

LOYALIST TOWNSHIP

**GEOTECHNICAL AND  
HYDROGEOLOGICAL INVESTIGATION  
AMHERSTVIEW SECONDARY PLAN  
KINGSTON, ONTARIO**

OCTOBER 15, 2021 (UPDATED)

CONFIDENTIAL







# GEOTECHNICAL AND HYDROGEOLOGICAL INVESTIGATION

## AMHERSTVIEW SECONDARY PLAN KINGSTON, ONTARIO

LOYALIST TOWNSHIP

CONFIDENTIAL

PROJECT NO.: 211-01353-00  
ORIGINAL: AUGUST 2021  
DATE UPDATED: OCTOBER 2021

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October 15, 2021

CONFIDENTIAL

Loyalist Township  
Economic Growth & Community Development Services  
P.O. Box 70, 18 Manitou Crescent West, Amherstview, ON K7N 1S3

Attention: Bohdan Wynnyckyj, RPP

**Subject: Geotechnical and Hydrogeological Investigation, Amherstview Secondary Plan, Kingston, Ontario**

**Dear Sir/Madam:**

We are pleased to submit our Geotechnical and Hydrogeological Investigation Report to provide subsurface information as input to the design of the Amherstview Secondary Plan, Kingston, Ontario.

The report is based on information obtained from WSP's borehole investigation, well monitoring and laboratory testing programs completed in July 2021. A summary of our completed field and laboratory work, subsurface findings, recommendations and construction considerations is included herein.

We trust that this report meets your present requirements. Please contact us if you have any questions.

Yours truly,

Steve Clark, M.Sc., P.Eng.  
Team Lead, Geotechnical/Northeast  
Earth and Environment

Lisa Gardiner  
Groundwater Specialist  
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WSP ref.: 211-01353-00





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# 1 INTRODUCTION

WSP Canada Inc. (WSP) was retained by the Loyalist Township (the Client) to complete a geotechnical and hydrogeological investigation for the proposed Amherstview Secondary Plan (the Site) at Kingston, Ontario. The location of the Site is shown on Figure 1.

The Site generally consists of open agricultural fields and forested areas with a residential street (Parrot's Bay Road) running north to south near the west side of the Site. It is crossed by a few small water courses with associated wetlands. The Site is bounded by Taylor Kidd Boulevard to the north, County Road 6 to the east, Bath Road (Highway 33) to the south and a wetlands and water course to the west.

A total of fifteen (15) borehole locations were staked in late May 2021. Twelve (12) boreholes were advanced across the Site from June 1st to 3rd, 2021 at various locations to provide information on subsurface conditions at the Site, including surficial soil, shallow bedrock and groundwater conditions. Three (3) borehole locations that were staked were not accessed due to objections from local residents when the drill rig was on site. Eight (8) of the twelve (12) boreholes that were advanced were further developed as monitoring wells. WSP also conducted a ground penetrating radar (GPR) survey in the vicinity of the boreholes to provide additional information beyond the immediate location of the boreholes in order to develop a sense of potential overburden thickness. WSP attended the Site on June 15, 2021 to develop the wells and measure groundwater conditions. Based on the investigation findings, WSP has provided recommendations for consideration during the layout and preliminary design of the Site.

## 2 SITE DESCRIPTION

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### 2.1 PHYSIOGRAPHY

The Site is located in the Napanee Plain Physiographic Region (Chapman and Putnam, 1984), which is comprised of shallow overburden overlying limestone bedrock. A map of the regional physiography is shown in Figure 3.

---

### 2.2 TOPOGRAPHY AND DRAINAGE

The topography of the Site is generally flat to undulating, sloping gently towards the south and towards a surface water feature that bisects the Site and drains southerly towards Parrott's Bay on the north shore of Lake Ontario immediately west of Kingston. Elevations at the Site range between 95 meters above sea level (masl) in the central area of the Site to about 80 masl to the south and west (Figure 1). The normal water level of Lake Ontario immediately south of the site is approximately 75 masl.

Drainage is generally good with moderately-sized open areas of agricultural land, primarily used for cattle grazing and small-scale farming activities. Numerous treed areas are present and several small seasonal water courses cross the Site, particularly in the south and west portion of the Site. Local shallow depressions are seasonally wet.

## 3 GEOLOGY AND HYDROGEOLOGY

The geological and hydrogeological properties of the subsurface were investigated using the following publicly available resources, in addition to boreholes installed across the Site and the GPR survey previously mentioned. The following publicly available resources were used to develop the information immediately below. The boreholes and GPR data are discussed in a following section.

- Existing geological mapping.
- Well records from the MECP Water Well Information System (WWIS).
- Records from the MECP PTTW and EASR databases.
- Drinking water source protection policy areas.

This information is discussed in the following sections.

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### 3.1 EXISTING GEOLOGICAL MAPPING

#### 3.1.1 SURFICIAL GEOLOGY

The surficial geology in the vicinity of the Site consists of generally flat-lying Paleozoic limestone bedrock, with a thin layer of overburden consisting of topsoil and fine-textured glaciolacustrine deposits consisting of silt and clay, minor sand and gravel pockets throughout the Site as shown in **Figure 4**. One borehole intersected approximately 12m of glaciolacustrine material in a potential karst. The GPR data indicates that deposits greater than 1 m thick will be rare.

#### 3.1.2 BEDROCK GEOLOGY

The bedrock underlying the Site consists primarily of lithographic to fine-crystalline limestone, silty dolostone, shale and fine-grained calcareous quartz sandstone of the Gull River Formation (Ontario Geological Survey, 1999) (**Figure 5**). The bedrock is typically found within 1 m of surface, as shown in **Figure 5**. Outcrops of limestone are found throughout the Site.

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### 3.2 WATER WELL RECORDS

One-hundred and twelve (112) records were found in the Ministry of the Environment, Conservation and Parks (MECP) water well database for wells within 500 m of the Site (**Figure 6**). Among all the records, there are:

- Twenty-seven (27) records listed as water supply wells, of which:
  - Eighty-two (82) are used for domestic purposes;
  - Four (4) are used for municipal purposes; and
  - Five (5) is used for livestock;
- One (1) record was listed as observation well;
- One (1) record was listed as unknown;
- Seventeen (17) record was listed as an abandonment record; and
- Two records had no data.

The soil materials described in the well records generally indicate shallow topsoil, clay, sand, gravel, stones or fill overlying shale and/or limestone bedrock. This is consistent with the regional understanding and observations from the fieldwork. Well depths ranged between 48.4 m below ground surface (mbgs) to 95.1 mbgs, water found ranged between 0.5 mbgs to 53.3 mbgs and static water levels ranged between 0.9 mbgs to 41.1 mbgs. The water well locations are shown on **Figure 6**. A tabulated summary of the well records is provided in **Appendix C**.

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### 3.3 MECP PTTW AND EASR DATABASES

No active permits were identified in the MECP Permit to Take Water (PTTW) database within a 500 m radius of the Site, except for one construction dewatering PTTW for Leighton Lands, located east of the Site. The PTTW has maximum of 3,270,240 L per day. No active Environmental Activity and Sector Registry (EASR) for construction dewatering were identified in the MECP Access Environment web portal within 500 m for takings between 50,000 and 400,000 L/day.



# 4 WORK PROGRAM

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## 4.1 FIELD INVESTIGATION

WSP geotechnical staff attended the Site in mid-May 2021 to stake borehole locations. Ontario One Call and a private locate service were used to identify potential underground utilities at each proposed borehole location. No utility conflicts were identified.

A drilling program was carried out at the Site from June 1<sup>st</sup> to 3<sup>rd</sup>, 2021, with twelve (12) boreholes, designated as BH21-01 to BH21-15, being advanced to the depths ranging from 5.0 to 6.6 m below ground surface (mBGS). Three (3) boreholes (BH21-05, BH21-10 and BH21-13) were not drilled due to complaints from local residents. Monitoring wells were installed in eight (8) of the boreholes. WSP field personnel supervised the drilling operations and recorded the subsurface conditions encountered in the boreholes. The boreholes were advanced using a tracked drill rig equipped with a down-the-hole hammer. Representative samples of rock cuttings were recovered from the boreholes and placed in moisture proof bags and transported to our CCIL-certified laboratory for subsequent review by the project team. Bedrock cores were obtained with a diamond core bit at three (3) locations to recover undisturbed samples of the bedrock. The boreholes were checked for groundwater seepage and general stability prior to backfilling.

GPR was used to evaluate the depth of overburden at various locations about the Site and specifically in the vicinity of the boreholes. The objective of the GPR investigation was to expand on the pin point data from the boreholes in order to develop a better sense of the potential for karsts in the area.

Groundwater monitoring was undertaken on June 4<sup>th</sup> and 15<sup>th</sup> to provide initial data for the assessment of the hydrogeological parameters of the Site. Of the eight (8) wells installed, four (4) were dry during the two monitoring events and one (1) was not accessible on June 15<sup>th</sup> as the well (BH21-12) had been locked and a No Trespassing sign installed. The other three (3) wells were measured and a slug test was performed on each well.

---

## 4.2 LABORATORY TESTING

### 4.2.1 PHYSICAL EXAMINATION

Upon completion of drilling, recovered soil and rock samples were transported to the WSP geotechnical laboratory for more detailed visual examination and engineering classifications by the Project Team. The rock chips and core samples were examined by a geological engineer.

The borehole logs are included in **Appendix A**.

---

### 4.2.2 ANALYTICAL LABORATORY TESTING

Analytical laboratory testing (chemical analysis) was performed on samples from the three (3) wells which contained a sufficient volume of groundwater. The environmental laboratory results are provided in **Appendix D**.

## 5 SUBSURFACE FINDINGS

Based on the data collected during field investigations, borehole information, the subsurface profile at the Site generally consists of a thin layer of overburden overlying limestone bedrock. The layers encountered in the boreholes are described as follows.

---

### 5.1 TOPSOIL

Topsoil was encountered at the surface at most borehole locations. The topsoil was described as organic-rich, brown, and moist at the time of the investigation. The topsoil thickness ranged from 0.0 m to 0.9 m with a typical thickness of 0.6 m. GPR was used to assess overburden thickness in the vicinity of the boreholes and at other select locations and yielded broadly similar results with most areas < 1m thick. Broadly speaking, the GPR data indicates the overburden is marginally thicker in the northeast quadrant when compared to the northwest, central and southwest areas.

---

### 5.2 SILTY CLAY

A 0.6 m thick layer of silty clay was identified in BH21-02 between the topsoil and top of limestone. The silty clay was brown, moist, and About the Plastic Limit (APL) at the time of the inspection.

BH21-03 intersected a 2.5 m thick unit of silty clay that was brown to brownish grey from about 0.6 mBGS to 3.1 mBGS. The silty clay was described as moist. The silty clay transitioned into a clayey silt at about 3.1 mBGS.

Two particle size distribution analyses were completed on the silty clay in these two boreholes. The two plots are presented in **Appendix B**.

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### 5.3 CLAYEY SILT

BH21-03 intersected a layer of brownish grey clayey silt underlying the silty clay from about 3.1 mBGS to bedrock at about 5.0 mBGS. The silty clay was described as wet. The clayey silt was resting directly on limestone bedrock, which was confirmed by coring from 5.0 mBGS to 6.1 mBGS in BH21-03.

One particle size distribution analysis was completed on the clayey silt. The plot is presented in **Appendix B**.

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### 5.4 LIMESTONE

Bedrock was intersected in all boreholes, typically within 0.6 m of the surface, with the exception of BH21-03, which likely intersected a karst feature with limestone at 5.0 mBGS.

The bedrock is typically flat-lying, gray, lithographic to fine-crystalline limestone with thin shaley laminations. The rock is strong with occasional fractures and only slightly weathered. The rock is typical of the Gull River Formation and may contain silty dolostone, shale and fine-grained calcareous quartz sandstone.

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### 5.5 GROUNDWATER

Eight (8) monitoring wells were installed on Site and only four (4) contained a measurable quantity of groundwater. Groundwater levels were measured manually from each monitoring well on two occasions, June 4 and June 15, 2021. Eight wells were installed at the site and four of the wells were dry on both monitoring occasions. BH21-12 was only measured on June 4, 2021 as the property owner had locked the well and placed a Do Not Trespass sign up prior to the June 15, 2021 event. Groundwater levels the remaining three wells ranged between 0.9 mBGS to below 2.0 mBGS in the wells. This corresponds to a range in elevations of 78.9 masl to 91.4 masl. Water levels are shown in Table 4-2 below. A summary of water levels and well construction details is provided in **Appendix C**.

Given the large property size and limited of wells with a measurable quantity of groundwater, preparation of groundwater flow direction maps is problematic. The competent limestone bedrock has a very low hydraulic conductivity and groundwater flow will be largely dependent on fractures and potentially shaly bedding planes, neither of which were identified in any significant quantity in the core samples.

**Table 5-1 Manual Water Measurements**

LOCATION	ELEVATION GROUND (MASL)	ELEVATION OF TOP OF PIPE (MASL)	WATER LEVELS			
			June 4, 2021		June 15, 2021	
			m bgs	mASL	m bgs	mASL
BH21-03	92.87	93.48	1.42	91.4	1.44	91.4
BH21-09	90.74	91.76	2.01	88.7	1.43	89.3
BH21-11	80.17	80.98	0.89	79.3	1.27	78.9
BH21-12	96.78	97.62	6.37	90.4	---	---

Note: --- the water level was not obtained during this visit.

## 5.6 GROUNDWATER QUALITY SAMPLING

Three (3) of the installed wells (BH21-03, BH21-09 and BH21-11) were accessible and contained a sufficient volume of water for sampling. The monitoring wells were purged of a minimum of three well volumes using dedicated Waterra® tubing and inertial lift foot valves on June 4, 2021. Samples were obtained and collected on June 15 and 16, 2021 and placed into laboratory-supplied bottles (with chemical preservatives as required) and stored according to chain of custody procedures until received at the laboratory. Groundwater samples were submitted for analysis of general chemistry parameters, including metals and inorganics and were compared to the Provincial Water Quality Objectives (PWQO), as indicated in **Table 2**. The Laboratory Certificates of Analysis for the groundwater samples are provided in **Appendix D**.

Laboratory analysis indicated that all samples analyzed met the PWQOS, except Boron, Cobalt, Copper, Iron, Nickel, Selenium, Silver, Thallium, Uranium, Vanadium, Zinc and Zirconium. The exceedances are summarized in **Table 5-2**.

**Table 5-2 PWQO Exceedences**

PARAMETER	PWQO	UNITS	BH21-03	BH21-09	BH21-116
Boron	0.2	mg/L	<b>0.236</b>	<b>1.66</b>	<b>0.229</b>
Cobalt	0.0009	mg/L	<b>0.354</b>	<b>0.0123</b>	<b>0.013</b>
Copper	0.005	mg/L	<b>0.8</b>	<b>0.039</b>	<b>0.028</b>
Iron	0.3	mg/L	<b>920</b>	<b>34.9</b>	<b>29.1</b>
Nickel	0.025	mg/L	<b>0.862</b>	<b>0.041</b>	<b>0.041</b>
Selenium	0.1	mg/L	<b>0.111</b>	-	-
Silver	0.0001	mg/L	<b>0.0019</b>	<b>0.0023</b>	-
Thallium	0.0003	mg/L	<b>0.0087</b>	<b>0.0014</b>	<b>0.0021</b>

PARAMETER	PWQO	UNITS	BH21-03	BH21-09	BH21-116
Uranium	0.005	mg/L	<b>0.019</b>	-	-
Vanadium	0.006	mg/L	<b>1.32</b>	<b>0.043</b>	<b>0.036</b>
Zinc	0.030	mg/L	<b>2.17</b>	<b>0.157</b>	<b>0.045</b>
Zirconium	0.004	mg/L	<b>0.088</b>	-	<b>0.007</b>

**Bold text** indicates an exceedance of the PWQO. Dash means parameter was within the PWQOs.

It is noted that the groundwater samples had high turbidity and that at least some of the elevated parameters may be related to elevated total suspended solids in the samples. It is inferred that during dewatering, if the quantity of sediment is reduced, then these parameters will also be reduced.

## 5.7 HYDRAULIC TESTING

Single well hydraulic tests (slug tests) were completed for the three monitoring wells with water (BH21-03, BH21-09, and BH21-11) on this site on June 15, 2021. Wells were purged of three well volumes using Waterra® tubing and foot valves and allowed to recover. Water level recovery measurements were obtained through manual readings. Electronic dataloggers were used on two of the wells. Tests were analyzed using the Hvorslev method for slug test recovery. Hydraulic conductivity (K) estimates ranged between  $2.0 \times 10^{-7}$  and  $3.8 \times 10^{-8}$  m/s, which is within the expected range of results for fractured limestone (Freeze and Cherry, 1978). The overburden rates may be slightly high for the types of material that have been encountered at the Site, while the values for fractured bedrock may be within the literature expected values. The results are provided in Table 5-3 and Slug Test calculations are provided in **Appendix G**.

**Table 5-3 Hydraulic Conductivity Estimates from Hydraulic Testing**

WELL	ANALYSIS	MATERIAL SCREENED	ESTIMATED HYDRAULIC CONDUCTIVITY (m/s)
BH21-03	Hvorslev	Clayey Silt to Silty Clay	$2.5 \times 10^{-7}$
BH21-09	Hvorslev	Limestone	$3.8 \times 10^{-8}$
BH21-11	Hvorslev	Limestone	$2.0 \times 10^{-7}$

## 5.8 GROUND PENETRATING RADAR

The GPR survey was conducted on April 5<sup>th</sup> and 6<sup>th</sup>, 2021 in the general vicinity of the boreholes and for selected areas beyond the limit of the boreholes. Approximately 25% of the entire site was scanned and with approximately 18km of profile data being generated.

Data from the GPR work indicates the overburden thickness averages less than 0.75 m thick and ranges up to 1.75 m thick with a few relatively small pockets of thicker overburden. These results correlate well with the borehole data which suggests overburden thickness from 0.3 m to 0.9m, with the exception of BH21-03 where the unconsolidated overburden is 5 m thick.

The data indicate the south and west half of the Site has generally less overburden than the north and east half. There are a few areas in the northeast quadrant of the Site that suggest potential karst development. Most notably, analysis of the data indicates a potential 5 m wide dipping feature trending generally east to west in the vicinity of BH21-02 and BH21-04. The data could indicate a karst feature although it is not certain. No other major features were identified within the coverage area. The GPR report is attached as **Appendix F**.

## 6 RECOMMENDATIONS

Overburden thickness at the Site is typically < 1 m with a few deeper pockets that will be encountered during construction activities. Topsoil is generally 0.3- 0.6 m thick with the balance of the unconsolidated material consisting of glaciolacustrine silty clay or clayey silt. Topsoil may be stripped and stockpiled for later reuse. The silty clay and clayey silt is not suitable for reuse as structural or trench backfill due to the high percentage of fine material, but could potentially be used for backfill of landscaped areas. Limestone bedrock encountered in all boreholes is competent rock and will present a challenge during construction. Bedrock removal by mechanical methods or blasting will be required for all below grade work.

While we believe our findings are fairly representative, conditions may differ beyond the investigated location. If significant differences in subsurface conditions are found at a later time, particularly during construction or as more information becomes available, WSP should be contacted immediately to revise our findings and recommendations, if necessary.

Recommendations are intended for Designers and are not intended as instructions to Contractors, who should perform their own investigations to confirm any conditions that may affect them. Recommendations in this Report must not be used by third parties without the express written consent of WSP.

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### 6.1 EXCAVATIONS AND DEWATERING

It is expected that most of the infrastructure and building work will require rock excavation. Excavations should be constructed in accordance with the most recent version (O. Reg. 123/08) of the Occupational Health and Safety Act (OHSa). In general, the Site soils are thin and consist predominantly of silty clay or clayey silt.

It is expected that most of the bedrock excavations will be relatively shallow and that stable vertical or near vertical walls can be readily achieved within the limestone. Based on the recovered core, it is expected that the shallow limestone can be removed by a large excavator equipped with a toothed bucket. Deeper or more competent bedrock can likely be removed with a hydraulic rock breaker although blasting may be required. It is recommended that once the design is advanced to the point where road and utility trench alignments have been determined, that test excavations be completed to determine the most cost-effective way to remove the rock. Having this knowledge prior to final design and tendering will allow for a better cost estimate to be made.

The native site soils, above the groundwater table, may be considered a Type 2 soil, and excavation sidewalls should be sloped at a maximum of 1H:1V to within 1.2 m of the base of the excavation;

The existing fill soils, above the groundwater table, may be considered a Type 3 soil, and excavation sidewalls should be sloped at a maximum of 1H:1V to the base of the excavation; and

Any soils below the groundwater tables should be considered a Type 4 soil, and excavation sidewalls should be sloped at a maximum of 3H:1V to the base of the excavation.

Excavations should be protected from exposure to precipitation and associated ground surface runoff, and should be inspected regularly for signs of instability. If localized instability is noted during excavation, or if wet conditions are encountered, side slopes should be flattened as required to maintain safe working conditions. If excavation side slopes cannot be achieved due to site confinement, shoring should be designed and installed.

Relatively minor seepage into open cut excavations above the groundwater table may be controlled using filtered sumps and pumps. Surface water inflow can also be controlled in this manner, but preferably it should be directed away from the excavations. For service trenches, to minimize potential problems, backfilling operations should follow closely after excavation and pipe installation so that only minimal lengths of trench are exposed at any given time.

It is expected that the majority of dewatering activities can be completed using filtered sumps, however depending on final installation depth, advance dewatering systems may be required when excavations extend below the groundwater table. All dewatering shall be completed according to OPSS 518 and shall be completed using submersible pumps and sumps, well points or diversions as required.

Trench dimensions (length, width and depths) as well as dewatering methods and techniques can greatly affect the volume of dewatering that will be required for excavation operations. Based on the hydraulic conductivity calculations completed to date, it is not expected that significant dewatering due to groundwater infiltration will be required. If dewatering activities exceed 50,000 L/day, the project would either need to be registered under the ESAR program by the MOECC for up to 400,000 L/day or require a PTTW if anticipated volume exceeds 400,000 L/day. Both an EASR or a PTTW application should be done in advance of construction, by a Qualified Person, and consider the pumping rates, drawdown, water quality for discharge, ground effects, and monitoring requirements.

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## 6.2 MATERIAL REUSE, BACKFILL AND COMPACTION

The native soils contain significant amounts of fine grained material which limit where this material can be reused. It is anticipated that the relatively small volume of native soil will be reused for landscaping and not placed as structural or trench backfill where freeze-thaw and insufficient compaction would be a concern.

Material used as trench backfill should be free of all deleterious matter (e.g. topsoil, organic matter, etc.). Materials used for trench backfill should be placed in 150 mm maximum loose lifts and compacted to 98 percent of the Standard Proctor Maximum Dry Density (SPMDD) beneath roadways and structural components, and 95 percent of the SPMDD in general fill areas. Compaction operations should be completed using a self-propelled vibratory compactor or jumping-jack plate tamper where access is limited. Backfill loose lift thicknesses may need to be reduced to achieve the above noted compaction values based on compaction equipment utilized.

Special considerations should be made for backfill and compaction operations during cold weather conditions. Reused native soils and granular soils (Granular A and B) tend not to achieve adequate compaction in below freezing temperatures and thus other backfill materials such as 19 mm Clear Stone Bedding or High-Performance Bedding Stone (HPBS) wrapped in a geotextile (Terrafix 270R or approved equivalent) may need to be utilized.

If soils are to be exported from the site, confirmatory field screening and chemical soil analyses should be completed at the time of export to verify acceptance for the receiving Site.

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## 6.3 BEDDING AND COVER MATERIAL

It is likely that all buried infrastructure will be installed in excavated bedrock trenches. A normal Class B bedding is recommended for all underground services. Bedding materials can be well graded, granular fill, such as Granular A (OPSS MUNI 1010), 19 mm crushed Clear Stone Bedding (OPSS MUNI 1010) or HPBS (OPSS MUNI 1010) with a minimum compacted thickness of 150 mm. Pipe bedding and cover materials should be compacted to at least 98 percent of SPMDD for Granular Materials.

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## 6.4 FROST PENETRATION DEPTH

Based on professional experience, soil types, and proposed structures, the proposed services should be provided with at least 1.5 m of earth cover for frost protection, or an equivalent thickness of insulation installed according to manufacturer's specifications. Municipal and/or Ontario Parks standards may supersede this recommended minimal frost penetration depth.

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## 6.5 LIFT STATION

It is assumed that an underground lift station will require an excavation to at least 4 m below existing grade. This will require the excavation of limestone.

The excavation for the construction of the lift station should be carried out in a manner that limits peripheral damage to the surrounding bedrock in order to maintain the integrity of the rock and avoid opening up fractures or other conduits that could increase dewatering requirements.

Upon approval of the exposed base by the Geotechnical engineer, and removal of any standing water that may accumulate as of result of seepage and infiltration, a geotextile fabric (such as Terrafix 360R, or equivalent) (if required) and high

performance bedding stone may be placed on the base of the excavation if required to facilitate the work. Subject to the conditions in the excavation at the time of construction, bedding thickness should be at least 300 mm. Groundwater seepage control may be required to place bedding.

Backfilling materials and methods should be carried out in accordance with the Manufacturer's Specifications, or as directed by the Engineer. The lift station shall be designed for sufficient uplift resistance to maintain stability and prevent flotation under all operating conditions.

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## 6.6 DESIGN COMMENTS

Geotechnical inspection and review of excavations and compaction procedures during construction must be carried out by a qualified geotechnical engineer, or qualified technician working under the direct supervision of a geotechnical engineer, to ensure compliance with our recommendations.

Recommendations for design and construction are based on the borehole information provided above. While we believe our findings are fairly representative, conditions may vary between and beyond the investigated locations. If significant differences in the subsurface conditions described above are found at a later time, WSP should be contacted immediately to revise our findings and recommendations, as necessary.

Recommendations are intended for Designers and are not intended as instructions to Contractors, who should perform their own investigations to confirm any conditions that may affect them. Recommendations in this report must not be used by third parties without the express written consent of WSP.

## 7 INSPECTIONS, MATERIAL TESTING AND LIMITATIONS OF REPORT

The data, conclusions and recommendations which are presented in this geotechnical report, and the quality thereof, are based on the scope of work authorized by the Client. While we believe the information to be representative of site conditions, subsurface conditions between and beyond the test locations may vary. If significant differences in the subsurface conditions described above are found, we should be contacted immediately to revise our findings and recommendations, if necessary.

The design recommendations provided in this report are intended for designers and should not be construed as providing instructions to contractors, who should form their own opinions about site conditions for tendering, construction procedures and general planning. WSP accepts no liability for use of or reliance on the report information by third parties, without express written consent. WSP should be contacted to review and comment on the pavement details and overall design to confirm that the geotechnical requirements stated in this report are addressed. If WSP is not given the opportunity to review the design prior to commencing of work of the above recommendations we cannot be held liable for any misinterpretation of the recommendations.

During construction, qualified personnel working under the direct supervision of the Geotechnical Engineer should be contacted to complete inspections of the bedrock excavations, subgrade, granular fill compaction and to oversee all phases of infrastructure construction. Geotechnical inspections are critical during construction operations for quality control and assurance (QA/QC). Inspection and testing services should include verification of subgrade soil conditions below placed granular fills, monitoring of the placement of engineered fill, and general testing of geotechnical materials including compaction testing of engineered fill and asphalt.





