



## Milton Link Phase One, Milton, Ontario

Preliminary Hydrogeological Investigation and Water Balance Assessment

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## 1 Executive Summary

The Proponent, Tribal Development Management Services Inc. (doing business as "Matthews"), is advancing the development of lands located adjacent to the CN Logistics Hub in the Town of Milton. Official Plan and Zoning By-law Amendments are being pursued to designate the subject lands as Industrial Area to be included within the Sustainable Halton Plan (SHP) Urban Area Boundary. The site will seek the entitlements associated with the Employment Zone, with site-specific provisions to support the intended development.

A Preliminary Hydrogeological Investigation and Water Balance Assessment was completed in support of the proposed Phase One industrial development at Milton Link, Ontario. The study evaluates groundwater conditions, construction dewatering requirements, potential environmental impacts, and compliance with municipal, conservation authority, and provincial requirements.

The site is located within the Peel Plain, underlain primarily by clayey silt till to silty clay till, which is generally low permeability. Groundwater levels are shallow and seasonally variable, with depths typically ranging from approximately 0.4 mbgs (185.86 masl) to 3.3 mbgs (180.07 masl). Groundwater flow is directed southeast toward Sixteen Mile Creek, consistent with regional drainage patterns. The site is located within the Halton Region Source Protection Area but not located within a Wellhead Protection Area, Significant Groundwater Recharge Area, or other vulnerable source protection zones.

The following parameters exceeded the PWQO parameters: Dissolved and Total Boron (B), Dissolved and Total Cobalt (Co), Total Iron (Fe), Dissolved and Total Uranium (U) and based on the water quality test results, a suitable pre-treatment and conservation authority approval will be required for the short-term dewatering discharge (natural environment).

Based on water balance assessment for the Site there will be an infiltration deficit in post-development. To fully mitigate the infiltration deficit of approximately 7,478 m<sup>3</sup>/yr in post-development conditions the feasible LIDs measures should be implemented. The LID area is based on the estimated design infiltration rate of 8 mm/hr, on the assumption that precipitation is evenly distributed during the year over two-week intervals, and bi-weekly volumes from roof will be infiltrated in 48-hour. The area of feasible LID that is required to offset the water balance deficit is approximately 1,215 m<sup>2</sup>. The infiltration system will need to have a minimum storage of 468 m<sup>3</sup> to store two weeks of precipitation to meet the pre-development infiltration levels. The water balance assessment will be updated once the site plan is finalized.

Based on the assumptions outlined in this report, the estimated peak dewatering rate for proposed construction activities is approximately 47,450 L/day and 48,950 L/day for the footings of the industrial building and underground services respectively at any given time. This is the rate which will be required to be discharged to the natural environment system. As the dewatering flow rate estimate is less than 50,000 L/day, EASR will not be required to facilitate the construction dewatering program for the Site.

Based on the geotechnical report dated June 17, 2026, section 5.4, it is our understanding that the underfloor drains will not be required since the proposed buildings are slab-on-grade. As such, there will be no long-term (post construction) dewatering.

## 2 Introduction

### 2.1 Project Description

EXP Services Inc. (EXP) was retained by Tribal Development Management Services Inc. (TDMSI). to prepare a Preliminary Hydrogeological Investigation and Water Balance Assessment Report associated with the proposed development located at Milton Link Phase One, Milton, Ontario (hereinafter referred to as the 'Site').

The Proponent, Tribal Development Management Services Inc. (doing business as "Matthews"), is advancing the development of lands located adjacent to the CN Logistics Hub in the Town of Milton. Official Plan and Zoning By-law Amendments are being pursued to designate the subject lands as Industrial Area to be included within the Sustainable Halton Plan (SHP) Urban Area Boundary. The site will seek the entitlements associated with the Employment Zone, with site-specific provisions to support the intended development. The Site is currently occupied by agricultural land. It is our understanding that the proposed development plan is to construct three (3) industrial slab on grade buildings (Buildings 1A, 1B and 1C) without basements, associated access roads, loading and parking areas. The Site location plan is shown in Figure 1.

EXP conducted a Preliminary Geotechnical Investigation in conjunction with this investigation. The pertinent information gathered from the noted investigations is utilized for this report.

### 2.2 Project Objectives

The main objectives of the Preliminary Hydrogeological Investigation and Water Balance Assessment are as follows:

- Establish the local hydrogeological settings within the Site;
- Provide Preliminary recommendations on construction and long-term dewatering;
- Assess groundwater quality; and
- Prepare a Preliminary Hydrogeological Investigation and Water Balance Assessment Report.

### 2.3 Scope of Work

To achieve the investigation objectives, EXP has completed the following scope of work:

- Reviewed available geological and hydrogeological information for the Site;
- Drilled and installed fourteen (14) monitoring wells and five (5) piezometers to an approximate depth ranging from 7.24 meters below ground surface (mbgs) to 8.13 mbgs;
- Installed 50 mm diameter monitoring wells in the geotechnical boreholes;
- Developed and conducted Single Well Response Tests (SWRT) on monitoring wells to assess hydraulic conductivities of the saturated soils at the Site;
- Completed eight (8) rounds of groundwater level measurements at all monitoring wells and piezometers for seasonal monitoring;
- Collected one (1) groundwater sample for analyses of parameters for the routine comprehensive analysis package (RCMP) and compare results to Provincial Water Quality Objectives (PWQO);
- Completed one (1) shallow infiltration test by hand auguring to assess the percolation rate;

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- Evaluated the information collected during the field investigation program, including borehole geological information, Water Well Records (WWR), SWRT results, groundwater level measurements and groundwater water quality;
- Prepared site plans, cross sections, geological mapping and groundwater contour mapping for the Site;
- Provided preliminary recommendations on the requirements for construction (short-term) dewatering;
- Provided with recommendations on the Ministry of Environment, Conservation and Parks (MECP) Water Taking Permits and Provincial Water Quality Objectives (PWQO) criteria for discharge to the natural environment (e.g.: surface water, drainage feature), the treatment systems will require Environmental Compliance Approvals (ECA) for construction phases;
- Conducted pre- and post-development water balance and conduct preliminary sizing of LIDs; and
- Prepared a Preliminary Hydrogeological Investigation and Water Balance Assessment Report.

The Preliminary Hydrogeological Investigation and Water Balance Assessment was prepared in accordance with the Ontario Water Resources Act and Ontario Regulation 387/04. The scope of work outlined above was made to assess dewatering and did not include a review of Environmental Site Assessments (ESA).

## 2.4 Review of Previous Reports

The following reports were reviewed as part of this Preliminary Hydrogeological Investigation and Water Balance Assessment:

- EXP Services Inc. (April 20, 2026), Preliminary Geotechnical Investigation, Britannia Road and First Line, Phase One Land, Milton, ON, prepared for Tribal Development Management Services Inc.
- EXP Services Inc. (November 1, 2024), Preliminary Hydrogeological Investigation (Draft), Britannia Road and First Line, Phase One Land, Milton, ON, prepared for Tribal Development Management Services Inc.

Any past and/or future geotechnical, hydrogeological, environmental and risk assessments, and updated development/architectural plans should be provided to update this hydrogeological report prior to submission of permits and approvals by the municipalities and agencies.

## 3 Hydrogeological Setting

### 3.1 Regional Setting

#### 3.1.1 Regional Physiography

The Site is within a physiographic region known as the Peel Plain, and the physiographic landform is named Bevelled Till Plains as shown in Figures 2A and 2B.

The plain is the lake bottom of former glacial Lake Peel, which was created between the front of the ice-lobe and the Niagara Escarpment. The Peel Plain is a level-to-undulating area of clay soil. The topography of the Plain gradually slopes down southeast, toward Lake Ontario, following the topography of the underlying till. A calm lake environment resulted in the deposition of silts and clays, particularly in depressions of the till. These sediments are quite thin, which suggests Lake Peel had a brief existence (Chapman & Putnam, 2007).

#### 3.1.2 Regional Geology and Hydrogeology

The surficial geology can be described as fine-textured glaciolacustrine deposits consisting of silt and clay, minor sand and gravel interbedded silt and clay and gritty pebbly flow till and rainout deposits (Ministry of Northern Development and Mines, 2012). The surficial geology of the Site and surrounding areas is shown in Figure 2C. Figure 2D shows the bedrock geology of the Site.

Based on the available regional geology maps, the subsurface stratigraphy of the Site from top to bottom is summarized in Table 3-1 (TRCA, 2008 and Oak Ridge Moraine Groundwater Program, 2023). The overburden thickness is approximately 20 m.

**Table 3-1: Summary of Subsurface Stratigraphy**

| Stratigraphic Unit                         | General Description                                                                                                                                                     | Top Elevation of Stratigraphic Unit |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| Halton Till or Equivalent (Aquitard)       | This lithologic unit typically consists of sandy silt to clayey silt till interbedded with silt, clay, sand and gravel.                                                 | 185                                 |
| Oak Ridges Moraine or Equivalent (Aquifer) | This geology unit mainly consists of interbedded fine-grained sand and silt deposits where coarse-grained sand and gravel along with clay laminae are locally reported. | 177                                 |
| Newmarket Till (Aquitard)                  | This lithologic unit mainly consists of a massive and dense silty sand unit.                                                                                            | 171                                 |
| Queenston Formation                        | Bedrock primarily consists of shale, limestone, dolostone and siltstone (Ministry of Northern Development and Mines, 2012).                                             | 165                                 |

Regional groundwater across the area flows southeast, towards Lake Ontario (Oak Ridge Moraine Groundwater Program, 2023). Local deviation from the regional groundwater flow pattern may occur in response to changes in topography and/or soils, as well as the presence of surface water features and/or existing subsurface infrastructure.

### 3.1.3 Existing Water Well Survey

Water Well Records (WWRs) were compiled from the database maintained by the Ministry of the Environment, Conservation and Parks (MECP) and reviewed to determine the number of water wells documented within a 500-m radius of the Site boundaries. The locations of the MECP WWRs within 500 m of the Site are shown on Figure 3. A summary of the WWR is included in Appendix A.

The MECP WWR database indicates that ninety-two (92) records within a 500 m radius from the Site centroid where three (3) well records are identified onsite (Figure 3 and Appendix A). Well distances are calculated relative to the Site centroid, therefore some distances in Appendix A exceed 500 m.

All offsite wells were reportedly identified as monitoring wells/test holes (31), water supply wells (18), abandoned wells (29) and/or listed with unknown use (14).

The Well Identification Numbers (Well ID No.) of the water supply wells (18) are 2802479, 2802463, 2802476, 2802477, 2802478, 2802480, 2802493, 2802494, 2802496, 2802501, 2802502, 2803260, 2803312, 2803422, 2806947, 2807119, 2807195 and 2808548 located between 518 m to 1,135 m from the Site centroid. It is recommended to complete a baseline residential well survey to verify results of the MECP WWR searches and to confirm current conditions and use of wells in 500 m zone of the Site.

The reported water levels ranged from depths of 0.3 m to 25.6 meters below ground surface (mbgs).

The Site is located within Halton Region Source Protection Area and Conservation Halton. The Site is not located within Wellhead Protection Area (WHPA), Intake Protection Area (IPA), Issue Contributing Area (ICA), Significant Groundwater Recharge Area (SGRA), Highly Vulnerable Area (HVA) and Event Based Area (EBA).

## 3.2 Site Setting

### 3.2.1 Site Topography

The Site is in an agricultural land use setting. The topography is considered relatively flat with a regional gradual southeast slope towards Sixteen Miles Creek and Lake Ontario. The surface elevation of the Site ranges between approximately 181.08 to 186.28 meters above sea level (masl).

### 3.2.2 Local Surface Water Features

The Site is within the Sixteen Mile Creek watershed and a small portion at west side is within Bronte Creek watershed. Tributaries of Sixteen Miles Creek surface water features cross the site. The nearest surface water feature is Sixteen Miles Creek, approximately located 600 meters northeast of the Site boundary. Lake Ontario is approximately 14.6 km from the Site boundary to the south.

### 3.2.3 Local Geology and Hydrogeology

A summary of subsurface soil stratigraphy is provided in the following paragraphs. The soil descriptions are based on the Preliminary Geotechnical Investigation Report (EXP, June 17, 2026). They are summarized for hydrogeological interpretations. As such, the information provided in this section shall not be used for construction design purposes.

The detailed soil profiles encountered in each borehole and the results of moisture content determinations are presented on the attached borehole logs (Appendix B). The soil boundaries indicated on the borehole logs are inferred from non-continuous sampling and observations during drilling. These boundaries are intended to reflect approximate transition zones for the Preliminary Hydrogeological Investigation and Water Balance Assessment and should not be interpreted as exact planes of geological change.

The "Notes on Sample Description" preceding the borehole logs form an integral part of and should be read in conjunction with this report. The following is a brief description of the soil conditions encountered during the investigation.

Based on the results of the geotechnical investigation, the general subsurface soil stratigraphy consists of the following units from top to bottom:

#### **Topsoil**

Topsoil with thicknesses ranging from 100 mm to 450 mm was encountered surficially in all boreholes. The thickness of the topsoil in each borehole is shown on the borehole log.

It should be noted that topsoil measurements were carried out at the borehole locations only and could differ at other locations on the site. If required, a more detailed test pit program should be carried out to more accurately quantify the amount of topsoil to be removed for construction purposes.

#### **Reworked Till**

Reworked till was encountered in all boreholes below the topsoil, except for Boreholes 1-7, 1-23 and 1-26 locations below the topsoil. The reworked till is disturbed parent material. The reworked till was fully penetrated at depth of 0.7 m. This material generally comprises brown silty clay with trace gravel and trace sand. Moisture contents in the reworked native soil varied between approximately 16 and 29 percent.

#### **Clayey Silt Till to Silty Clay Till**

Deposits of clayey silt till to silty clay till (clayey till) were encountered in all boreholes below the topsoil or reworked till. All boreholes were terminated in this stratum at approximately 7.7 to 8.2 m depth (~Elevation 172.9 to 178.1 m), except for Borehole 1-15. The clayey silt till deposit was fully penetrated at a depth of 5.5 m (~Elevation 177.7 m) in Borehole 1-15. The clayey till contains silty sand layers/seams, trace gravel, some sand and occasional cobbles and boulders. The clayey till is brown in colour with oxidized pockets, changing to grey with depth. The consistency of the clayey till was assessed as stiff to hard, but generally very stiff to hard. Moisture content of the clayey till ranges from approximately 7 to 18 percent.

Grain size analyses on two (2) clayey till samples from Boreholes 1-9 and 1-25 indicated 3% to 5% gravel, 17% to 19% sand, 54% to 55% silt and 22% to 26% clay.

The Atterberg Limits testing carried out on the same sample from Borehole 1-9 yield 14% Plastic Limits (PL), 29% Liquid Limit (LL) and corresponding Plastic Index (PI) 15.

#### **Sandy Silt Till**

Localized deposit of sandy silt till was encountered in Borehole 1-15. Borehole 1-15 was terminated at a depth of approximately 7.7 m (~Elevation 175.5 m) in this deposit. The sandy silt till is brown in colour. This soil exists in a very dense condition. Moisture content of the sandy silt till was recorded at approximately 9 to 11 percent.

The borehole and monitoring well locations are shown in Figure 4. Geological cross-sections were generated based on the available borehole logs completed as part of the previous and current investigations and shown in Figure 5A and 5B (Cross sections A-A' and B-B'). The cross section shows a simplified representation of soil conditions and soil deposits may be interconnected differently than represented. Borehole logs used to generate both cross-sections are provided in Appendix B.

## 4 Results

### 4.1 Monitoring Well Details

The monitoring well network was installed as part of the Geotechnical and Hydrogeological Investigations at the Site. It consists of the following:

- Fourteen (14) monitoring wells (BH1-5, BH1-7, BH1-8, BH1-9, BH1-18, BH1-19, BH1-20, BH1-21, BH1-22, BH1-23, BH1-24, BH1-25, BH1-26 and BH1-27) were installed;
- Five (5) piezometers (Piezo 1-4, Piezo 1-13, Piezo 1-16, Piezo 1-28 and Piezo 1-29) were installed.

The diameter of all monitoring wells is 50 mm. All wells were installed with monument protective casings (stick-ups). Borehole logs and monitoring well installation details are provided in Appendix B. The monitoring well locations are shown in Figure 4.

### 4.2 Water Level Monitoring

As part of the Preliminary Hydrogeological Investigation and Water Balance Assessment, static water levels in the monitoring wells were recorded in eighty (8) monitoring events between June 26, 2024, and November 13 of 2025. A summary of all static water level data as it relates to the elevation survey is given in Table 4-1 appended in the List of Tables at the end of this report below including the water level hydrographs.

The groundwater elevation recorded in the intermediate wells ranged from 180.07 masl (3.28 mbgs at Piezometer 1-16 on June 26, 2024) to 185.86 masl (0.42 mbgs at BH1-23 on June 26, 2024).

During the seasonal groundwater monitoring from June 26, 2024, to November 13, 2025, the water level fluctuated from 0.47 m (Piezometer 1-13) to 2.75 m (BH1-26). It is interpreted that seasonal high groundwater elevations were observed during the June 26 of 2024 monitoring event.

One (1) map was created for the Site to show groundwater contours of the intermediate water-bearing zone (Figure 6). Accordingly, the groundwater flow direction in the intermediate is interpreted to be generally southeast of the Site, towards Sixteen Miles Creek.

For the design of foundations without perimeter and foundation drainage systems, shallower wells need to be considered to evaluate the shallow groundwater table. The hydrogeologist needs to be consulted during the design process.