# APPENDIX

## A BOREHOLE LOGS



PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.222354 E -76.671411

Method: solid stem  
 Diameter: 160mm O.D  
 Date: Jun-01-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 1

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT				POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%)				
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80				100	PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT
102.1	Ground Surface																	
0.0	<b>TOPSOIL</b> Brown, moist, some organics		1	AS														
101.5	<b>LIMESTONE and SHALE</b> Grey, competent bedrock		2	CORE														
0.6																		
1																		
2																		
3																		
4																		
5																		
6																		
6.4	Borehole terminated at 6.4 mBGS in LIMESTONE and SHALE bedrock																	

Water level at 6.4 mBTOP measured on June 4, 2021

WSP 2021-06-04 10:30 AM 211-01353-00 BH21-01 LOG OF BOREHOLE BH21-01

**GROUNDWATER ELEVATIONS**  
 Measurement

**GRAPH NOTES** + 3, x 3: Numbers refer to Sensitivity      ○ ● = 3% Strain at Failure







# LOG OF BOREHOLE BH21-04

PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.224896 E -76.676717

Method: solid stem  
 Diameter: 160mm O.D  
 Date: Jun-01-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 4

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT		PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%)
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40						
92.9	Ground Surface														
0.0	<b>TOPSOIL</b> Brown, moist, some organics		1	AS											
92.6	<b>LIMESTONE and SHALE</b> Grey, competent bedrock														
0.3															
1			2	CORE											
2															
3			3	CORE											
4															
4			4	CORE											
6															
6			5	CORE											
6															
6.4	Borehole terminated at 6.4 mBGS in LIMESTONE and SHALE bedrock														

Water level at 6.4 mBTOP measured on June 4, 2021

WSP 2021-06-04 14:30:00 211-01353-00 BH21-04 LOG OF BOREHOLE BH21-04

GROUNDWATER ELEVATIONS  
 Measurement

GRAPH NOTES + 3, x 3: Numbers refer to Sensitivity ○ ●=3% Strain at Failure



# LOG OF BOREHOLE BH21-06

PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.220927 E -76.677255

Method: solid stem  
 Diameter: 160mm O.D  
 Date: Jun-01-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 5

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT				PLASTIC LIMIT W <sub>p</sub>	NATURAL MOISTURE CONTENT w	LIQUID LIMIT W <sub>L</sub>	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%) GR SA SI CL
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE			"N" BLOWS 0.3 m	SHEAR STRENGTH (kPa)								
96.1	Ground Surface															
0.0	<b>LIMESTONE and SHALE</b> Grey, competent bedrock		1	CORE												
1			2	CORE												
2			3	CORE												
4			4	CORE												
6			5	CORE												
6.4	Borehole terminated at 6.4 mBGS in LIMESTONE and SHALE bedrock															Water level at 6.4 mBTOP measured on June 4, 2021
89.7																

WSP 2021-06-04 14:30:00 211-01353-00 BH21-06 LOG SHEET 1 of 1

GROUNDWATER ELEVATIONS  
 Measurement 1st 2nd 3rd 4th

GRAPH NOTES + 3, × 3: Numbers refer to Sensitivity ○ ●=3% Strain at Failure





PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.214942 E -76.669737

Method: solid stem  
 Diameter: 160mm O.D  
 Date: May-31-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 7

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT				PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%)	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80							100
91.7	Ground Surface																	
0.0	<b>TOPSOIL</b> Brown, moist, some organics		1	AS														
0.8	<b>LIMESTONE</b> Grey, shale beds, thinnely laminated, fine grained, moderate fractures, moderately strong, freshly weathered		1	CORE														
1.0																		
2.0			2	CORE														
4.0			3	CORE														
6.0			4	CORE														
6.3	Borehole terminated at 6.3 mBGS in LIMESTONE bedrock																	

GROUNDWATER ELEVATIONS  
 Measurement 1st 2nd 3rd 4th

GRAPH NOTES + 3, x 3: Numbers refer to Sensitivity ○ ●=3% Strain at Failure

WSP 2021-05-31-2021 BH21-08  
 211-01353-00 ENCL 7



LOG OF BOREHOLE BH21-09

PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.214117 E -76.673795

Method: solid stem  
 Diameter: 160mm O.D  
 Date: May-31-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 8

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT				PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%)		
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE			"N" BLOWS 0.3 m	20	40	60							80	100
90.7	Ground Surface																	
0.0	<b>TOPSOIL</b> Brown, moist, some organics		1	AS														
90.1																		
0.6	<b>LIMESTONE</b> Grey, shale bedding, moderate fractures, slightly weathered, medium strong		2	CORE														
1																		
2																		
3																		
4																		
5																		
6																		
6.1	Borehole terminated at 6.1 mBGS in LIMESTONE bedrock																	
84.6																		

Water level at 2.45 mBTOP measured on June 15, 2021  
 Water level at 3.03 mBTOP measured on June 4, 2021

WSP 2021-05-31-2021 BH21-09 LOG OF BOREHOLE BH21-09

GROUNDWATER ELEVATIONS  
 Measurement 1st 2nd 3rd 4th

GRAPH NOTES + 3, x 3: Numbers refer to Sensitivity ○ ●=3% Strain at Failure







LOG OF BOREHOLE BH21-12

PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.22611 E -76.683333

Method: solid stem  
 Diameter: 160mm O.D  
 Date: Jun-03-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 10

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT					PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%)	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80	100							W <sub>p</sub>
	Continued																	
																		Water level at 7.21 mBTOP measured on June 4, 2021

WSP 2021-06-04 10:30 AM 2021-06-04 10:30 AM 2021-06-04 10:30 AM 2021-06-04 10:30 AM

GROUNDWATER ELEVATIONS  
 Measurement

GRAPH NOTES + 3, x 3: Numbers refer to Sensitivity ○ ●=3% Strain at Failure



LOG OF BOREHOLE BH21-14

PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.215 E -76.66583

Method: solid stem  
 Diameter: 160mm O.D  
 Date: Jun-03-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 11

SOIL PROFILE			SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT					PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%)
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE	"N" BLOWS 0.3 m			20	40	60	80	100						
0.0	Ground Surface <b>TOPSOIL</b> Brown, moist, some organics		1	AS														
0.6	<b>LIMESTONE and SHALE</b> Grey, competent bedrock		2	CORE														
			3	CORE														
			4	CORE														
			5	CORE														
6.4	Borehole terminated at 6.4 mBGS in LIMESTONE and SHALE bedrock																	Water level at 6.4 mBTOP measured on June 4, 2021

WSP 2021-06-03 BH21-14 LOG 211-01353-00

GROUNDWATER ELEVATIONS  
 Measurement

GRAPH NOTES + 3, x 3: Numbers refer to Sensitivity ○ ●=3% Strain at Failure

PROJECT: Loyalist Secondary Plan  
 CLIENT: Township of Loyalist  
 PROJECT LOCATION:  
 DATUM: Geodetic  
 BH LOCATION: N 44.218333 E -76.668055

Method: solid stem  
 Diameter: 160mm O.D  
 Date: Jun-03-2021

REF. NO.: 211-01353-00  
 ENCL NO.: 12

SOIL PROFILE		SAMPLES			GROUND WATER CONDITIONS	ELEVATION	STANDARD PENETRATION TEST RESISTANCE PLOT					PLASTIC LIMIT	NATURAL MOISTURE CONTENT	LIQUID LIMIT	POCKET PEN. (Cu) (kPa)	NATURAL UNIT WT (kN/m <sup>3</sup> )	REMARKS AND GRAIN SIZE DISTRIBUTION (%)	
(m) ELEV DEPTH	DESCRIPTION	STRATA PLOT	NUMBER	TYPE			"N" BLOWS 0.3 m	SHEAR STRENGTH (kPa)										W <sub>p</sub>
0.0	Ground Surface <b>TOPSOIL</b> Brown, moist, some organics		1	AS														
0.6	<b>LIMESTONE and SHALE</b> Grey, moderate fractures, slightly weathered, medium strong		2	CORE														
			3	CORE														
			4	CORE														
			5	CORE														
6.6	Borehole terminated at 6.6 mBGS in LIMESTONE and SHALE bedrock																	

WSP 2021-07-01 10:30 AM 2021-07-01 10:30 AM 211-01353-00 211-01353-00 211-01353-00 211-01353-00

GROUNDWATER ELEVATIONS  
 Measurement

GRAPH NOTES + 3, × 3: Numbers refer to Sensitivity ○ ●=3% Strain at Failure

# APPENDIX

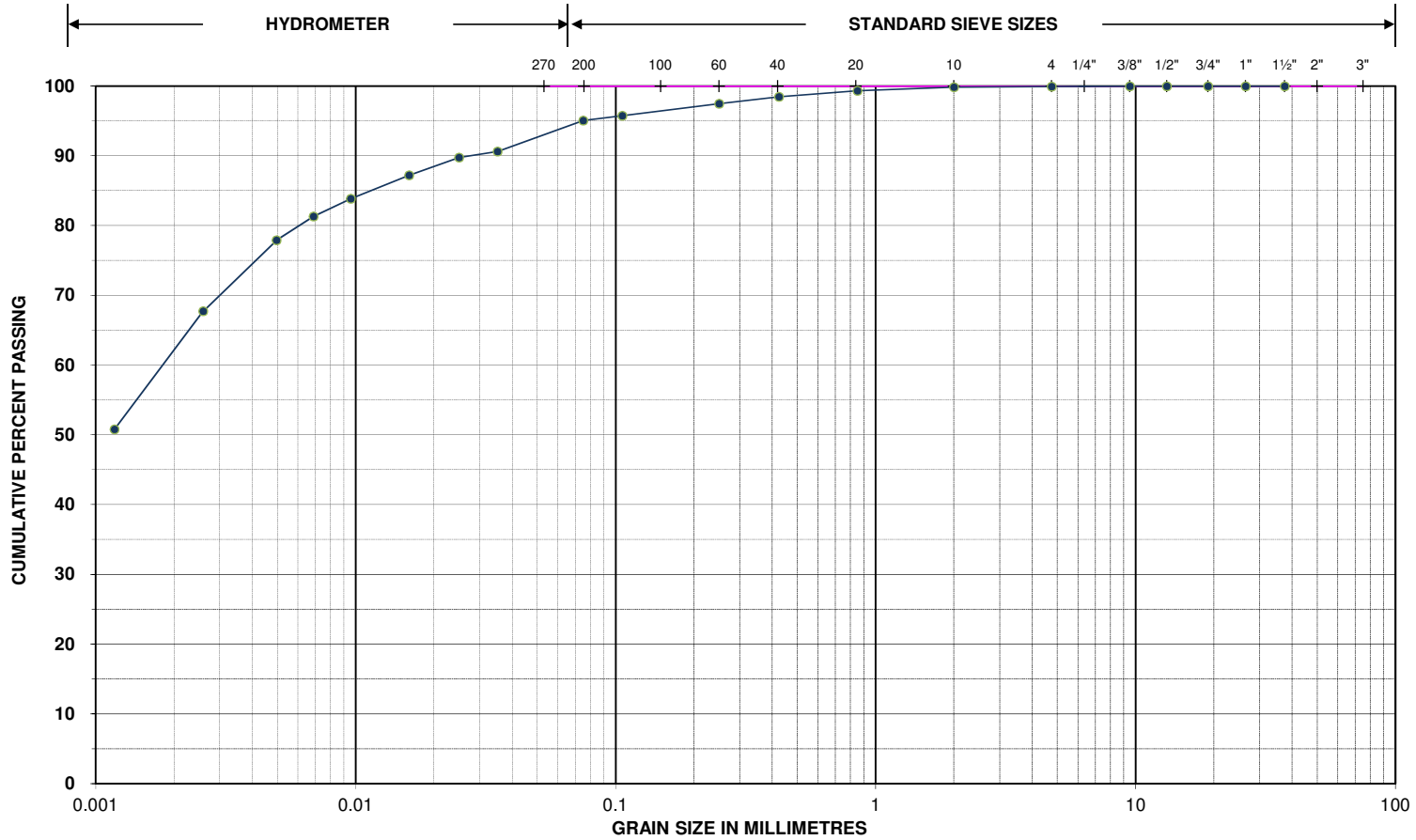
**B**

PHYSICAL  
LABORATORY  
DATA





# PARTICLE SIZE DISTRIBUTION ASTM D422



Unified Classification System

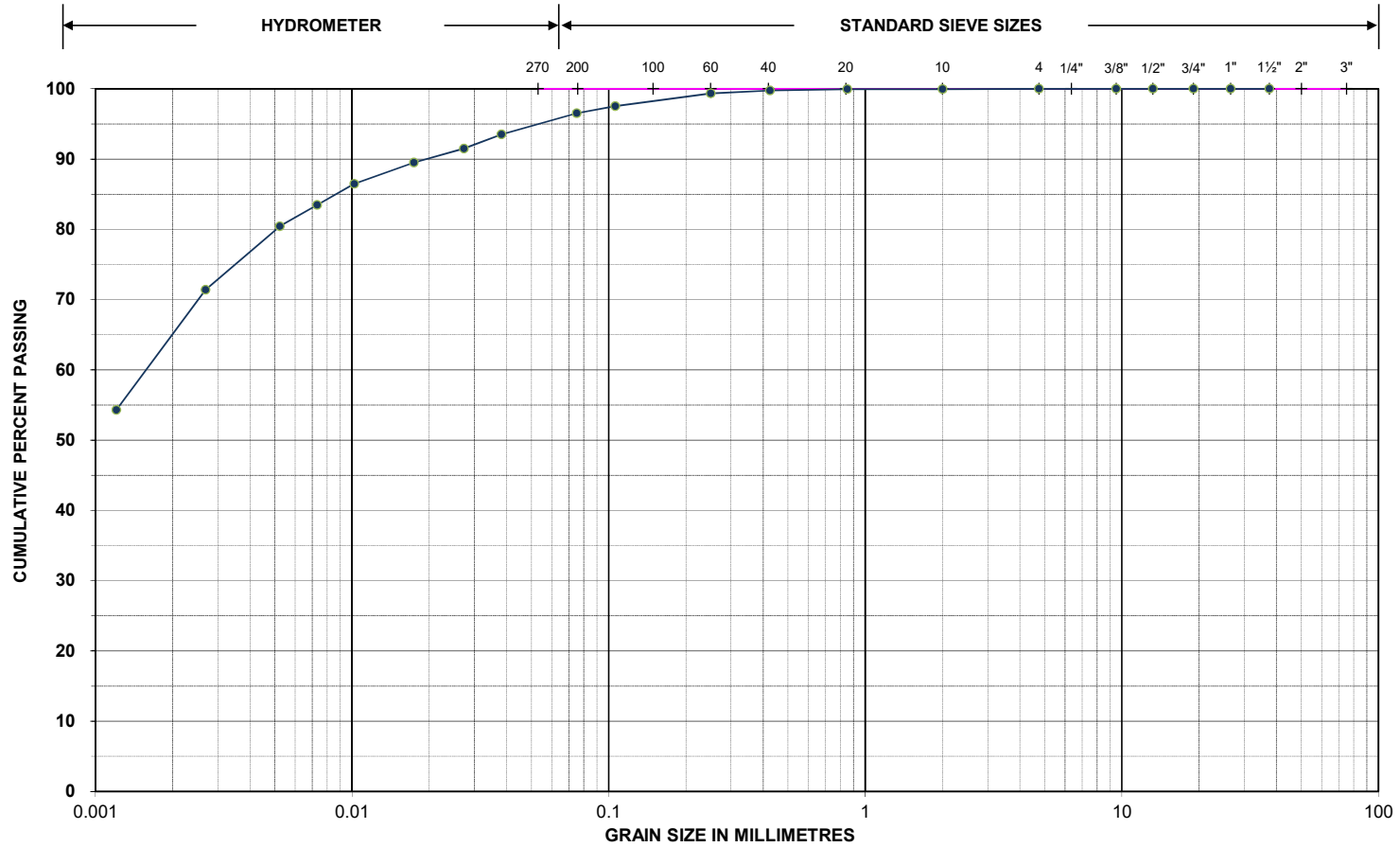
SILT AND CLAY	SAND	GRAVEL
---------------	------	--------

<b>Project Name:</b> Loyalist Secondary Plan <b>Location ID.:</b> BH21-2	<b>Project No.:</b> 211-01353-00 <b>Sample No./Depth:</b> AS2
-----------------------------------------------------------------------------	------------------------------------------------------------------

Sieve Size	% Passing Coarse	Sieve Size	% Passing Fine	Hydrometer (mm)	% Passing
37.5 mm	100.0	2.00 mm	99.9	0.035	90.6
26.5 mm	100.0	0.850 mm	99.3	0.016	87.2
19.0 mm	100.0	0.425 mm	98.5	0.007	81.3
13.2 mm	100.0	0.250 mm	97.5	0.003	67.8
9.50 mm	100.0	0.106 mm	95.7	0.001	50.8
4.75 mm	99.9	0.075 mm	95.1		



# PARTICLE SIZE DISTRIBUTION ASTM D421



Unified Classification System

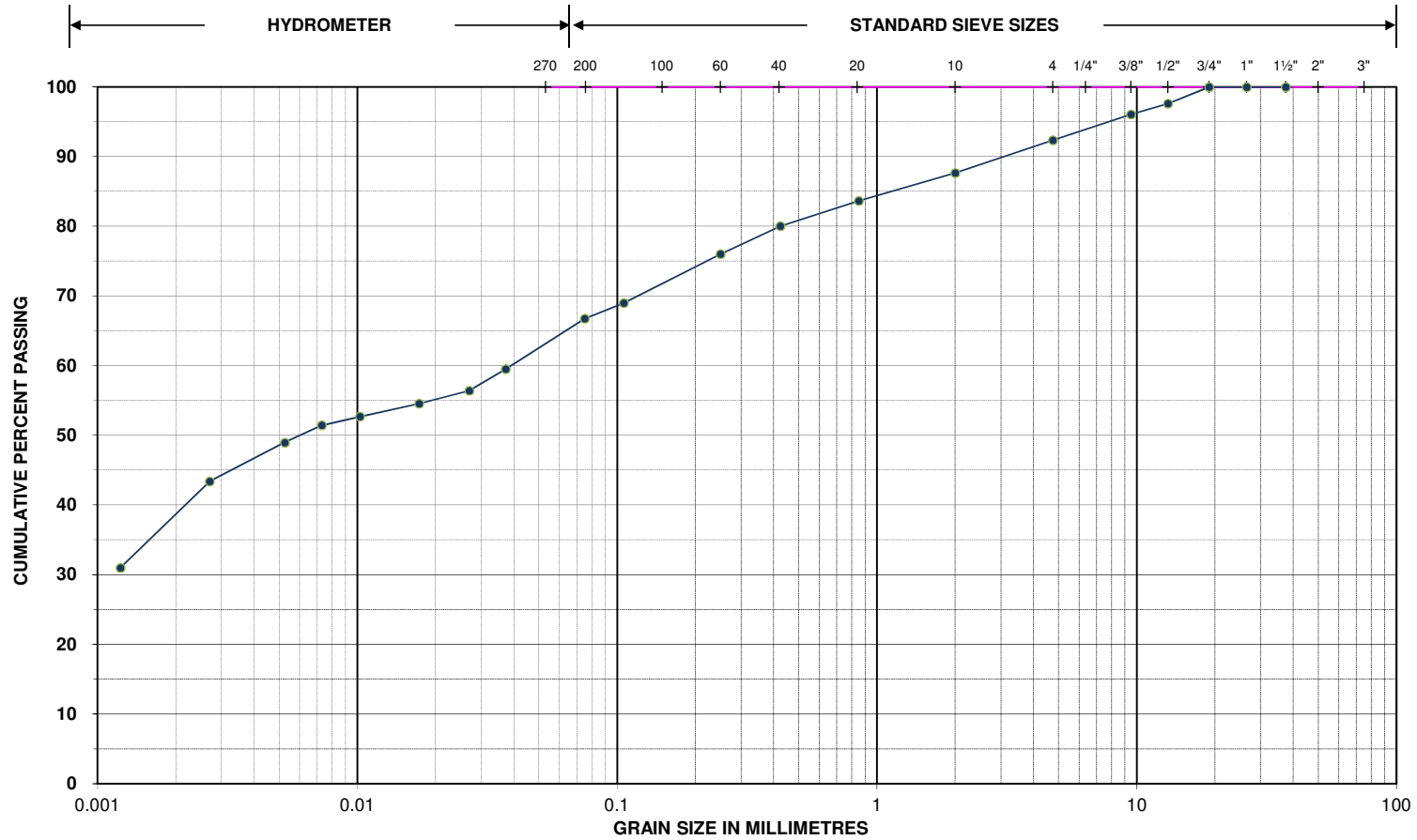
SILT AND CLAY	SAND	GRAVEL
---------------	------	--------

<b>Project Name:</b> Loyalist Secondary Plan	<b>Project No.:</b> 211-01353-00
<b>Location ID.:</b> BH21-03	<b>Sample No./Depth:</b> AS2 & AS3

Sieve Size	% Passing Coarse	Sieve Size	% Passing Fine	Hydrometer (mm)	% Passing
37.5 mm	100.0	2.00 mm	100.0	0.038	93.5
26.5 mm	100.0	0.850 mm	100.0	0.017	89.5
19.0 mm	100.0	0.425 mm	99.8	0.007	83.5
13.2 mm	100.0	0.250 mm	99.4	0.003	71.4
9.50 mm	100.0	0.106 mm	97.5	0.001	54.3
4.75 mm	100.0	0.075 mm	96.5		



# PARTICLE SIZE DISTRIBUTION ASTM D422



Unified Classification System

SILT AND CLAY	SAND	GRAVEL
---------------	------	--------

<b>Project Name:</b> Loyalist Secondary Plan <b>Location ID.:</b> BH21-03	<b>Project No.:</b> 211-01353-00 <b>Sample No./Depth:</b> AS4
------------------------------------------------------------------------------	------------------------------------------------------------------

Sieve Size	% Passing Coarse	Sieve Size	% Passing Fine	Hydrometer (mm)	% Passing
37.5 mm	100.0	2.00 mm	87.7	0.037	59.5
26.5 mm	100.0	0.850 mm	83.7	0.017	54.5
19.0 mm	100.0	0.425 mm	80.0	0.007	51.4
13.2 mm	97.6	0.250 mm	76.0	0.003	43.4
9.50 mm	96.1	0.106 mm	69.0	0.001	31.0
4.75 mm	92.4	0.075 mm	66.7		



# ATTERBERG LIMITS

ASTM D4318

Date:	18-Jun-21	Job No.:	211-01353-00
Project Name:	Loyalist Secondary Plan	Tech.:	LEK
Borehole/Sample No.: BH21-03 / AS2 & AS3 / 0.6-3.0m			

### Liquid Limit Test

Number of Shocks	19	25	35
Tin No.			
Tin + Wet soil	38.2	38.3	28.2
Tin + Dry soil	34.6	34.7	25.3
Wt. of Water	3.6	3.65	2.9
Wt. of Tin	28.3	28.2	19.9
Wt. of Dry Soil	6.3	6.5	5.4
Water Content	57	56	54

### Plastic Limit Test

Tin No.		
Tin + Wet soil	34.5	26.6
Tin + Dry soil	33.2	25.1
Wt. of Water	1.3	1.5
Wt. of Tin	28.4	19.8
Wt. of Dry Soil	4.8	5.3
Water Content	27	29

### Natural Water Content

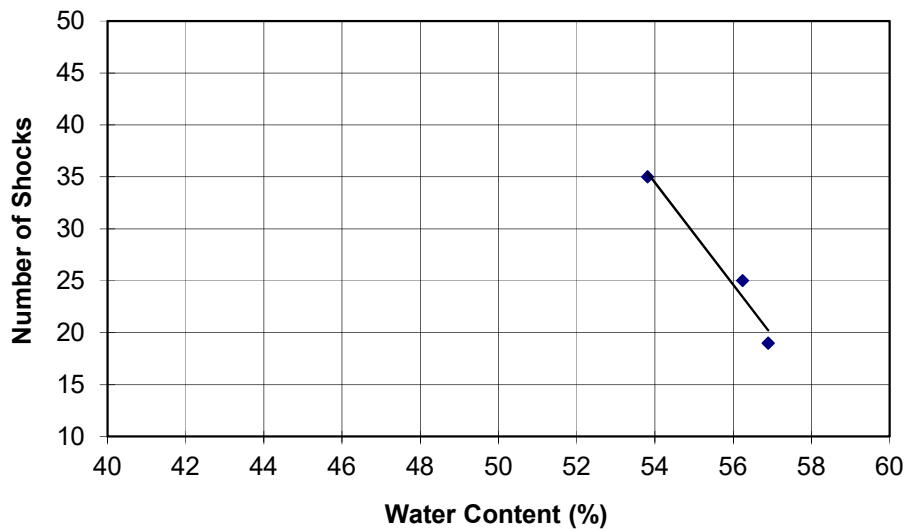
KA
98.4
70.1
28.3
15.6
54.5
51.9

### Control Results

Liquid Limit, ( $W_L$ )	<u>56</u>
Plastic Limit, (WP)	<u>28</u>
Plasticity Index ( $I_p=W_L-W_p$ )	<u>28</u>
Natural Water Content, W	<u>52</u>
Liquidity Index ( $I_L=W-W_p/W_L-W_p$ )	<u>1</u>

Liquid Limit, ( $W_L$ )	<u>31</u>
Plastic Limit, (WP)	<u>19</u>
Plasticity Index ( $I_p=W_L-W_p$ )	<u>12</u>

### Liquid Limit

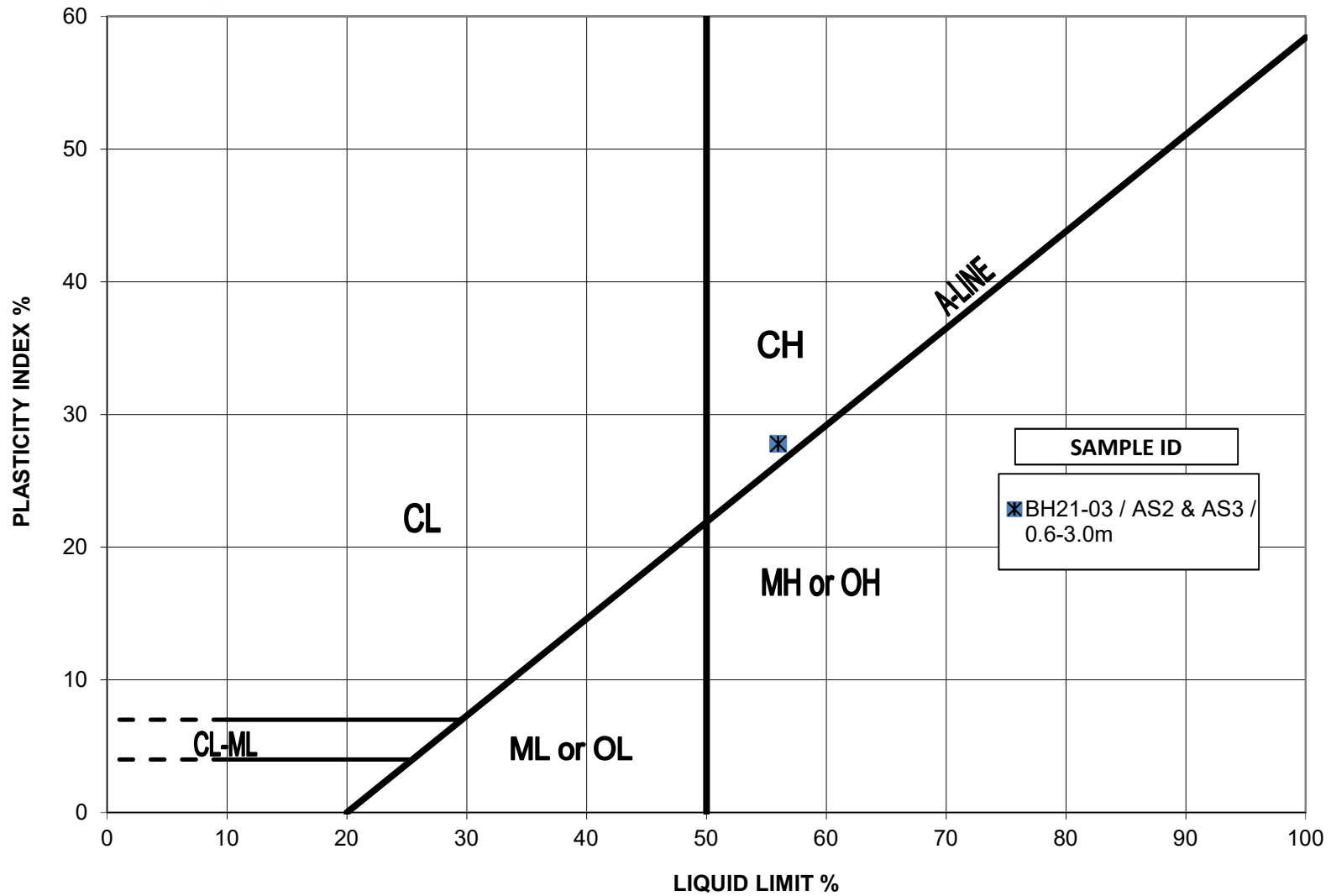




# Atterberg Limits Plasticity Chart

## Loyalist Secondary Plan

211-01353-00





# MOISTURE CONTENTS

**Project Location:** Loyalist Secondary Plan **Tech:** LEK  
**File No.:** 211-01353-00 **Date:** 15-Jun-21

TIN NO.	HL-20	LB6			
BOREHOLE NO.	BH21-02	BH21-03			
SAMPLE & DEPTH	AS2 / 0.6-1.5m	AS4 / 3.0-5.0m			
WT of TIN & WET SOIL (g)	100.8	142.4			
WT of TIN & DRY SOIL (g)	82.9	105.3			
WT of WATER (g)	17.9	37.1			
TARE WT (g)	16.8	15.0			
WT of DRY SOIL (g)	66.1	90.3			
MOISTURE CONTENT	27.1%	41.0%			

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					



# MOISTURE CONTENTS

**Project Location:** Loyalist Secondary Plan **Tech:** LEK  
**File No.:** 211-01353-00 **Date:** 18-Jun-21

TIN NO.	AR8	KA	RE		
BOREHOLE NO.	BH21-03	BH21-03	BH21-03		
SAMPLE & DEPTH		AS2	AS3		
WT of TIN & WET SOIL (g)	98.4	65.9	59.5		
WT of TIN & DRY SOIL (g)	70.1	47.4	43.3		
WT of WATER (g)	28.2	18.6	16.3		
TARE WT (g)	15.6	10.2	10.2		
WT of DRY SOIL (g)	54.5	37.2	33.1		
MOISTURE CONTENT	51.8%	49.9%	49.2%		

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					

TIN NO.					
BOREHOLE NO.					
SAMPLE & DEPTH					
WT of TIN & WET SOIL (g)					
WT of TIN & DRY SOIL (g)					
WT of WATER (g)					
TARE WT (g)					
WT of DRY SOIL (g)					
MOISTURE CONTENT					

# APPENDIX

## C

## GROUNDWATER MEASUREMENTS



**Table 1 Monitoring Well Installation and Groundwater Levels**

Monitoring Well ID		BH21-01	BH21-03	BH21-04	BH21-06	BH21-07	BH21-09	BH21-11	BH21-12	
Installed By		WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP	
Installation Date		1-Jun-21	2-Jun-21	1-Jun-21	1-Jun-21	31-May-21	31-May-21	3-Jun-21	3-Jun-21	
Well Status		Active	Active	Active	Active	Active	Active	Active	Active	
Well Inner Diameter	(mm)	51	51	51	51	51	51	51	51	
Casing Type (Flushmount / Monument)		Monument	Monument	Monument	Monument	Monument	Monument	Monument	Monument	
Top of Pipe Elevation	(masl)	102.84	93.48	93.50	96.92	97.68	91.76	80.98	97.62	
Ground Surface Elevation	(masl)	102.08	92.87	92.89	96.11	96.84	90.74	80.17	96.78	
Bottom of Concrete Seal/Top of Bentonite Seal	(mbgs)	1.22	1.22	1.22	1.22	1.22	0.9	0.9	0.9	
	(masl)	100.9	91.6	91.7	94.9	95.6	89.8	79.3	95.9	
Bottom of Bentonite Seal/Top of Sand Pack	(mbgs)	1.5	1.5	1.5	1.5	1.5	1.2	1.2	1.2	
	(masl)	100.6	91.3	91.4	94.6	95.3	89.5	79.0	95.6	
Top of Well Screen	(mbgs)	1.8	2.0	2.0	1.8	2.0	1.8	1.6	1.7	
	(masl)	100.3	90.9	90.9	94.3	94.9	89.0	78.6	95.1	
Screen Length	(m)	4.6	3.0	4.6	4.6	4.6	4.6	4.6	4.6	
Bottom of Screen	(mbgs)	6.4	5.0	6.6	6.4	6.6	6.3	6.2	6.3	
	(masl)	95.7	87.8	86.3	89.7	90.3	84.4	74.0	90.5	
4-Jun-21	Depth of GW	(mbtop)	7.4	2.0	7.5	7.5	7.3	3.0	1.7	7.2
	GW Elevation	(masl)	95.4	91.4	86.0	89.4	90.4	88.7	79.3	90.4
	GWL above Well Screen		No (dry)	Yes	No (dry)	No (dry)	No (dry)	Yes	Yes	No
15-Jun-21	Depth of GW	(mbtop)	-	2.1	-	-	-	2.5	2.1	N/A
	GW Elevation	(masl)	-	91.4	-	-	-	89.3	78.9	N/A
	GWL above Well Screen		-	Yes	-	-	-	Yes	Yes	Well Locked

Notes:

**Bold:** Parameter exceeds the PWQOs.

**MECP Water Well Records**

**Well Record #**

<b>3700712</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 9/11/1951 DD/MM/YYYY	Elev 81.5 (masl) / Domestic	Easting 365060	Northing 4897282	Water Supply UTM RC 9 unknown UTM	SWL 5.5 (mbgs)	76.1 (masl)		
	Water Found 9.1 (mbgs)	72.4 (masl)	FRESH		Pumping WL 18.2 (LPM)	/		
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 81.5	Color	Soil Descriptions		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						
	Screen Interval (m)							
			0.9	80.6		SHALE /	/	
			16.8	64.8		LIMESTONE /	/	

<b>3700713</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 7/10/1953 DD/MM/YYYY	Elev 81.5 (masl) / Domestic	Easting 365027	Northing 4897255	Water Supply UTM RC 9 unknown UTM	SWL 6.1 (mbgs)	75.4 (masl)		
	Water Found 12.2 (mbgs)	69.3 (masl)	FRESH		Pumping WL 6.1 (mbgs)	75.4 (masl)		
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 81.5	Color	Soil Descriptions		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						
	Screen Interval (m)							
			2.7	78.8		SHALE /	/	
			13.7	67.8		LIMESTONE /	/	

<b>3700714</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 11/15/1953 DD/MM/YYYY	Elev 79.1 (masl) / Domestic	Easting 365252	Northing 4897008	Water Supply UTM RC 9 unknown UTM	SWL 3.4 (mbgs)	75.8 (masl)		
	Water Found 12.2 (mbgs)	66.9 (masl)	FRESH		Pumping WL 9.8 (mbgs)	69.4 (masl)		
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 79.1	Color	Soil Descriptions		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						
	Screen Interval (m)							
			0.9	78.2		TOPSOIL /	MEDIUM SAND /	
			13.7	65.4	BLUE	LIMESTONE /	/	

<b>3700715</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 4/19/1955 DD/MM/YYYY	Elev 81.3 (masl) / Domestic	Easting 365006	Northing 4897249	Water Supply UTM RC 9 unknown UTM	SWL 5.5 (mbgs)	75.8 (masl)		
	Water Found 24.4 (mbgs)	56.9 (masl)	FRESH		Pumping WL 12.2 (mbgs)	69.1 (masl)		
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 81.3	Color	Soil Descriptions		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						
	Screen Interval (m)							
			0.6	80.7		CLAY /	/	
			25.6	55.7		LIMESTONE /	/	

<b>3700716</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 6/29/1956 DD/MM/YYYY	Elev 77.6 (masl) / Domestic	Easting 365162	Northing 4897336	Water Supply UTM RC 9 unknown UTM	SWL 5.5 (mbgs)	72.1 (masl)		
	Water Found 10.4 (mbgs)	67.3 (masl)	FRESH		Pumping WL 15.2 (mbgs)	62.4 (masl)		
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 77.6	Color	Soil Descriptions		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						
	Screen Interval (m)							

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				0.9	76.7		MEDIUM SAND /	STONES	/
				15.2	62.4	BLUE	LIMESTONE /		/
				25.9	51.7	WHITE	LIMESTONE /		/

<b>3700717</b>	<b>Lot 030</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date	6/30/1956	Elev	76.9 (masl)	Easting	365212	Northing	4897322	SWL	11.6 (mbgs)	65.3 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 9	unknown UTM		Pumping WL	25.9 (mbgs)	51.0 (masl)
	Water Found	24.7 (mbgs)	52.2 (masl)	FRESH				Pump Rate	13.6 (LPM)	2 / 0
	Casing Diameter	6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap.	0.95 (LPM/m)	Hour / Minute
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	76.9	Color			Soil Descriptions
	Screen Interval	(m)								
					25.9	51.0	BLUE	LIMESTONE /		/

<b>3700718</b>	<b>Lot 030</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date	8/16/1962	Elev	75.5 (masl)	Easting	365171	Northing	4897301	SWL	4.9 (mbgs)	70.7 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m		Pumping WL	18.9 (mbgs)	56.6 (masl)
	Water Found	14.6 (mbgs)	60.9 (masl)	FRESH				Pump Rate	18.2 (LPM)	1 / 0
	Casing Diameter	6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap.	1.30 (LPM/m)	Hour / Minute
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	75.5	Color			Soil Descriptions
	Screen Interval	(m)								
					0.6	74.9			TOPSOIL /	SHALE /
					6.1	69.4			SHALE /	/
					18.9	56.6	GREY		LIMESTONE /	/

<b>3700721</b>	<b>Lot 031</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date	5/27/1957	Elev	86.4 (masl)	Easting	365260	Northing	4897657	SWL	4.6 (mbgs)	81.8 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 9	unknown UTM		Pumping WL	15.2 (mbgs)	71.2 (masl)
	Water Found	13.7 (mbgs)	72.7 (masl)	FRESH				Pump Rate	31.8 (LPM)	1 / 0
	Casing Diameter	6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap.	2.98 (LPM/m)	Hour / Minute
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	86.4	Color			Soil Descriptions
	Screen Interval	(m)								
					2.4	84.0	BLUE		CLAY /	/
					18.3	68.1	BLUE		LIMESTONE /	/

<b>3700722</b>	<b>Lot 031</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date	10/13/1959	Elev	80.5 (masl)	Easting	365300	Northing	4897422	SWL	6.1 (mbgs)	74.4 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m		Pumping WL	11.6 (mbgs)	68.9 (masl)
	Water Found	11.6 (mbgs)	68.9 (masl)	FRESH				Pump Rate	45.5 (LPM)	1 / 0
	Casing Diameter	6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap.	8.29 (LPM/m)	Hour / Minute
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	80.5	Color			Soil Descriptions
	Screen Interval	(m)								
					11.3	69.2			CLAY /	MEDIUM SAND / BOULDERS
					11.6	68.9			GRAVEL /	/

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<b>3700723</b>		<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date	11/5/1960	Elev	86.2 (masl)	Easting	364833	Northing	4897893	SWL	17.1 (mbgs)	69.1 (masl)
	DD/MM/YYYY		/ Livestock	Water Supply	UTM RC 9	unknown UTM		Pumping WL	36.3 (mbgs)	49.9 (masl)
		Water Found	18.9 (mbgs)	67.3 (masl)	FRESH			Pump Rate	0.0 (LPM)	1 / 0
Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)			Spec. Cap.	0.00 (LPM/m)	Hour / Minute
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	86.2	Color		Soil Descriptions		
Screen Interval	(m)									
				1.2	84.9			SHALE /		/
				36.3	49.9	BLUE		LIMESTONE /		/

<b>3700724</b>		<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date	7/18/1961	Elev	83.1 (masl)	Easting	365347	Northing	4897316	SWL	19.8 (mbgs)	63.2 (masl)
	DD/MM/YYYY		/ Livestock	Water Supply	UTM RC 5	margin of error : 100 m - 300 m		Pumping WL	28.3 (mbgs)	54.7 (masl)
		Water Found	24.7 (mbgs)	58.4 (masl)	FRESH			Pump Rate	13.6 (LPM)	1 / 0
Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)			Spec. Cap.	1.60 (LPM/m)	Hour / Minute
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	83.1	Color		Soil Descriptions		
Screen Interval	(m)									
				0.3	82.8			TOPSOIL /		/
				2.4	80.6			SHALE /	LIMESTONE	/
				29.6	53.5	BLUE		LIMESTONE /		/

<b>3700725</b>		<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date	4/23/1962	Elev	87.3 (masl)	Easting	365398	Northing	4897367	SWL	6.1 (mbgs)	81.3 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m		Pumping WL	31.4 (mbgs)	56.0 (masl)
		Water Found	28.0 (mbgs)	59.3 (masl)	FRESH			Pump Rate	4.5 (LPM)	1 / 0
Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)			Spec. Cap.	0.18 (LPM/m)	Hour / Minute
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	87.3	Color		Soil Descriptions		
Screen Interval	(m)									
				5.8	81.6			SHALE /		/
				31.4	56.0	BLUE		LIMESTONE /		/

<b>3700726</b>		<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date	1/5/1963	Elev	77.7 (masl)	Easting	365199	Northing	4897318	SWL	4.3 (mbgs)	73.5 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m		Pumping WL	20.7 (mbgs)	57.0 (masl)
		Water Found	21.3 (mbgs)	56.4 (masl)	FRESH			Pump Rate	31.8 (LPM)	1 / 30
Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)			Spec. Cap.	1.93 (LPM/m)	Hour / Minute
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	77.7	Color		Soil Descriptions		
Screen Interval	(m)									
				0.3	77.4			CLAY /		/
				5.5	72.2			LIMESTONE /		/
				25.0	52.7	BLUE		LIMESTONE /		/

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<b>3700727</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 5/1/1964 DD/MM/YYYY	Elev 78.4 (masl)	Easting 365147	Northing 4897334	UTM RC 5	margin of error : 100 m - 300 m	SWL 7.9 (mbgs)	70.4 (masl)	
	/ Domestic	Water Supply				Pumping WL 27.4 (mbgs)	50.9 (masl)	
	Water Found 7.0 (mbgs)	71.3 (masl)	FRESH			Pump Rate 9.1 (LPM)	1 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 78.4	Color	Spec. Cap. 0.47 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						Soil Descriptions
	Screen Interval (m)							
			0.3 78.1			TOPSOIL /	/	
			28.7 49.7		BLUE	LIMESTONE /	/	

<b>3700728</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 10/5/1965 DD/MM/YYYY	Elev 81.5 (masl)	Easting 365328	Northing 4897351	UTM RC 5	margin of error : 100 m - 300 m	SWL 12.8 (mbgs)	68.7 (masl)	
	/ Domestic	Water Supply				Pumping WL 22.6 (mbgs)	59.0 (masl)	
	Water Found 22.6 (mbgs)	59.0 (masl)	FRESH			Pump Rate 27.3 (LPM)	1 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 81.5	Color	Spec. Cap. 2.80 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						Soil Descriptions
	Screen Interval (m)							
			2.1 79.4			SHALE /	LIMESTONE /	/
			23.8 57.7		BLUE	LIMESTONE /	/	

<b>3700729</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 4/18/1967 DD/MM/YYYY	Elev 77.4 (masl)	Easting 365376	Northing 4897197	UTM RC 5	margin of error : 100 m - 300 m	SWL 0.9 (mbgs)	76.5 (masl)	
	/ Municipal	Water Supply				Pumping WL 32.0 (mbgs)	45.4 (masl)	
	Water Found 6.7 (mbgs)	70.7 (masl)	FRESH			Pump Rate 477.3 (LPM)	3 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 77.4	Color	Spec. Cap. 15.35 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						Soil Descriptions
	Screen Interval (m)							
			2.4 75.0		BLUE	CLAY /	/	
			15.2 62.2		BLUE	LIMESTONE /	/	

<b>3700730</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 7/2/1953 DD/MM/YYYY	Elev 93.0 (masl)	Easting 366032	Northing 4897043	UTM RC 9	unknown UTM	SWL 12.2 (mbgs)	80.8 (masl)	
	/ Domestic	Water Supply				Pumping WL 15.2 (mbgs)	77.8 (masl)	
	Water Found 38.1 (mbgs)	54.9 (masl)	FRESH			Pump Rate 45.5 (LPM)	1 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 93.0	Color	Spec. Cap. 14.91 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						Soil Descriptions
	Screen Interval (m)							
			4.3 88.7			SHALE /	/	
			41.1 51.9			LIMESTONE /	/	

<b>3700731</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 10/28/1953 DD/MM/YYYY	Elev 82.7 (masl)	Easting 366072	Northing 4896857	UTM RC 9	unknown UTM	SWL 7.6 (mbgs)	75.1 (masl)	
	/ Domestic	Water Supply				Pumping WL 10.7 (mbgs)	72.0 (masl)	
	Water Found 24.4 (mbgs)	58.3 (masl)	FRESH			Pump Rate 45.5 (LPM)	1 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 82.7	Color	Spec. Cap. 14.91 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)						Soil Descriptions
	Screen Interval (m)							
			3.7 79.0			SHALE /	/	

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		26.8		55.9		LIMESTONE /		/	
<b>3700732</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 4/13/1954	Elev 93.6 (masl)	Easting 365995	Northing 4897045	SWL 24.4	(mbgs)	69.2	(masl)		
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9 unknown UTM	Pumping WL 35.1	(mbgs)	58.6	(masl)		
Water Found 41.1 (mbgs)	52.5 (masl)	FRESH		Pump Rate 36.4	(LPM)	2 / 0			
Spec. Cap. 3.41	(LPM/m)	Hour / Minute							
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 93.6	Color	Soil Descriptions				
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)			1.2	92.4	BLUE	CLAY /	/		
		41.8	51.9	BLUE	LIMESTONE /	/			

<b>3700733</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 6/28/1954	Elev 87.2 (masl)	Easting 365598	Northing 4897112	SWL 24.4	(mbgs)	62.8	(masl)		
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9 unknown UTM	Pumping WL 25.9	(mbgs)	61.2	(masl)		
Water Found 38.1 (mbgs)	49.1 (masl)	FRESH		Pump Rate 77.3	(LPM)	2 / 0			
Spec. Cap. 50.71	(LPM/m)	Hour / Minute							
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 87.2	Color	Soil Descriptions				
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)			0.9	86.2		CLAY /	/		
		39.3	47.8	BLUE	LIMESTONE /	/			

<b>3700734</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 10/16/1956	Elev 90.6 (masl)	Easting 365608	Northing 4897831	SWL 9.1	(mbgs)	81.5	(masl)		
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9 unknown UTM	Pumping WL 36.0	(mbgs)	54.6	(masl)		
Water Found 18.9 (mbgs)	71.7 (masl)	FRESH		Pump Rate 9.1	(LPM)	1 / 30			
Spec. Cap. 0.34	(LPM/m)	Hour / Minute							
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 90.6	Color	Soil Descriptions				
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)			3.4	87.2	BLUE	CLAY /	/		
		36.0	54.6	BLUE	LIMESTONE /	/			

<b>3700735</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 5/30/1957	Elev 89.7 (masl)	Easting 365523	Northing 4897197	SWL 12.2	(mbgs)	77.5	(masl)		
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9 unknown UTM	Pumping WL 18.3	(mbgs)	71.4	(masl)		
Water Found 37.5 (mbgs)	52.2 (masl)	FRESH		Pump Rate 22.7	(LPM)	1 / 0			
Spec. Cap. 3.73	(LPM/m)	Hour / Minute							
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 89.7	Color	Soil Descriptions				
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)			0.3	89.4		TOPSOIL /	/		
		38.1	51.6	BLUE	LIMESTONE /	/			

<b>3700736</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 1/15/1958	Elev 96.5 (masl)	Easting 365895	Northing 4897133	SWL 6.1	(mbgs)	90.4	(masl)		
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 5 margin of error : 100 m - 300 m	Pumping WL 30.2	(mbgs)	66.3	(masl)		
Water Found 14.6 (mbgs)	81.9 (masl)	FRESH		Pump Rate 9.1	(LPM)	1 / 0			
Spec. Cap. 0.38	(LPM/m)	Hour / Minute							
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 96.5	Color	Soil Descriptions				
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)									

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				0.9	95.6		LIMESTONE /	/
				30.2	66.3	GREY	LIMESTONE /	/

<b>3700737</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	4/27/1961	Elev	86.3 (masl)	Easting	365539	Northing	4897139	SWL	16.5 (mbgs)	69.8 (masl)	
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m			Pumping WL	43.3 (mbgs)	43.0 (masl)
		Water Found	23.8 (mbgs)	62.5 (masl)	FRESH			Pump Rate	4.5 (LPM)	1 / 0	
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	0.17 (LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	86.3	Color		Soil Descriptions	
		Screen Interval	(m)								
						1.5	84.7	BLUE	CLAY /	/	
						5.2	81.1		SHALE /	/	
						43.3	43.0	BLUE	LIMESTONE /	/	

<b>3700738</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	9/22/1962	Elev	90.8 (masl)	Easting	366023	Northing	4896994	SWL	14.6 (mbgs)	76.2 (masl)	
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m			Pumping WL	36.6 (mbgs)	54.2 (masl)
		Water Found	36.9 (mbgs)	53.9 (masl)	SULPHUR			Pump Rate	22.7 (LPM)	2 / 0	
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	1.04 (LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	90.8	Color		Soil Descriptions	
		Screen Interval	(m)								
						0.3	90.5		TOPSOIL /	/	
						39.0	51.8	BLUE	LIMESTONE /	/	

<b>3700739</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	12/20/1962	Elev	90.3 (masl)	Easting	366021	Northing	4896986	SWL	18.3 (mbgs)	72.0 (masl)	
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m			Pumping WL	39.6 (mbgs)	50.6 (masl)
		Water Found	42.7 (mbgs)	47.6 (masl)	SULPHUR			Pump Rate	22.7 (LPM)	2 / 0	
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	1.07 (LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	90.3	Color		Soil Descriptions	
		Screen Interval	(m)								
						1.2	89.1		CLAY /	/	
						44.2	46.1	BLUE	LIMESTONE /	/	

<b>3700740</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	8/8/1963	Elev	90.3 (masl)	Easting	365557	Northing	4897477	SWL	9.1 (mbgs)	81.2 (masl)	
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m			Pumping WL	32.6 (mbgs)	57.7 (masl)
		Water Found	21.3 (mbgs)	69.0 (masl)	SULPHUR			Pump Rate	4.5 (LPM)	1 / 0	
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	0.19 (LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	90.3	Color		Soil Descriptions	
		Screen Interval	(m)								
						3.0	87.3		SHALE /	LIMESTONE /	
						32.6	57.7	BLUE	LIMESTONE /	/	

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<b>3700741</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 8/27/1964 DD/MM/YYYY	Elev 78.4 (masl)	Easting 366219	Northing 4896677	UTM RC 5	margin of error : 100 m - 300 m	SWL 6.1 (mbgs)	72.3 (masl)	
	/ Municipal	Water Supply	FRESH			Pumping WL 29.0 (mbgs)	49.4 (masl)	
	Water Found 17.7 (mbgs)	60.7 (masl)				Pump Rate 136.4 (LPM)	2 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 78.4	Color	Spec. Cap. 5.97 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)					Soil Descriptions	
	Screen Interval (m)							
			2.4	76.0			SHALE /	LIMESTONE /
			36.6	41.8	BLUE		LIMESTONE /	/

<b>3700742</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 2/26/1964 DD/MM/YYYY	Elev 81.9 (masl)	Easting 365327	Northing 4897326	UTM RC 5	margin of error : 100 m - 300 m	SWL 9.1 (mbgs)	72.7 (masl)	
	/ Domestic	Water Supply	FRESH			Pumping WL 18.3 (mbgs)	63.6 (masl)	
	Water Found 20.7 (mbgs)	61.1 (masl)				Pump Rate 22.7 (LPM)	1 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 81.9	Color	Spec. Cap. 2.49 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)					Soil Descriptions	
	Screen Interval (m)							
			0.6	81.3			TOPSOIL /	/
			3.7	78.2			SHALE /	LIMESTONE /
			22.3	59.6	BLUE		LIMESTONE /	/

<b>3700743</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 8/10/1964 DD/MM/YYYY	Elev 86.1 (masl)	Easting 365576	Northing 4897449	UTM RC 5	margin of error : 100 m - 300 m	SWL 2.7 (mbgs)	83.4 (masl)	
	/ Municipal	Water Supply	FRESH			Pumping WL 7.6 (mbgs)	78.5 (masl)	
	Water Found 12.8 (mbgs)	73.3 (masl)				Pump Rate 113.7 (LPM)	2 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 86.1	Color	Spec. Cap. 23.30 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)					Soil Descriptions	
	Screen Interval (m)							
			1.5	84.6	BLUE		CLAY /	/
			14.0	72.1	BLUE		LIMESTONE /	/

<b>3700744</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 8/12/1964 DD/MM/YYYY	Elev 86.1 (masl)	Easting 365579	Northing 4897451	UTM RC 5	margin of error : 100 m - 300 m	SWL 2.4 (mbgs)	83.6 (masl)	
	/ Municipal	Water Supply	FRESH			Pumping WL 8.5 (mbgs)	77.5 (masl)	
	Water Found 13.4 (mbgs)	72.6 (masl)				Pump Rate 113.7 (LPM)	2 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 86.1	Color	Spec. Cap. 18.64 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)					Soil Descriptions	
	Screen Interval (m)							
			2.7	83.3	BLUE		CLAY /	/
			14.0	72.0	BLUE		LIMESTONE /	/

<b>3700745</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 12/16/1949 DD/MM/YYYY	Elev 91.4 (masl)	Easting 366502	Northing 4896994	UTM RC 9	unknown UTM	SWL 4.9 (mbgs)	86.5 (masl)	
	/ Domestic	Water Supply	FRESH			Pumping WL 9.8 (mbgs)	81.7 (masl)	
	Water Found 14.6 (mbgs)	76.8 (masl)				Pump Rate 45.5 (LPM)	3 / 0	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 91.4	Color	Spec. Cap. 9.32 (LPM/m)	Hour / Minute	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)					Soil Descriptions	
	Screen Interval (m)							