Groundwater levels are expected to show seasonal fluctuations and vary in response to prevailing climate conditions. This may also affect the direction and rate of flow.

### 4.3 Hydraulic Conductivity Testing

Fourteen (14) Single Well Response Tests (SWRT's) were completed on monitoring wells (BH1-5, BH1-7, BH1-8, BH1-9, BH1-18, BH1-19, BH1-20, BH1-21, BH1-22, BH1-23, BH1-24, BH1-25, BH1-26 and BH1-27) on July 4 and 5 of 2024. The tests were completed to estimate the saturated hydraulic conductivity (K) of the soils at the well screen depths utilizing data loggers, preprogrammed to take measurement on half second intervals.

The static water level within each monitoring well was measured prior to the start of testing. In advance of performing SWRTs, each monitoring well underwent development to remove fines introduced into the screens following construction. The development process involved purging of the monitoring wells to induce the flow of fresh formation water through the screen. Each monitoring well was permitted to fully recover prior to performing SWRTs.

Hydraulic conductivity values were calculated from the SWRT and constant rate test data as per Hvorslev's solution included in the Aqtesolv Pro. V.4.5 software package. The semi-log plots for normalized drawdown versus time are included in Appendix C.

A summary of the hydraulic conductivities (K-values) estimated from the SWRTs are provided in List of Tables (Table 4-2) at the end of this report below.

SWRTs provide K-estimates of the geological formation surrounding the well screens and may not be representative of bulk formation hydraulic conductivity. As shown in List of Tables (Table 4-2), the highest K-value of the tested water-bearing zone is  $2.7 \times 10^{-6}$  m/s, and the arithmetic and geometric mean of the K-values are  $2.3 \times 10^{-7}$  m/s and  $2.7 \times 10^{-8}$  m/s respectively.

## 4.4 Groundwater Quality

To assess the suitability for discharging pumped groundwater into the natural environment during dewatering activities, one (1) groundwater sample was collected from selected monitoring well (BH1-20) on July 4, 2024 using a peristaltic pump. Prior to collecting the noted water sample, approximately three (3) standing well volumes of groundwater were purged from the referred well. The samples were collected, filtered and placed into pre-cleaned laboratory-supplied vials and/or bottles provided with analytical test group specific preservatives, as required. Dedicated nitrile gloves were used during sample handling. The groundwater samples were submitted for analysis to Bureau Veritas Laboratory, a CALA certified independent laboratory in Mississauga, Ontario. Analytical results are provided in Appendix D.

Table 4-3 summarizes exceedance(s) of the Provincial Water Quality Objectives (PWQO) parameters.

The following parameters exceeded the PWQO parameters: Dissolved and Total Boron (B), Dissolved and Total Cobalt (Co), Total Iron (Fe), Dissolved and Total Uranium (U).

Reporting detection limit exceeded for the following PWQO parameters: Dissolved Cadmium (Cd), Dissolved Iron (Fe), Dissolved Silver (Ag) and Dissolved Zirconium (Zr).

**Table 4-3: Summary of Analytical Results**

| Parameter             | Units | Provincial Water Quality Objectives (PWQO) Limit | Concentration BH1-20 4-July-2024 | Concentration BH1-20 – Lab Duplicate 4-July-2024 |
|-----------------------|-------|--------------------------------------------------|----------------------------------|--------------------------------------------------|
| Dissolved Boron (B)   | µg/L  | 200                                              | <b>1400</b>                      | <b>1300</b>                                      |
| Total Boron (B)       | µg/L  | 200                                              | <b>1100</b>                      | -                                                |
| Total Cobalt (Co)     | µg/L  | 0.9                                              | <b>3.6</b>                       | -                                                |
| Dissolved Cobalt (Co) | µg/L  | 0.9                                              | <b>3.7</b>                       | <b>3.7</b>                                       |
| Total Iron (Fe)       | µg/L  | 300                                              | <b>400</b>                       | -                                                |
| Total Uranium (U)     | µg/L  | 5                                                | <b>12</b>                        | -                                                |
| Dissolved Uranium (U) | µg/L  | 5                                                | <b>11</b>                        | <b>11</b>                                        |

**Bold** – Exceeds PWQO Limit.

For the short-term dewatering system (construction phase), it is anticipated that TSS levels and some other parameters (for example, Total Metals) in the pumped groundwater may become elevated and exceed PWQO limit. To control the concentration of TSS and associated metals, it is recommended that a suitable treatment method be implemented (filtration or decantation facilities and/ or any other applicable treatment system) during construction dewatering activities to discharge to the applicable

sewer system. The specifications of the treatment system will need to be adjusted to the reported water quality results by the treatment contractor/process engineer.

For the short-term dewatering discharge (natural environment) and based on the water quality test results, it is recommended to implement a suitable pre-treatment, as required.

For discharge to the natural environment (e.g.: surface water, drainage feature), the treatment systems will require Environmental Compliance Approvals (ECA) for construction and post construction phases.

The Environmental Site Assessment Report(s) shall be reviewed for more information on the groundwater quality conditions at the Site.

## 4.5 Infiltration Testing

EXP completed two (2) infiltration rate tests (INF 1-20 and INF 1-20 redo) within the Site area on June 26 and July 4, 2024. These tests were conducted in proximity of selected monitoring well: BH1-20.

Infiltration tests (IT) were conducted at depths ranged from 0.70 mbgs to 0.74 mbgs, depending on the measured groundwater elevation at the testing location. The reported water levels at BH1-20 are 0.25 and 1.63 mbgs on June 26 and July 4, 2024.

The stratigraphy of the shallow subsurface comprises a clayey silt till matrix. Table 4.4 below shows a summary of field saturated hydraulic conductivity ( $K_{fs}$ ) testing and design infiltration rates, as per the Low Impact Development (LID) Stormwater Management Planning and Design Guide, CVC – TRCA, 2010, Appendix G. The estimated field saturated hydraulic conductivities were correlated to infiltration rates based on the relationship provided in Appendix D of the guideline.

Infiltration rate testing locations are shown on Figure 4 and infiltration rate analysis is provided in Appendix E.

**Table 4.4: Summary of Infiltration Testing Results**

| Infiltration Test Location/ MW ID | Depth of Hole (mbgs) | Formation tested          | Field Saturated Hydraulic Conductivity, $K_{fs}$ (cm/s) | Infiltration Rates (mm/hr) |
|-----------------------------------|----------------------|---------------------------|---------------------------------------------------------|----------------------------|
| INF 1-20 (BH 1-20)                | 0.74                 | Clayey Silt to Silty Clay | $9.6 \times 10^{-6}$                                    | 25                         |
| INF 1-20 Redo (BH1-20)            | 0.80                 | Clayey Silt to Silty Clay | $2.2 \times 10^{-6}$                                    | 17                         |
| <b>Geometric Mean</b>             |                      |                           | <b><math>4.57 \times 10^{-6}</math></b>                 | <b>20</b>                  |
| <b>Design Infiltration Rate*</b>  |                      |                           |                                                         | <b>8 (20/2.5)</b>          |

Notes:

\*Safety Factor of 2.5 was applied to calculate the design infiltration rate (Low Impact Development (LID) Stormwater Management Planning and Design Guide, CVC – TRCA, 2010, Appendix D).

The estimated design infiltration rate based on percolation rate testing for the Site is 8 mm/hr.

## 5 Water Balance Assessment (Site Specific)

### 5.1 Methodology

The Thornthwaite water balance (Thornthwaite, 1948; Mather, 1978; 1979) is a counting method used to analyze the allocation of water among various components of the hydrologic cycle. This methodology was used to complete the pre-construction (existing conditions) and post-development water balance. Inputs to the model are monthly temperature, precipitation, and Site latitude. Outputs include monthly potential and actual evapotranspiration, soil moisture storage, soil moisture storage change, surplus, infiltration, and runoff.

When precipitation (P) occurs, it can either runoff (R) through the surface water system, infiltrate (I) to the water table including an interflow component, or evapo-transpire (ET) from the earth's surface and vegetation. The difference between total precipitation (P) and the total of evaporation and evapotranspiration (ET) is defined to be the water surplus (S) which is available for both infiltration (recharge to the groundwater system including interflow) and for runoff. When long-term averages of P, R, I and ET are used, no net change in groundwater storage (ST) is assumed. Annually, however, there is a potential for small changes in ST. The annual water budget can be stated as follows:

$$P = ET + R + I + ST$$

Where:

P = precipitation  
ET = evapotranspiration  
R = surface water runoff  
I = infiltration  
ST = change in groundwater storage

For this assessment, the Thornthwaite and Mather method was used to estimate average annual infiltration rates.

Infiltration is governed by surficial soil types, topography, and land cover. If the water table is at surface, as measured in shallow monitoring wells, then the percolation rate of precipitation into the shallow soils is considered negligible.

For ease of calculation, a spreadsheet was used for the computation. A graphical user interface (Thornthwaite Monthly Water-Balance program, 2007) developed by the United States Geological Survey (USGS) was applied for the Thornthwaite and Mather Model.

### 5.2 Meteorological Data

Meteorological data including average monthly precipitation and average temperatures were obtained from the National Climate Data and Information Archive (Environment Canada) for the Georgetown WWTP (Station ID No. 6152695) climatic station (elevation 221.0 masl).

Meteorological data of 30 years from 1981 to 2010 was utilized for the assessment. Summary of input data is provided in Appendix F-1.

## 5.3 Pre- and Post-Development Site Characteristics

### 5.3.1 Pre-Development Site Characteristics

The property occupies an area of approximately 73.9119 hectares (182.64 acres). It is understood that the Site will be proposed three (3) industrial slab on grade buildings (Buildings 1A, 1B and 1C) without basement, associated access roads, loading and parking areas. A summary of the existing (pre-development) landscape features is provided in Table 5-1:

**Table 5-1: Pre-Development (Existing) Land Use**

| Description                                       | Pre-Construction<br>(Existing)<br>(m <sup>2</sup> ) | Percentage<br>% |
|---------------------------------------------------|-----------------------------------------------------|-----------------|
| Buildings                                         | 0                                                   | 0%              |
| Site Area Available for Infiltration (Landscaped) | 216,019                                             | 29.2%           |
| Areas with Depth of Water Table <1.0 m            | 523,100                                             | 70.8%           |
| Paved Surfaces                                    | 0                                                   | 0%              |
| Total Site Area                                   | 739,119                                             | 100%            |

The areas provided in Table 5-1 above were determined based on a review of available Site plan (Appendix H) and these estimates are considered appropriate for estimating the water balance. As evident from the information provided in Table 5.1, under pre-development conditions 29.2% of the Site area is pervious and available for groundwater infiltration (Figure 7).

### 5.3.2 Post-Development Site Characteristics

As provided in the preliminary conceptual Site Plan (Appendix H), Table 5-2 provides a summary of the post-development Site characteristics. This will be updated once the site plan is finalized.

**Table 5-2: Post-Development Site Characteristics**

| Description                                                                               | Impervious Areas<br>m <sup>2</sup> | Pervious Areas<br>available for<br>Infiltration<br>m <sup>2</sup> | Total Areas<br>Post-Construction<br>(Proposed)<br>m <sup>2</sup> |
|-------------------------------------------------------------------------------------------|------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------------|
| Paved Surfaces (roads, sidewalks, parking and also areas with Depth to Water Table <1.0m) | 310,600                            | 0                                                                 | 204,736                                                          |
| Building roofs                                                                            | 244,472                            | 0                                                                 | 244,472                                                          |
| SWM                                                                                       | 35,200                             | 0                                                                 | 154,011                                                          |
| Landscaped and woodlot areas                                                              | 0                                  | 148,847                                                           | 135,900                                                          |
| Totals                                                                                    | 590,272                            | 148,847                                                           | 739,119                                                          |
| Percentage %                                                                              | 79.9                               | 20.1                                                              | 100                                                              |

Under post-development conditions, the total pervious area is reduced from 29.2% to 20.1% of the total Site area (Tables 5-1 and 5-2 and Figure 8).

## 5.4 Pre-Development Water Balance Estimates

### 5.4.1 Climate Data Analysis

The mean annual water surplus was calculated by using the Thornthwaite and Mather (1955) method. Monthly average precipitation values were obtained for 30 years (1981 to 2010) from the National Climate Data and Information Archive (Environment Canada) for the Georgetown WWTP (Station ID No. 6152695) climatic station (elevation 221.0 masl).

Moisture storage of 135 mm/year was assumed for soils and considered to be representative of pre-construction Site conditions. The closest latitude to the Site is 44°, which was used in the USGS model (2020).

Table 5.3 summarizes the climatic water balance analysis. Appendix F-1 and F-2 provide the model input and output, respectively.

**Table 5.3: Climatic Water Balance Analysis in Pre-Development Conditions**

| Soil Moisture Storage<br>(mm/yr) | Precipitation<br>(mm/yr) | Actual ET<br>(mm/yr) | Surplus<br>(mm/yr) |
|----------------------------------|--------------------------|----------------------|--------------------|
| 135 mm/yr                        | 877.3                    | 542.0                | 335.3              |

Note: ET = Evapotranspiration

The results of the climatic water balance analysis for the Site suggest that a surplus of 218.9 mm/year of water is available for surface runoff and infiltration.

### 5.4.2 Infiltration

The infiltration is expected to be controlled by soil type, topography, and soil cover type. Surplus water is portioned between runoff and infiltration based on the controlling factors provided by MOE (1995). The controlling factors provided by the MOE were used for estimating infiltration factors.

Using this method, a total infiltration factor for the Site was estimated by using the individual sub-factors, which are representative of the topography, soil type and land cover conditions (Figures 2 and 7). Appendix F-3 provides a summary of the sub factors and total factor based on the Site conditions. The infiltration sub-factors were determined for estimating pre-development infiltration rates of the entire Site.

The estimated pre-development total infiltration factor of 0.33 (or 33%) represents the fraction of the water surplus available for infiltration. The complementary fraction of the available water for runoff is 0.67. The infiltration factor is utilized to calculate the amount of annual infiltration (in units of m<sup>3</sup>/yr) at the Site by multiplying it with the average yearly water surplus estimate and with the Site area available for infiltration.

Applying the infiltration factor of 0.33 and a water surplus of 335.3 mm/yr, the estimated pre-development infiltration rate of the whole Site is 111.32 mm/yr.

In areas with water table at or above surface and less than approximately 1.0 m below surface, the infiltration rate would be considered negligible for existing and proposed grade. Water levels above ground surface were not reported and water levels less than 1 m below ground surface were not reported while monitoring water levels at this Site except at Piezometers 1-4, 1-16, 1-28 and 1-29 and BH1-5, BH1-7, BH1-8, BH1-19, BH1-20, BH1-21, BH1-22, BH1-23, BH1-24, BH1-25, BH1-26 and BH1-27. The area of high-water levels was mapped and excluded for infiltration (Figure 8).

### 5.4.3 Pre-Development Water Balance Analysis

The water balance analysis is based on available information on a regional scale and deemed representative for the Site. Table 5-4 provides water balance analysis for the Site.

**Table 5-4: Pre-Development Water Balance Results**

| Location                          | Total Site Area (m <sup>2</sup> ) | Area Available for Infiltration (m <sup>2</sup> ) | Total Precipitation (m <sup>3</sup> /yr) | Actual Evapo-transpiration (m <sup>3</sup> /yr) | Runoff (m <sup>3</sup> /yr) | Infiltration (m <sup>3</sup> /yr) |
|-----------------------------------|-----------------------------------|---------------------------------------------------|------------------------------------------|-------------------------------------------------|-----------------------------|-----------------------------------|
| Total Site                        | 739,119                           | 216,019                                           | 648,429                                  | 400,602                                         | 233,779                     | 24,047                            |
| Percentage of Total Precipitation |                                   |                                                   | 100%                                     | 62%                                             | 35%                         | 4%                                |

The total property area was used to estimate the annual precipitation volume of the Site (Appendix F-4). As summarized in Table 5-4, the breakdown of the pre-development water balance is as follows: 62% of the total precipitation is subject to evapotranspiration, 35% to runoff, and 4% to infiltration.

The pre-development water balance, on a weighted average depth basis (in mm/year) is as follows:

$$P (877.30) = ET (542.00) + R (302.76) + I (32.54) + ST (0)$$

## 5.5 Post-Development Water Balance Estimates

### 5.5.1 Post-Development Water Balance

Based on the proposed development drawings (Site Plan - Appendix H), the total area of pervious surfaces under post-development conditions is approximately 148,847 m<sup>2</sup>, representing approximately 20.1% of the total Site area of 739,119 m<sup>2</sup> (Table 5-2). The remaining 590,272 m<sup>2</sup> will not contribute to infiltration in the post-development phase (approximately 79.9% of the total land area).

Post-development infiltration sub-factors were determined in a similar manner for estimating infiltration sub-factors for pre-development Site conditions, both based on the method recommended by MOE (1995). For post-development infiltration sub-factors, the landscaped areas were assumed to be consistent with cultivated cover with an infiltration sub-factor of 0.132 (Appendix F-3). The estimated post-development total infiltration factor of 0.33 (or 33%).

Table 5-5 presents a summary of the overall post-development water balance assessment.

**Table 5-5: Post-Development Water Balance Forecast**

| Location                          | Total Site Area (m <sup>2</sup> ) | Area Available for Infiltration (m <sup>2</sup> ) | Total Precipitation (m <sup>3</sup> /yr) | Evapo-transpiration (m <sup>3</sup> /yr) | Runoff (m <sup>3</sup> /yr) | Infiltration (m <sup>3</sup> /yr) |
|-----------------------------------|-----------------------------------|---------------------------------------------------|------------------------------------------|------------------------------------------|-----------------------------|-----------------------------------|
| Total Site                        | 739,119                           | 148,847                                           | 648,429                                  | 99,753                                   | 532,106                     | 16,570                            |
| Percentage of Total Precipitation |                                   |                                                   | 100%                                     | 15.4                                     | 82.1%                       | 2.6%                              |

If no remedial measures are implemented to maintain infiltration, it is expected that the annual infiltration volume will be reduced from approximately 24,047 m<sup>3</sup>/year to 16,570 m<sup>3</sup>/year in post-development, resulting in a deficit of 7,478 m<sup>3</sup>/year (Appendix F-4).

Infiltration deficits based on pre- and post-development Site conditions can be utilized to guide mitigation measures under idealized soil and groundwater conditions. If suitable mitigation measures are implemented, it is expected that the infiltration deficit of 7,478 m<sup>3</sup>/year can be mitigated under the post-development Site conditions under engineered conditions. Reasonable mitigation measures onsite are therefore recommended to maintain the pre-development infiltration under post-development Site conditions.

Under unmitigated post-development conditions, a reduction in annual infiltration volume may occur, as compared to pre-development conditions. Consequently, water contribution from infiltration to downgradient drainage features would decrease.

The post-development water balance, on a weighted average depth basis (in mm/year) is as follows:

$$P (877.30) = ET (134.96) + R (719.92) + I (22.42) + ST (0)$$

## 5.6 Impact and Proposed Mitigation Measures

Mitigation measures should be implemented to balance the estimated post-development infiltration rate deficit of 7,478 m<sup>3</sup>/year (Appendix F-4). To offset the noted deficit, approximately 5% of the available runoff from roof-top water of 142,984 m<sup>3</sup>/year (in 8 months) would need be infiltrated. This could be accommodated in Low Impact Development (LID) facilities, such as infiltration galleries and enhanced grass swales implemented onsite to maintain the pre-development infiltration rates during the post-development phase.

As per the CA and MECP guidelines, the invert of the infiltration system needs to be 1.0 m above the highest water level or top of bedrock measured at location of the infiltration system, as a minimum.

The following mitigation measures are proposed to be implemented onsite to maintain the pre-development infiltration rates during the post-development phase:

- **Infiltration Galleries**

To balance the infiltration deficit in 8 months per year a LID system (infiltration gallery) with a total of approximately 1,215 m<sup>2</sup> in size would be required. The LID area is based on the estimated design infiltration rate of 8 mm/hr, on the assumption that precipitation is evenly distributed during the year over two-week interval, and bi-weekly volumes from roof will be infiltrated in 48-hour. The infiltration system will need to have a minimum storage of 468 m<sup>3</sup> to store two weeks of precipitation to meet the pre-development infiltration levels (Appendix F-5).

As per regulatory requirements, the invert of the infiltration system needs to be 1.0 m above the highest water level measured at the location of the proposed infiltration system, as a minimum.

- **Enhanced Grass Swales and Rain Gardens**

To increase the post-development infiltration onsite, enhanced grass swales and / or rain gardens are also recommended where feasible.

These facilities are recommended to be designed to mimic current shallow groundwater (interflow). Where possible, selected areas can also be used as rain gardens to enhance groundwater infiltration

## 6 Dewatering Assessment

### 6.1 Dewatering Flow Rate Estimate

The Dupuit equation for steady linear flow to both sides of an excavation through an unconfined aquifer resting on a horizontal impervious surface was used to obtain a flow rate estimate. Dewatering flow rate is expressed as follows:

$$Q_w = xK(H^2 - h^2)/L_o$$

Where:

- Q<sub>w</sub> = Rate of pumping (m<sup>3</sup>/s)
- X = Length of excavation (m)
- K = Hydraulic conductivity (m/s)
- H = Hydraulic head beyond the influence of pumping (static groundwater elevation) (m)
- h = Hydraulic head above the base of aquifer in an excavation (m)
- L<sub>o</sub> = Distance of influence (m)

It is expected that the initial dewatering rate will be higher to remove groundwater from within the overburden formation. The dewatering rates are expected to decrease once the target water level is achieved in the excavation footprint as groundwater will have been removed, primarily from storage, resulting in lower seepage rates into the excavation.

### 6.2 Sichardt's Radius of Influence

The radius of influence (R<sub>s</sub>) for the construction dewatering was calculated based on Sichardt's equation. This equation is used to predict the distance at which the drawdown resulting from pumping is negligible. This empirical formula was developed to provide representative flow rates using the steady state flow dewatering equations, as discussed below.

The estimated radius of influence due to pumping is based on Sichardt's formula as follows:

$$R_s = C(H - h)\sqrt{K}$$

Where:

- R<sub>s</sub> = Estimated Sichardt's radius of influence (m)
- H = Hydraulic head in aquifer (static water level or saturated depth) (m)
- h = Dynamic water level (m)
- K = Hydraulic conductivity (m/sec)
- C = Constant (3,000)

Based on Sichardt's formula and the highest K-value, the calculated distance of influence (L<sub>o</sub> = R<sub>o</sub>/2) is provided in Appendix G.

### 6.3 Stormwater

Additional pumping capacity may be required to maintain dry conditions within the excavation during and following significant precipitation events. Therefore, the dewatering rates at the Site should also include removing stormwater from the excavation.

A 25 mm precipitation event was utilized for estimating the stormwater volume. The calculation of the stormwater volume is included in Appendix G.

The estimate of the stormwater volume only accounts for direct precipitation into the excavation. The dimensions of the excavation are considered in the dewatering calculations. Runoff, which originated outside of the excavation's footprint is excluded and it should be directed away from the excavation.

During precipitation events greater than 25 mm (ex: 100-year storm), measures should be taken by the contractor to retain stormwater onsite in a safe manner to not exceed the allowable water taking and discharge limits, as necessary. A two (2) and a one hundred (100) year storm event over a 24-hour period are approximately 57.3 and 124.9 mm.

## 6.4 Results of Dewatering Rate Estimates

### 6.4.1 Construction Dewatering Rate Estimate

Short-term (construction) dewatering calculations are presented in Appendix G. Based on the assumptions provided in this report, the results of the dewatering rate estimate can be summarized as follows:

**Table 6-1 Summary of Construction Dewatering Assumptions and Rate**

| Input Parameter                      | Industrial Buildings           | Utility Trench | Units                     | Notes                                                                                          |
|--------------------------------------|--------------------------------|----------------|---------------------------|------------------------------------------------------------------------------------------------|
| Number of Subgrade Levels            | Slab-on-grade without basement | Not applicable | -                         |                                                                                                |
| Ground Elevations                    | 186.28                         | 186.28         | masl                      | The highest BH1-23 elevation                                                                   |
| Lowest Footing/trench Elevation      | 183.28                         | 182.28         | masl                      | Assumed to be approximately 3 mbgs and 4 mbgs for the building and utility trench respectively |
| Excavation Area (Length x Width)     | ( 30 x 1.5 )                   | (30 x 3)       | m <sup>2</sup><br>(m x m) | At one time 30 m trench will be excavated for the building footings and the utility trench     |
| <b>Short Term Dewatering</b>         |                                |                |                           |                                                                                                |
| With Safety Factor and Precipitation | 47,450                         | 48,950         | L/day                     | 25 mm of precipitation                                                                         |
| With Safety Factor                   | 46,330                         | 46,700         | L/day                     | Safety factor of 2 and without precipitation                                                   |
| Without Safety Factor                | 23,160                         | 23,350         | L/day                     | Without precipitation                                                                          |

The contractor is responsible for the design of the dewatering systems (depth of wells, screen length, number of wells, spacing sand pack around screens, prevent soil loss etc.) to ensure that dry conditions are always maintained within the excavation at all costs.

### 6.4.2 Post-Construction Dewatering Rate Estimate

Based on the geotechnical report dated June 17, 2026, section 5.4, it is our understanding that the underfloor drains will not be required since the proposed buildings are slab-on-grade and the slab will be placed above the groundwater table. As such, there will be no long-term (post construction) dewatering.

## 6.5 MECP Water Taking Permits

### 6.5.1 Short-Term Discharge Rate (Construction Phase)

In accordance with the Ontario Water Resources Act, if the water taking for the construction dewatering is more than 50,000 L/day, then an online registration in the Environmental Activity and Sector Registry (EASR) with the MECP will be required.

As of July 1, 2025, an amendment of O. Reg. 63/16 has come into effect and replaced the former subsection 7 (5) such that the EASR water taking limit of 400,000 L/day would no longer apply to groundwater takings of each dewatered work area only, excluding stormwater.

The dewatering estimate, including a safety factor is less than 50,000 L/day as shown in Table 6-1. The MECP construction dewatering rate excludes the precipitation amount and is the rate used for the permit application. Based on the MECP construction dewatering an EASR will not be required to facilitate the construction dewatering program of the Site.

A Discharge Plan (dewatering sketch, sewer discharge agreement) must be developed and applied for any discharges from the Site. Monitoring of both water quantity and water quality must be carried out for the entire duration of the construction dewatering phase. During this phase, the Discharge Plan and the daily water taking records must be available onsite.

The Discharge Plan, hydrogeological investigation report, and geotechnical assessment of settlements must also be available at the construction Site during the entire construction dewatering. EXP should be notified immediately about any changes to the construction dewatering schedule or design, since an EASR may be required to reflect these modifications. Altogether, the hydrogeological report, EASR, Discharge Plan and geotechnical assessment constitute the Water Taking Plan which needs to be available onsite during the construction dewatering.

### 6.5.2 Long-Term Discharge Rate (Post Construction Phase)

Based on the geotechnical report dated June 17, 2026, section 5.4, it is our understanding that the underfloor drains will not be required since the proposed buildings are slab-on-grade. As such, there will be no long-term (post construction) dewatering.

## 7 Environmental Impact

### 7.1 Surface Water Features

The Site is located within the Sixteen Miles Creek watershed and a small portion at west side is within Bronte Creek watershed. Tributaries of Sixteen Miles Creek surface water features exist onsite. The nearest surface water feature is Sixteen Miles Creek, approximately located 600 meters northeast of the Site boundary. Lake Ontario is approximately 14.6 km from the Site boundary to the south.

Since the tributary of Sixteen Miles Creek crosses the Site and can be partly within the anticipated zone of influence (ZOI) of approximately 25 m, surface water level monitoring plan in the creek during the construction should be in place in order to avoid impact to the surface water feature.

### 7.2 Groundwater Sources

Well Records from the MECP Water Well Record (WWR) Database were reviewed to determine the presence and number of water supply wells within a 500 m radius of the Site boundaries. The MECP WWR database indicates that ninety-two (92) records within a 500 m radius from the Site centroid where three (3) well records are identified onsite (Figure 3 and Appendix A). Well distances are calculated relative to the Site centroid, therefore some distances in Appendix A exceed 500 m.

All offsite wells were reportedly identified as monitoring wells/test holes (31), water supply wells (18), abandoned wells (29) and/or listed with unknown use (14).

The Well Identification Numbers (Well ID No.) of the water supply wells (18) are 2802479, 2802463, 2802476, 2802477, 2802478, 2802480, 2802493, 2802494, 2802496, 2802501, 2802502, 2803260, 2803312, 2803422, 2806947, 2807119, 2807195 and 2808548 located between 518 m to 1,135 m from the Site centroid. Given the anticipated ZOI and distance to water supply wells, no short-term dewatering related impacts to well users are predicted.

It is recommended to complete a baseline residential well survey to verify results of the MECP WWR searches and to confirm current conditions and use of wells in 500 m zone of the Site.

### 7.3 Geotechnical Considerations

As per the MECP technical requirement for PTTW and EASRs, the geotechnical assessment of the stability of the soils due to water taking (ex: settlement, soil loss, subsidence, etc.) is required. The water taking should not have unacceptable interference on soils and underground structures (foundations, utilities, etc.).

A letter related to geotechnical issues as it pertains to the Site is required to be completed under a separate cover.

### 7.4 Groundwater Quality

It is our understanding that the potential effluent from the dewatering system during the construction will be released to the natural environment system. As such, the quality of groundwater discharge is required to conform to the PWQO criteria.

Dewatering (short-term) may induce migration of contaminants within the zone of influence and beyond due to changing hydraulic gradients, hydrogeological conditions beyond Site boundaries and preferential pathways in utility beddings etc. The water quality sampling conducted as part of this assessment was performed under static conditions. As a result, monitoring may be required during dewatering activities (short-term) to monitor potential migration, and this should be performed more frequently during early dewatering stages.

For the short-term dewatering discharge (natural environment) and based on the water quality test results, it is recommended to implement a suitable pre-treatment, as required.

For discharge to the natural environment (e.g.: surface water, drainage feature), the treatment systems will require Environmental Compliance Approvals (ECA) for construction and post construction phases.

The Environmental Site Assessment Report(s) shall be reviewed for more information on the groundwater quality conditions at the Site.

## 7.5 Well Decommissioning

In conformance with Regulation 903 of the Ontario Water Resources Act, the installation and eventual decommissioning of any dewatering system wells or monitoring wells must be completed by a licensed well contractor. This will be required for all wells that are no longer in use.

## 8 Conclusions and Recommendations

Based on the findings of the Preliminary Hydrogeological Investigation and Water Balance Assessment, the following conclusions and recommendations are provided:

- The Site is within the Sixteen Mile Creek watershed and a small portion at west side is within Bronte Creek watershed. The Site is located in the physiographic region known as Peel Plain and physiographic landform known as Bevelled Till Plains.
- The main overburden soil types encountered during on-site drilling program include clayey silt till to silty clay till.
- Tributaries of Sixteen Miles Creek Surface water features cross the site. The nearest surface water feature is Sixteen Miles Creek, approximately located 600 meters northeast of the Site boundary. Lake Ontario is approximately 14.6 km from the Site boundary to the south.
- The Site is located within Halton Region Source Protection Area and Conservation Halton. The Site is not located within Wellhead Protection Area (WHPA), Intake Protection Area (IPA), Issue Contributing Area (ICA), Significant Groundwater Recharge Area (SGRA), Highly Vulnerable Area (HVA) and Event Based Area (EBA).
- MECP WWR database indicates ninety-two (92) records within a 500 m radius of the Site with eighteen (18) of these WWRs reportedly completed as water supply wells.
- Although given the anticipated ZOI and distance to a water supply wells no short-term dewatering related impacts to well users are predicted, it is recommended to complete a baseline residential well survey prior construction to verify results of the MECP WWR searches and to confirm current conditions and use of wells in 500 m zone of the Site.
- The groundwater elevation recorded in the intermediate wells ranged from 180.07 masl (3.28 mbgs at Piezometer 1-16 on June 26, 2024) to 185.86 masl (0.42 mbgs at BH1-23 on June 26, 2024). During the seasonal groundwater monitoring program from June 26, 2024, to November 13, 2025, the water level fluctuated from 0.47 m (Piezometer 1-13) to 2.75 m (BH1-26). It is interpreted that seasonal high groundwater elevations were observed during the June 26 of 2024 monitoring event.
- The direction of groundwater flow is interpreted to follow topographic relief and to be directed to be southeast of the Site, towards Sixteen Miles Creek.
- The highest estimated bulk hydraulic conductivity is approximately  $2.7 \times 10^{-6}$  m/s.
- The measured geometric mean of design infiltration rate from the site-specific infiltration tests is 8 mm/hr.
- The following parameters exceeded the PWQO parameters: Dissolved and Total Boron (B), Dissolved and Total Cobalt (Co), Total Iron (Fe), Dissolved and Total Uranium (U).
- Based on water balance assessment for the Site there will be an infiltration deficit in post-development. To fully mitigate the infiltration deficit of approximately 7,478 m<sup>3</sup>/yr in post-development conditions the feasible LIDs measures should be implemented. The LID area is based on the estimated design infiltration rate of 8 mm/hr, on the assumption that precipitation is evenly distributed during the year over two-week intervals, and bi-weekly volumes from roof will be infiltrated in 48-hour. The area of feasible LID that is required to offset the water balance deficit is approximately 1,215 m<sup>2</sup>. The infiltration system will need to have a minimum storage of 468 m<sup>3</sup> to store two weeks of precipitation to meet the pre-development infiltration levels.
- Based on the assumptions outlined in this report, the estimated peak dewatering rate for proposed construction activities is approximately 47,450 L/day and 48,950 L/day for the footings of the industrial building and underground services respectively at any given time. This is the rate which will be required to be discharged to the natural environment system.
- As the dewatering flow rate estimate is less than 50,000 L/day, EASR will not be required to facilitate the construction dewatering program for the Site.