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						12.2	79.2	BLUE	CLAY /	MEDIUM SAND	/ GRAVEL	
						15.8	75.6	BLUE	LIMESTONE /		/	
<b>3700746</b>	<b>Lot 033</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	1/15/1954	Elev	90.1 (masl)	Easting	366443	Northing	4896943		SWL	9.1	(mbgs)	80.9 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC	9	unknown UTM		Pumping WL	42.7	(mbgs)	47.4 (masl)
		Water Found	39.6 (mbgs)	50.5 (masl)	FRESH				Pump Rate	31.8	(LPM)	1 / 0
									Spec. Cap.	0.95	(LPM/m)	Hour / Minute
	Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)						
					0.0	90.1	Color				Soil Descriptions	
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)								
	Screen Interval	(m)										
					1.2	88.9			CLAY /		/	
					42.7	47.4	BLUE		LIMESTONE /		/	

<b>3700747</b>	<b>Lot 033</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	5/20/1954	Elev	77.8 (masl)	Easting	366302	Northing	4896847		SWL	7.3	(mbgs)	70.5 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC	9	unknown UTM		Pumping WL	33.8	(mbgs)	44.0 (masl)
		Water Found	32.9 (mbgs)	44.9 (masl)	FRESH				Pump Rate	31.8	(LPM)	/
									Spec. Cap.	1.20	(LPM/m)	Hour / Minute
	Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)						
					0.0	77.8	Color				Soil Descriptions	
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)								
	Screen Interval	(m)										
					0.3	77.5			TOPSOIL /		/	
					4.6	73.3			SHALE /		/	
					33.8	44.0			LIMESTONE /		/	

<b>3700748</b>	<b>Lot 033</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	9/23/1961	Elev	93.0 (masl)	Easting	365770	Northing	4897786		SWL	12.2	(mbgs)	80.8 (masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC	5	margin of error : 100 m - 300 m		Pumping WL	30.5	(mbgs)	62.5 (masl)
		Water Found	35.1 (mbgs)	58.0 (masl)	FRESH				Pump Rate	22.7	(LPM)	1 / 0
									Spec. Cap.	1.24	(LPM/m)	Hour / Minute
	Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)						
					0.0	93.0	Color				Soil Descriptions	
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)								
	Screen Interval	(m)										
					0.3	92.7			TOPSOIL /		/	
					37.5	55.5	BLUE		LIMESTONE /		/	

<b>3700749</b>	<b>Lot 033</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	5/28/1962	Elev	93.9 (masl)	Easting	365762	Northing	4897759		SWL	9.1	(mbgs)	84.8 (masl)
	DD/MM/YYYY		/ Livestock	Water Supply	UTM RC	5	margin of error : 100 m - 300 m		Pumping WL	33.5	(mbgs)	60.4 (masl)
		Water Found	33.5 (mbgs)	60.4 (masl)	FRESH				Pump Rate	18.2	(LPM)	1 / 0
									Spec. Cap.	0.75	(LPM/m)	Hour / Minute
	Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)						
					0.0	93.9	Color				Soil Descriptions	
	Top of Screen	(mbgs)	Bottom of Screen	(mbgs)								
	Screen Interval	(m)										
					0.9	93.0	BLUE		CLAY /		/	
					35.4	58.5	BLUE		LIMESTONE /		/	

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<b>3700750</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 8/5/1964 DD/MM/YYYY	Elev 87.1 (masl) / Domestic	Easting 366129	Northing 4896918	UTM RC 5	margin of error : 100 m - 300 m	SWL 2.7 (mbgs)	84.3 (masl)	
	Water Found 21.0 (mbgs)	66.0 (masl)	FRESH			Pumping WL 22.3 (mbgs)	64.8 (masl)	
						Pump Rate 90.9 (LPM)	1 / 0	
						Spec. Cap. 4.66 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 87.1	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.9	86.1			CLAY /	/	
		5.2	81.9			SHALE /	/	
		22.3	64.8	BLUE		LIMESTONE /	/	

<b>3700751</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 12/2/1957 DD/MM/YYYY	Elev 78.3 (masl) / Domestic	Easting 366700	Northing 4896827	UTM RC 9	unknown UTM	SWL 4.9 (mbgs)	73.4 (masl)	
	Water Found 10.7 (mbgs)	67.6 (masl)	FRESH			Pumping WL 10.7 (mbgs)	67.6 (masl)	
						Pump Rate 45.5 (LPM)	1 / 0	
						Spec. Cap. 7.85 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 78.3	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		4.9	73.4	GREY		SHALE /	LIMESTONE /	
		12.5	65.8	GREY		LIMESTONE /	/	

<b>3700752</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 12/31/1957 DD/MM/YYYY	Elev 82.1 (masl) Domestic / Livestock	Easting 366729	Northing 4896891	UTM RC 9	unknown UTM	SWL 6.7 (mbgs)	75.4 (masl)	
	Water Found 27.4 (mbgs)	54.7 (masl)	FRESH			Pumping WL 28.7 (mbgs)	53.5 (masl)	
						Pump Rate 9.1 (LPM)	1 / 0	
						Spec. Cap. 0.41 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 82.1	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.9	81.2			CLAY /	/	
		3.7	78.5			SHALE /	LIMESTONE /	
		28.7	53.5	GREY		LIMESTONE /	/	

<b>3700753</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 10/8/1958 DD/MM/YYYY	Elev 82.5 (masl) /	Easting 366823	Northing 4896929	UTM RC 5	margin of error : 100 m - 300 m	SWL (mbgs)	(masl)	
	Water Found (mbgs)	Abandoned-Supply (masl)	FRESH			Pumping WL (mbgs)	(masl)	
						Pump Rate (LPM)	/	
						Spec. Cap. (LPM/m)	Hour / Minute	
Casing Diameter 8 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 82.5	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		13.7	68.8			LIMESTONE /	/	

<b>3700754</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 4/23/1960 DD/MM/YYYY	Elev 82.7 (masl) / Livestock	Easting 366780	Northing 4896912	UTM RC 5	margin of error : 100 m - 300 m	SWL 8.5 (mbgs)	74.2 (masl)	
	Water Found 29.0 (mbgs)	53.8 (masl)	FRESH			Pumping WL 25.9 (mbgs)	56.8 (masl)	
						Pump Rate 22.7 (LPM)	1 / 0	
						Spec. Cap. 1.31 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 82.7	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								

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						3.4	79.4		SHALE /	LIMESTONE /
						30.5	52.3	BLUE	LIMESTONE /	/

<b>3700755</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	5/20/1960	Elev	83.6 (masl)	Easting	366707	Northing	4896910		SWL	(mbgs)	(masl)
	DD/MM/YYYY	/		Abandoned-Supply		UTM RC	5	margin of error : 100 m - 300 m	Pumping WL	(mbgs)	(masl)
		Water Found	(mbgs)	(masl)					Pump Rate	(LPM)	/
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)		Spec. Cap.	(LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	83.6	Color			Soil Descriptions
		Screen Interval	(m)								
						0.3	83.2			TOPSOIL /	/
						50.3	33.3	BLUE		LIMESTONE /	/

<b>3700756</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	9/13/1961	Elev	86.4 (masl)	Easting	366570	Northing	4896919		SWL	6.1 (mbgs)	80.3 (masl)
	DD/MM/YYYY	/	Domestic	Water Supply		UTM RC	5	margin of error : 100 m - 300 m	Pumping WL	6.7 (mbgs)	79.7 (masl)
		Water Found	3.7 (mbgs)	82.7 (masl)	FRESH				Pump Rate	4.5 (LPM)	0 / 15
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)		Spec. Cap.	7.46 (LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	86.4	Color			Soil Descriptions
		Screen Interval	(m)								
						0.6	85.8			TOPSOIL /	/
						7.3	79.1	GREY		LIMESTONE /	/

<b>3700757</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	9/11/1963	Elev	85.6 (masl)	Easting	366602	Northing	4896915		SWL	11.9 (mbgs)	73.7 (masl)
	DD/MM/YYYY	/	Domestic	Water Supply		UTM RC	5	margin of error : 100 m - 300 m	Pumping WL	(mbgs)	(masl)
		Water Found	10.7 (mbgs)	74.9 (masl)	FRESH				Pump Rate	(LPM)	/
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)		Spec. Cap.	(LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	85.6	Color			Soil Descriptions
		Screen Interval	(m)								
						3.0	82.5			SHALE /	LIMESTONE /
						28.3	57.2	GREY		LIMESTONE /	/

<b>3700758</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	5/1/1964	Elev	83.3 (masl)	Easting	366880	Northing	4896992		SWL	9.4 (mbgs)	73.9 (masl)
	DD/MM/YYYY	/	Domestic	Water Supply		UTM RC	5	margin of error : 100 m - 300 m	Pumping WL	11.3 (mbgs)	72.1 (masl)
		Water Found	11.6 (mbgs)	71.8 (masl)	FRESH				Pump Rate	45.5 (LPM)	1 / 0
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)		Spec. Cap.	24.86 (LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	83.3	Color			Soil Descriptions
		Screen Interval	(m)								
						1.5	81.8	BLUE		CLAY /	/
						7.6	75.7			SHALE /	LIMESTONE /
						13.1	70.2	BLUE		LIMESTONE /	/

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<b>3700759</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 4/14/1954 DD/MM/YYYY	Elev 89.6 (masl) / Domestic	Easting 366897	Northing 4897197	UTM RC 9	unknown UTM	SWL 41.1 (mbgs)	48.4 (masl)		
	Water Found 41.1 (mbgs)	Abandoned-Quality 48.4 (masl)	SALTY			Pumping WL (mbgs)			
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 89.6	Color	Pump Rate (LPM)	/		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. (LPM/m)	Hour / Minute		
	Screen Interval (m)		45.1	44.5	BLUE	LIMESTONE /	/		

<b>3700760</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 5/18/1959 DD/MM/YYYY	Elev 83.4 (masl) / Domestic	Easting 366983	Northing 4897071	UTM RC 5	margin of error : 100 m - 300 m	SWL 7.3 (mbgs)	76.1 (masl)		
	Water Found 9.8 (mbgs)	Water Supply 73.7 (masl)	FRESH			Pumping WL (mbgs)	56.3 (masl)		
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 83.4	Color	Pump Rate (LPM)	1 / 0		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. (LPM/m)	Hour / Minute		
	Screen Interval (m)		5.5	77.9					
			27.1	56.3		SHALE /	/		
						LIMESTONE /	/		

<b>3700761</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing?			
Date 8/8/1959 DD/MM/YYYY	Elev 96.5 (masl) /	Easting 366310	Northing 4898549	UTM RC 5	margin of error : 100 m - 300 m	SWL (mbgs)	(masl)		
	Water Found (mbgs)	Abandoned-Supply (masl)				Pumping WL (mbgs)	(masl)		
	Casing Diameter 6 inch	Casing Material:	Depth (m) 0.0	Elev (masl) 96.5	Color	Pump Rate (LPM)	/		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. (LPM/m)	Hour / Minute		
	Screen Interval (m)		0.9	95.6					
			40.8	55.6		CLAY /	/		
						LIMESTONE /	/		

<b>3700762</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 6/29/1960 DD/MM/YYYY	Elev 80.8 (masl) / Domestic	Easting 367258	Northing 4897118	UTM RC 5	margin of error : 100 m - 300 m	SWL 4.3 (mbgs)	76.5 (masl)		
	Water Found 12.2 (mbgs)	Water Supply 68.6 (masl)	FRESH			Pumping WL (mbgs)	65.9 (masl)		
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 80.8	Color	Pump Rate (LPM)	1 / 0		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. (LPM/m)	Hour / Minute		
	Screen Interval (m)		2.4	78.4					
			14.9	65.9	BLUE	SHALE /	LIMESTONE /	/	/
						LIMESTONE /	/		

<b>3700764</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date 9/12/1963 DD/MM/YYYY	Elev 84.2 (masl) / Domestic	Easting 366977	Northing 4897099	UTM RC 5	margin of error : 100 m - 300 m	SWL 15.2 (mbgs)	69.0 (masl)		
	Water Found 28.3 (mbgs)	Water Supply 55.9 (masl)	SULPHUR			Pumping WL (mbgs)	55.3 (masl)		
	Casing Diameter 6 inch	Casing Material:	Depth (m) 0.0	Elev (masl) 84.2	Color	Pump Rate (LPM)	1 / 0		
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. (LPM/m)	Hour / Minute		
	Screen Interval (m)		24.7	59.6					
			29.0	55.3	BLUE	PREV. DRILLED /	/		
						LIMESTONE /	/		

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<b>3700765</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 8/3/1968 DD/MM/YYYY	Elev 95.0 (masl) / Domestic	Easting 366831	Northing 4897324	UTM RC 5	margin of error : 100 m - 300 m	SWL 3.7 (mbgs)	91.3 (masl)	
	Water Found 30.5 (mbgs)	Water Supply 64.5 (masl)	FRESH			Pumping WL 33.5 (mbgs)	61.5 (masl)	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 95.0	Color	Pump Rate 0.0 (LPM)	0 / 30	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. 0.00 (LPM/m)	Hour / Minute	
	Screen Interval (m)							
			2.1	92.9				TOPSOIL / /
			33.5	61.5	GREY			LIMESTONE / /

<b>3702585</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 10/7/1968 DD/MM/YYYY	Elev 84.6 (masl) / Domestic	Easting 366840	Northing 4897002	UTM RC 4	margin of error : 30 m - 100 m	SWL 19.8 (mbgs)	64.7 (masl)	
	Water Found 18.3 (mbgs)	Water Supply 66.3 (masl)	FRESH			Pumping WL 38.1 (mbgs)	46.5 (masl)	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 84.6	Color	Pump Rate 0.0 (LPM)	0 / 20	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. 0.00 (LPM/m)	Hour / Minute	
	Screen Interval (m)							
			2.4	82.1				TOPSOIL / /
			38.1	46.5	GREY			LIMESTONE / /

<b>3702764</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 12/23/1969 DD/MM/YYYY	Elev 76.0 (masl) / Domestic	Easting 365150	Northing 4897352	UTM RC 4	margin of error : 30 m - 100 m	SWL 2.1 (mbgs)	73.9 (masl)	
	Water Found 8.2 (mbgs)	Water Supply 67.8 (masl)	FRESH			Pumping WL 9.1 (mbgs)	66.9 (masl)	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 76.0	Color	Pump Rate 13.6 (LPM)	2 / 0	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. 1.95 (LPM/m)	Hour / Minute	
	Screen Interval (m)							
			2.7	73.3	BLUE			CLAY / /
			9.4	66.6	BLUE			LIMESTONE / /

<b>3702906</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 1/29/1970 DD/MM/YYYY	Elev 79.4 (masl) / Domestic	Easting 366660	Northing 4896822	UTM RC 4	margin of error : 30 m - 100 m	SWL 3.7 (mbgs)	75.7 (masl)	
	Water Found 12.8 (mbgs)	Water Supply 66.6 (masl)	FRESH			Pumping WL 5.2 (mbgs)	74.2 (masl)	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 79.4	Color	Pump Rate 136.4 (LPM)	1 / 0	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. 89.49 (LPM/m)	Hour / Minute	
	Screen Interval (m)							
			0.6	78.8	BROWN			TOPSOIL / /
			13.7	65.7	BLUE			LIMESTONE / /

<b>3702917</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 8/20/1970 DD/MM/YYYY	Elev 90.3 (masl) / Domestic	Easting 365710	Northing 4897602	UTM RC 4	margin of error : 30 m - 100 m	SWL 5.2 (mbgs)	85.2 (masl)	
	Water Found 13.1 (mbgs)	Water Supply 77.2 (masl)	FRESH			Pumping WL 12.2 (mbgs)	78.2 (masl)	
	Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 90.3	Color	Pump Rate 31.8 (LPM)	2 / 0	
	Top of Screen (mbgs)	Bottom of Screen (mbgs)				Spec. Cap. 4.54 (LPM/m)	Hour / Minute	
	Screen Interval (m)							
			1.2	89.1	BROWN			TOPSOIL / /

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		14.3	76.0	BLUE	LIMESTONE /	/
<b>3702941</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>			Flowing? N	
Date 8/11/1969	Elev 93.6 (masl)	Easting 366150	Northing 4898672	SWL 3.0	(mbgs)	90.5 (masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 4 margin of error : 30 m - 100 m	Pumping WL 6.7	(mbgs)	86.9 (masl)
Water Found 6.1 (mbgs)	87.5 (masl)	FRESH		Pump Rate 9.1	(LPM)	0 / 20
				Spec. Cap. 2.49	(LPM/m)	Hour / Minute
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 93.6	Color	Soil Descriptions	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					
Screen Interval (m)						
		1.8	91.8		TOPSOIL /	/
		7.3	86.3	GREY	LIMESTONE /	/

<b>3703096</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>			Flowing? N	
Date 11/23/1970	Elev 78.6 (masl)	Easting 365120	Northing 4897302	SWL 5.5	(mbgs)	73.1 (masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 4 margin of error : 30 m - 100 m	Pumping WL 25.0	(mbgs)	53.6 (masl)
Water Found 21.9 (mbgs)	56.7 (masl)	FRESH		Pump Rate 18.2	(LPM)	2 / 0
				Spec. Cap. 0.93	(LPM/m)	Hour / Minute
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 78.6	Color	Soil Descriptions	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					
Screen Interval (m)						
		0.3	78.3	BROWN	TOPSOIL /	/
		26.8	51.8	BLUE	LIMESTONE /	/

<b>3703697</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>			Flowing? N	
Date 10/30/1973	Elev 82.8 (masl)	Easting 364930	Northing 4897202	SWL 2.1	(mbgs)	80.6 (masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 4 margin of error : 30 m - 100 m	Pumping WL 2.1	(mbgs)	80.6 (masl)
Water Found 5.5 (mbgs)	77.3 (masl)	FRESH		Pump Rate 113.7	(LPM)	1 / 0
				Spec. Cap. 9,999.99	(LPM/m)	Hour / Minute
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 82.8	Color	Soil Descriptions	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					
Screen Interval (m)						
		1.2	81.5	BROWN	CLAY /	SHALE /
		13.4	69.3	BLUE	LIMESTONE /	/

<b>3704159</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>			Flowing? N	
Date 5/2/1974	Elev 93.2 (masl)	Easting 366084	Northing 4897048	SWL 14.6	(mbgs)	78.6 (masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 4 margin of error : 30 m - 100 m	Pumping WL 39.9	(mbgs)	53.3 (masl)
Water Found 39.0 (mbgs)	54.2 (masl)	MINERIAL		Pump Rate 27.3	(LPM)	2 / 0
				Spec. Cap. 1.08	(LPM/m)	Hour / Minute
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 93.2	Color	Soil Descriptions	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					
Screen Interval (m)						
		0.6	92.6	BROWN	TOPSOIL /	/
		1.2	92.0	GREY	SHALE /	/
		39.9	53.3	GREY	LIMESTONE /	/

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<b>3704396</b>		<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date	10/3/1975	Elev	90.2 (masl)	Easting	365490	Northing	4897422	SWL	13.7 (mbgs)	76.5 (masl)
	DD/MM/YYYY	/	Domestic	Water Supply	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	45.7 (mbgs)	44.5 (masl)
		Water Found	48.8 (mbgs)	41.5 (masl)	SULPHUR			Pump Rate	45.5 (LPM)	2 / 0
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	1.42 (LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	90.2	Color		Soil Descriptions
		Screen Interval	(m)							
						0.3	89.9	BROWN	FILL /	/
						2.4	87.8	BLUE	LIMESTONE /	SHALE /
						50.3	39.9	BLUE	LIMESTONE /	/

<b>3704708</b>		<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing?			
Date	6/18/1976	Elev	101.4 (masl)	Easting	366667	Northing	4897583	SWL	(mbgs)	(masl)
	DD/MM/YYYY	/	Abandoned-Supply	Abandoned-Quality	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	(mbgs)	(masl)
		Water Found	(mbgs)	(masl)				Pump Rate	(LPM)	/
		Casing Diameter	6 inch	Casing Material:		Depth (m)	Elev (masl)	Spec. Cap.	(LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	101.4	Color		Soil Descriptions
		Screen Interval	(m)							
						0.3	101.0	BROWN	TOPSOIL /	/
						53.3	48.0	BLUE	LIMESTONE /	/

<b>3704977</b>		<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N			
Date	7/4/1977	Elev	87.9 (masl)	Easting	365650	Northing	4897532	SWL	15.2 (mbgs)	72.6 (masl)
	DD/MM/YYYY	/	Abandoned-Quality	Abandoned-Quality	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	47.2 (mbgs)	40.6 (masl)
		Water Found	53.3 (mbgs)	34.5 (masl)	SALTY			Pump Rate	136.4 (LPM)	2 / 0
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	4.26 (LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	87.9	Color		Soil Descriptions
		Screen Interval	(m)							
						0.6	87.3	BROWN	TOPSOIL /	/
						54.9	33.0	BLUE	LIMESTONE /	/

<b>3704983</b>		<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing?			
Date	7/11/1977	Elev	95.3 (masl)	Easting	366310	Northing	4898832	SWL	(mbgs)	(masl)
	DD/MM/YYYY	/	Abandoned-Supply	Abandoned-Quality	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	(mbgs)	(masl)
		Water Found	(mbgs)	(masl)				Pump Rate	(LPM)	/
		Casing Diameter	6 inch	Casing Material:	OPEN HOLE	Depth (m)	Elev (masl)	Spec. Cap.	(LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	95.3	Color		Soil Descriptions
		Screen Interval	(m)							
						1.2	94.1		TOPSOIL /	/
						22.9	72.5		LIMESTONE /	/

<b>3704984</b>		<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing?			
Date	7/14/1977	Elev	93.0 (masl)	Easting	366270	Northing	4898752	SWL	(mbgs)	(masl)
	DD/MM/YYYY	/	Abandoned-Supply	Abandoned-Quality	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	(mbgs)	(masl)
		Water Found	(mbgs)	(masl)				Pump Rate	(LPM)	/
		Casing Diameter	6 inch	Casing Material:		Depth (m)	Elev (masl)	Spec. Cap.	(LPM/m)	Hour / Minute
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	93.0	Color		Soil Descriptions
		Screen Interval	(m)							

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				0.9	92.1		TOPSOIL /	/
				25.9	67.1		LIMESTONE /	/

<b>3704985</b>	<b>Lot 035</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N		
Date 7/18/1977 DD/MM/YYYY	Elev 93.3 (masl)	Easting 366310	Northing 4898782	UTM RC 4	margin of error : 30 m - 100 m	SWL 4.6 (mbgs)	88.8 (masl)		
	/ Domestic	Water Supply				Pumping WL 30.5 (mbgs)	62.9 (masl)		
	Water Found 15.2 (mbgs)	78.1 (masl)	SULPHUR			Pump Rate 9.1 (LPM)	0 / 30		
						Spec. Cap. 0.35 (LPM/m)	Hour / Minute		
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 93.3	Color		Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)									
				0.9	92.4		TOPSOIL /	/	
				30.5	62.9		LIMESTONE /	/	

<b>3704986</b>	<b>Lot 035</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing?		
Date 7/30/1977 DD/MM/YYYY	Elev 94.4 (masl)	Easting 366310	Northing 4898812	UTM RC 4	margin of error : 30 m - 100 m	SWL (mbgs)	(masl)		
	/	Abandoned-Supply				Pumping WL (mbgs)	(masl)		
	Water Found (mbgs)	(masl)				Pump Rate (LPM)	/		
						Spec. Cap. (LPM/m)	Hour / Minute		
Casing Diameter 6 inch	Casing Material:	Depth (m) 0.0	Elev (masl) 94.4	Color		Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)									
				0.9	93.5		TOPSOIL /	/	
				42.7	51.8		LIMESTONE /	/	

<b>3705126</b>	<b>Lot 032</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N		
Date 8/12/1977 DD/MM/YYYY	Elev 84.1 (masl)	Easting 365690	Northing 4897502	UTM RC 4	margin of error : 30 m - 100 m	SWL 2.1 (mbgs)	82.0 (masl)		
	/ Domestic	Water Supply				Pumping WL 21.6 (mbgs)	62.5 (masl)		
	Water Found 20.7 (mbgs)	63.4 (masl)	FRESH			Pump Rate 18.2 (LPM)	2 / 0		
						Spec. Cap. 0.93 (LPM/m)	Hour / Minute		
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 84.1	Color		Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)									
				2.7	81.4	BLUE	CLAY /	/	
				3.7	80.5	BROWN	SAND /	/	
				23.2	61.0	BLUE	LIMESTONE /	/	

<b>3705134</b>	<b>Lot 030</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing? N		
Date 11/22/1977 DD/MM/YYYY	Elev 79.0 (masl)	Easting 365030	Northing 4897222	UTM RC 4	margin of error : 30 m - 100 m	SWL 5.2 (mbgs)	73.8 (masl)		
	/ Domestic	Water Supply				Pumping WL 28.0 (mbgs)	51.0 (masl)		
	Water Found 20.4 (mbgs)	58.6 (masl)	FRESH			Pump Rate 9.1 (LPM)	2 / 0		
						Spec. Cap. 0.40 (LPM/m)	Hour / Minute		
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 79.0	Color		Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)								
Screen Interval (m)									
				0.3	78.7		TOPSOIL /	/	
				0.9	78.1		LIMESTONE /	FRACTURED /	
				29.0	50.1	BLUE	LIMESTONE /	/	



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<b>3705212</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 5/3/1978 DD/MM/YYYY	Elev 73.8 (masl) / Domestic	Easting 366929	Northing 4896921	UTM RC 4	margin of error : 30 m - 100 m	SWL 2.7 (mbgs)	71.0 (masl)	
Water Found 8.2 (mbgs)	65.5 (masl)	FRESH				Pumping WL 7.9 (mbgs)	65.8 (masl)	
						Pump Rate 68.2 (LPM)	2 / 0	
						Spec. Cap. 13.16 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 73.8	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.6	73.2	BROWN		TOPSOIL /	/	
		9.1	64.6	BLUE		LIMESTONE /	/	

<b>3705241</b>	<b>Lot 029 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 6/28/1978 DD/MM/YYYY	Elev 81.9 (masl) / Domestic	Easting 365129	Northing 4896821	UTM RC 4	margin of error : 30 m - 100 m	SWL 4.6 (mbgs)	77.3 (masl)	
Water Found 7.0 (mbgs)	74.9 (masl)	FRESH				Pumping WL 6.1 (mbgs)	75.8 (masl)	
						Pump Rate 45.5 (LPM)	1 / 0	
						Spec. Cap. 29.83 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 81.9	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.3	81.6			TOPSOIL /	/	
		8.5	73.3			LIMESTONE /	/	

<b>3705352</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 4/15/1978 DD/MM/YYYY	Elev 78.4 (masl) / Domestic	Easting 365170	Northing 4896922	UTM RC 4	margin of error : 30 m - 100 m	SWL 2.1 (mbgs)	76.3 (masl)	
Water Found 19.8 (mbgs)	58.6 (masl)	Not stated				Pumping WL 21.9 (mbgs)	56.5 (masl)	
						Pump Rate 22.7 (LPM)	1 / 0	
						Spec. Cap. 1.15 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 78.4	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.3	78.1			TOPSOIL /	/	
		21.9	56.5	BLUE		LIMESTONE /	/	

<b>3705369</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 5/11/1979 DD/MM/YYYY	Elev 92.7 (masl) / Domestic	Easting 365529	Northing 4897521	UTM RC 4	margin of error : 30 m - 100 m	SWL 10.4 (mbgs)	82.3 (masl)	
Water Found 18.3 (mbgs)	74.4 (masl)	FRESH				Pumping WL 27.4 (mbgs)	65.2 (masl)	
						Pump Rate 9.1 (LPM)	1 / 0	
						Spec. Cap. 0.53 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 92.7	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.3	92.4	BROWN		TOPSOIL /	STONES / LOOSE	
		30.5	62.2	GREY		LIMESTONE /	LAYERED /	

<b>3705605</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 7/14/1980 DD/MM/YYYY	Elev 92.4 (masl) / Domestic	Easting 366029	Northing 4897021	UTM RC 4	margin of error : 30 m - 100 m	SWL 18.3 (mbgs)	74.1 (masl)	
Water Found 39.0 (mbgs)	53.4 (masl)	SULPHUR				Pumping WL 39.0 (mbgs)	53.4 (masl)	
						Pump Rate 22.7 (LPM)	2 / 0	
						Spec. Cap. 1.10 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 92.4	Color		Soil Descriptions		
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		1.8	90.6	BLUE		CLAY /	/	

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							2.4	90.0	BROWN	LIMESTONE /	SHALE	/
							38.1	54.3	BLUE	LIMESTONE /		/
							41.1	51.3	GREEN	LIMESTONE /		/

<b>3705623</b>	<b>Lot 033</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	12/4/1980	Elev	87.9 (masl)	Easting	366229	Northing	4896921	SWL	15.2	(mbgs)	72.6	(masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	26.2	(mbgs)	61.7	(masl)
		Water Found	28.3 (mbgs)	59.5 (masl)	SULPHUR			Pump Rate	36.4	(LPM)	2 / 0	
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	3.31	(LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	87.9	Color			Soil Descriptions	
		Screen Interval	(m)									
						0.6	87.3	BLUE		CLAY /	/	
						29.3	58.6	BLUE		LIMESTONE /	/	

<b>3705733</b>	<b>Lot 033</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing?				
Date	6/8/1981	Elev	75.4 (masl)	Easting	366529	Northing	4896821	SWL		(mbgs)		(masl)
	DD/MM/YYYY		/	Abandoned-Supply	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL		(mbgs)		(masl)
		Water Found	(mbgs)	(masl)				Pump Rate		(LPM)	/	
		Casing Diameter		Casing Material:		Depth (m)	Elev (masl)	Spec. Cap.		(LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	75.4	Color			Soil Descriptions	
		Screen Interval	(m)									
						0.6	74.8	BROWN		TOPSOIL /	/	
						53.0	22.4	BLUE		LIMESTONE /	/	
						59.4	16.0	RED		GRANITE /	/	

<b>3705775</b>	<b>Lot 032</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	6/29/1981	Elev	89.5 (masl)	Easting	365829	Northing	4897021	SWL	12.5	(mbgs)	77.0	(masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	39.3	(mbgs)	50.2	(masl)
		Water Found	37.8 (mbgs)	51.7 (masl)	Not stated			Pump Rate	13.6	(LPM)	1 / 0	
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	0.51	(LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	89.5	Color			Soil Descriptions	
		Screen Interval	(m)									
						0.3	89.2			TOPSOIL /	/	
						39.3	50.2	BLUE		LIMESTONE /	/	

<b>3705776</b>	<b>Lot 029</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>					Flowing? N				
Date	8/8/1981	Elev	76.6 (masl)	Easting	364929	Northing	4897121	SWL	6.1	(mbgs)	70.5	(masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	18.9	(mbgs)	57.7	(masl)
		Water Found	6.1 (mbgs)	70.5 (masl)	Not stated			Pump Rate	22.7	(LPM)	1 / 0	
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	1.78	(LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	76.6	Color			Soil Descriptions	
		Screen Interval	(m)									
						0.3	76.3			TOPSOIL /	/	
						18.9	57.7			LIMESTONE /	/	

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<b>3705828</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 10/14/1982 DD/MM/YYYY	Elev 81.7 (masl) / Domestic	Easting 367329	Northing 4897121	UTM RC 4	margin of error : 30 m - 100 m	SWL 10.7 (mbgs)	71.0 (masl)	
Water Found 12.8 (mbgs)	68.9 (masl)	Water Supply	SULPHUR			Pumping WL 28.7 (mbgs)	53.0 (masl)	
						Pump Rate 13.6 (LPM)	3 / 0	
						Spec. Cap. 0.76 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	81.7					
Screen Interval (m)								
		0.3	81.4	BLUE	CLAY /		/	
		0.9	80.8	BROWN	LIMESTONE /		/	
		25.9	55.8	BLUE	LIMESTONE /		/	
		26.5	55.2	GREEN	LIMESTONE /		/	
		29.6	52.1	BLUE	LIMESTONE /		/	

<b>3705949</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 11/14/1983 DD/MM/YYYY	Elev 88.8 (masl) / Domestic	Easting 365429	Northing 4896821	UTM RC 4	margin of error : 30 m - 100 m	SWL 0.9 (mbgs)	87.9 (masl)	
Water Found 6.1 (mbgs)	82.7 (masl)	Water Supply	Not stated			Pumping WL 7.6 (mbgs)	81.2 (masl)	
						Pump Rate 45.5 (LPM)	1 / 0	
						Spec. Cap. 6.78 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material:	Depth (m)	Elev (masl)	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	88.8					
Screen Interval (m)								
		7.6	81.2	BLUE	LIMESTONE /		/	

<b>3705950</b>	<b>Lot 030 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 12/13/1983 DD/MM/YYYY	Elev 81.9 (masl) / Domestic	Easting 365129	Northing 4896821	UTM RC 4	margin of error : 30 m - 100 m	SWL 3.0 (mbgs)	78.8 (masl)	
Water Found (mbgs)	(masl)	Water Supply				Pumping WL 27.7 (mbgs)	54.1 (masl)	
						Pump Rate 136.4 (LPM)	1 / 0	
						Spec. Cap. 5.52 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	81.9					
Screen Interval (m)								
		0.3	81.6		TOPSOIL /		/	
		27.7	54.1		LIMESTONE /		/	

<b>3705966</b>	<b>Lot 029 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 10/18/1983 DD/MM/YYYY	Elev 84.3 (masl) / Domestic	Easting 364829	Northing 4897321	UTM RC 4	margin of error : 30 m - 100 m	SWL 3.7 (mbgs)	80.7 (masl)	
Water Found 7.0 (mbgs)	77.3 (masl)	Water Supply	FRESH			Pumping WL 13.1 (mbgs)	71.2 (masl)	
						Pump Rate 68.2 (LPM)	2 / 0	
						Spec. Cap. 7.22 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	84.3					
Screen Interval (m)								
		0.3	84.0	BROWN	TOPSOIL /		/	
		4.9	79.4	BROWN	LIMESTONE /	SHALE	/	
		14.9	69.4	BLUE	LIMESTONE /		/	

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<b>3706074</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 6/9/1984 DD/MM/YYYY	Elev 92.3 (masl) / Domestic	Easting 365829	Northing 4897721	UTM RC 4	margin of error : 30 m - 100 m	SWL 17.7 (mbgs)	74.6 (masl)	
	Water Found 40.8 (mbgs)	Water Supply 51.5 (masl)	SULPHUR			Pumping WL 40.8 (mbgs)	51.5 (masl)	
						Pump Rate 27.3 (LPM)	2 / 0	
						Spec. Cap. 1.18 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 92.3	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.9	91.4	BLUE	CLAY /		/	
		1.2	91.1	BROWN	SHALE /		/	
		40.5	51.8	BLUE	LIMESTONE /		/	
		41.5	50.9	BLACK	LIMESTONE /		/	

<b>3706139</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 7/22/1984 DD/MM/YYYY	Elev 81.5 (masl) / Domestic	Easting 366829	Northing 4896921	UTM RC 4	margin of error : 30 m - 100 m	SWL 6.1 (mbgs)	75.4 (masl)	
	Water Found 22.9 (mbgs)	Water Supply 58.7 (masl)	FRESH			Pumping WL 24.4 (mbgs)	57.2 (masl)	
						Pump Rate (LPM)	/	
						Spec. Cap. (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 81.5	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.9	80.6	RED	SAND /	TOPSOIL	/	
		24.4	57.2	BLUE	LIMESTONE /		/	

<b>3706506</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 4/28/1987 DD/MM/YYYY	Elev 100.0 (masl) / Domestic	Easting 365199	Northing 4898464	UTM RC 9	unknown UTM	SWL 12.2 (mbgs)	87.8 (masl)	
	Water Found 21.9 (mbgs)	Water Supply 78.0 (masl)	SULPHUR			Pumping WL 32.9 (mbgs)	67.0 (masl)	
						Pump Rate 27.3 (LPM)	2 / 0	
						Spec. Cap. 1.32 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 100.0	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		0.9	99.0	BROWN	SHALE /		/	
		27.7	72.2	BLUE	LIMESTONE /		/	
		28.7	71.3	GREEN	LIMESTONE /		/	
		34.4	65.5	GREY	LIMESTONE /		/	

<b>3706745</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 8/20/1988 DD/MM/YYYY	Elev 98.0 (masl) / Domestic	Easting 365919	Northing 4898814	UTM RC 9	unknown UTM	SWL 9.1 (mbgs)	88.9 (masl)	
	Water Found 21.3 (mbgs)	Water Supply 76.7 (masl)	SULPHUR			Pumping WL 28.7 (mbgs)	69.4 (masl)	
						Pump Rate 9.1 (LPM)	1 / 0	
						Spec. Cap. 0.47 (LPM/m)	Hour / Minute	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 98.0	Color	Soil Descriptions			
Top of Screen (mbgs)	Bottom of Screen (mbgs)							
Screen Interval (m)								
		1.8	96.2		TOPSOIL /	SOFT	/ LIMESTONE	
		15.2	82.8	GREY	UNKNOWN TYPE /	HARD	/	
		21.3	76.7	GREY	LIMESTONE /		/	
		29.6	68.4	GREY	LIMESTONE /	SOFT	/	

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<b>3706849</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 7/12/1988	Elev 96.4 (masl)	Easting 366292	Northing 4898980	UTM RC 9	unknown UTM	SWL 7.6	(mbgs) 88.7	(masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9	unknown UTM		Pumping WL 30.8	(mbgs) 65.6	(masl)
Water Found 29.3 (mbgs)	67.1 (masl)	Not stated				Pump Rate 27.3	(LPM) 1 / 0	
Casing Diameter 6 inch	Casing Material:	Depth (m)	Elev (masl)			Spec. Cap. 1.18	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	96.4	Color			Soil Descriptions	
Screen Interval (m)								
		0.6	95.7			TOPSOIL /		/
		30.8	65.6	BLUE		LIMESTONE /		/

<b>3706868</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 11/19/1987	Elev 95.1 (masl)	Easting 365524	Northing 4898653	UTM RC 9	unknown UTM	SWL 14.0	(mbgs) 81.0	(masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9	unknown UTM		Pumping WL 45.7	(mbgs) 49.3	(masl)
Water Found 29.9 (mbgs)	65.2 (masl)	Not stated				Pump Rate 22.7	(LPM) 1 / 0	
Casing Diameter 6 inch	Casing Material:	Depth (m)	Elev (masl)			Spec. Cap. 0.72	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	95.1	Color			Soil Descriptions	
Screen Interval (m)								
		0.9	94.1			TOPSOIL /		/
		45.7	49.3			LIMESTONE /		/

<b>3708038</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 7/1/1992	Elev 95.1 (masl)	Easting 365524	Northing 4898653	UTM RC 9	unknown UTM	SWL 14.3	(mbgs) 80.7	(masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9	unknown UTM		Pumping WL 31.4	(mbgs) 63.7	(masl)
Water Found 32.6 (mbgs)	62.4 (masl)	FRESH				Pump Rate 31.8	(LPM) 2 / 0	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap. 1.86	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	95.1	Color			Soil Descriptions	
Screen Interval (m)								
		0.6	94.5	BROWN		TOPSOIL /		/
		32.6	62.4	BLUE		LIMESTONE /		/
		33.5	61.5	BROWN		LIMESTONE /		/

<b>3708222</b>	<b>Lot 031 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 7/16/1993	Elev 85.1 (masl)	Easting 365379	Northing 4897390	UTM RC 5	margin of error : 100 m - 300 m	SWL 11.3	(mbgs) 73.8	(masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 5	margin of error : 100 m - 300 m		Pumping WL 22.6	(mbgs) 62.6	(masl)
Water Found 18.9 (mbgs)	66.2 (masl)	FRESH				Pump Rate 27.3	(LPM) 2 / 0	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap. 2.42	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	85.1	Color			Soil Descriptions	
Screen Interval (m)								
		0.3	84.8	BROWN		TOPSOIL /		/
		3.4	81.8	BROWN		LIMESTONE /		/
		17.7	67.4	BLUE		LIMESTONE /		/
		21.0	64.1	BROWN		LIMESTONE /		/
		22.9	62.3	BLUE		LIMESTONE /		/
		24.1	61.0	BROWN		LIMESTONE /		/

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<b>3708308</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 1/25/1994	Elev 86.4 (masl)	Easting 367138	Northing 4897276	UTM RC 5	margin of error : 100 m - 300 m	SWL	(mbgs)	(masl)
DD/MM/YYYY	/ Not Used	Observation Wells				Pumping WL	(mbgs)	(masl)
Water Found	(mbgs)	(masl)				Pump Rate	(LPM)	/
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap.	(LPM/m)	Hour / Minute
Top of Screen 7.6 (mbgs)	Bottom of Screen 10.7 (mbgs)	0.0	86.4	Color		Soil Descriptions		
Screen Interval 3.0 (m)		1.5	84.9	BROWN	GRAVEL /	CLAY	/	FILL
		10.7	75.7	GREY	LIMESTONE /	HARD	/	

<b>3708309</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 2/3/1994	Elev 86.7 (masl)	Easting 367139	Northing 4897285	UTM RC 5	margin of error : 100 m - 300 m	SWL	(mbgs)	(masl)
DD/MM/YYYY	Not Used / Domestic	Observation Wells				Pumping WL	(mbgs)	(masl)
Water Found	(mbgs)	(masl)				Pump Rate	(LPM)	/
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap.	(LPM/m)	Hour / Minute
Top of Screen 45.7 (mbgs)	Bottom of Screen 48.8 (mbgs)	0.0	86.7	Color		Soil Descriptions		
Screen Interval 3.0 (m)		1.5	85.1	BROWN	GRAVEL /	CLAY	/	FILL
		14.3	72.3	GREY	LIMESTONE /	HARD	/	
		48.8	37.9	GREY	LIMESTONE /	HARD	/	

<b>3708310</b>	<b>Lot 035 Conc 09</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 2/4/1994	Elev 86.2 (masl)	Easting 367149	Northing 4897277	UTM RC 5	margin of error : 100 m - 300 m	SWL	(mbgs)	(masl)
DD/MM/YYYY	Not Used / Domestic	Observation Wells				Pumping WL	(mbgs)	(masl)
Water Found	(mbgs)	(masl)				Pump Rate	(LPM)	/
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap.	(LPM/m)	Hour / Minute
Top of Screen 39.6 (mbgs)	Bottom of Screen 44.2 (mbgs)	0.0	86.2	Color		Soil Descriptions		
Screen Interval 4.6 (m)		0.6	85.6	BLACK	TOPSOIL /	SOFT	/	
		44.2	42.0	GREY	LIMESTONE /	HARD	/	

<b>3708320</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 3/2/1994	Elev 100.0 (masl)	Easting 365199	Northing 4898464	UTM RC 9	unknown UTM	SWL 12.5	(mbgs)	87.5 (masl)
DD/MM/YYYY	/ Domestic	Water Supply				Pumping WL 31.1	(mbgs)	68.9 (masl)
Water Found 31.1 (mbgs)	68.9 (masl)	SULPHUR				Pump Rate 27.3	(LPM)	2 / 0
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m)	Elev (masl)			Spec. Cap. 1.47	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)	0.0	100.0	Color		Soil Descriptions		
Screen Interval (m)		0.3	99.7	BROWN	TOPSOIL /			/
		21.9	78.0	BLUE	LIMESTONE /			/
		23.8	76.2	GREEN	LIMESTONE /			/
		30.5	69.5	BLUE	LIMESTONE /			/
		31.1	68.9	GREEN	LIMESTONE /			/
		32.9	67.0	BLUE	LIMESTONE /			/

**Well Record #**

<b>3708386</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date 10/6/1994	Elev 98.0 (masl)	Easting 365919	Northing 4898814	UTM RC 9	unknown UTM	SWL	(mbgs)	(masl)	
DD/MM/YYYY	/	Abandoned-Supply				Pumping WL	(mbgs)	(masl)	
Water Found	(mbgs)	(masl)				Pump Rate	(LPM)	/	
Casing Diameter		Casing Material:		Depth (m)	Elev (masl)	Spec. Cap.	(LPM/m)	Hour / Minute	
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	98.0	Color	Soil Descriptions		
Screen Interval	(m)								
				0.9	97.1	BROWN	TOPSOIL /	/	
				26.2	71.8	BLUE	LIMESTONE /	/	

<b>3708479</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date 7/7/1993	Elev 100.0 (masl)	Easting 365199	Northing 4898464	UTM RC 9	unknown UTM	SWL	15.8 (mbgs)	84.1 (masl)	
DD/MM/YYYY	/ Domestic	Water Supply				Pumping WL	36.3 (mbgs)	63.7 (masl)	
Water Found	36.3 (mbgs)	63.7 (masl)	FRESH			Pump Rate	45.5 (LPM)	3 / 0	
Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	2.23 (LPM/m)	Hour / Minute	
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	100.0	Color	Soil Descriptions		
Screen Interval	(m)								
				0.6	99.4	BROWN	SAND /	GRAVEL /	FILL
				2.4	97.5	BROWN	LIMESTONE /	FRACTURED	/
				17.1	82.9	BLUE	LIMESTONE /	/	/
				18.3	81.7	GREEN	LIMESTONE /	/	/
				36.0	64.0	BLUE	LIMESTONE /	/	/
				38.7	61.3	GREEN	LIMESTONE /	/	/

<b>3708514</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date 9/29/1995	Elev 95.1 (masl)	Easting 365524	Northing 4898653	UTM RC 9	unknown UTM	SWL	4.3 (mbgs)	90.8 (masl)	
DD/MM/YYYY	/ Domestic	Water Supply				Pumping WL	18.9 (mbgs)	76.2 (masl)	
Water Found	12.2 (mbgs)	82.9 (masl)	FRESH			Pump Rate	22.7 (LPM)	2 / 0	
Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	1.55 (LPM/m)	Hour / Minute	
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	95.1	Color	Soil Descriptions		
Screen Interval	(m)								
				3.4	91.7	BLUE	CLAY /	/	/
				4.0	91.1	BROWN	SHALE /	/	/
				12.2	82.9	BLUE	LIMESTONE /	/	/
				12.8	82.3	BROWN	LIMESTONE /	/	/
				21.3	73.7	BLUE	LIMESTONE /	/	/

<b>3708800</b>	<b>Lot 034 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>			
Date 4/21/1998	Elev 98.0 (masl)	Easting 365919	Northing 4898814	UTM RC 9	unknown UTM	SWL	5.2 (mbgs)	92.8 (masl)	
DD/MM/YYYY	/ Domestic	Water Supply				Pumping WL	15.8 (mbgs)	82.2 (masl)	
Water Found	8.5 (mbgs)	89.5 (masl)	FRESH			Pump Rate	45.5 (LPM)	2 / 0	
Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	4.26 (LPM/m)	Hour / Minute	
Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	98.0	Color	Soil Descriptions		
Screen Interval	(m)								
				0.6	97.4	BROWN	CLAY /	/	/
				1.5	96.5	BROWN	SHALE /	/	/
				3.0	95.0	BLUE	LIMESTONE /	/	/
				20.1	77.9	BLUE	LIMESTONE /	/	/

**Well Record #**

<b>3708990</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 5/20/1999	Elev 95.0 (masl)	Easting 365523	Northing 4898651	UTM RC 9	unknown UTM	SWL 15.8	(mbgs)	79.1 (masl)
DD/MM/YYYY	/ Domestic	Water Supply	UTM RC 9	unknown UTM		Pumping WL 15.8	(mbgs)	79.1 (masl)
Water Found 47.5 (mbgs)	47.4 (masl)	SULPHUR				Pump Rate 200.0	(LPM)	1 / 30
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 95.0	Color		Spec. Cap. 9,999.99	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)							Soil Descriptions
Screen Interval (m)								
		0.3	94.7					TOPSOIL / /
		47.2	47.7	GREY				LIMESTONE / /
		58.2	36.8	GREY				LIMESTONE / GRANITE /

<b>3709179</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 8/3/2000	Elev 100.2 (masl)	Easting 365196	Northing 4898465	UTM RC 9	unknown UTM	SWL	(mbgs)	(masl)
DD/MM/YYYY	/	Abandoned-Quality	UTM RC 9	unknown UTM		Pumping WL	(mbgs)	(masl)
Water Found (mbgs)	(masl)					Pump Rate	(LPM)	/
Casing Diameter	Casing Material:	Depth (m) 0.0	Elev (masl) 100.2	Color		Spec. Cap.	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)							Soil Descriptions
Screen Interval (m)								
		2.1	98.1	BROWN				CLAY / /
		3.0	97.2	GREY				SHALE / /
		7.3	92.9	BLUE				LIMESTONE / /
		12.8	87.4	BLACK				LIMESTONE / /
		29.6	70.7	BLUE				LIMESTONE / /
		33.8	66.4	GREY				LIMESTONE / /
		41.8	58.5	BLUE				LIMESTONE / /
		42.7	57.6	BLACK				LIMESTONE / /

<b>3709234</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 10/23/2000	Elev 94.6 (masl)	Easting 365520	Northing 4898652	UTM RC 9	unknown UTM	SWL	(mbgs)	(masl)
DD/MM/YYYY	/ Not Used	Abandoned-Supply	UTM RC 9	unknown UTM		Pumping WL	(mbgs)	(masl)
Water Found (mbgs)	(masl)					Pump Rate	(LPM)	/
Casing Diameter	Casing Material:	Depth (m) 0.0	Elev (masl) 94.6	Color		Spec. Cap.	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)							Soil Descriptions
Screen Interval (m)								
		1.5	93.1	BROWN				CLAY / STONES / PACKED
		18.6	76.0	GREY				LIMESTONE / HARD /

<b>3709238</b>	<b>Lot 033 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 10/20/2000	Elev 94.6 (masl)	Easting 365520	Northing 4898652	UTM RC 9	unknown UTM	SWL	(mbgs)	(masl)
DD/MM/YYYY	/ Not Used	Abandoned-Quality	UTM RC 9	unknown UTM		Pumping WL	(mbgs)	(masl)
Water Found (mbgs)	(masl)					Pump Rate	(LPM)	/
Casing Diameter	Casing Material:	Depth (m) 0.0	Elev (masl) 94.6	Color		Spec. Cap.	(LPM/m)	Hour / Minute
Top of Screen (mbgs)	Bottom of Screen (mbgs)							Soil Descriptions
Screen Interval (m)								
		2.7	91.8	BROWN				CLAY / STONES / PACKED
		44.2	50.4	GREY				LIMESTONE / HARD /



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<b>3709290</b>	<b>Lot 032 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>		
Date 6/8/2001 DD/MM/YYYY	Elev 98.2 (masl) / Domestic	Easting 365505	Northing 4898196	UTM RC 3	margin of error : 10 - 30 m	SWL 6.4 (mbgs)	91.8 (masl)	
Water Found 35.1 (mbgs)	63.1 (masl)	Not stated				Pumping WL 22.6 (mbgs)	75.6 (masl)	
Casing Diameter 6 inch	Casing Material: STEEL	Depth (m) 0.0	Elev (masl) 98.2	Color		Pump Rate 63.6 (LPM)	2 /	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					Spec. Cap. 3.94 (LPM/m)	Hour / Minute	
Screen Interval (m)								
		0.3	97.9			TOPSOIL /	/	
		37.2	61.0	GREY		LIMESTONE /	/	

<b>3710091</b>	<b>Lot 001 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 9/19/2005 DD/MM/YYYY	Elev 99.6 (masl) / Domestic	Easting 366282	Northing 4897521	UTM RC 4	margin of error : 30 m - 100 m	SWL 4.5 (mbgs)	95.1 (masl)	
Water Found 5.7 (mbgs)	93.9 (masl)	FRESH				Pumping WL 4.6 (mbgs)	95.0 (masl)	
Casing Diameter 91 cm	Casing Material: CONCRETE	Depth (m) 0.0	Elev (masl) 99.6	Color		Pump Rate 22.7 (LPM)	1 / 0	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					Spec. Cap. 151.53 (LPM/m)	Hour / Minute	
Screen Interval (m)								
		0.2	99.4	BROWN		TOPSOIL /	/	
		1.8	97.8	BROWN		CLAY /	PACKED /	
		6.0	93.6	GREY		LIMESTONE /	HARD /	

<b>7107623</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 5/15/2008 DD/MM/YYYY	Elev 97.6 (masl) /	Easting 366989	Northing 4897591	UTM RC 3	margin of error : 10 - 30 m	SWL (mbgs)	(masl)	
Water Found (mbgs)	(masl)	Abandoned-Other				Pumping WL (mbgs)	(masl)	
Casing Diameter	Casing Material:	Depth (m) 0.0	Elev (masl) 97.6	Color		Pump Rate (LPM)	/	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					Spec. Cap. (LPM/m)	Hour / Minute	
Screen Interval (m)								
								/
								/

<b>7125035</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 6/30/2009 DD/MM/YYYY	Elev 97.6 (masl) /	Easting 366989	Northing 4897591	UTM RC 3	margin of error : 10 - 30 m	SWL (mbgs)	(masl)	
Water Found (mbgs)	(masl)	Abandoned-Other				Pumping WL (mbgs)	(masl)	
Casing Diameter	Casing Material:	Depth (m) 0.0	Elev (masl) 97.6	Color		Pump Rate (LPM)	/	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					Spec. Cap. (LPM/m)	Hour / Minute	
Screen Interval (m)								
								/
								/

<b>7138720</b>	<b>Lot 035 Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>		
Date 1/20/2010 DD/MM/YYYY	Elev 97.6 (masl) /	Easting 366989	Northing 4897591	UTM RC 4	margin of error : 30 m - 100 m	SWL (mbgs)	(masl)	
Water Found 0.5 (mbgs)	97.1 (masl)	Untested				Pumping WL (mbgs)	(masl)	
Casing Diameter	Casing Material:	Depth (m) 0.0	Elev (masl) 97.6	Color		Pump Rate (LPM)	/	
Top of Screen (mbgs)	Bottom of Screen (mbgs)					Spec. Cap. (LPM/m)	Hour / Minute	
Screen Interval (m)								
								/
								/