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- Based on the geotechnical report dated June 17, 2026, section 5.4, it is our understanding that the underfloor drains will not be required since the proposed buildings are slab-on-grade. As such, there will be no long-term (post construction) dewatering. A PTTW will be required for long-term discharge.
- The construction dewatering is based on the assumptions outlined in this report. Any variations in hydrogeological conditions beyond those encountered as part of this preliminary investigation may significantly influence the discharge volumes.
- For the short-term dewatering system (construction phase), it is anticipated that TSS levels and some other parameters (for example, Total Metals) in the pumped groundwater may become elevated and exceed PWQO limits. To control the concentration of TSS and associated metals, it is recommended that a suitable treatment method be implemented (filtration or decantation facilities and/ or any other applicable treatment system) during construction dewatering activities to discharge to the applicable natural environment system. The specifications of the treatment system will need to be adjusted to the reported water quality results by the treatment contractor/process engineer.
- For the short-term dewatering discharge (natural environment) and based on the water quality test results, it is recommended to implement a suitable pre-treatment, as required.
- For discharge to the natural environment (e.g.: surface water, drainage feature), the treatment systems will require Environmental Compliance Approvals (ECA) for construction and post construction phases.
- As per the MECP technical requirement for PTTW and EASRs, the geotechnical assessment of the stability of the soils due to water taking (ex: settlement, soil loss, subsidence etc.) is required. The water taking should not have unacceptable interference on soils and underground structures (foundations, utilities etc.). A letter related to geotechnical issues as it pertains to the Site is required to be completed under a separate cover.
- A Discharge Plan (dewatering sketch, sewer discharge agreement) must be developed and applied for any discharges from the Site. The Discharge Plan and monitoring for both water quantity and water quality must be carried out at the Site during the entire construction dewatering phase. The daily water taking records must be maintained onsite for the entire construction dewatering phase. The EASR, Discharge Plan, hydrogeological investigation report, and geotechnical assessment of settlements must always also be available at the construction Site for the entire construction dewatering. EXP should be notified immediately about any changes to the construction dewatering schedule or design, since EASR will need to be updated to reflect these modifications. The hydrogeological report, EASR, Discharge Plan and geotechnical assessment constitute the Water Taking Plan which needs to be available onsite for the duration of construction dewatering.
- In conformance with Regulation 903 of the Ontario Water Resources Act, the installation and eventual decommissioning of any dewatering system wells or monitoring wells must be completed by a licensed well contractor. This will be required for all wells that are no longer in use.

The conclusions and recommendations provided above should be reviewed in conjunction with the entirety of the report. They assume that the present design concept described throughout the report will proceed to construction. This report is solely intended for the construction and long-term dewatering assessments. Any changes to the design concept may result in a modification to the recommendations provided in this report.

## 9 Limitations

This report is based on a limited investigation designed to provide information to support an assessment of the current hydrogeological conditions within the study area. The conclusions and recommendations presented within this report reflect Site conditions existing at the time of the assessment. EXP must be contacted immediately if any unforeseen Site conditions are experienced during construction activities. This will allow EXP to review the new findings and provide appropriate recommendations to allow the construction to proceed in a timely and cost-effective manner.

Our undertaking at EXP, therefore, is to perform our work within limits prescribed by our clients, with the usual thoroughness and competence of the geoscience/engineering profession. No other warranty or representation, either expressed or implied, is included or intended in this report.

This report was prepared for the exclusive use of Tribal Development Management Services Inc. (TDMSI). This report may not be reproduced in whole or in part, without the prior written consent of EXP, or used or relied upon in whole or in part by other parties for any purposes whatsoever. Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. EXP Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

We trust that this information is satisfactory for your purposes. Should you have any questions or comments, please do not hesitate to contact this office.

Sincerely,

EXP Services Inc.

Amar Neku



Amar Neku, Ph.D., P.Eng., P.Geo.  
Senior Hydrogeologist  
Environmental Services

Francois Chartier

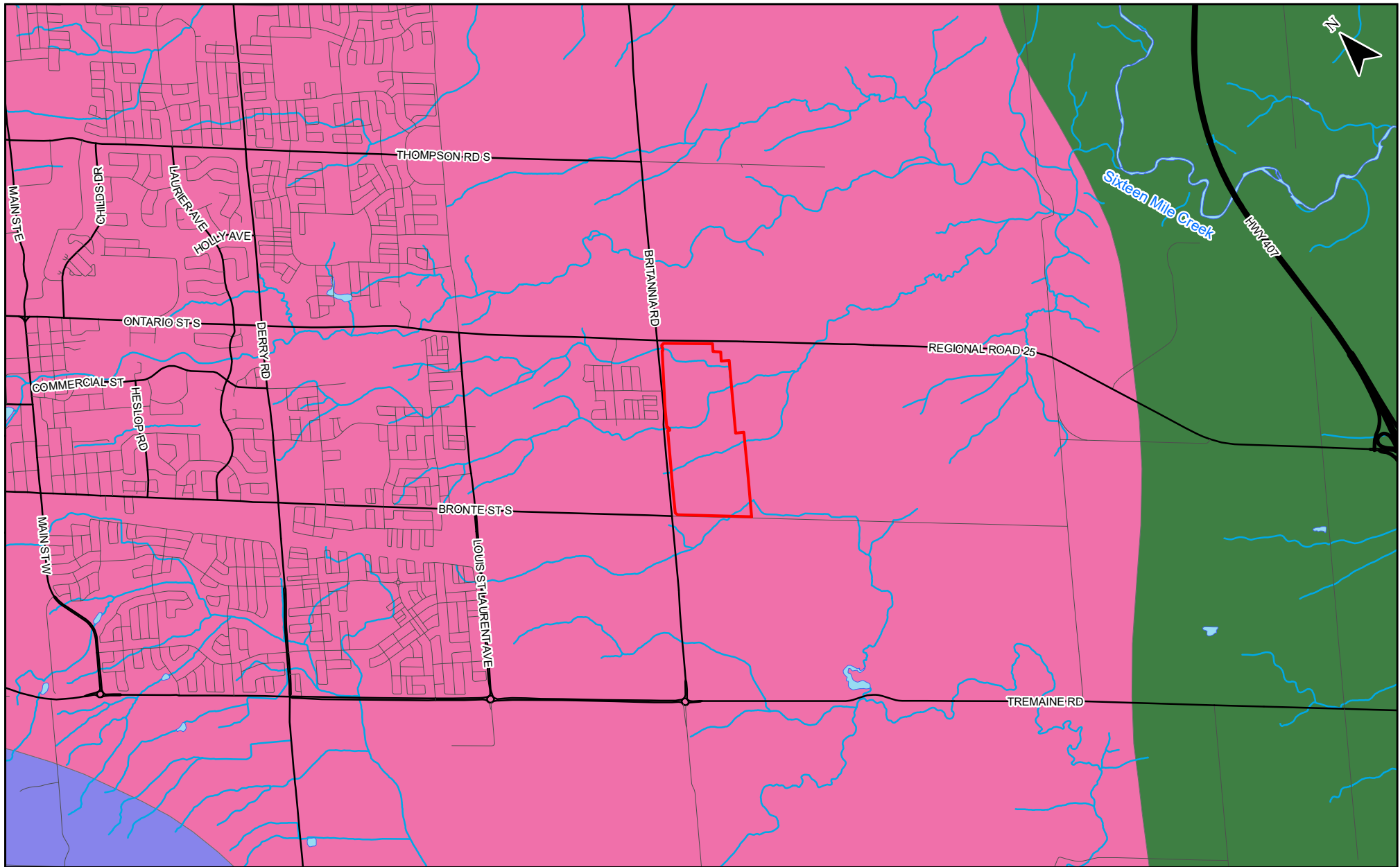
Francois Chartier, M.Sc., P.Geo.  
Discipline Manager, Hydrogeology  
Environmental Services

## 10 References

- Cashman and Preene (2013) Groundwater Lowering in Construction, 2nd Edition.
- Chapman, L.J. and Putnam, D.F. (2007). Physiography of Southern Ontario, 3rd Edition, Ontario Geological Survey.
- EXP Services Inc. (June 17, 2026), Preliminary Geotechnical Investigation, Britannia Road and First Line, Milton, ON, prepared for Tribal Development Management Services Inc.
- EXP Services Inc. (November 1, 2024), Preliminary Hydrogeological Investigation (Draft), Britannia Road and First Line, Phase One Land, Milton, ON, prepared for Tribal Development Management Services Inc.
- J.P. Powers, A.B. Corwin, P.C. Schmall and W.E. Kaeck (2007). Construction Dewatering and Groundwater Control, Third Edition.
- Ministry of Northern Development and Mines (May 2012). OGS Earth. Retrieved from <http://www.mndm.gov.on.ca/en/mines-and-minerals/applications/ogsearth>.
- Oak Ridges Moraine Groundwater Program. Accessed to the website (<https://oakridgeswater.ca/>) July 2024.

## Figures





SCALE:  
0 500 1,000 1,500 2,000 2,500  
m

SOURCE:  
BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2007

LEGEND:  
 NIAGARA ESCARPMENT  
 PEEL PLAIN  
 SOUTH SLOPE  
 APPROXIMATE SITE BOUNDARY

## PHYSIOGRAPHIC REGIONS

FIGURE:  
2A

HYDROGEOLOGICAL INVESTIGATION AND  
WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

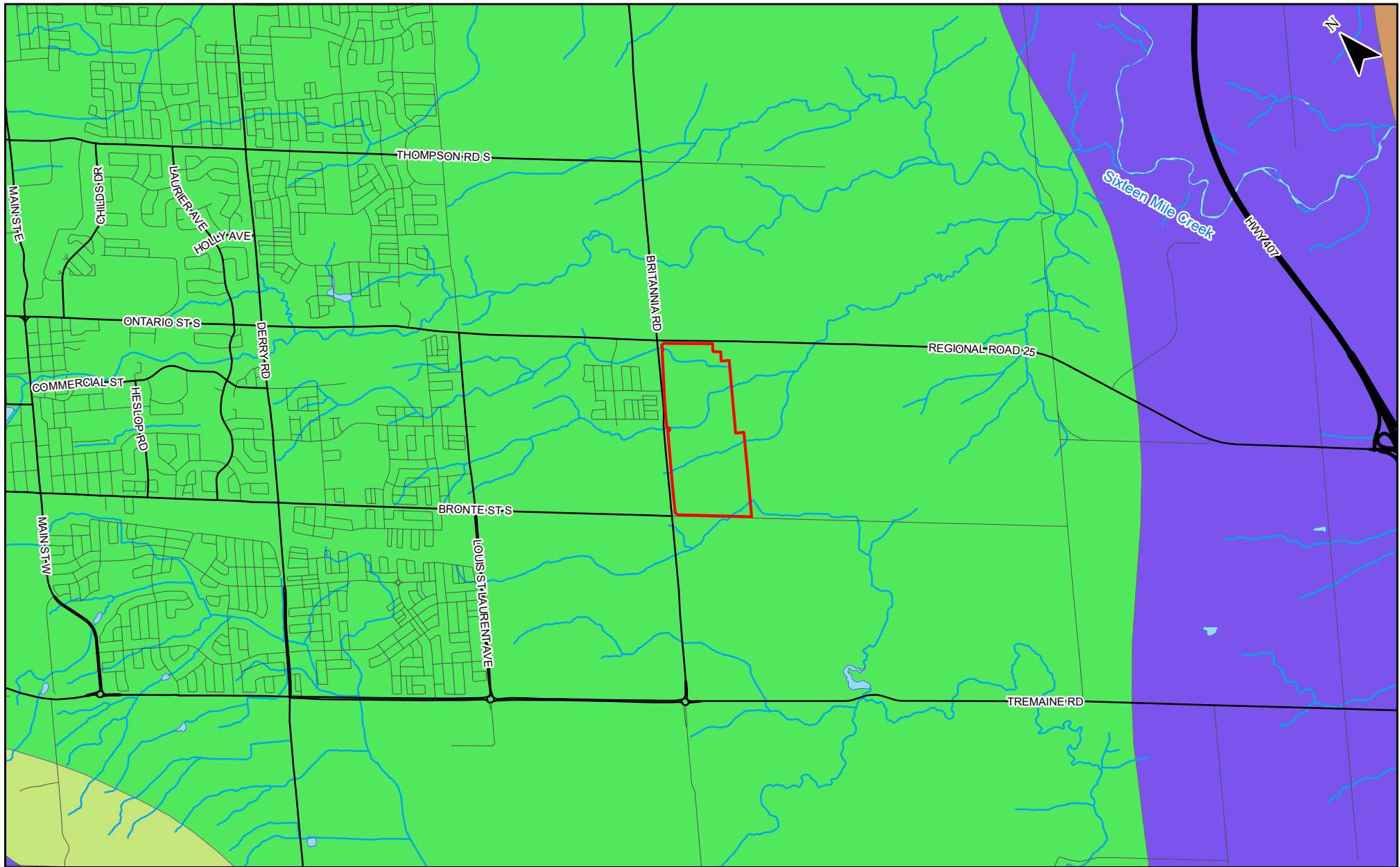
PROJECT NUMBER: BRM-23015226-A0

DATE: JULY 2024



DRAWN BY:  
AC

CHECKED BY:  
AN



SCALE:  
0 500 1,000 1,500 2,000 2,500  
m

SOURCE:  
BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2007

LEGEND:  
 BEVELLED TILL PLAINS  
 ESCARPMENTS  
 TILL MORAINES  
 TILL PLAINS (DRUMLINIZED)  
 APPROXIMATE SITE BOUNDARY

## PHYSIOGRAPHIC LANDFORMS

FIGURE:  
2B

HYDROGEOLOGICAL INVESTIGATION AND  
WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

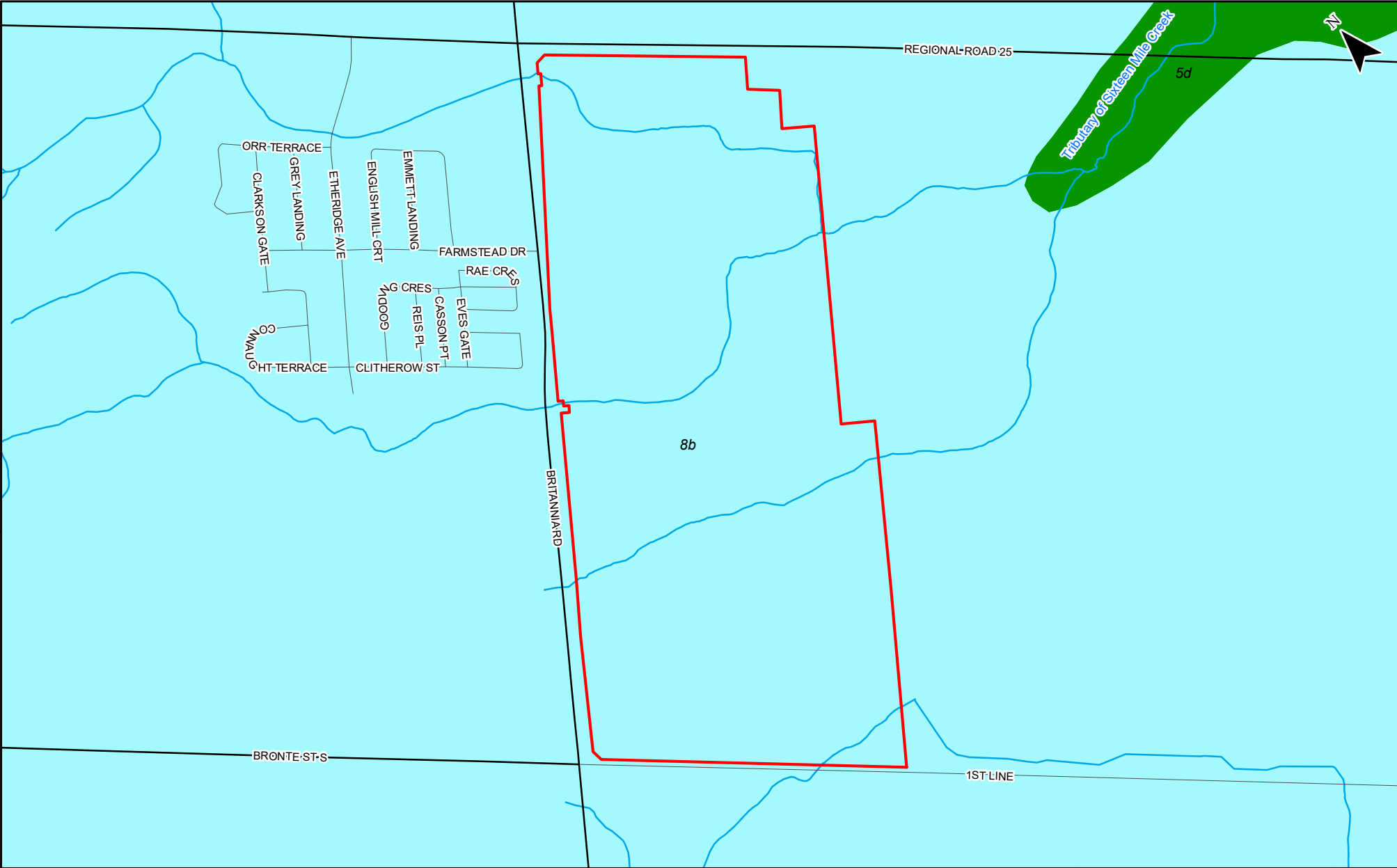
PROJECT NUMBER: BRM-23015226-A0

DATE: JULY 2024



DRAWN BY:  
AC

CHECKED BY:  
AN



SCALE:  
0 100 200 300 400 500  
m

SOURCE:  
BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2010



DRAWN BY:  
AC

CHECKED BY:  
AN

LEGEND:

- 8b: FINE-TEXTURED GLACIOLACUSTRINE DEPOSITS
- 5d: GLACIOLACUSTRINE-DERIVED SILTY TO CLAYEY TILL
- APPROXIMATE SITE BOUNDARY

QUATERNARY GEOLOGY

FIGURE:  
2C

HYDROGEOLOGICAL INVESTIGATION AND  
WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