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<b>7150983</b>		<b>Lot 003</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>				
Date	7/30/2010	Elev	80.0 (masl)	Easting	365413	Northing	4897150	SWL	6.1	(mbgs)	73.9	(masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 4	margin of error : 30 m - 100 m		Pumping WL	6.2	(mbgs)	73.8	(masl)
		Water Found	15.2 (mbgs)	64.7 (masl)	Untested			Pump Rate	54.6	(LPM)	1	/
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	1,789.76	(LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	80.0	Color			Soil Descriptions	
		Screen Interval	(m)									
						1.5	78.5	BROWN		CLAY /		/
						2.4	77.5	GREY		SHALE /		/
						10.7	69.3	BLUE		LIMESTONE /		/
						14.3	65.7	BLACK		LIMESTONE /		/
						20.4	59.6	GREEN		LIMESTONE /		/
						24.4	55.6	BLUE		LIMESTONE /		/

<b>7175432</b>		<b>Lot 031</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing? N</b>				
Date	1/4/2012	Elev	88.0 (masl)	Easting	365541	Northing	4896843	SWL	4.0	(mbgs)	84.0	(masl)
	DD/MM/YYYY		/ Domestic	Water Supply	UTM RC 4	margin of error : 30 m - 100 m		Pumping WL	5.9	(mbgs)	82.1	(masl)
		Water Found	7.6 (mbgs)	80.4 (masl)	Untested			Pump Rate	54.6	(LPM)	1	/
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)	Spec. Cap.	28.41	(LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	88.0	Color			Soil Descriptions	
		Screen Interval	(m)									
						0.3	87.7	BROWN		CLAY /		/
						9.8	78.3	BLUE		LIMESTONE /		/
						17.1	71.0	GREEN		LIMESTONE /		/
						30.5	57.6	BLACK		LIMESTONE /		/

<b>7188527</b>		<b>Lot</b>	<b>Conc</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>				
Date	4/5/2012	Elev	103.0 (masl)	Easting	366436	Northing	4898311	SWL		(mbgs)		(masl)
	DD/MM/YYYY		/	Water Supply	UTM RC 4	margin of error : 30 m - 100 m		Pumping WL		(mbgs)		(masl)
		Water Found	(mbgs)	(masl)	Untested			Pump Rate		(LPM)		/
		Casing Diameter		Casing Material:		Depth (m)	Elev (masl)	Spec. Cap.		(LPM/m)	Hour / Minute	
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	103.0	Color			Soil Descriptions	
		Screen Interval	(m)									
											/	/

<b>7237648</b>		<b>Lot 034</b>	<b>Conc 01</b>	<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				<b>Flowing?</b>				
Date	11/13/2014	Elev	98.1 (masl)	Easting	366340	Northing	4897412	SWL		(mbgs)		(masl)
	DD/MM/YYYY		/ Monitoring and Te	Test Hole	UTM RC 4	margin of error : 30 m - 100 m		Pumping WL		(mbgs)		(masl)
		Water Found	(mbgs)	(masl)	Untested			Pump Rate		(LPM)		/
		Casing Diameter	2 inch	Casing Material:	PLASTIC	Depth (m)	Elev (masl)	Spec. Cap.		(LPM/m)	Hour / Minute	
		Top of Screen	2.3 (mbgs)	Bottom of Screen	3.8 (mbgs)	0.0	98.1	Color			Soil Descriptions	
		Screen Interval	1.5 (m)									
						3.8	94.3	BROWN		CLAY /	FILL	/

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<b>7251560</b>										<b>Lot 030 Conc 01</b>			<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing?			
Date	7/23/2015	Elev	84.2 (masl)	Easting	364993	Northing	4897325	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	(mbgs)	(masl)	SWL	(mbgs)	(masl)				
	DD/MM/YYYY		/ Not Used		Abandoned-Other						Pump Rate	(LPM)	/							
		Water Found	(mbgs)		(masl)						Spec. Cap.	(LPM/m)	Hour / Minute							
		Casing Diameter	6 inch	Casing Material:	STEEL	Depth (m)	Elev (masl)				Color		Soil Descriptions							
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0	84.2													
		Screen Interval	(m)																	
						14.3	69.9						/					/		

<b>7335821</b>										<b>Lot 032 Conc 01</b>			<b>ERNESTOWN TOWNSHIP / LENNOX &amp; ADDINGTON</b>				Flowing?			
Date		Elev	(masl)	Easting	365592	Northing	4897493	UTM RC	4	margin of error : 30 m - 100 m	Pumping WL	(mbgs)	(masl)	SWL	(mbgs)	(masl)				
	DD/MM/YYYY		/								Pump Rate	(LPM)	/							
		Water Found	(mbgs)		(masl)						Spec. Cap.	(LPM/m)	Hour / Minute							
		Casing Diameter	6 Inch	Casing Material:	STEEL	Depth (m)	Elev (masl)				Color		Soil Descriptions							
		Top of Screen	(mbgs)	Bottom of Screen	(mbgs)	0.0														
		Screen Interval	(m)																	
													/					/		

# APPENDIX

## **D** GROUNDWATER LABORATORY DATA

Table 2 Ground Water Analytical Results

Parameter			BH21-03	BH21-09	BH21-11
Date of Collection	Units	Provincial Water Quality Objectives	Jun 15, 2021	Jun 15, 2021	Jun 15, 2021
Date Reported			Jun 25, 2021	Jun 25, 2021	Jun 25, 2021
Analytical Report Reference No.			21P761978	21P761978	21P761978
Electrical Conductivity	µS/cm		936	779	651
pH	pH Units	6.5-8.5	7.33	7.59	7.25
Saturation pH (Calculated)			5.86	6.14	5.59
Langelier Index (Calculated)			1.47	1.45	1.66
Hardness (as CaCO3) (Calculated)	mg/L		4070	1220	5670
Total Dissolved Solids	mg/L		576	434	378
Alkalinity (as CaCO3)	mg/L		265	435	326
Bicarbonate (as CaCO3)	mg/L		265	435	326
Carbonate (as CaCO3)	mg/L		<5	<5	<5
Hydroxide (as CaCO3)	mg/L		<5	<5	<5
Fluoride	mg/L		<0.05	0.83	0.17
Chloride	mg/L		124	6.76	21
Nitrate as N	mg/L		<0.05	<0.05	<0.05
Nitrite as N	mg/L		<0.05	<0.05	<0.05
Bromide	mg/L		<0.05	<0.05	<0.05
Sulphate	mg/L		85.3	40.5	31.1
Ortho Phosphate as P	mg/L		<0.10	<0.10	<0.10
Ammonia as N	mg/L		0.09	0.24	<0.02
Ammonia-Un-ionized (Calculated)	mg/L	0.02	0.00109	0.00534	<0.000002
Total Phosphorus	mg/L	*	40.3	0.61	1.52
Total Organic Carbon	mg/L		40.4	30.7	37.4
True Colour	TCU		<5	<5	<5
Turbidity	NTU		7870	329	30500
Total Calcium	mg/L		936	400	2190
Total Magnesium	mg/L		422	53.1	49
Total Potassium	mg/L		167	17.4	10.3
Total Sodium	mg/L		73.4	67.7	9.9
Aluminum-dissolved	mg/L	*	<0.004	0.005	<0.004
Total Aluminum	mg/L		778	34.5	20.5
Total Antimony	mg/L	0.020	<0.001	0.001	<0.001
Total Arsenic	mg/L	0.1	0.069	0.005	0.009
Total Barium	mg/L		7.9	0.396	0.231
Total Beryllium	mg/L	*	0.0258	0.0013	0.001
Total Boron	mg/L	0.2	<b>0.236</b>	<b>1.66</b>	<b>0.229</b>
Total Cadmium	mg/L	0.0002	0.0023	0.0003	0.0001
Total Chromium	mg/L		1.14	0.047	0.039
Total Cobalt	mg/L	0.0009	<b>0.354</b>	<b>0.0123</b>	<b>0.013</b>
Total Copper	mg/L	0.005	<b>0.8</b>	<b>0.039</b>	<b>0.028</b>
Total Iron	mg/L	0.3	<b>920</b>	<b>34.9</b>	<b>29.1</b>
Total Lead	mg/L	*	0.21	0.082	0.058
Total Manganese	mg/L		12.6	0.69	1.33
Dissolved Mercury	mg/L	0.0002	<0.0001	<0.0001	<0.0001
Total Mercury	mg/L		<0.0001	<0.0001	<0.0001
Total Molybdenum	mg/L	0.040	0.005	0.005	0.004
Total Nickel	mg/L	0.025	<b>0.862</b>	<b>0.041</b>	<b>0.041</b>
Total Selenium	mg/L	0.1	<b>0.111</b>	<0.002	<0.002
Total Silver	mg/L	0.0001	<b>0.0019</b>	<b>0.0023</b>	<0.0001
Total Strontium	mg/L		2.66	4.06	5.92
Total Thallium	mg/L	0.0003	<b>0.0087</b>	<b>0.0014</b>	<b>0.0021</b>
Total Tin	mg/L		0.008	0.004	<0.002
Total Titanium	mg/L		50.9	1.11	0.136
Total Tungsten	mg/L	0.030	<0.010	0.011	<0.010
Total Uranium	mg/L	0.005	<b>0.019</b>	0.002	0.004
Total Vanadium	mg/L	0.006	<b>1.32</b>	<b>0.043</b>	<b>0.036</b>
Total Zinc	mg/L	0.030	<b>2.17</b>	<b>0.157</b>	<b>0.045</b>
Total Zirconium	mg/L	0.004	<b>0.088</b>	<0.004	<b>0.007</b>

Notes:

Bold: Parameter exceeds the PWQOs.

# APPENDIX

**E**

HYDRAULIC  
CONDUCTIVITY  
TESTING

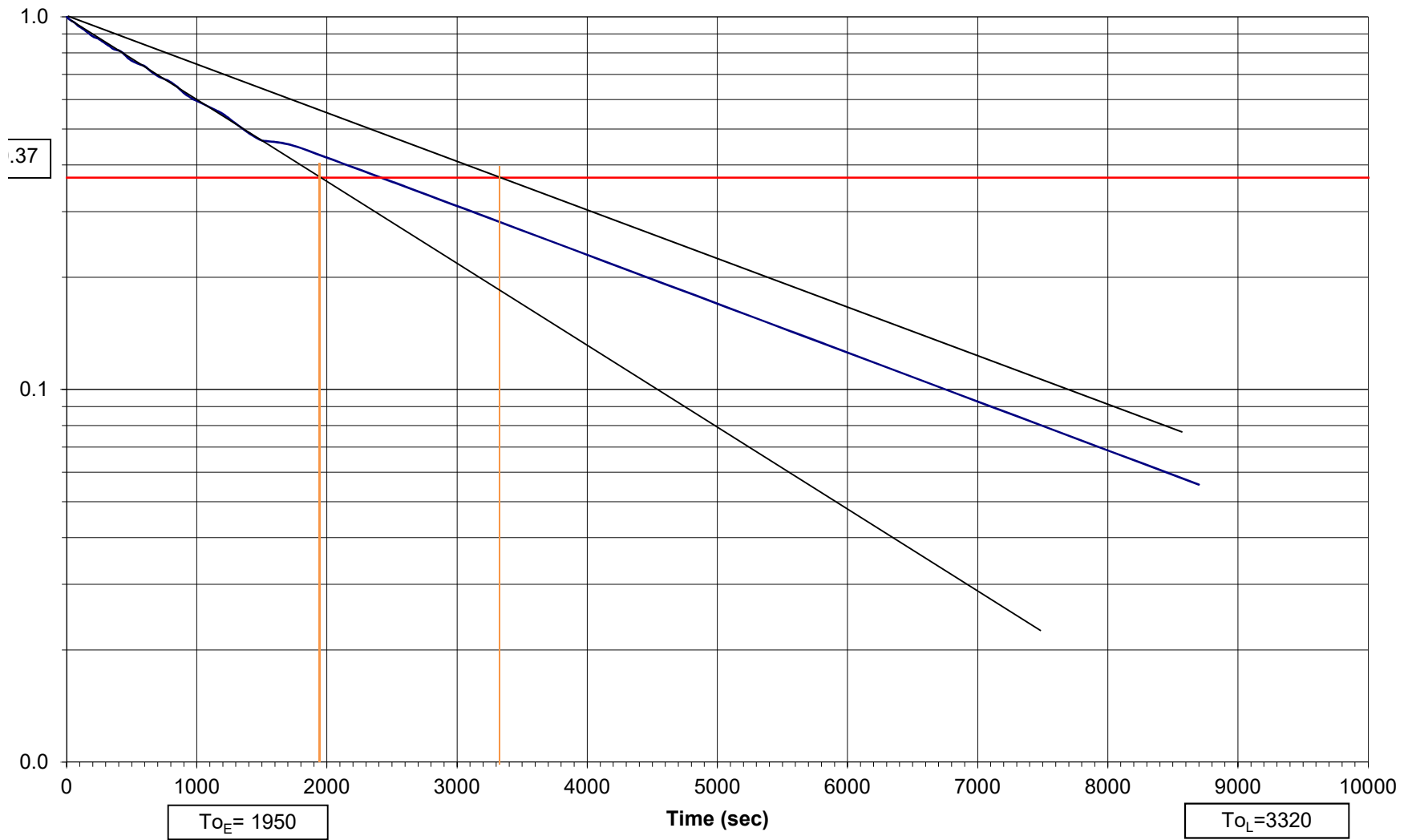
# Hvorslev Testing: BH21-03

Project No.:	211-01353-00	H = Static Water Level	mbg
Project Name:	Loyalist Secondary Plan	Ho = Head at time = 0	mbg
Date:	15-Jun-21	h = Water Level at time t	mbg
Conducted by:	LG/DAY	To <sub>E</sub> =	1950 sec
Well Number:	BH21-03	To <sub>L</sub> =	3320 sec
Well Depth:	5.00 mbgs	Screen Length (L) =	152.4 cm
Top of Pipe:	0.61 mag	Hole Radius (R) =	15.2 cm
Well Diameter:	51 mm	Well Radius (r) =	2.55 cm (measured)
Well Elevation:	93.50 masl		
Static Water Level:	2.31 mbtop	$K_E = r^2 \ln(L/R) / (2LTo) =$	2.52E-05 cm/s
Ground Elevation:	92.90 masl	$K_L = r^2 \ln(L/R) / (2LTo) =$	1.48E-05 cm/s

Time t (sec)	Water Level (mbtop)	Water Level Elevation (masl)
0	3.75	89.75
30	3.72	89.78
60	3.7	89.80
90	3.67	89.83
120	3.65	89.85
150	3.625	89.88
180	3.6	89.90
210	3.58	89.92
240	3.57	89.93
270	3.55	89.95
330	3.51	89.99
360	3.49	90.01
420	3.47	90.03
480	3.42	90.08
540	3.39	90.11
600	3.37	90.13
660	3.33	90.17
720	3.3	90.20
780	3.28	90.22
840	3.25	90.25
900	3.21	90.29
960	3.18	90.32
1020	3.16	90.34
1080	3.14	90.36
1140	3.12	90.38
1200	3.1	90.40
1500	2.98	90.52
1800	2.95	90.55
8700	2.39	91.11

Time t (sec)	H-h	H-Ho	(H-h)/(H-Ho)
0	1.440	1.440	1.000
30	1.410	1.440	0.979
60	1.390	1.440	0.965
90	1.360	1.440	0.944
120	1.340	1.440	0.931
150	1.315	1.440	0.913
180	1.290	1.440	0.896
210	1.270	1.440	0.882
240	1.260	1.440	0.875
270	1.240	1.440	0.861
330	1.200	1.440	0.833
360	1.180	1.440	0.819
420	1.160	1.440	0.806
480	1.110	1.440	0.771
540	1.080	1.440	0.750
600	1.060	1.440	0.736
660	1.020	1.440	0.708
720	0.990	1.440	0.688
780	0.970	1.440	0.674
840	0.940	1.440	0.653
900	0.900	1.440	0.625
960	0.870	1.440	0.604
1020	0.850	1.440	0.590
1080	0.830	1.440	0.576
1140	0.810	1.440	0.563
1200	0.790	1.440	0.549
1500	0.670	1.440	0.465
1800	0.640	1.440	0.444
8700	0.080	1.440	0.056

### Hvorslev Testing: BH21-03





# Hvorslev Testing: BH21-09

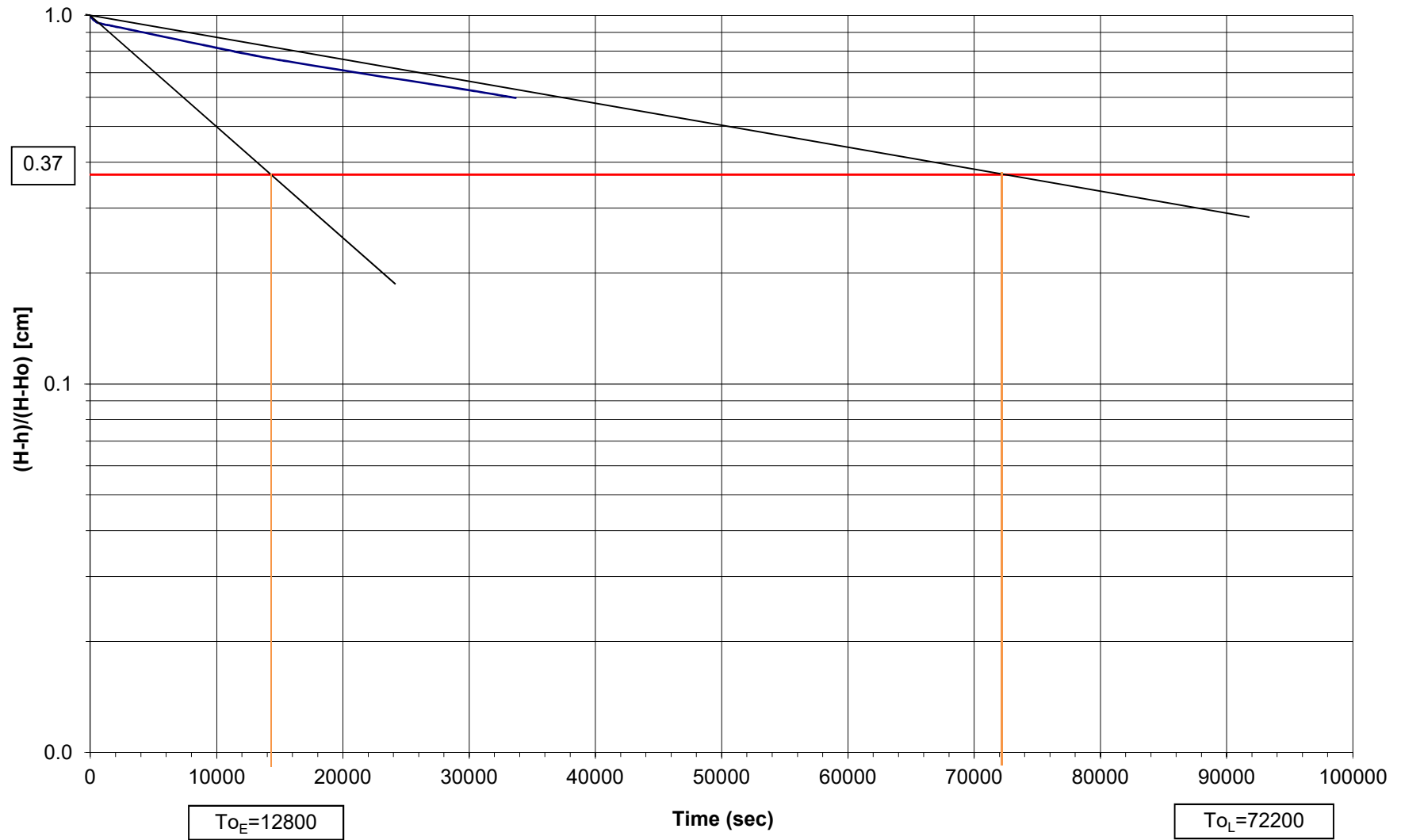
Project No.:	211-01353-00	H = Static Water Level	mbg
Project Name:	Loyalist Secondary Plan	Ho = Head at time = 0	mbg
Date:	15-Jun-21	h = Water Level at time t	mbg
Conducted by:	LG/DAY	To <sub>E</sub> =	12800 sec
Well Number:	BH21-09	To <sub>L</sub> =	72,200 sec
Well Depth:	6.34 mbgs	Screen Length (L) =	152.4 cm
Top of Pipe:	1.02 mag	Hole Radius (R) =	15.2 cm
Well Diameter:	51 mm	Well Radius (r) =	2.55 cm (measured)
Well Elevation:	91.85 masl		
Static Water Level:	2.45 mbtop	$K_E = r^2 \ln(L/R) / (2LT_o) =$	3.84E-06 cm/s
Ground Elevation:	90.74 masl	$K_L = r^2 \ln(L/R) / (2LT_o) =$	6.81E-07 cm/s

Time t (sec)	Water Level (mbtop)	Water Level Elevation (masl)
0	6.63	85.25
35	6.6	85.25
60	6.57	85.28
90	6.545	85.31
120	6.53	85.32
150	6.52	85.33
180	6.51	85.34
210	6.495	85.36
240	6.49	85.36
270	6.48	85.37
300	6.47	85.38
360	6.46	85.39
420	6.445	85.41
480	6.43	85.42
540	6.42	85.43
600	6.415	85.44
660	6.41	85.44
720	6.405	85.45
780	6.4	85.45
840	6.395	85.46
900	6.39	85.46
960	6.385	85.47
1020	6.38	85.47
1080	6.375	85.48
1140	6.37	85.48
1200	6.365	85.49

Time t (sec)	H-h	H-Ho	(H-h)/(H-Ho)
0	4.180	4.150	1.007
35	4.150	4.150	1.000
60	4.120	4.150	0.993
90	4.095	4.150	0.987
120	4.080	4.150	0.983
150	4.070	4.150	0.981
180	4.060	4.150	0.978
210	4.045	4.150	0.975
240	4.040	4.150	0.973
270	4.030	4.150	0.971
300	4.020	4.150	0.969
360	4.010	4.150	0.966
420	3.995	4.150	0.963
480	3.980	4.150	0.959
540	3.970	4.150	0.957
600	3.965	4.150	0.955
660	3.960	4.150	0.954
720	3.955	4.150	0.953
780	3.950	4.150	0.952
840	3.945	4.150	0.951
900	3.940	4.150	0.949
960	3.935	4.150	0.948
1020	3.930	4.150	0.947
1080	3.925	4.150	0.946
1140	3.920	4.150	0.945
1200	3.915	4.150	0.943



### Hvorslev Testing: BH21-09



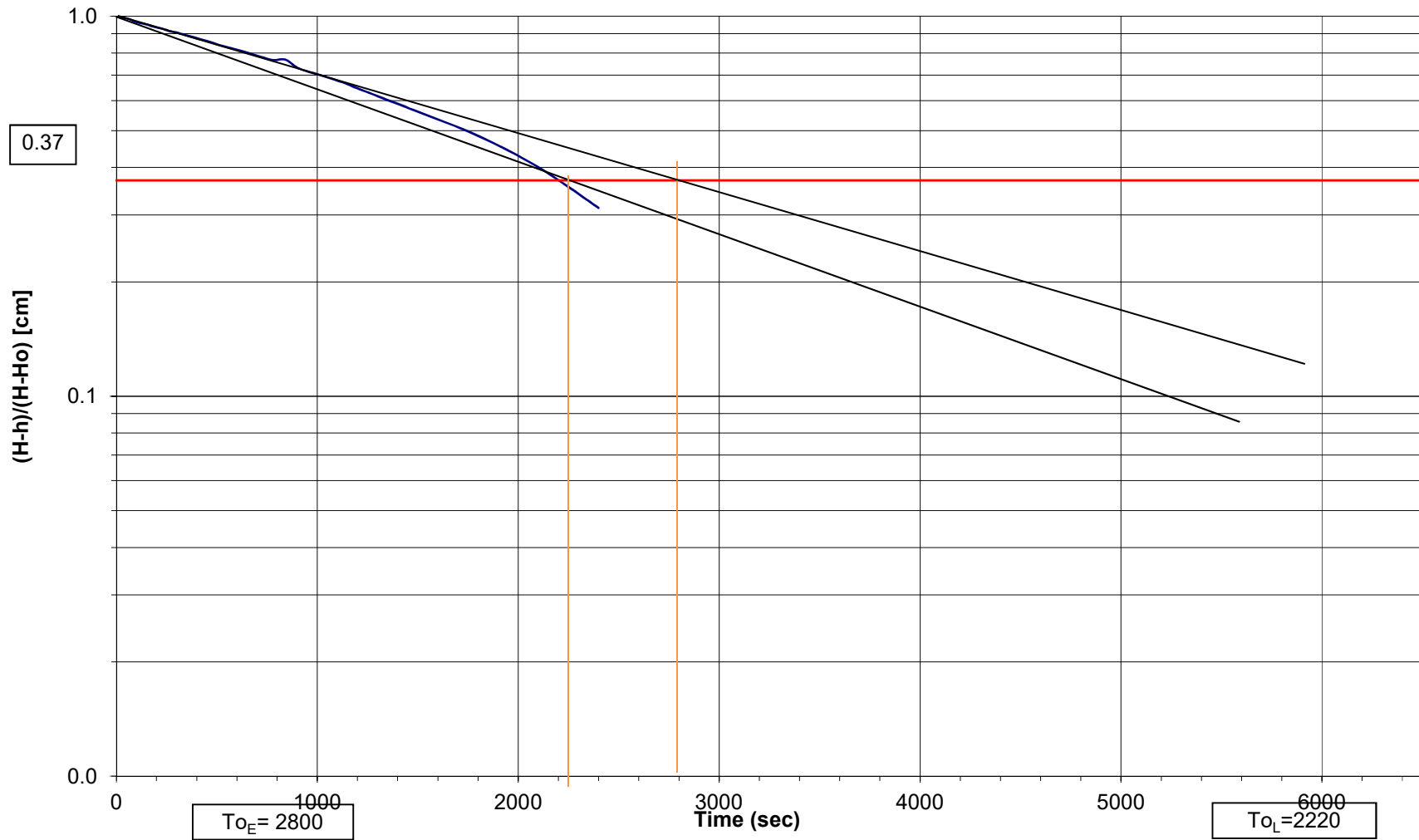
## Hvorslev Testing: MW20-4

Project No.:	211-01353-00	H = Static Water Level	mbg
Project Name:	Loyalist Secondary Plan	Ho = Head at time = 0	mbg
Date:	15-Jun-21	h = Water Level at time t	mbg
Conducted by:	LG/DAY	To <sub>E</sub> =	2800 sec
Well Number:	MW20-4	To <sub>L</sub> =	2220 sec
Well Depth:	2.64 mbgs	Screen Length (L) =	152.4 cm
Top of Pipe:	0.89 mag	Hole Radius (R) =	10.414 cm
Well Diameter:	51 mm	Well Radius (r) =	2.55 cm (measured)
Well Elevation:	127.54 masl		
Static Water Level:	2.08 mbtop	$K_E = r^2 \ln(L/R) / (2LT_o) =$	2.04E-05 cm/s
Ground Elevation:	126.50 masl	$K_L = r^2 \ln(L/R) / (2LT_o) =$	2.58E-05 cm/s

Time t (sec)	Water Level (mbtop)	Water Level Elevation (masl)
0	4.7	122.84
25	4.68	122.86
60	4.66	122.88
90	4.62	122.92
120	4.595	122.94
150	4.575	122.96
180	4.545	122.99
240	4.5	123.04
270	4.47	123.07
300	4.455	123.08
360	4.405	123.13
420	4.36	123.18
480	4.31	123.23
540	4.26	123.28
600	4.22	123.32
660	4.175	123.36
720	4.13	123.41
780	4.09	123.45
840	4.095	123.44
900	4	123.54
960	3.95	123.59
1020	3.91	123.63
1080	3.868	123.67
1140	3.825	123.71
1200	3.773	123.76
1500	3.55	123.99
1800	3.35	124.19
2100	3.13	124.41
2400	2.9	124.64

Time t (sec)	H-h	H-Ho	(H-h)/(H-Ho)
0	2.620	2.620	1.000
25	2.600	2.620	0.992
60	2.580	2.620	0.985
90	2.540	2.620	0.969
120	2.515	2.620	0.960
150	2.495	2.620	0.952
180	2.465	2.620	0.941
240	2.420	2.620	0.924
270	2.390	2.620	0.912
300	2.375	2.620	0.906
360	2.325	2.620	0.887
420	2.280	2.620	0.870
480	2.230	2.620	0.851
540	2.180	2.620	0.832
600	2.140	2.620	0.817
660	2.095	2.620	0.800
720	2.050	2.620	0.782
780	2.010	2.620	0.767
840	2.015	2.620	0.769
900	1.920	2.620	0.733
960	1.870	2.620	0.714
1020	1.830	2.620	0.698
1080	1.788	2.620	0.682
1140	1.745	2.620	0.666
1200	1.693	2.620	0.646
1500	1.470	2.620	0.561
1800	1.270	2.620	0.485
2100	1.050	2.620	0.401
2400	0.820	2.620	0.313

# Hvorslev Testing: MW20-4



# APPENDIX

**F**

GROUND

PENETRATING

RADAR STUDY



## TECHNICAL NOTE

**TO:**

**FROM:** Milan Situm

**SUBJECT:** Bedrock Mapping via geophysical methods

**PROJECT No.:** 211-01353-00

**DATE:** May 14,2021

---

### 1 INTRODUCTION

WSP Canada Inc. (WSP) was retained to provide geophysical services for the developing land beginning at the corner of Taylor Kidd Blvd and County Road 6, west of Amherstview (see Figure 1). The purpose of this investigation was to use geophysics to create a contour map which predicts the depth of the underlying bedrock at each of the borehole locations. A secondary study was to look for evidence of karst as this could heavily reduce the cost of development. The geophysical method used was Ground Penetrating Radar (GPR).

This technical note will outline the background of the geophysical method, data collection procedures and walk through the results of the data set.

### 2 FIELD STUDY SUMMARY

Ground Penetrating Radar (GPR) is a geophysical method that uses short duration electromagnetic pulses focused into the ground to produce images of the subsurface by measuring the reflected pulses. The properties of the reflected waves give information about the objects lying within the subsurface as well as the soils themselves. There are two key pieces of information that are measured, the amplitude of the wave and the arrival time, which corresponds to the difference in permittivity between two materials and depth, respectively. More details on the background behind the GPR can be found in Section 2.1.

The survey began on April 5<sup>th</sup> and was completed on April 6<sup>th</sup>. Figure 1 shows the boundary area (blue) of interest that is looking to be developed as well as the borehole locations overlaid on a Google Earth image. The operator gathered a total of 56 data files. The device that was used to complete the survey was the Mala GX (Ground Explorer) with the 450MHz antenna, which is linked directly to the Global Positioning System (GPS). A fact sheet has been attached in Appendix A. The device was set in time-mode which simply means the device is always recording, regardless if the operator is moving or not. A conservative estimate of the total amount of linear profiles covered was 18.0 kilometers.



Figure 1: Survey Area with borehole locations marked

## 2.1 GPR BACKGROUND

The principal of ground-penetrating radar (GPR) is to emit an electromagnetic pulse into the ground which propagates into the earth and reflects on a variety of materials where there is a contrast in dielectric permittivity. Examples of a dielectric contrast include; earth / concrete (electrical caisson or concrete pads), earth / water (bathymetry surveys), earth / air (void mapping) or earth / metal (tank or watermain locating). When the radiation interacts with the boundary it can either reflect and return to the surface or refract and continue further into the subsurface. The properties of the returning wave, measured by the receiver, contains information about the material under the subsurface. The two measurables that provide useful information are the corresponding arrival time and amplitude. The amplitude of the wave gives information about the electrical property of the boundary between the two materials, a large amplitude implies a large difference in permittivity's between two materials, hence the



speed of the EM wave through the material can be determined. The corresponding arrival time is associated with the depth of the target. Using the speed of the wave, measured by the amplitude, the depth of the target can be calculated from the measured time it takes for a wave to return.

GPR has a variety of applications, including the following:

- Mapping buried infrastructure (utilities, foundations, etc.)
- Mapping sub-surface geology
- Studying bedrock, soil and groundwater
- Mapping archeology features
- Mapping unexploded ordnance and detecting tunnels for the military

The effective depth of GPR is dependent on the electric conductivity of the ground as well as the frequency of the transmitter. A subsurface with higher electric conductivity will attenuate the wave, essentially it decreases the penetration depth of the wave. The frequency and depth have an inversely proportional relationship: as the frequency increases the effective depth decreases. However, there is a trade-off; higher frequency waves offer higher resolution to images; therefore, you can use lower frequency waves to produce images, but at the expense of their clarity. It is best to use the highest frequency possible to ensure that the operator can make the most accurate diagnosis of the data.

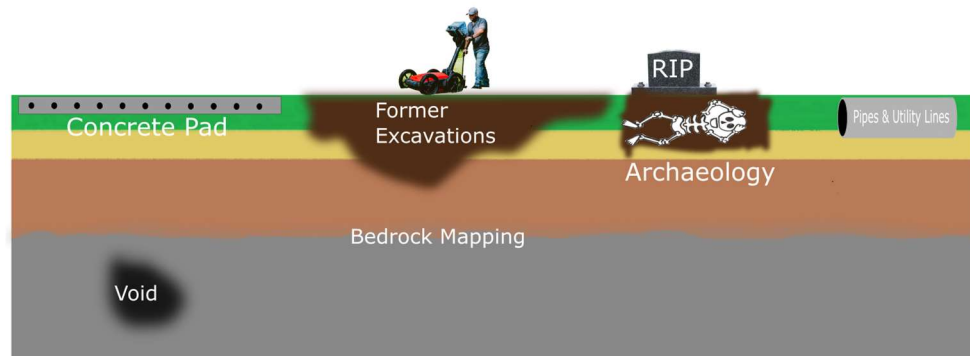


Figure 2: GPR Applications

### 3 RESULTS

The data was processed using the RadExplorer Software, which involves the operator interpreting the bedrock line along each profile. Each “pick” file is then exported and was used to create a contour map of the underlying bedrock, as shown in Figure 3. Each colour is associated to a 0.25m depth interval of the underlying bedrock. This contour map can also be found in Appendix B and shows scale for colour to depth. Table 1 summarizes the predicted rock depth interval at each of the borehole locations. The contour map suggests that the majority of the bedrock is within 1-meter from surface. However, interpreting bedrock depth can be difficult as the moisture content of the overburden changes throughout the site, which directly affects the speed of the EM-waves and therefore the interpreted depth. For example, in the northeast end of the property the soils appeared fairly dry which suggests a dielectric of

roughly 6-7. On the west side, near BH21-13 and BH21-05, the overburden was very lumpy and contained much higher moisture content. This causes 1) the EM wave to travel much slower and therefore the depth of the bedrock could be overestimated 2) as the conductivity of the ground increases the penetration depth of the EM-waves decreases. In other words, soils with high moisture content cause EM waves to attenuate which can make interpreting bedrock much more difficult. For this site BH21-05, BH21-07 and BH21-13 were in highly saturated zones.

During the interpretation there were a few zones that had interesting features. Figure 4 shows the approximate location of each of the anomalies and Table 2 summarizes location with depth. These anomalies will require some explanation:

*Possible Dip #1 + Exposed Fissure in Rock* – These anomalies are located within the same general area and may possibly be related to each other. As shown on the contour map, in this area there was a large hill of exposed rock. Observable from surface is a substantial fissure. The depth most likely exceeds one meter. It is unclear if there is an open void extending away from this feature. However, the operator while on site observed a very strong dipping feature that appears roughly 5-meters wide with some evidence of a ground radar image characteristic called ‘ringing’. Ringing could be key evidence of karst formation as there may be an open void. This area appeared to be the most promising evidence for karst-like features.

*Possible Utility* – At the very northeast side of the property the operator noticed a very consistent anomaly that extends from the northeast corner, roughly 45 degrees away from Taylor Kidd Rd that has the appearance of a pipe. The possible utility does not appear to be a live wire as the signal would have most likely been stronger.

*Possible Dipping/Evidence of Dipping* – Remaining dipping bedrock features and zones did not show a large amount of ringing which reduces the likelihood of karst-like features. However, these are areas where the bedrock could dip below 1.5-meters which appears to be rare for this particular site.

*Possible Large Boulders* – Located at the central east part of the property it was observed from surface that there was a dipping feature that extended roughly 5-meters from west to east. The GPR data suggests that there is a possibility of large boulders that may have purposefully placed.

*Possible Loosened Rock / Forecasted Void* – In the northwest corner of the site there was evidence of loosened rock / collective of small voids. It is unclear whether this is naturally occurring or induced by the blasting that would have taken place to create the road.

*Possible Buried Metal Area* – While on site the operator and ESA team came across dumping of metal. From scanning the area, it appears that there is evidence of buried metal surrounding the area. It is unclear how many objects there were or how deep, metal almost always attenuates EM-waves due to their higher conductivity value.

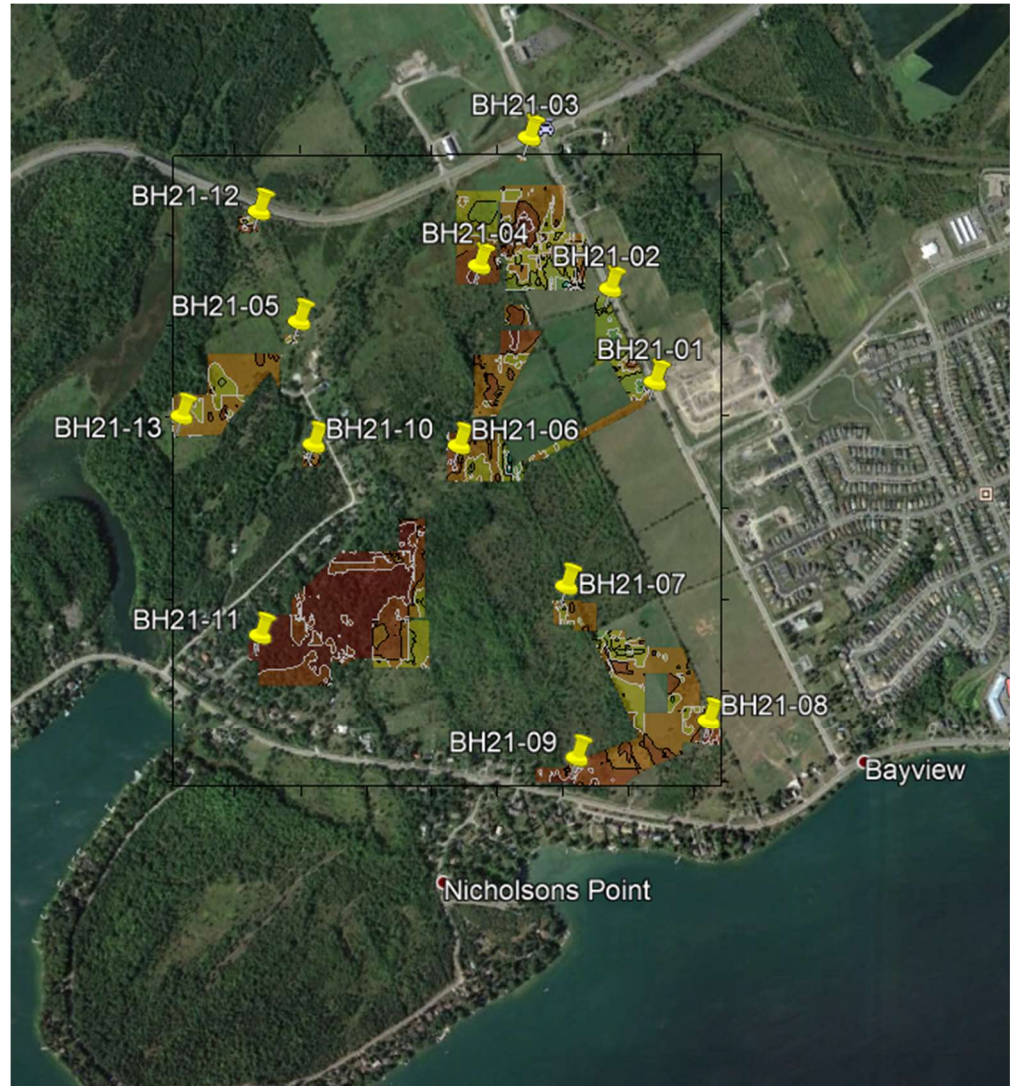


Figure 3 : Contour Map overlaid on Google Earth Image

BH21-#	Depth Interval (m)
01	0.5 – 0.75
02	0.75 - 1
03	0.5 – 0.75
04	0.25 – 0.5
05	0.5 – 0.75
06	0 – 0.25
07	0.5 – 0.75
08	0 – 0.25
09	0.25 – 0.5
10	0.25 – 0.5
11	0 – 0.25
12	0.5 – 0.75
13	0.75 - 1

Table 1: Summary of approximate rock depth at each borehole location



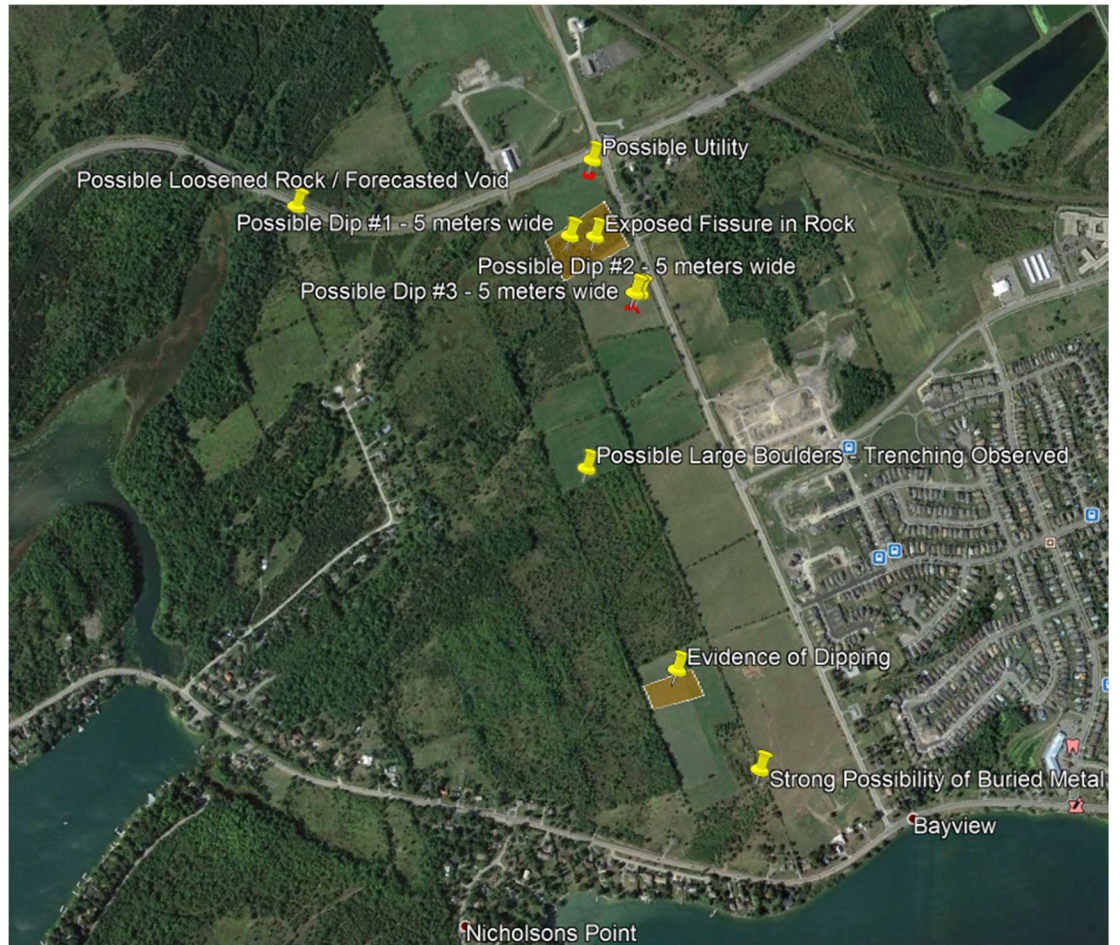


Figure 4: Anomaly Map

Anomaly Name	Easting (m) +/- 1m	Northing (m) +/- 1m	Approximate Depth (m)
Possible Loosened Rock / Forecasted Void	365521	4898392	2
Possible Utility	366213	4898519	0.5
Possible Dip #1	366165	4898337	2
Exposed Fissure in Rock	366224	4898338	0
Possible Dip #2	366333	4898208	2.5
Possible Dip #3	366321	4898207	2.5
Possible Large Boulders / Trenching Observed	366218	4897795	1.5 - 2
Evidence of Dipping Zone	366372 - 366517	4897277 - 4897367	1.5 - 2
Strong Possibility of Buried Metal (Area)	366638	4897108	NA

Table 2: Summary of Anomaly locations

## 4 CONCLUSIONS

The survey took place on April 5th and concluded on April 6th. Figure 1 shows the approximate boundaries of the property with the boreholes marked. The purpose of the survey was to create a contour map of the bedrock as well as investigate any anomalous features with a focus on karst like features. Ground penetrating radar was used to complete this task, a fact sheet has been attached in Appendix A.

Figure 3 and again in Appendix B is the resulting contour map from combining 56 data files. The majority of the bedrock appears to be within the upper 1-meter. However, there were high moisture areas which can cause problems with interpretation and are described in Section 3. Table 1 summarizes the predicted depth interval at each of the borehole locations.

Figure 4 is an anomaly map; a map of interesting features that are were not part of the general pattern/geology. In addition, it is not quite clear exactly what each of the features are related to but there is a strong idea. Each anomaly has been described in detail in Section 3. Table 2 summarizes the location and approximate depth. Some of the features are related to a modest amount of karstic erosion in the form of vertical fissures and others are related to broken rock being moved and regraded in other areas.

Prepared by: Milan Situm, P.Geol.

---

Milan Situm, P.Geol.  
Senior Geophysicist





# APPENDIX A

## EQUIPMENT SHEETS

### GPR ANTENNAS WITH 4 DIFFERENT FREQUENCIES

MALÅ GX is an integrated GPR solution with four MALÅ GX antenna options: GX80, GX160, GX450 and GX750.

MALÅ GX can be optimized for specific measurements and applications by adding different antennas. For the GX-series of antennas, there are four options to choose from using center-frequencies of 80, 160, 450 or 750MHz. The choice of antenna frequency will be governed by your application and the desired depth penetration and resolution. All new MALÅ GX antennas are app-enabled, and comes with WiFi connection per default. This enables full integration with MALÅ Controller app and MALÅ Vision.



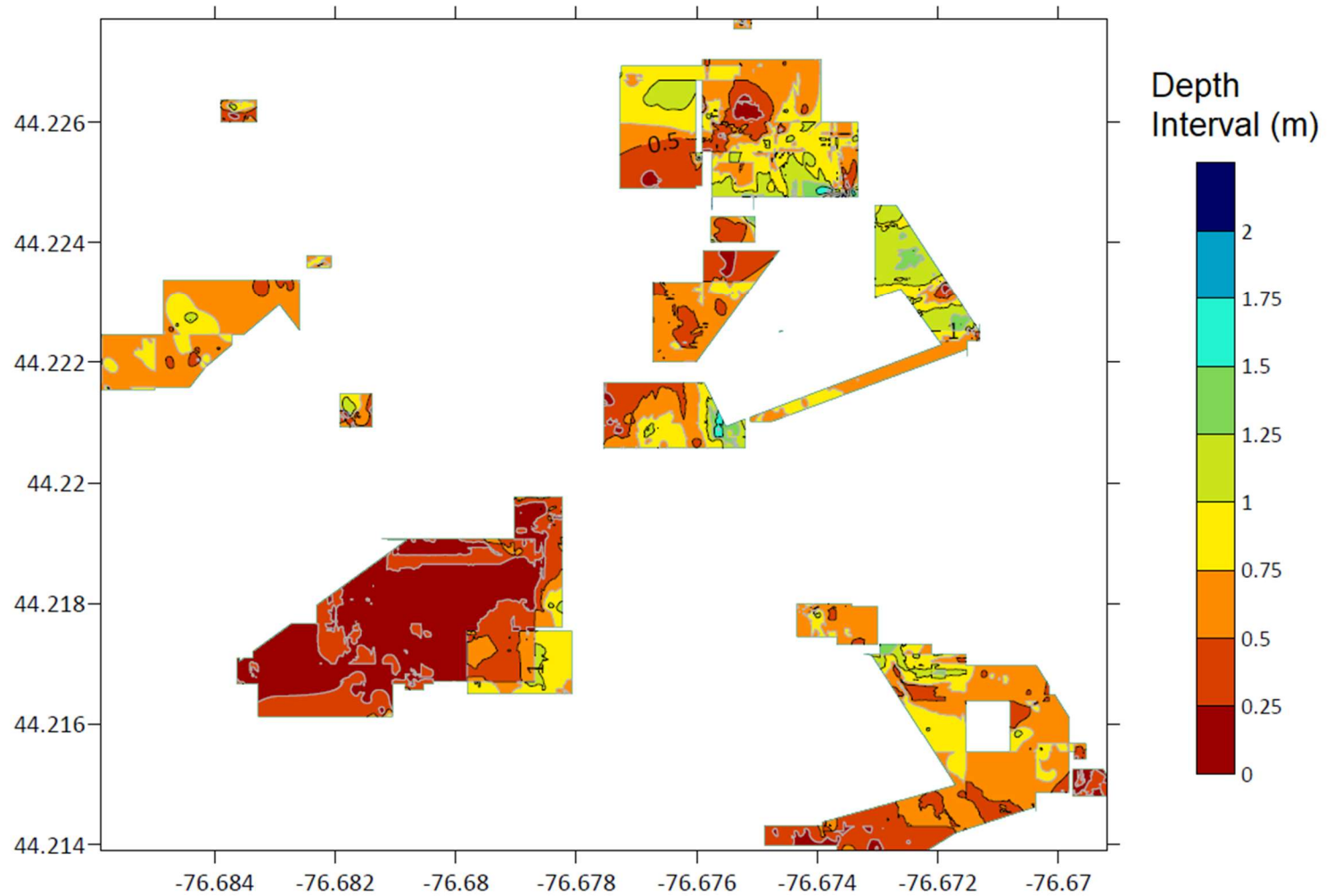
#### Geological

Geological applications are usually both longer and deeper (lower frequency antennas) surveys and sometimes performed in boreholes. Work includes, Layer detection, Rock fracture analysis, general and more detailed Site investigations, Pre-mining studies, Exploration work, Bathymetry, Earthquake prediction, Landslide investigations, Volume estimations, Ore lineage mapping, Nuclear waste repository studies, Tunnelling work, etc.