PROJECT NUMBER: BRM-23015226-A0

DATE: JULY 2024



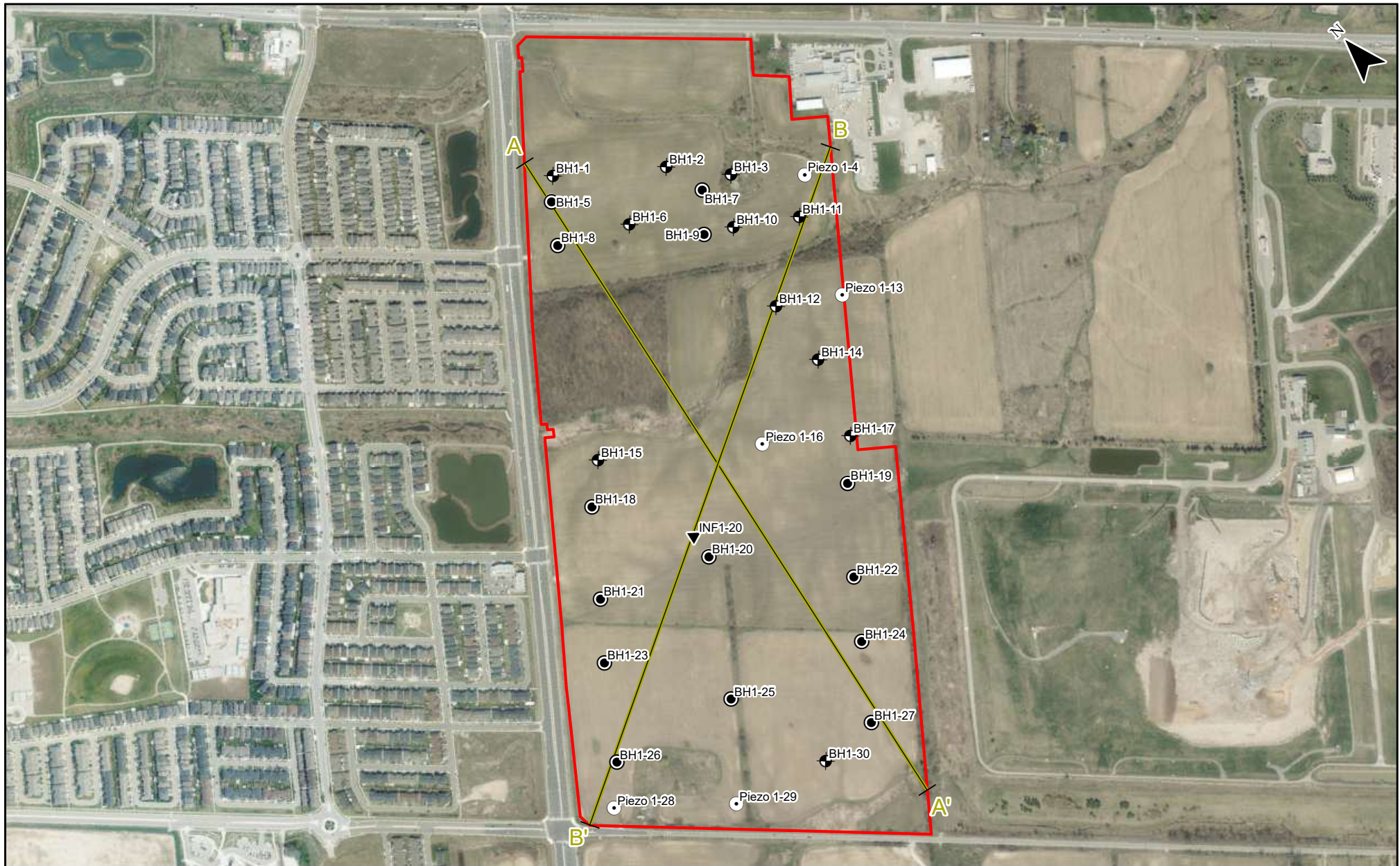
|                                                                                 |                            |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                |                          |
|---------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| <p>SCALE:</p> <p>0 130 260 390 520 650 m</p>                                    |                            | <p>LEGEND:</p> <p><span style="border: 2px solid red; display: inline-block; width: 20px; height: 10px;"></span> APPROXIMATE SITE BOUNDARY</p> <p><span style="background-color: #0070C0; display: inline-block; width: 20px; height: 10px;"></span> 55a: (SHALE, LIMESTONE, DOLOSTONE, SILTSTONE)</p> <p><i>Queenston Formation</i></p> | <p>BEDROCK GEOLOGY</p>                                                                                                                         | <p>FIGURE:</p> <p>2D</p> |
| <p>SOURCE:</p> <p>BASED ON ONTARIO GEOLOGICAL SURVEY DATA PUBLISHED IN 2011</p> |                            |                                                                                                                                                                                                                                                                                                                                          | <p>HYDROGEOLOGICAL INVESTIGATION AND WATER BALANCE ASSESSMENT DEVELOPMENT LANDS (PHASE 1) AT BRITANNIA ROAD AND FIRST LINE MILTON, ONTARIO</p> |                          |
|                                                                                 | <p>DRAWN BY:</p> <p>AC</p> | <p>CHECKED BY:</p> <p>AN</p>                                                                                                                                                                                                                                                                                                             | <p>PROJECT NUMBER: BRM-23015226-A0      DATE: JULY 2024</p>                                                                                    |                          |



|                                                                                                            |                 |                   |
|------------------------------------------------------------------------------------------------------------|-----------------|-------------------|
| SCALE:<br>0 200 400 600 800 1,000 m                                                                        |                 |                   |
| SOURCE:<br>BASED ON GOOGLE EARTH IMAGERY DATED 2023,<br>AVAILABLE WELL RECORD INFORMATION AS OF JUNE 2023. |                 |                   |
|                                                                                                            | DRAWN BY:<br>AC | CHECKED BY:<br>AN |

|                                                                                                                         |  |                                                                            |
|-------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------|
| LEGEND:<br>● MONITORING WELL / TEST HOLE<br>● WATER SUPPLY WELL<br>● ABANDONED WELL<br>○ UNCLASSIFIED / UNFINISHED WELL |  | [Red Solid Line] APPROXIMATE SITE BOUNDARY<br>[Red Dotted Line] 500 m ZONE |
|-------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------|

|                                                                                                                                                     |  |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|
| MECP WATER WELL<br>RECORDS MAP                                                                                                                      |  | FIGURE:<br>3    |
| HYDROGEOLOGICAL INVESTIGATION AND<br>WATER BALANCE ASSESSMENT<br>DEVELOPMENT LANDS (PHASE 1)<br>AT BRITANNIA ROAD AND FIRST LINE<br>MILTON, ONTARIO |  |                 |
| PROJECT NUMBER: BRM-23015226-A0                                                                                                                     |  | DATE: JULY 2024 |



SCALE:

0 80 160 240 320 400 m

LEGEND:

- APPROXIMATE SITE BOUNDARY
- CROSS SECTION AXIS
- BOREHOLE (EXP, 2024)
- BOREHOLE / MONITORING WELL (EXP, 2024)
- PIEZOMETER (EXP, 2024)
- INFILTRATION TEST LOCATION (EXP, 2024)

**BOREHOLE / MONITORING  
WELL LOCATION PLAN**

FIGURE:

**4A**

HYDROGEOLOGICAL INVESTIGATION AND  
WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

PROJECT NUMBER: BRM-23015226-A0

DATE: JULY 2024

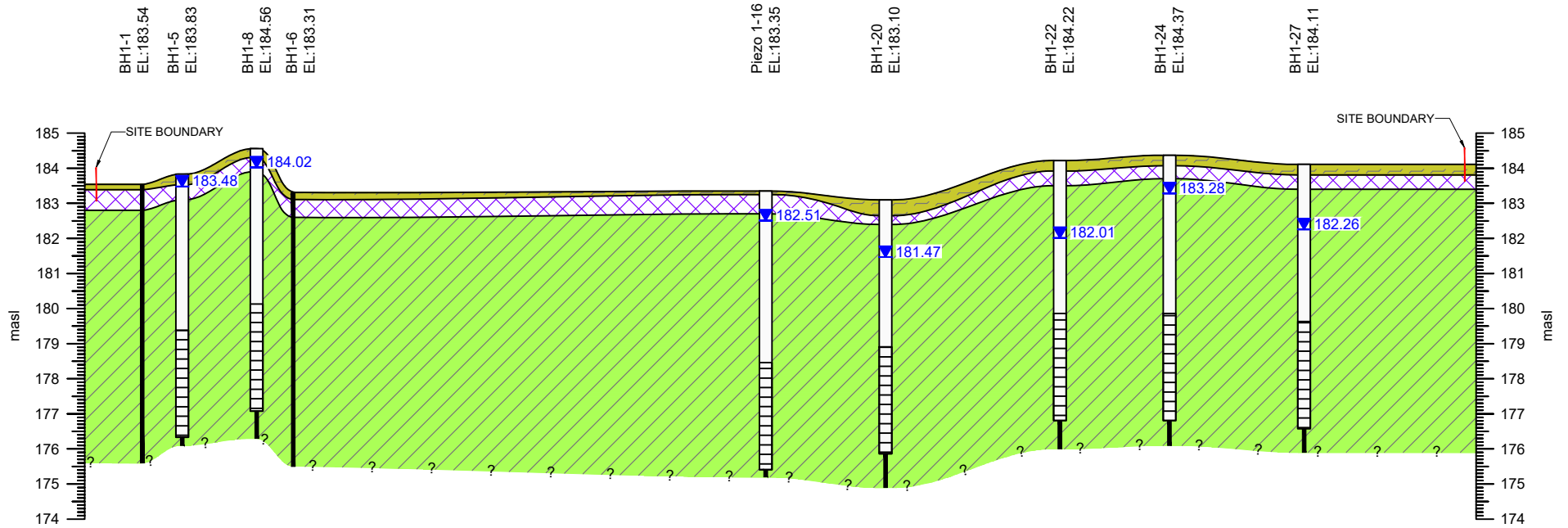


DRAWN BY:  
AC

CHECKED BY:  
AN

A  
NORTH

A'  
SOUTH



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE: 0 50 100 150 200 250 m

**EXP Services Inc.**

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Brampton, ON L6T 4V1  
Canada

[www.exp.com](http://www.exp.com)



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**LEGEND:**

- TOPSOIL
- REWORKED TILL
- CLAYEY SILT TILL TO SILTY CLAY TILL

GROUNDWATER ELEVATION (masl) AS  
MEASURED ON JULY 4, 2024

**TITLE AND LOCATION:**

**CROSS SECTION A-A'**  
HYDROGEOLOGICAL INVESTIGATION  
AND WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

**PROJECT NO.:**

BRM-23015226-A0

**DWN.:**

JA

**SCALE:**

AS NOTED

**CK:**

AN

**DATE:**

JULY 2024

**FIG. NO.:**

5A

B  
NORTHEAST

B'  
SOUTHWEST

Piezo 1-4  
EL.:181.65

BH1-11  
EL.:181.08

BH1-12  
EL.:182.45

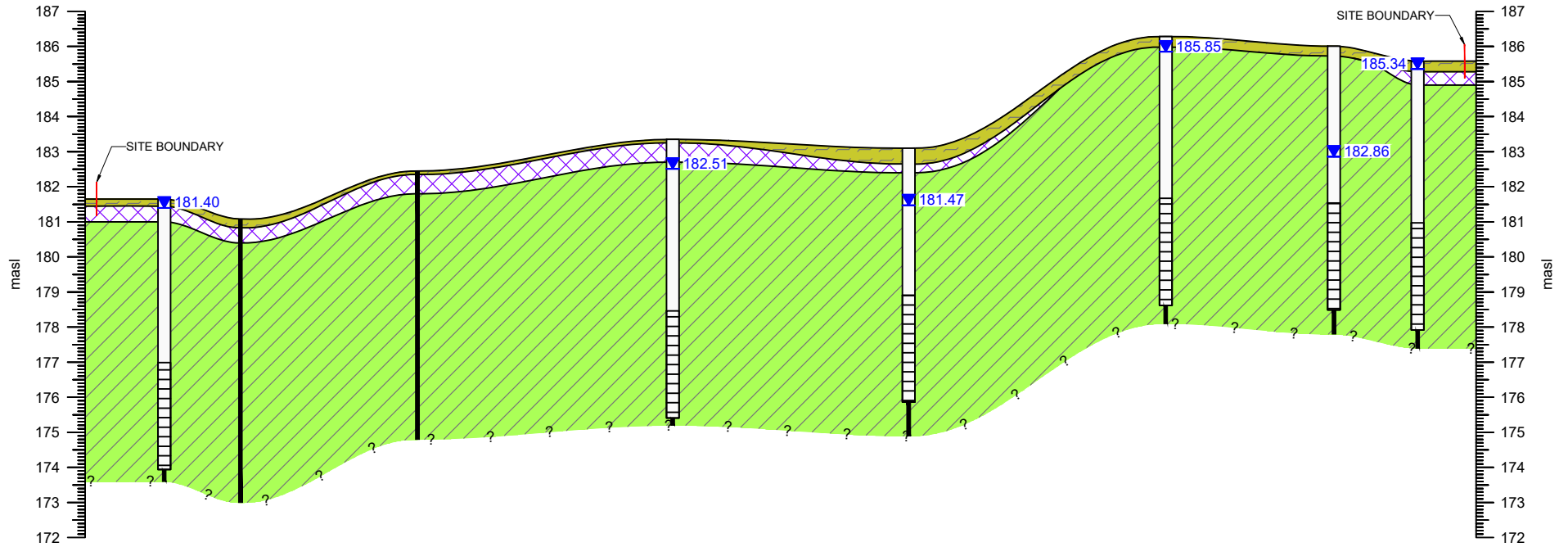
Piezo 1-16  
EL.:183.35

BH1-20  
EL.:183.10

BH1-23  
EL.:186.28

BH1-26  
EL.:186.01

Piezo 1-28  
EL.:185.58



VERTICAL SCALE: AS SHOWN

HORIZONTAL SCALE:

0 50 100 150 200 250 m

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• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

**LEGEND:**

- TOPSOIL
- REWORKED TILL
- CLAYEY SILT TILL TO SILTY CLAY TILL

GROUNDWATER ELEVATION (masl) AS  
MEASURED ON JULY 4, 2024

**TITLE AND LOCATION:**

**CROSS SECTION B-B'**  
HYDROGEOLOGICAL INVESTIGATION  
AND WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

**PROJECT NO.:**

BRM-23015226-A0

**DWN.:**

JA

**SCALE:**

AS NOTED

**CK:**

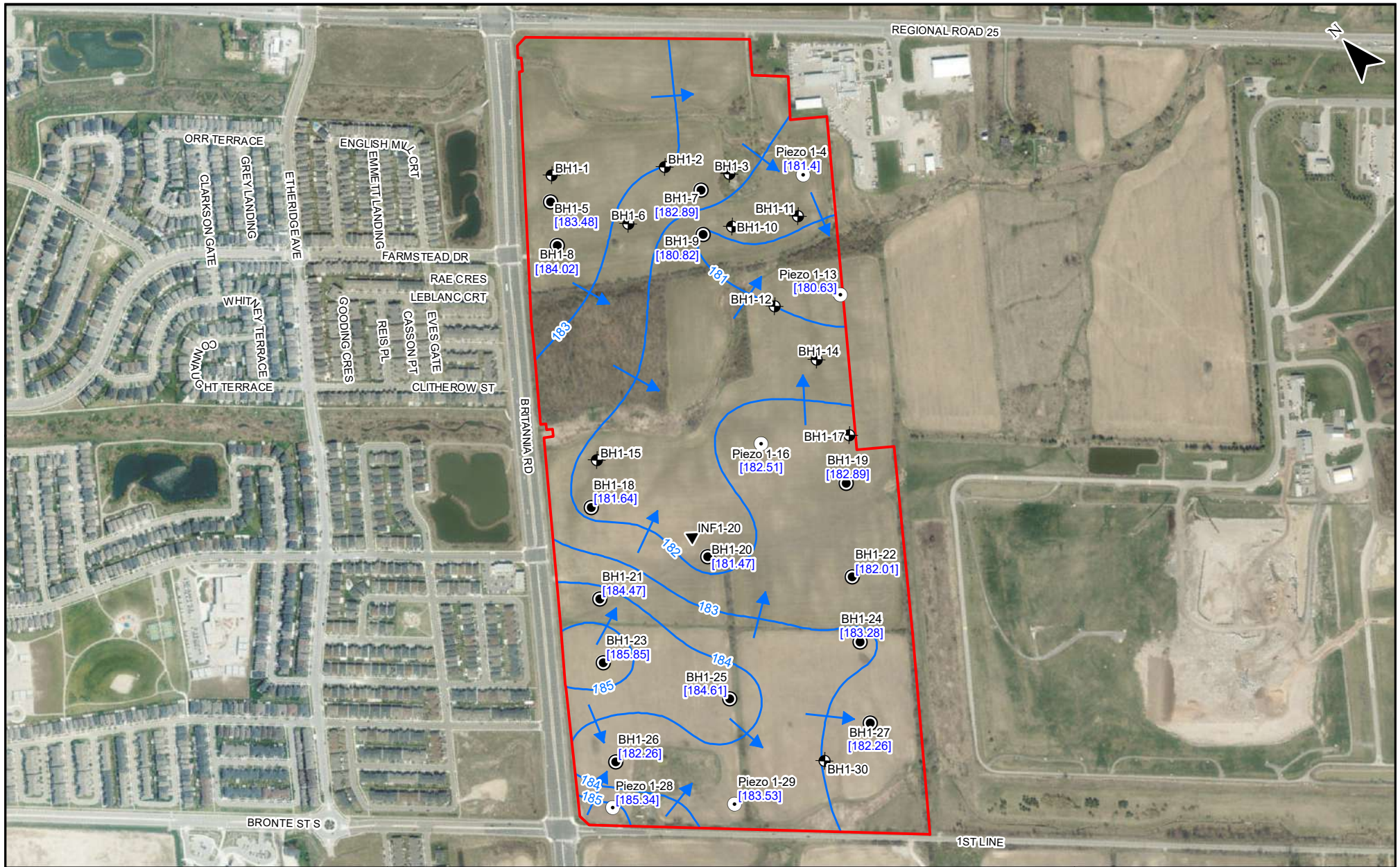
AN

**DATE:**

JULY 2024

**FIG. NO.:**

5B



SCALE:

0 80 160 240 320 400 m

LEGEND:

- APPROXIMATE SITE BOUNDARY
- BOREHOLE (EXP, 2024)
- BOREHOLE / MONITORING WELL (EXP, 2024)
- PIEZOMETER (EXP, 2024)
- INFILTRATION TEST LOCATION (EXP, 2024)

- GROUNDWATER CONTOUR
- GROUNDWATER FLOW DIRECTION
- [xx.xx] GROUNDWATER ELEVATION (m ASL) AS MEASURED ON JULY 4, 2024

## GROUNDWATER CONTOUR PLAN

FIGURE:

6

HYDROGEOLOGICAL INVESTIGATION AND  
WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

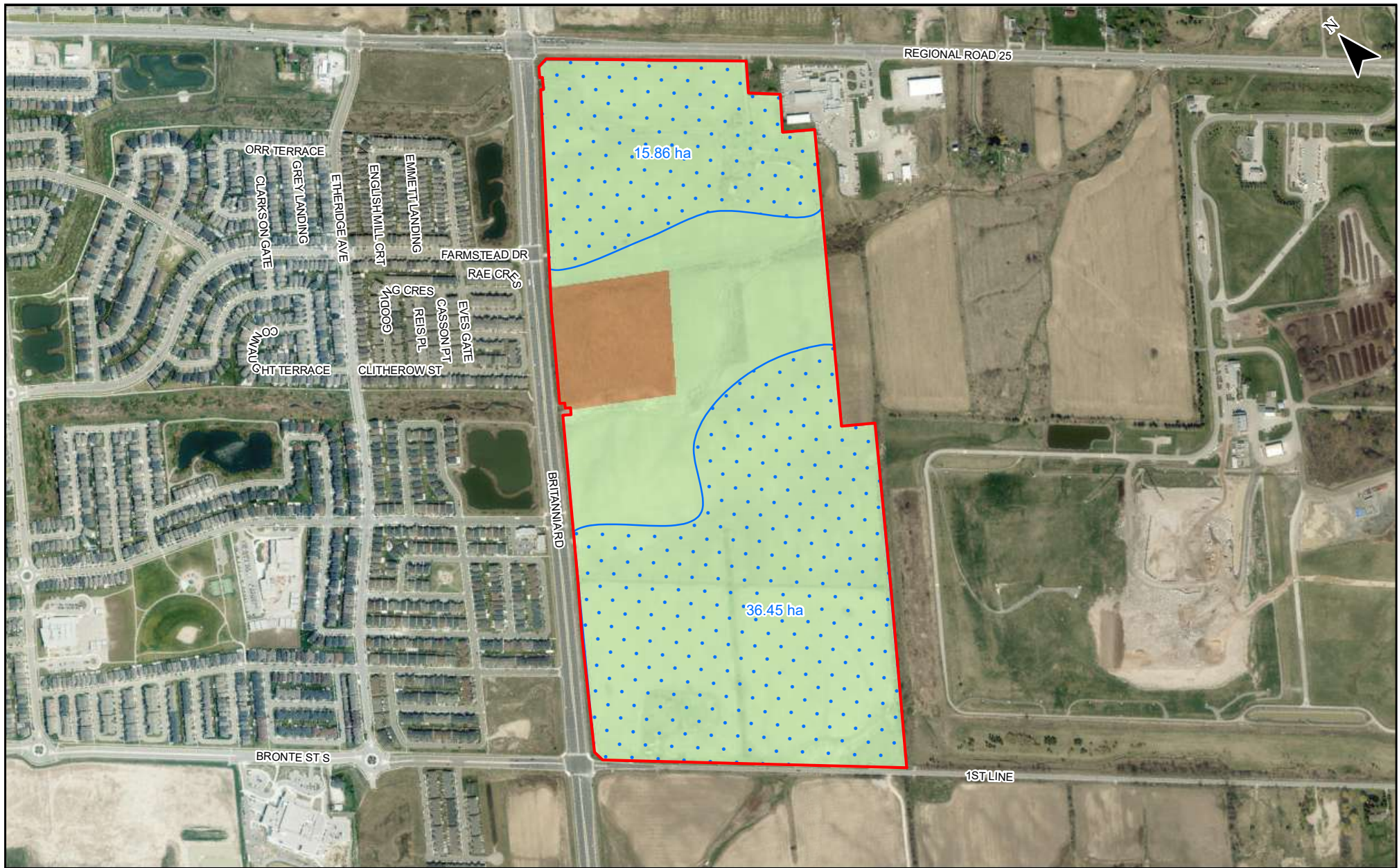
PROJECT NUMBER: BRM-23015226-A0

DATE: JULY 2024



DRAWN BY:  
JA

CHECKED BY:  
AN



SCALE:

0 100 200 300 400 500  
m

LEGEND:

- AGRICULTURAL / LANDSCAPE
- WOODLOT
- APPROXIMATE SITE BOUNDARY
- HIGH WATER LEVEL AREA

EXISTING LAND USE  
AND HIGH WATER LEVEL AREAS

FIGURE:

7

HYDROGEOLOGICAL INVESTIGATION AND  
WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

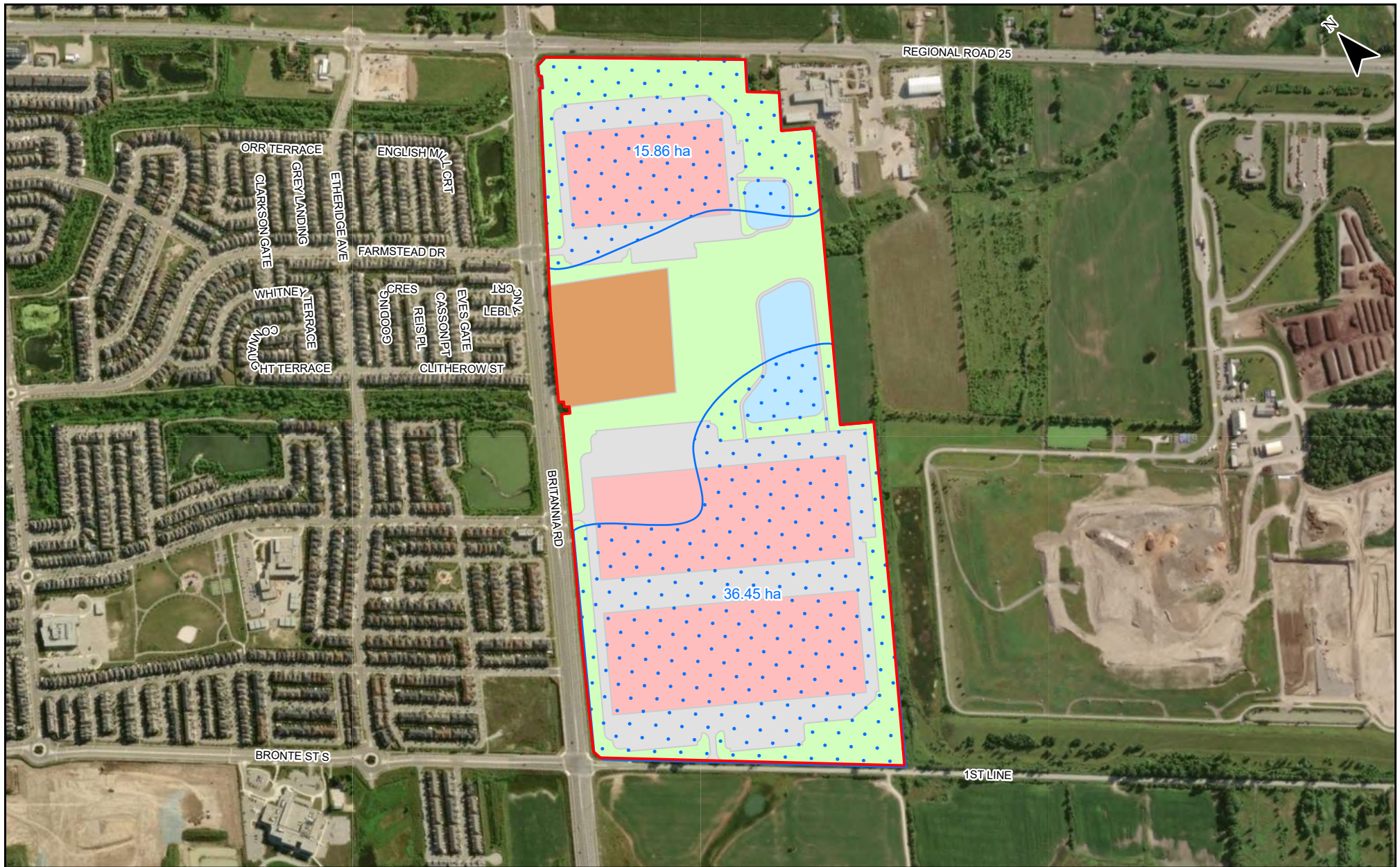
PROJECT NUMBER: BRM-23015226-A0

DATE: JULY 2024

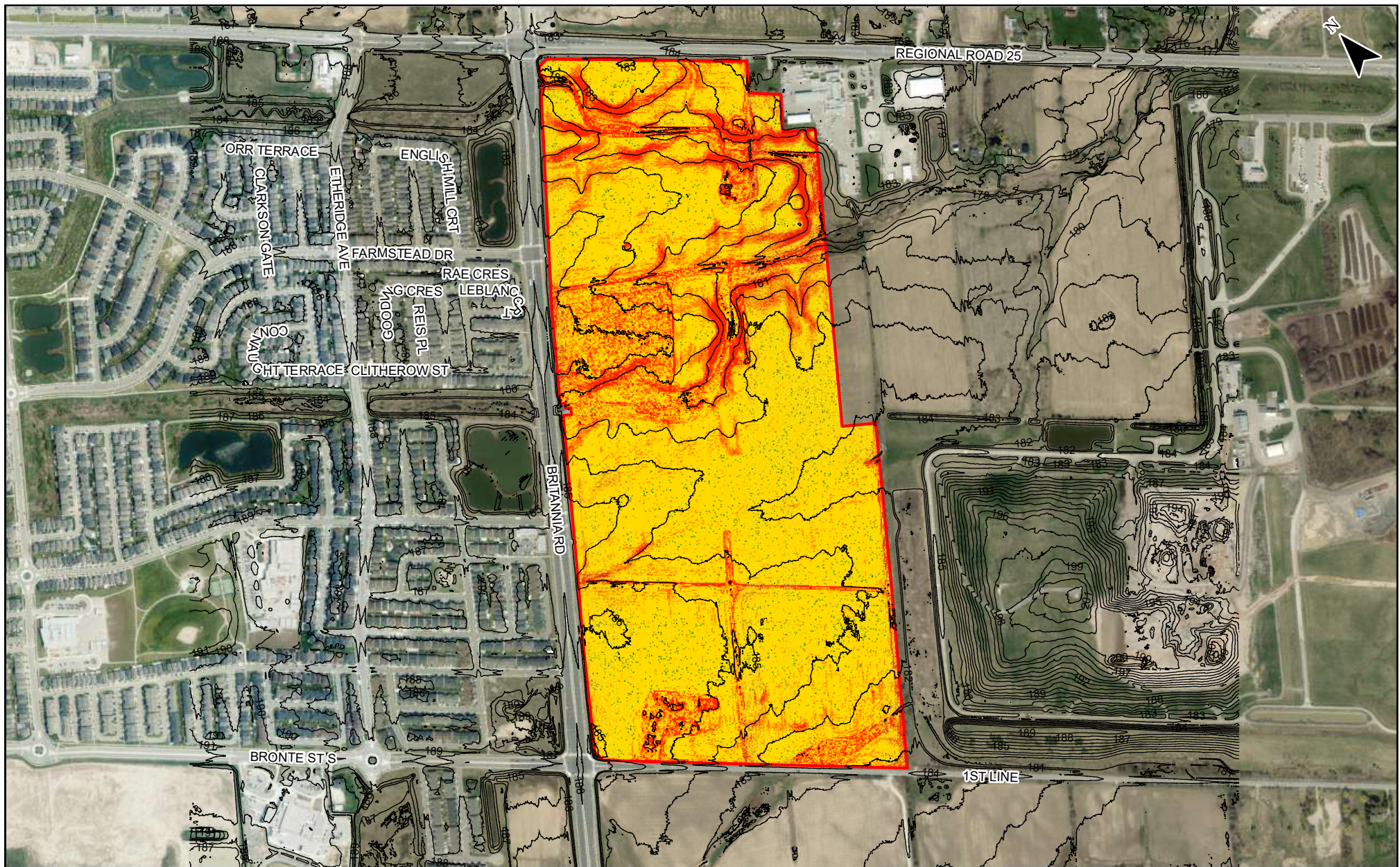


DRAWN BY:  
AC

CHECKED BY:  
AN



|                                                                                     |                     |                                                                                                                                                                                |                        |                                                     |                  |
|-------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------|------------------|
| <p>SCALE:</p> <p>0 100 200 300 400 500 m</p>                                        |                     | <p>LEGEND:</p> <p>BUILDING</p> <p>LANDSCAPE</p> <p>PAVEMENT</p> <p>STORMWATER MANAGEMENT POND</p> <p>WOODLOT</p> <p>APPROXIMATE SITE BOUNDARY</p> <p>HIGH WATER LEVEL AREA</p> |                        | <p>PROPOSED LAND USE AND HIGH WATER LEVEL AREAS</p> | <p>FIGURE: 8</p> |
| <p>SOURCE:</p> <p>PROPOSED LAND USE BASED ON MILTON LINK SITE PLAN, JUNE 2 2026</p> |                     | <p>HYDROGEOLOGICAL INVESTIGATION AND WATER BALANCE ASSESSMENT DEVELOPMENT LANDS (PHASE 1) AT BRITANNIA ROAD AND FIRST LINE MILTON, ONTARIO</p>                                 |                        | <p>PROJECT NUMBER: BRM-23015226-A0</p>              |                  |
| <p>exp.</p>                                                                         | <p>DRAWN BY: AC</p> | <p>CHECKED BY: AN</p>                                                                                                                                                          | <p>DATE: JUNE 2026</p> |                                                     |                  |



SCALE:  
0 100 200 300 400 500  
m

SOURCE:  
TOPOGRAPHIC CONTOURS BASED ON HIGH RESOLUTION  
DIGITAL ELEVATION MODEL (HRDEM)  
MADE AVAILABLE UNDER THE OPEN GOVERNMENT LICENCE - CANADA.

LEGEND:

- TOPOGRAPHIC CONTOUR (m asl)
- APPROXIMATE SITE BOUNDARY

EXISTING SLOPE (INFILTRATION FACTOR):

|                                                                                                                                                 |                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <span style="display: inline-block; width: 15px; height: 15px; background-color: #006400; border: 1px solid black;"></span> <0.06% (0.30)       | <span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black;"></span> 0.38 - 2.8% (0.15) |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black;"></span> 0.06 - 0.28% (0.25) | <span style="display: inline-block; width: 15px; height: 15px; background-color: #FF8C00; border: 1px solid black;"></span> 2.8 - 4.7% (0.10)  |
| <span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black;"></span> 0.28 - 0.38% (0.20) | <span style="display: inline-block; width: 15px; height: 15px; background-color: #FF0000; border: 1px solid black;"></span> >4.7% (0.05)       |

EXISTING SLOPE

FIGURE:

9

HYDROGEOLOGICAL INVESTIGATION AND  
WATER BALANCE ASSESSMENT  
DEVELOPMENT LANDS (PHASE 1)  
AT BRITANNIA ROAD AND FIRST LINE  
MILTON, ONTARIO