# APPENDIX B

## BEDROCK CONTOUR MAP

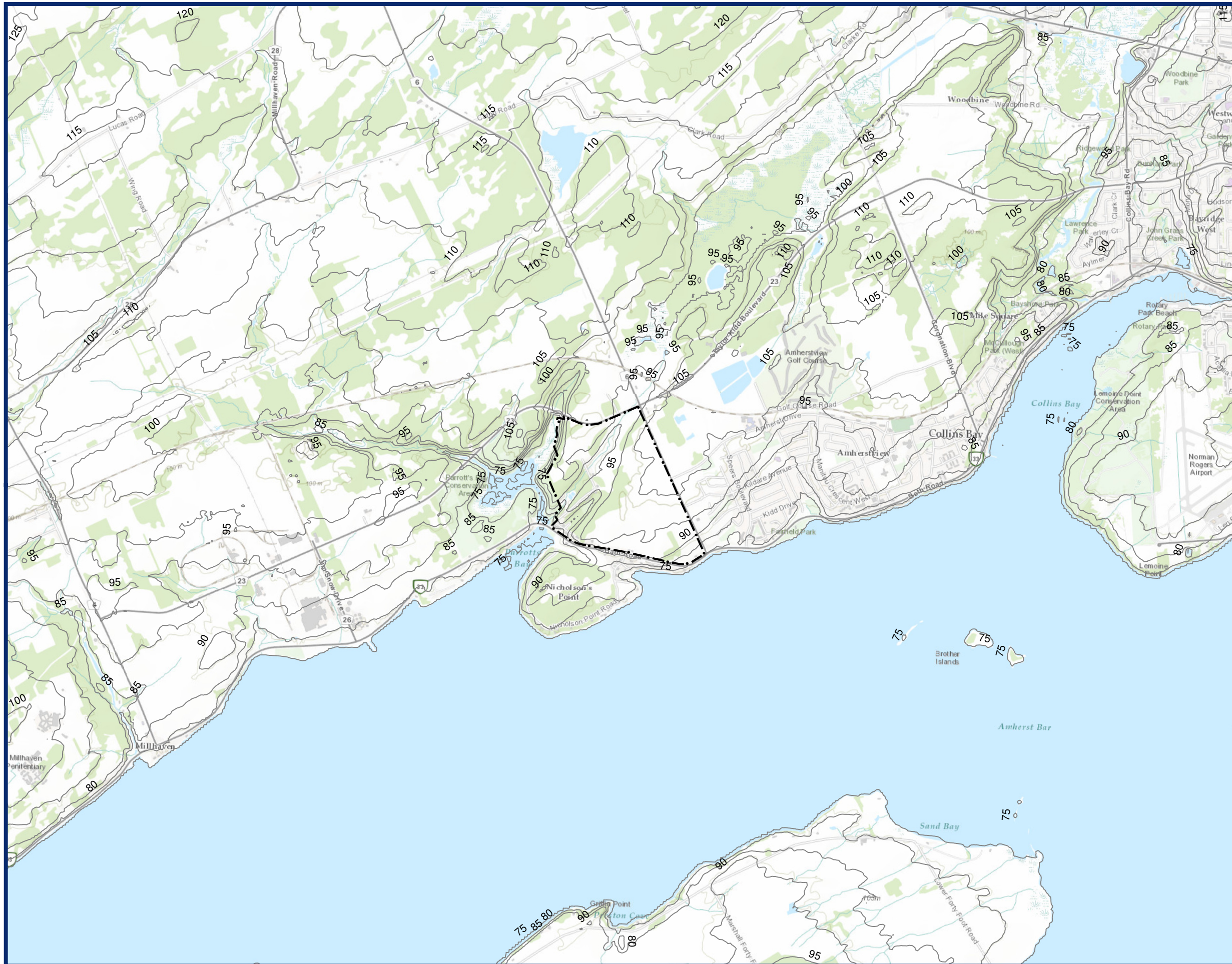
Amherstview - Loyalist  
Bedrock Depth Map



# FIGURE









**Figure 1  
Site Location**

**Geotechnical Investigation &  
Hydrogeological Assessment  
Amherstview West Secondary Plan**

-  SITE BOUNDARY
-  5 m TOPOGRAPHIC CONTOUR



0 500 1,000 1,500 2,000  
m









**June 2021**  
Source: Loyalist Township; LIO

**wsp** 2611 Queensview Drive Suite 300  
Ottawa, ON K2B 8K2  
Canada  
www.wsp.com



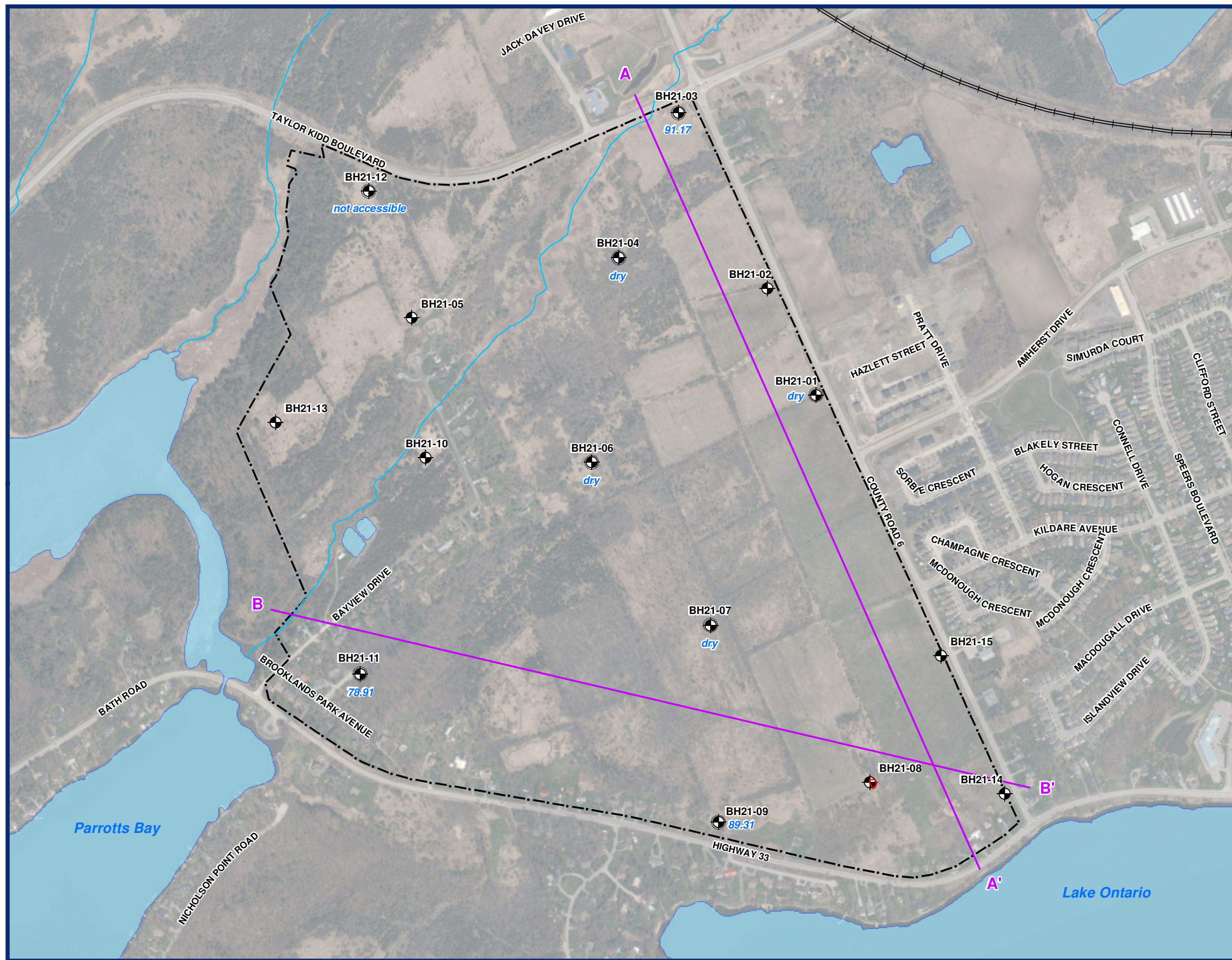
**Figure 2  
Site Plan**

**Geotechnical Investigation & Hydrogeological Assessment  
Amherstview West Secondary Plan**

-  SITE BOUNDARY
-  RAILWAY
-  WATERCOURSE
-  WATERBODY
-  POTENTIAL CONTAMINATED AREA
-  CROSS SECTION LOCATION
-  BOREHOLE LOCATIONS
-  MONITORING WELL










**July 2021**  
Source: Loyalist Township; LIO

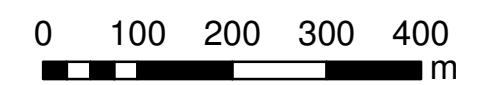
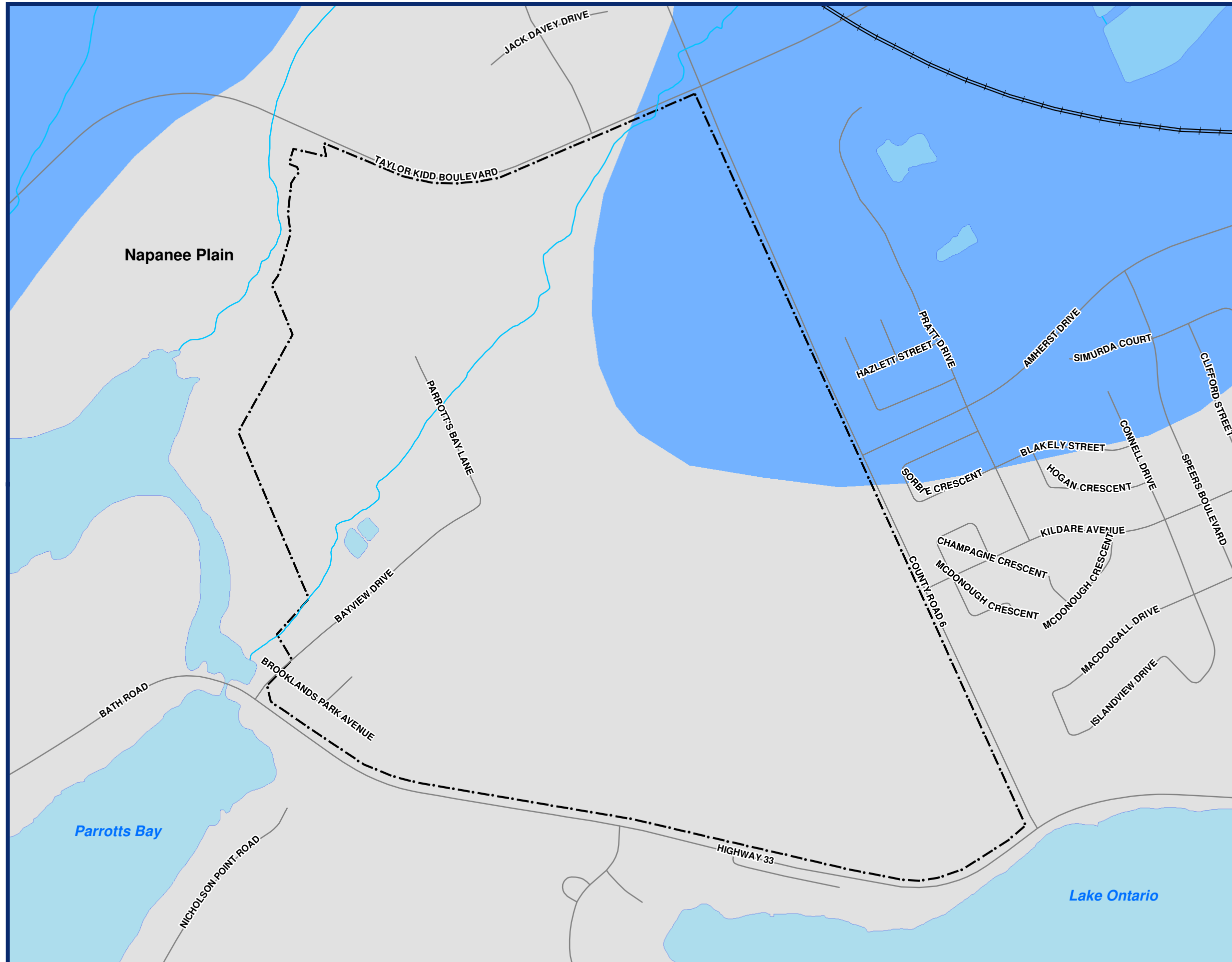




**Figure 3  
Physiography**

**Geotechnical Investigation &  
Hydrogeological Assessment  
Amherstview West Secondary Plan**

-  SITE BOUNDARY
-  RAILWAY
-  WATERCOURSE
-  WATERBODY
-  PHYSIOGRAPHIC REGION BOUNDARY
-  CLAY PLAINS
-  LIMESTONE PLAINS










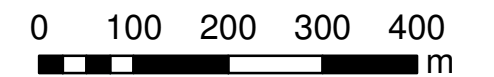
**June 2021**

Source: Loyalist Township; LIO; Chapman, L.J. and Putnam, D.F. 2007. Physiography of southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 228.

**Figure 4**  
**Surficial Geology**

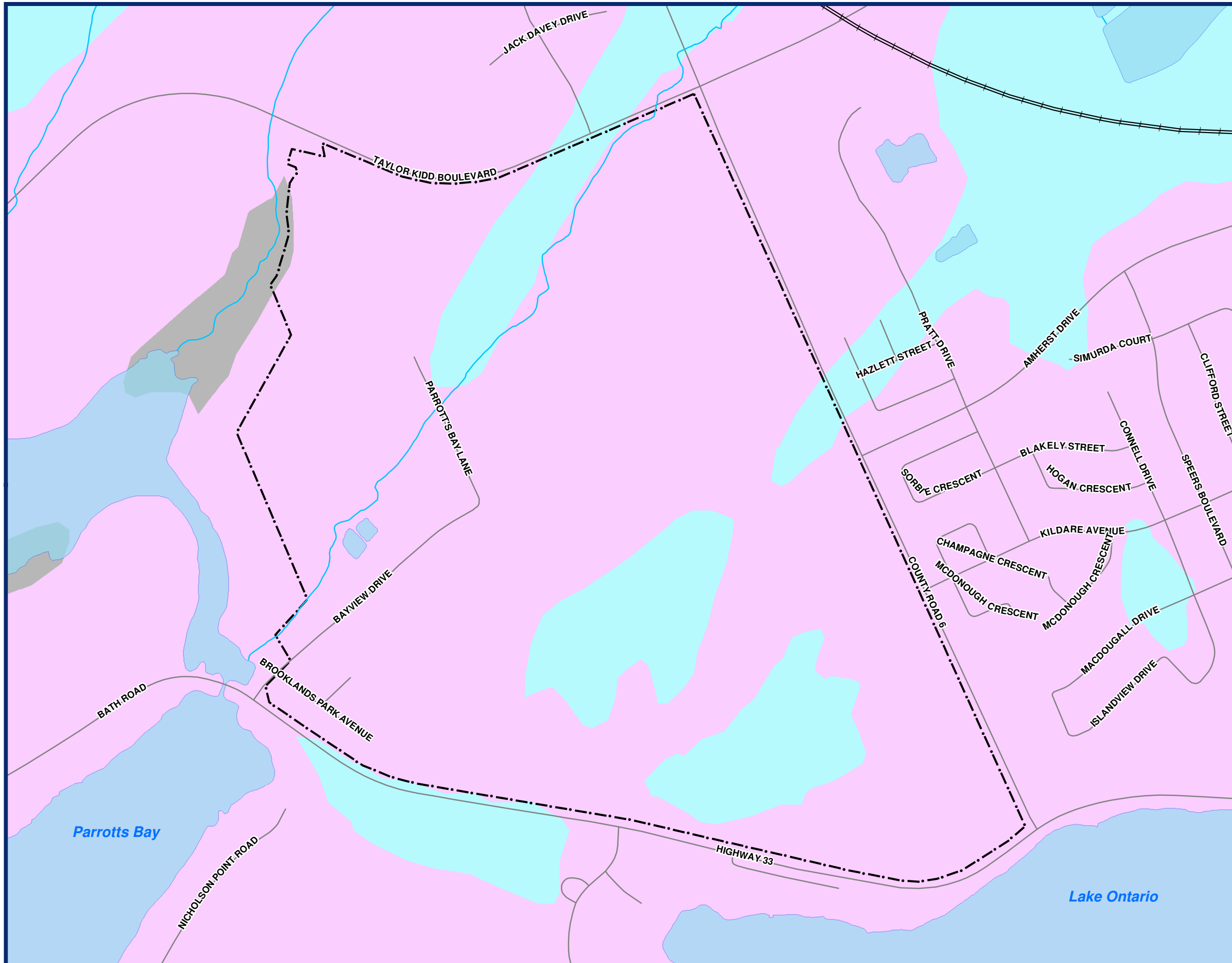
**Geotechnical Investigation & Hydrogeological Assessment  
Amherstview West Secondary Plan**

-  SITE BOUNDARY
-  RAILWAY
-  WATERCOURSE
-  WATERBODY
-  PALEOZOIC BEDROCK
-  MASSIVE-WELL LAMINATED
-  ORGANIC DEPOSITS









**June 2021**

Source: Loyalist Township; LIO; Chapman, L.J. and Surficial Geology of Southern Ontario, MRD 128, Ministry of Northern Development and Mines.



**Figure 5**  
**Bedrock Geology &**  
**Bedrock Topography**

**Geotechnical Investigation &**  
**Hydrogeological Assessment**  
**Amherstview West Secondary Plan**

-  SITE BOUNDARY
-  RAILWAY
-  WATERCOURSE
-  WATERBODY
-  GULL RIVER FORMATION
-  BEDROCK ELEVATION (mASL) (5m INTERVAL)



**June 2021**

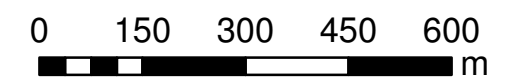
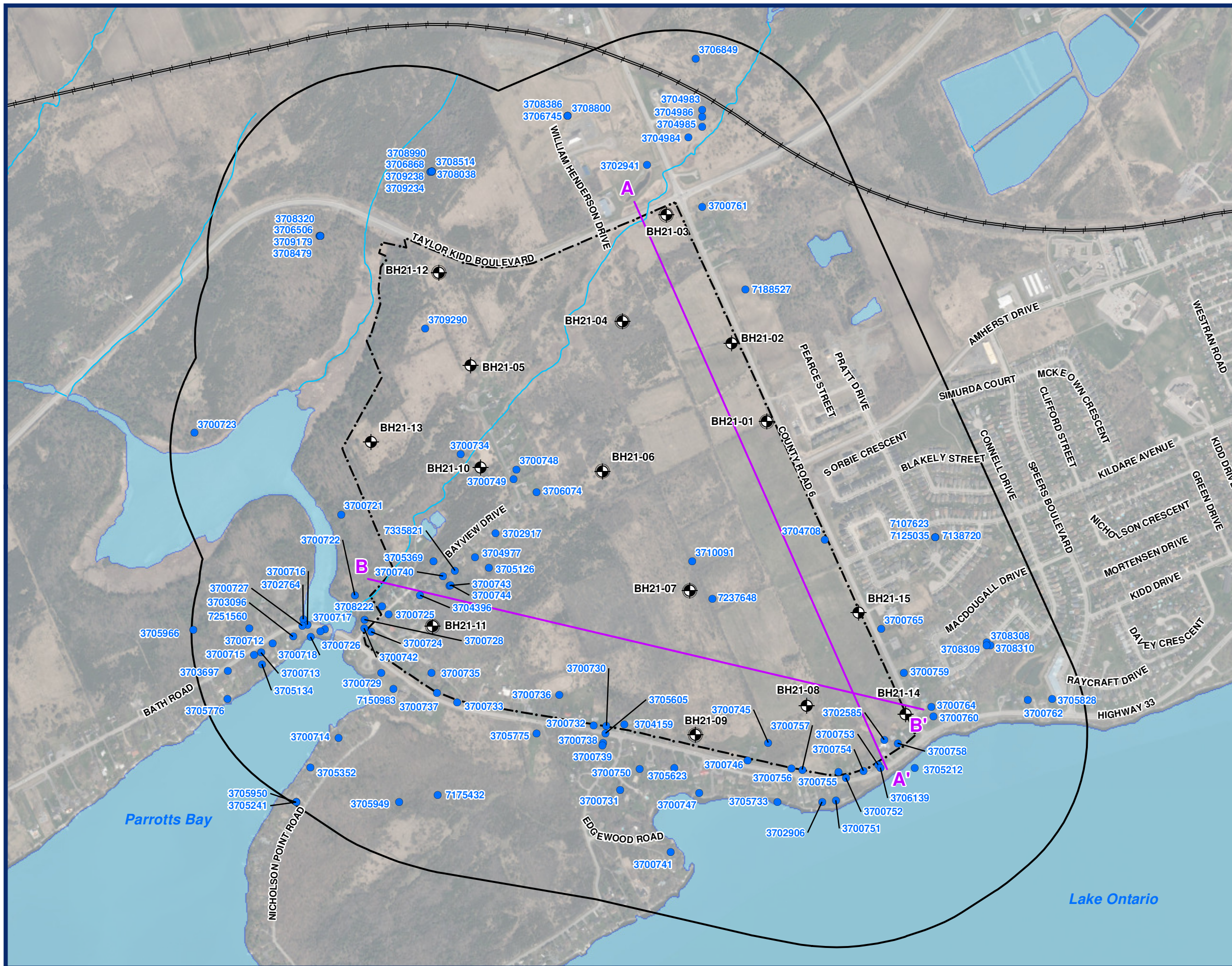
Source: Loyalist Township; LIO; Bedrock Topography and Overburden Thickness Mapping, Southern Ontario, MRD 207, Ministry of Northern Development and Mines. Ontario Geological Survey 2011. Paleozoic Geology of Southern Ontario, MRD 219, Ministry of Northern Development and Mines.



Figure 6  
MECP Water Well Locations

Geotechnical Investigation & Hydrogeological Assessment  
Amherstview West Secondary Plan

- [Dashed line] SITE BOUNDARY
- [Line with cross-ticks] RAILWAY
- [Thick black line] 500 m STUDY AREA
- [Blue line] WATERCOURSE
- [Light blue area] WATERBODY
- [Blue dot] MECP WATER WELL LOCATIONS
- [Purple line] CROSS SECTION LOCATION
- [Circle with crosshair] BOREHOLE LOCATIONS
- [Circle with dot] MONITORING WELL



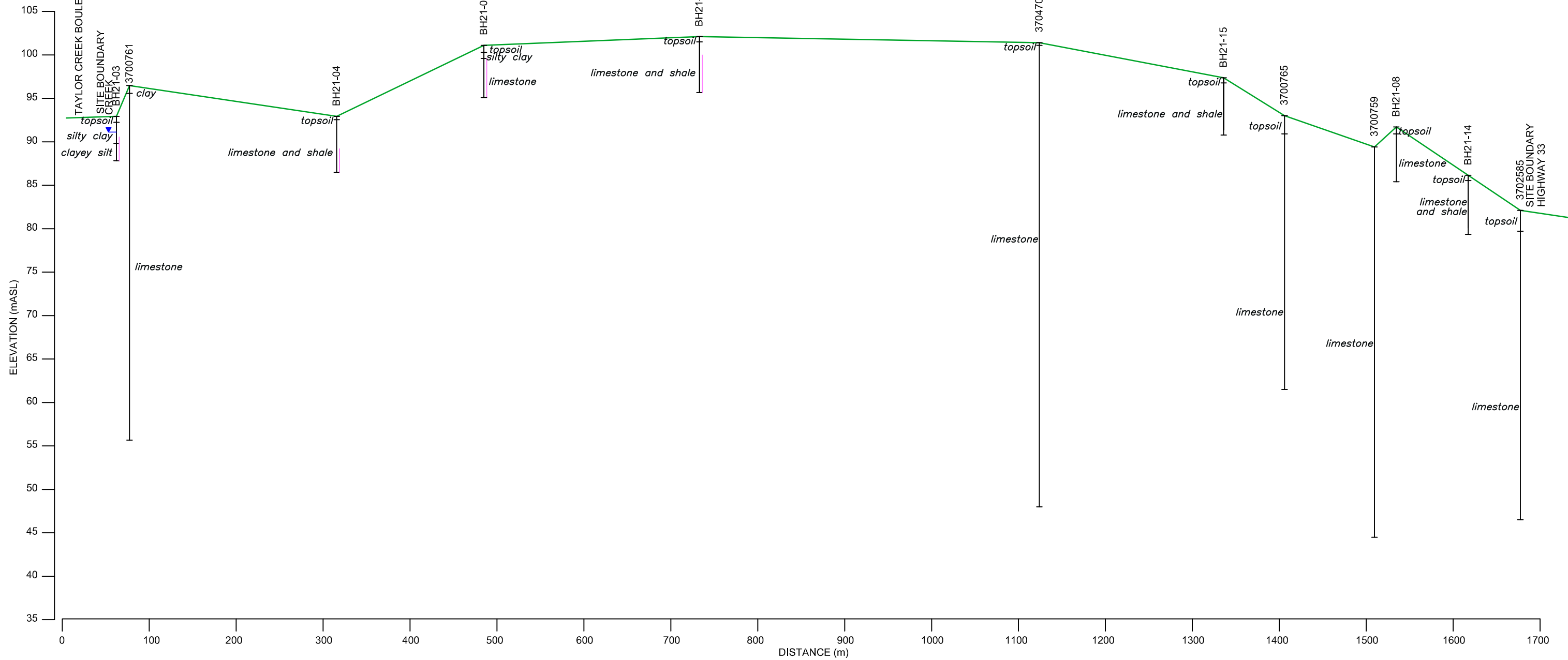
July 2021

Source: Loyalist Township; LIO



North

South



LEGEND

- WELL ID
- GROUND SURFACE
- WATER LEVEL / WELL SCREEN
- CHANGE IN STRATIGRAPHY
- END OF BORING (mBGL)

CROSS SECTION A-A'

GEOTECHNICAL INVESTIGATION & HYDROGEOLOGICAL ASSESSMENT AMHERSTVIEW WEST SECONDARY PLAN

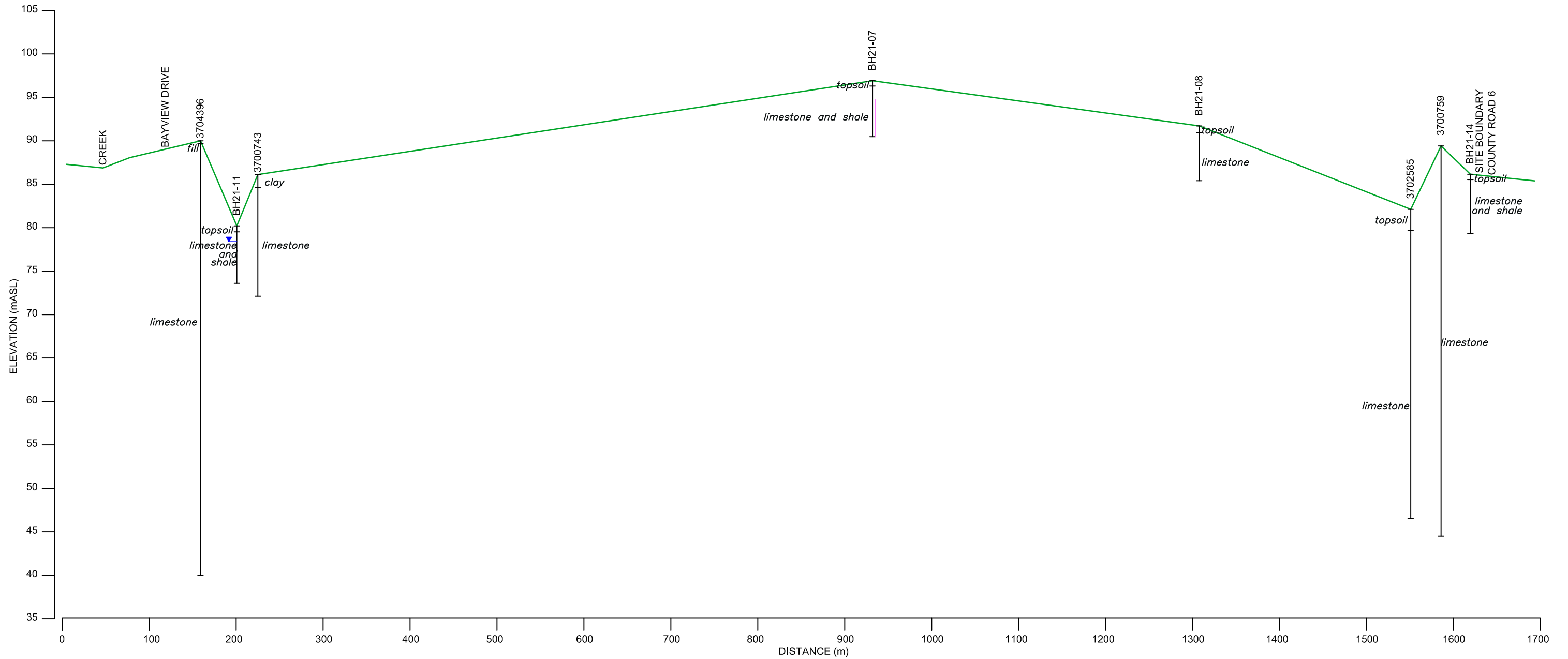
DATE: JULY 2021	SCALES: AS SHOWN
PROJECT: 211-01353-00	FILE NO.: 211-01353-00 F7 CR

	FIGURE <b>7</b>
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NOTE:  
 THE ACTUAL SOIL STRATIFICATION HAS BEEN VERIFIED FROM DATA OBTAINED AT THE WELL LOCATIONS ONLY. THE INFERRED CONTACTS SHOWN ARE BASED ON GEOLOGICAL EVIDENCE AND THESE MAY VARY FROM THOSE SHOWN BETWEEN BORINGS. WELL DATA IS PROJECTED ONTO THE SECTION WHICH ALSO MAY CREATE SOME IRREGULARITIES IN CONTACT DEPTHS.

North West

South East



LEGEND

- WELL ID
- GROUND SURFACE
- WATER LEVEL / WELL SCREEN
- CHANGE IN STRATIGRAPHY
- END OF BORING (mBGL)

NOTE:  
 THE ACTUAL SOIL STRATIFICATION HAS BEEN VERIFIED FROM DATA OBTAINED AT THE WELL LOCATIONS ONLY. THE INFERRED CONTACTS SHOWN ARE BASED ON GEOLOGICAL EVIDENCE AND THESE MAY VARY FROM THOSE SHOWN BETWEEN BORINGS. WELL DATA IS PROJECTED ONTO THE SECTION WHICH ALSO MAY CREATE SOME IRREGULARITIES IN CONTACT DEPTHS.

<b>CROSS SECTION B-B'</b>	
GEOTECHNICAL INVESTIGATION & HYDROGEOLOGICAL ASSESSMENT AMHERSTVIEW WEST SECONDARY PLAN	
DATE: JULY 2021	SCALES: AS SHOWN
PROJECT: 211-01353-00	FILE NO.: 211-01353-00 F8 CR
	FIGURE <b>8</b>