PROJECT NUMBER: BRM-23015226-A0

DATE: JULY 2024



DRAWN BY:  
AC

CHECKED BY:  
AN

## List of Tables (Groundwater Elevations, Hydrographs and Summary of K Values)

**TABLE 4-1: Groundwater Elevation Summary**

Britannia Rd and First Line - Phase 1

BRM-23015226-A0

| Monitoring Well ID | Ground Surface Elevation (masl) | Stick Up (m) | Approximate Full Well Depth (mbTOP) | Approximate Full Well Depth (mbgs) | Minimum GW Elevation (masl) | Maximum GW Elevation (masl) | Depth | 26-Jun-24 | 4-Jul-24 | 30-Jan-25 | 28-Mar-25 | 22-May-25 | 11-Jul-25 | 16-Sep-25 | 13-Nov-25 |
|--------------------|---------------------------------|--------------|-------------------------------------|------------------------------------|-----------------------------|-----------------------------|-------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Piezo 1-4          | 181.65                          | 1.02         | 8.73                                | 7.71                               | 180.78                      | 181.42                      | mbTOP | 1.25      | 1.27     | 1.89      | 1.36      | 1.61      | 1.66      | 1.64      | 1.42      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.23      | 0.25     | 0.87      | 0.34      | 0.59      | 0.64      | 0.62      | 0.40      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 181.42    | 181.40   | 180.78    | 181.31    | 181.06    | 181.01    | 181.03    | 181.25    |
| BH1-5              | 183.83                          | 0.97         | 8.47                                | 7.50                               | 182.93                      | 183.48                      | mbTOP | 1.34      | 1.32     | 1.87      | 1.48      | 1.58      | 1.49      | 1.54      | 1.58      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.37      | 0.35     | 0.90      | 0.51      | 0.61      | 0.52      | 0.57      | 0.61      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 183.46    | 183.48   | 182.93    | 183.32    | 183.22    | 183.31    | 183.26    | 183.22    |
| BH1-7              | 183.25                          | 0.99         | 8.43                                | 7.44                               | 182.44                      | 183.11                      | mbTOP | 1.28      | 1.35     | 1.80      | 1.27      | 1.14      | 1.75      | 1.66      | 1.13      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.29      | 0.36     | 0.81      | 0.28      | 0.15      | 0.76      | 0.67      | 0.14      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 182.96    | 182.89   | 182.44    | 182.97    | 183.10    | 182.49    | 182.58    | 183.11    |
| BH1-8              | 184.56                          | 0.99         | 8.47                                | 7.48                               | 183.42                      | 184.07                      | mbTOP | 1.48      | 1.53     | 2.13      | 1.58      | 1.79      | 1.86      | 1.81      | 1.62      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.49      | 0.54     | 1.14      | 0.59      | 0.80      | 0.87      | 0.82      | 0.63      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 184.07    | 184.02   | 183.42    | 183.97    | 183.76    | 183.69    | 183.74    | 183.93    |
| BH1-9              | 182.53                          | 1.05         | 8.47                                | 7.42                               | 180.82                      | 181.40                      | mbTOP | 2.18      | 2.76     | 2.51      | 2.26      | 2.45      | 2.35      | 2.50      | 2.53      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 1.13      | 1.71     | 1.46      | 1.21      | 1.40      | 1.30      | 1.45      | 1.48      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 181.40    | 180.82   | 181.07    | 181.32    | 181.13    | 181.23    | 181.08    | 181.05    |
| Piezo 1-13         | 182.39                          | 0.95         | 8.57                                | 7.62                               | 180.16                      | 180.63                      | mbTOP | 3.08      | 2.71     | 3.18      | 2.89      | 2.99      | Destroyed | Destroyed | Destroyed |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 2.13      | 1.76     | 2.23      | 1.94      | 2.04      | -         | -         | -         |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 180.26    | 180.63   | 180.16    | 180.45    | 180.35    | -         | -         | -         |
| Piezo 1-16         | 183.35                          | 1.00         | 8.94                                | 7.94                               | 180.07                      | 182.65                      | mbTOP | 4.28      | 1.84     | 2.09      | 1.81      | 1.90      | 1.70      | 2.39      | 2.91      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 3.28      | 0.84     | 1.09      | 0.81      | 0.90      | 0.70      | 1.39      | 1.91      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 180.07    | 182.51   | 182.26    | 182.54    | 182.45    | 182.65    | 181.96    | 181.44    |
| BH1-18             | 183.55                          | 1.00         | 8.40                                | 7.40                               | 180.99                      | 181.68                      | mbTOP | 2.87      | 2.91     | 3.28      | 3.29      | 3.18      | 3.13      | 3.50      | 3.56      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 1.87      | 1.91     | 2.28      | 2.29      | 2.18      | 2.13      | 2.50      | 2.56      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 181.68    | 181.64   | 181.27    | 181.26    | 181.37    | 181.42    | 181.05    | 180.99    |
| BH1-19             | 183.25                          | 1.02         | 8.32                                | 7.30                               | 181.16                      | 182.89                      | mbTOP | 1.40      | 1.38     | 2.31      | 2.28      | 2.11      | 1.73      | 2.51      | 3.11      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.38      | 0.36     | 1.29      | 1.26      | 1.09      | 0.71      | 1.49      | 2.09      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 182.87    | 182.89   | 181.96    | 181.99    | 182.16    | 182.54    | 181.76    | 181.16    |
| BH1-20             | 183.10                          | 1.06         | 8.30                                | 7.24                               | 181.47                      | 182.85                      | mbTOP | 1.31      | 2.69     | 1.97      | 1.50      | 1.69      | 1.45      | 2.39      | 2.08      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.25      | 1.63     | 0.91      | 0.44      | 0.63      | 0.39      | 1.33      | 1.02      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 182.85    | 181.47   | 182.19    | 182.66    | 182.47    | 182.71    | 181.77    | 182.08    |
| BH1-21             | 184.68                          | 1.01         | 8.44                                | 7.43                               | 183.37                      | 184.51                      | mbTOP | 1.18      | 1.22     | 1.90      | 1.41      | 1.56      | 1.32      | 2.32      | 2.00      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.17      | 0.21     | 0.89      | 0.40      | 0.55      | 0.31      | 1.31      | 0.99      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 184.51    | 184.47   | 183.79    | 184.28    | 184.13    | 184.37    | 183.37    | 183.69    |
| BH1-22             | 184.22                          | 1.06         | 8.47                                | 7.41                               | 182.01                      | 183.73                      | mbTOP | 1.55      | 3.27     | 2.14      | 2.50      | 2.11      | 1.58      | 1.95      | 2.43      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.49      | 2.21     | 1.08      | 1.44      | 1.05      | 0.52      | 0.89      | 1.37      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 183.73    | 182.01   | 183.14    | 182.78    | 183.17    | 183.70    | 183.33    | 182.85    |
| BH1-23             | 186.28                          | 0.87         | 8.53                                | 7.66                               | 184.82                      | 185.86                      | mbTOP | 1.29      | 1.30     | 2.33      | 2.18      | 1.70      | 1.46      | 1.85      | 2.18      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.42      | 0.43     | 1.46      | 1.31      | 0.83      | 0.59      | 0.98      | 1.31      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 185.86    | 185.85   | 184.82    | 184.97    | 185.45    | 185.69    | 185.30    | 184.97    |
| BH1-24             | 184.37                          | 1.03         | 8.59                                | 7.56                               | 183.05                      | 183.86                      | mbTOP | 1.54      | 2.12     | 2.01      | 1.98      | 2.03      | 1.79      | 2.35      | 2.21      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.51      | 1.09     | 0.98      | 0.95      | 1.00      | 0.76      | 1.32      | 1.18      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 183.86    | 183.28   | 183.39    | 183.42    | 183.37    | 183.61    | 183.05    | 183.19    |

| Monitoring Well ID | Ground Surface Elevation (masl) | Stick Up (m) | Approximate Full Well Depth (mbTOP) | Approximate Full Well Depth (mbgs) | Minimum GW Elevation (masl) | Maximum GW Elevation (masl) | Depth | 26-Jun-24 | 4-Jul-24 | 30-Jan-25 | 28-Mar-25 | 22-May-25 | 11-Jul-25 | 16-Sep-25 | 13-Nov-25 |
|--------------------|---------------------------------|--------------|-------------------------------------|------------------------------------|-----------------------------|-----------------------------|-------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| BH1-25             | 185.23                          | 0.92         | 8.53                                | 7.61                               | 183.81                      | 184.99                      | mbTOP | 1.16      | 1.54     | 1.74      | 1.46      | 1.49      | 1.26      | 1.99      | 2.34      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.24      | 0.62     | 0.82      | 0.54      | 0.57      | 0.34      | 1.07      | 1.42      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 184.99    | 184.61   | 184.41    | 184.69    | 184.66    | 184.89    | 184.16    | 183.81    |
| BH1-26             | 186.01                          | 0.91         | 8.43                                | 7.52                               | 182.86                      | 185.61                      | mbTOP | 1.31      | 4.06     | 1.96      | 1.87      | 1.72      | 1.48      | 1.84      | 1.80      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.40      | 3.15     | 1.05      | 0.96      | 0.81      | 0.57      | 0.93      | 0.89      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 185.61    | 182.86   | 184.96    | 185.05    | 185.20    | 185.44    | 185.08    | 185.12    |
| BH1-27             | 184.11                          | 0.92         | 8.45                                | 7.53                               | 181.88                      | 183.31                      | mbTOP | 1.72      | 2.77     | 2.17      | 2.19      | 2.25      | 2.11      | 2.94      | 3.15      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.80      | 1.85     | 1.25      | 1.27      | 1.33      | 1.19      | 2.02      | 2.23      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 183.31    | 182.26   | 182.86    | 182.84    | 182.78    | 182.92    | 182.09    | 181.88    |
| Piezo 1-28         | 185.58                          | 0.98         | 8.64                                | 7.66                               | 184.48                      | 185.34                      | mbTOP | 1.24      | 1.22     | 1.85      | 1.45      | 1.57      | 1.43      | 2.08      | 1.87      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.26      | 0.24     | 0.87      | 0.47      | 0.59      | 0.45      | 1.10      | 0.89      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 185.32    | 185.34   | 184.71    | 185.11    | 184.99    | 185.13    | 184.48    | 184.69    |
| Piezo 1-29         | 184.41                          | 1.00         | 9.13                                | 8.13                               | 182.45                      | 183.53                      | mbTOP | 1.90      | 1.88     | 2.28      | 2.39      | 2.40      | 2.26      | 2.79      | 2.96      |
|                    |                                 |              |                                     |                                    |                             |                             | mbgs  | 0.90      | 0.88     | 1.28      | 1.39      | 1.40      | 1.26      | 1.79      | 1.96      |
|                    |                                 |              |                                     |                                    |                             |                             | masl  | 183.51    | 183.53   | 183.13    | 183.02    | 183.01    | 183.15    | 182.62    | 182.45    |

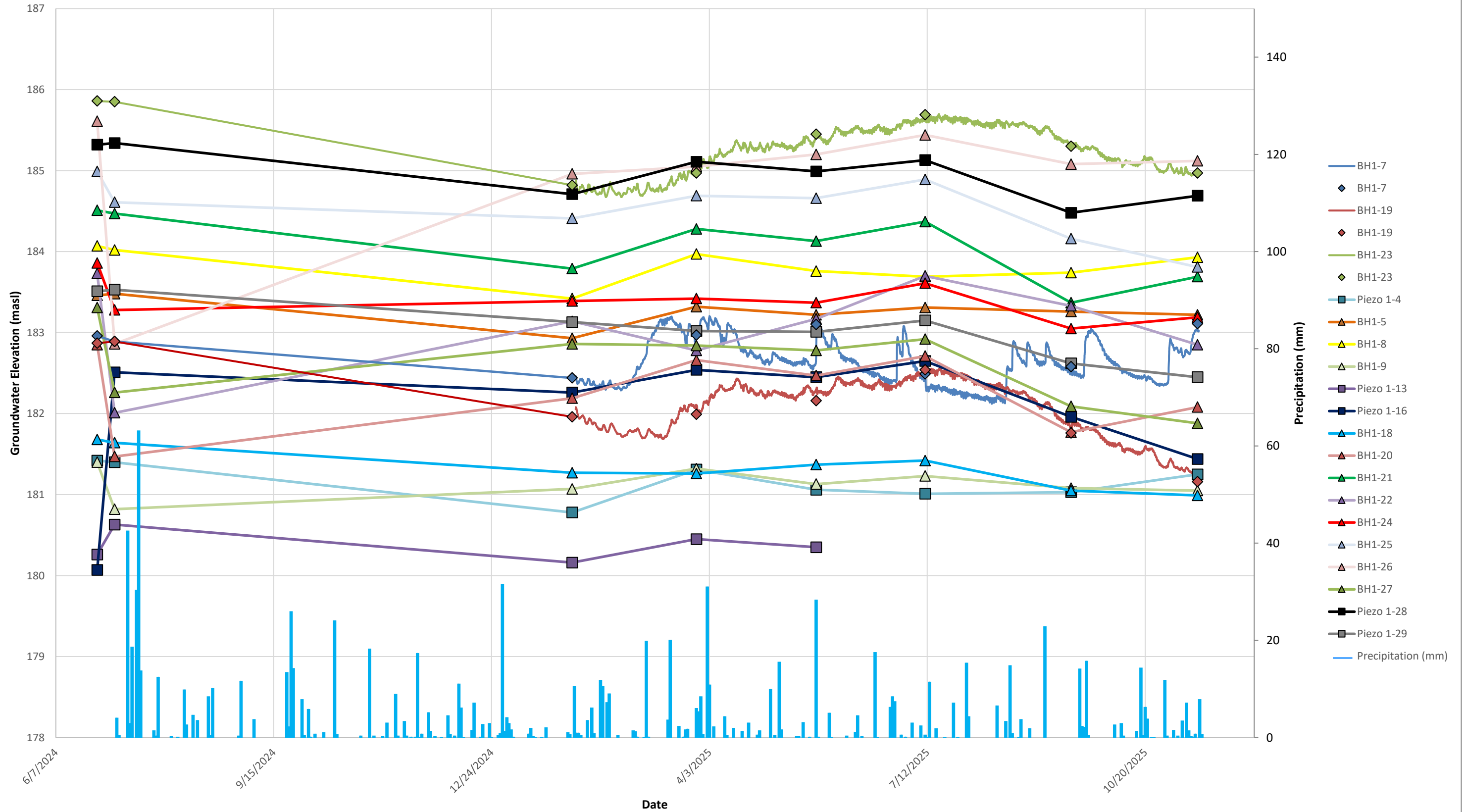
Notes:

mbTOP - meters below top of the pipe  
mbgs - meters below ground surface  
masl - meters above mean sea level

|               | Min. GW Elev. | Max. Gw Elev. |
|---------------|---------------|---------------|
| Shallow Wells | 180.07        | 185.86        |
| Deep Wells    | 0             | 0             |

# Tribal Milton Phase 1 Hydrograph

June 2024 - November 2025



**Table 4-2: Summary of Hydraulic Conductivity Testing Results**

Britannia Rd and First Line - Phase 1

BRM-23015226-A0

| Monitoring Well                       | Well Depth (mbgs) | Screen Interval (mbgs) |      | Soil Formation Screened                         | Estimated Hydraulic Conductivity (m/s) |
|---------------------------------------|-------------------|------------------------|------|-------------------------------------------------|----------------------------------------|
|                                       |                   | from                   | to   |                                                 |                                        |
| BH1-5                                 | 7.5               | 4.5                    | 7.5  | Clayey Silt Till/Silty Clay                     | 2.3E-08                                |
| BH1-7                                 | 7.44              | 4.44                   | 7.44 | Clayey Silt Till/Silty Clay                     | 2.6E-07                                |
| BH1-8                                 | 7.48              | 4.48                   | 7.48 | Clayey Silt Till/Silty Clay                     | 2.5E-08                                |
| BH1-9                                 | 7.42              | 4.42                   | 7.42 | Clayey Silt Till/Silty Clay                     | 6.5E-09                                |
| BH1-18                                | 7.4               | 4.4                    | 7.4  | Clayey Silt Till/Silty Clay                     | 1.7E-08                                |
| BH1-19                                | 7.3               | 4.3                    | 7.3  | Clayey Silt Till/Silty Clay                     | 1.6E-08                                |
| BH1-20                                | 7.24              | 4.24                   | 7.24 | Clayey Silt Till/Silty Clay<br>(Fine Sand Seam) | 2.7E-06                                |
| BH1-21                                | 7.43              | 4.43                   | 7.43 | Clayey Silt Till/Silty Clay                     | 1.6E-08                                |
| BH1-22                                | 7.41              | 4.41                   | 7.41 | Clayey Silt Till/Silty Clay                     | 1.6E-08                                |
| BH1-23                                | 7.66              | 4.66                   | 7.66 | Clayey Silt Till/Silty Clay                     | 9.0E-08                                |
| BH1-24                                | 7.56              | 4.56                   | 7.56 | Clayey Silt Till/Silty Clay                     | 7.1E-09                                |
| BH1-25                                | 7.61              | 4.61                   | 7.61 | Clayey Silt Till/Silty Clay                     | 1.1E-08                                |
| BH1-26                                | 7.52              | 4.52                   | 7.52 | Clayey Silt Till/Silty Clay                     | 4.7E-09                                |
| BH1-27                                | 7.53              | 4.53                   | 7.53 | Clayey Silt Till/Silty Clay                     | 1.3E-08                                |
| Highest Estimated K Value             |                   |                        |      |                                                 | 2.7E-06                                |
| Arithmetic Mean of Estimated K Values |                   |                        |      |                                                 | 2.3E-07                                |
| Geometric Mean of Estimated K Values  |                   |                        |      |                                                 | 2.7E-08                                |

## Appendix A – MECP WWR Summary Table

| On-Site      |         |            |        |         |                      |                               |                                                |        |                                       |                        |                       |                        |                            |                          |          |                   |
|--------------|---------|------------|--------|---------|----------------------|-------------------------------|------------------------------------------------|--------|---------------------------------------|------------------------|-----------------------|------------------------|----------------------------|--------------------------|----------|-------------------|
| BORE_HOLE_ID | WELL_ID | DATE       | EAST83 | NORTH83 | ELEVATION<br>(m ASL) | LOCATION ACCURACY             | STREET                                         | CITY   | DISTANCE FROM<br>SITE CENTROID<br>(m) | CONSTRUCTION<br>METHOD | WELL DEPTH<br>(m bgs) | WATER FOUND<br>(m bgs) | CASING<br>DIAMETER<br>(cm) | 1st USE                  | 2nd USE  | FINAL STATUS      |
| 10149029     | 2802479 | 8/31/1962  | 593670 | 4814263 | 183.7                | margin of error : 100 - 300 m | 5680 BRONTE RD<br>BRITANNIA & FIRST LINE       | Milton | 583                                   | Boring                 | 17.4                  | 12.8                   | 76.2                       | Livestock                | Domestic | Water Supply      |
| 1003586563   | 7170328 | 18720814   | 594513 | 4815198 | 183.1                | on Water Well Record          |                                                |        | 685                                   | Boring                 | 15.2                  | 8.5                    | 91.4                       | Domestic                 |          |                   |
| 1005657057   | 7247411 | 8/14/2015  | 593830 | 4814989 | 183.3                | on Water Well Record          |                                                |        | 301                                   |                        | 0.0                   | 0.0                    | 0.0                        |                          |          | Abandoned-Other   |
| Off-Site     |         |            |        |         |                      |                               |                                                |        |                                       |                        |                       |                        |                            |                          |          |                   |
| BORE_HOLE_ID | WELL_ID | DATE       | EAST83 | NORTH83 | ELEVATION<br>(m ASL) | LOCATION ACCURACY             | STREET                                         | CITY   | DISTANCE FROM<br>SITE CENTROID<br>(m) | CONSTRUCTION<br>METHOD | WELL DEPTH<br>(m bgs) | WATER FOUND<br>(m bgs) | CASING<br>DIAMETER<br>(cm) | 1st USE                  | 2nd USE  | FINAL STATUS      |
| 10149012     | 2802462 | 1/3/1955   | 593288 | 4814397 | 185.1                | unknown UTM                   |                                                |        | 793                                   | Cable Tool             | 25.9                  | 25.6                   | 15.2                       | Not Used                 |          | Abandoned-Quality |
| 10149013     | 2802463 | 1/12/1955  | 593181 | 4814511 | 188.3                | unknown UTM                   |                                                |        | 853                                   | Cable Tool             | 22.3                  | 21.9                   | 15.2                       | Domestic                 |          | Water Supply      |
| 10149026     | 2802476 | 8/7/1964   | 594052 | 4814226 | 180.8                | margin of error : 100 - 300 m |                                                |        | 518                                   | Cable Tool             | 22.9                  | 21.6                   | 15.2                       | Domestic                 |          | Water Supply      |
| 10149027     | 2802477 | 7/23/1964  | 594756 | 4814801 | 180.6                | margin of error : 100 - 300 m |                                                |        | 756                                   | Cable Tool             | 19.2                  | 18.3                   | 15.2                       | Domestic                 |          | Water Supply      |
| 10149028     | 2802478 | 10/6/1955  | 594565 | 4815153 | 182.1                | margin of error : 100 - 300 m |                                                |        | 697                                   | Cable Tool             | 19.8                  | 18.6                   | 17.8                       | Domestic                 |          | Water Supply      |
| 10149030     | 2802480 | 10/13/1967 | 593909 | 4815813 | 188.4                | margin of error : 100 - 300 m |                                                |        | 1075                                  | Cable Tool             | 13.4                  | 13.4                   | 15.2                       | Domestic                 |          | Water Supply      |
| 10149043     | 2802493 | 4/12/1953  | 594825 | 4815070 | 182.0                | from gps                      |                                                |        | 886                                   | Cable Tool             | 22.3                  | 21.3                   | 15.2                       | Livestock                | Domestic | Water Supply      |
| 10149044     | 2802494 | 6/17/1954  | 594952 | 4814877 | 181.1                | unknown UTM                   |                                                |        | 959                                   | Cable Tool             | 18.6                  | 18.3                   | 15.2                       | Domestic                 |          | Water Supply      |
| 10149046     | 2802496 | 4/30/1959  | 594992 | 4814842 | 180.8                | margin of error : 100 - 300 m |                                                |        | 995                                   | Cable Tool             | 19.8                  | 18.9                   | 17.8                       | Domestic                 |          | Water Supply      |
| 10149051     | 2802501 | 7/16/1964  | 594177 | 4815607 | 183.8                | margin of error : 100 - 300 m |                                                |        | 883                                   | Cable Tool             | 13.7                  | 13.7                   | 12.7                       | Domestic                 |          | Water Supply      |
| 10149052     | 2802502 | 11/27/1967 | 594414 | 4815788 | 187.2                | margin of error : 100 - 300 m |                                                |        | 1124                                  | Boring                 | 9.1                   | 6.4                    | 76.2                       | Domestic                 |          | Water Supply      |
| 10149802     | 2803260 | 11/24/1969 | 594385 | 4815763 | 187.6                | margin of error : 30 - 100 m  |                                                |        | 1091                                  | Boring                 | 11.6                  | 9.1                    | 76.2                       | Public                   |          | Water Supply      |
| 10149854     | 2803312 | 2/2/1970   | 593155 | 4814473 | 187.7                | margin of error : 30 - 100 m  |                                                |        | 889                                   | Boring                 | 12.5                  | 4.9                    | 76.2                       | Domestic                 |          | Water Supply      |
| 10149963     | 2803422 | 8/28/1970  | 593915 | 4815723 | 186.5                | margin of error : 30 - 100 m  |                                                |        | 985                                   | Cable Tool             | 19.8                  | 19.5                   | 15.2                       | Domestic                 |          | Water Supply      |
| 10153210     | 2806947 | 6/21/1988  | 593586 | 4815199 | 183.6                | Lot centroid                  |                                                |        | 619                                   | Boring                 | 10.1                  | 4.6                    | 76.2                       | Domestic                 |          | Water Supply      |
| 10153381     | 2807119 | 1/11/1989  | 594357 | 4815820 | 187.2                | from gps                      |                                                |        | 1135                                  | Cable Tool             | 22.9                  | 13.1                   | 15.2                       | Commercial               |          | Water Supply      |
| 10153457     | 2807195 | 8/17/1988  | 593017 | 4814720 | 188.2                | from gps                      |                                                |        | 985                                   | Cable Tool             | 24.7                  | 18.9                   | 15.2                       | Domestic                 |          | Water Supply      |
| 10153884     | 2807624 | 7/5/1990   | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 11.0                  | 10.4                   | 15.2                       | Not Used                 |          | Observation Wells |
| 10153885     | 2807625 | 6/28/1990  | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 9.1                   | 8.2                    | 15.2                       | Not Used                 |          | Observation Wells |
| 10153925     | 2807666 | 9/4/1990   | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 12.8                  | 11.9                   | 15.2                       | Not Used                 |          | Observation Wells |
| 10153882     | 2807622 | 6/25/1990  | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 11.3                  | 11.3                   | 15.2                       | Not Used                 |          | Observation Wells |
| 10153883     | 2807623 | 6/26/1990  | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 10.7                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10153927     | 2807668 | 9/11/1990  | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 12.2                  | 25.4                   |                            | Not Used                 |          | Abandoned-Supply  |
| 10154126     | 2807869 | 10/17/1991 | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 13.1                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10154127     | 2807870 | 10/16/1991 | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 13.1                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10154167     | 2807910 | 11/11/1991 | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 13.4                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10154168     | 2807911 | 11/6/1991  | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 13.1                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10154169     | 2807912 | 11/10/1991 | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 14.9                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10154170     | 2807913 | 11/4/1991  | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 11.9                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10154171     | 2807914 | 10/31/1991 | 594475 | 4814340 | 182.3                | Lot centroid                  |                                                |        | 621                                   | Cable Tool             | 11.9                  |                        | 15.2                       | Not Used                 |          | Observation Wells |
| 10154805     | 2808548 | 7/17/1997  | 594925 | 4814907 | 181.3                | from gps                      |                                                |        | 938                                   | Cable Tool             | 18.9                  | 17.1                   | 15.2                       | Domestic                 |          | Water Supply      |
| 1001579744   | 7104308 | 4/2/2008   | 594271 | 4815550 | 184.2                | on Water Well Record          | 2356 BRITANIA RD                               | MILTON | 852                                   | Boring                 | 6.1                   |                        |                            | Not Used                 |          | Observation Wells |
| 1001837552   | 7113170 | 8/28/2008  | 594260 | 4815545 | 184.2                | on Water Well Record          | 2356 BRITANNIA RD                              | MILTON | 844                                   |                        |                       |                        |                            |                          |          |                   |
| 1002736086   | 7117475 | 12/3/2008  | 594051 | 4814032 | 190.3                | on Water Well Record          | 5400 REGIONAL RD. #25                          | BOYNE  | 711                                   | Driving                |                       |                        |                            | Not Used                 |          | Other Status      |
| 1002736082   | 7117475 | 12/3/2008  | 594051 | 4814032 | 189.7                | on Water Well Record          | 5400 REGIONAL RD. #25                          | BOYNE  | 711                                   | Driving                |                       |                        |                            | Not Used                 |          | Other Status      |
| 1002736090   | 7117475 | 12/3/2008  | 594051 | 4814032 | 187.7                | on Water Well Record          | 5400 REGIONAL RD. #25                          | BOYNE  | 711                                   | Driving                |                       |                        |                            | Not Used                 |          | Other Status      |
| 1002736094   | 7117475 | 12/3/2008  | 594051 | 4814032 | 190.7                | on Water Well Record          | 5400 REGIONAL RD. #25                          | BOYNE  | 711                                   | Driving                |                       |                        |                            | Not Used                 |          | Other Status      |
| 1002736073   | 7117475 | 12/3/2008  | 594051 | 4814032 | 190.6                | on Water Well Record          | 5400 REGIONAL RD. #25                          | BOYNE  | 711                                   | Driving                |                       |                        |                            | Not Used                 |          | Other Status      |
| 1001945176   | 7117475 | 12/3/2008  | 594051 | 4814032 | 188.4                | on Water Well Record          | 5400 REGIONAL RD. #25                          | BOYNE  | 711                                   | Driving                | 13.7                  |                        |                            | Not Used                 |          | Other Status      |
| 1002420573   | 7122509 | 3/24/2009  | 594172 | 4815625 | 184.8                | on Water Well Record          | 6029 HWY 25                                    | Milton | 900                                   |                        |                       |                        |                            |                          |          | Abandoned-Other   |
| 1002950857   | 7141643 | 1/7/2010   | 593276 | 4814759 | 187.5                | on Water Well Record          | 7151 BRITANNIA RD.                             | Milton | 726                                   | Digging                |                       |                        | 76.2                       | Not Used                 |          | Abandoned-Other   |
| 1002950859   | 7141644 | 1/7/2010   | 593274 | 4814722 | 187.5                | on Water Well Record          | 7151 BRITANNIA RD.                             | Milton | 728                                   | Digging                | 1.5                   |                        | 76.2                       | Not Used                 |          | Abandoned-Other   |
| 1002982545   | 7145017 | 3/9/2010   | 594535 | 4815180 | 182.8                | on Water Well Record          | 5680 HWY 25                                    | Milton | 690                                   |                        |                       |                        |                            | Domestic                 | Not Used | Abandoned-Supply  |
| 1003527014   | 7164672 | 6/1/2011   | 594249 | 4815607 | 184.9                | on Water Well Record          |                                                |        | 900                                   |                        |                       |                        |                            |                          |          |                   |
| 1003627161   | 7174178 | 3/10/2011  | 594742 | 4814891 | 181.8                | on Water Well Record          | HALTON SALT STORAGE- REGIONAL RD.25            | MILTON | 755                                   | Auger                  | 6.1                   |                        | 5.1                        | Monitoring and Test Hole |          | Test Hole         |
| 1003718850   | 7180170 | 4/19/2012  | 593129 | 4814802 | 188.1                | from gis                      | 1ST LINE + BRITANNIA RD                        | Milton | 875                                   | Diamond                |                       |                        | 61.0                       | Domestic                 |          | Abandoned-Other   |
| 1003924674   | 7182649 | 5/28/2012  | 594225 | 4815590 | 184.4                | on Water Well Record          | 6007 REGIONAL RD 25                            | Milton | 877                                   |                        |                       |                        |                            |                          |          |                   |
| 1005006989   | 7224956 | 5/13/2014  | 594289 | 4815477 | 183.5                | on Water Well Record          | REGIONAL RD. 25 & BRITANNIA RD.                | MILTON | 789                                   | Boring                 | 6.4                   |                        | 5.2                        | Monitoring               |          | Observation Wells |
| 1005008772   | 7224967 | 5/13/2014  | 594272 | 4815494 | 183.7                | on Water Well Record          | REGIONAL RD. 25 & BRITANNIA RD.                | MILTON | 799                                   | Boring                 | 11.2                  |                        | 5.2                        | Monitoring               |          | Observation Wells |
| 1005315739   | 7238731 | 9/22/2014  | 593917 | 4815717 | 186.5                | on Water Well Record          | 6096 HWY 25                                    | BOYNE  | 979                                   |                        |                       |                        | 1.2                        |                          |          | Abandoned-Other   |
| 1005315742   | 7238732 | 9/22/2014  | 593883 | 4815713 | 186.5                | on Water Well Record          | 6096 HWY 25                                    | BOYNE  | 979                                   |                        |                       |                        | 12.7                       |                          |          | Abandoned-Other   |
| 1005315745   | 7238733 | 9/22/2014  | 593913 | 4815734 | 186.4                | on Water Well Record          | 6096 HWY 25                                    | BOYNE  | 996                                   |                        |                       |                        | 12.7                       |                          |          | Abandoned-Other   |
| 1005352944   | 7241291 | 4/27/2015  | 594487 | 4815296 | 182.8                | on Water Well Record          | NEAR 5593 HALTON REGIONAL RD. 25               | Milton | 737                                   |                        |                       |                        |                            |                          |          | Abandoned-Other   |
| 1005389335   | 7242271 | 5/13/2015  | 594718 | 4815077 | 183.2                | on Water Well Record          | 5111 REGIONAL RD 25                            | Milton | 791                                   |                        |                       |                        |                            |                          |          | Abandoned-Other   |
| 1005657060   | 7247412 | 8/14/2015  | 593535 | 4815236 | 187.5                | on Water Well Record          | BRITANNIA & FIRST LINE                         |        | 680                                   |                        |                       |                        |                            |                          |          | Abandoned-Other   |
| 1005747527   | 7250260 | 9/25/2015  | 594295 | 4815586 | 184.9                | on Water Well Record          | 8092 BRITANNIA RD.                             | MILTON | 894                                   | Direct Push            | 5.5                   |                        | 3.8                        | Monitoring and Test Hole |          | Observation Wells |
| 1005763973   | 7250896 | 9/28/2015  | 593757 | 4814962 | 185.0                | on Water Well Record          | UNNIA APRX.650M E. BRONTE& APX.20M N.OF BRITAI | Milton | 329                                   |                        |                       |                        |                            |                          |          | Abandoned-Other   |
| 1005850883   | 7255182 | 11/26/2015 | 593214 | 4814553 | 188.2                | on Water Well Record          | 1501 BRONTE ST. S                              | MILTON | 810                                   |                        |                       |                        |                            |                          |          | Abandoned-Other   |
| 1005849215   | 7255120 | 11/26/2015 | 593214 | 4814554 | 188.2                | on Water Well Record          | 1510 BRONTE S. S                               | MILTON | 810                                   |                        |                       |                        |                            |                          |          | Abandoned-Other   |
| 1005878327   | 7257266 | 1/21/2016  | 594312 | 4815609 | 185.4                | on Water Well Record          |                                                |        | 921                                   |                        |                       |                        |                            |                          |          |                   |

| Off-Site     |         |            |        |         |                      |                      |                     |        |                                       |                        |                       |                        |                            |            |         |                   |
|--------------|---------|------------|--------|---------|----------------------|----------------------|---------------------|--------|---------------------------------------|------------------------|-----------------------|------------------------|----------------------------|------------|---------|-------------------|
| BORE_HOLE_ID | WELL_ID | DATE       | EAST83 | NORTH83 | ELEVATION<br>(m ASL) | LOCATION ACCURACY    | STREET              | CITY   | DISTANCE FROM<br>SITE CENTROID<br>(m) | CONSTRUCTION<br>METHOD | WELL DEPTH<br>(m bgs) | WATER FOUND<br>(m bgs) | CASING<br>DIAMETER<br>(cm) | 1st USE    | 2nd USE | FINAL STATUS      |
| 1008336318   | 7361497 | 3/4/2020   | 594217 | 4815853 | 187.6                | on Water Well Record | 2287 Britannia Road | Milton | 1132                                  | Boring                 | 8.2                   |                        | 5.1                        | Monitoring |         | Observation Wells |
| 1008336327   | 7361500 | 3/4/2020   | 594437 | 4815906 | 187.5                | on Water Well Record | 2287 Britannia Road | Milton | 1243                                  | Boring                 | 10.7                  |                        | 5.1                        | Monitoring |         | Observation Wells |
| 1008469770   | 7368397 | 6/29/2020  | 593940 | 4815167 | 184.7                | on Water Well Record | Britannia Road W    | Milton | 430                                   |                        |                       | 0.6                    |                            |            |         | Abandoned-Other   |
| 1008469773   | 7368398 | 6/29/2020  | 594028 | 4815285 | 184.2                | on Water Well Record | Britannia Road W    | Milton | 544                                   |                        |                       | 0.3                    |                            |            |         | Abandoned-Other   |
| 1008469782   | 7368401 | 6/29/2020  | 593196 | 4814211 | 183.9                | on Water Well Record | Britannia Road West | Milton | 965                                   |                        |                       | 0.5                    |                            |            |         | Abandoned-Other   |
| 1008712480   | 7392029 | 3/23/2021  | 594194 | 4815520 | 183.9                | on Water Well Record |                     |        | 802                                   |                        |                       |                        |                            |            |         |                   |
| 1008712483   | 7392030 | 3/23/2021  | 594255 | 4815531 | 184.2                | on Water Well Record |                     |        | 829                                   |                        |                       |                        |                            |            |         |                   |
| 1008711635   | 7392078 | 3/23/2021  | 594189 | 4815532 | 183.9                | on Water Well Record |                     |        | 812                                   |                        |                       |                        |                            |            |         |                   |
| 1008711638   | 7392079 | 3/23/2021  | 594196 | 4815535 | 184.4                | on Water Well Record |                     |        | 817                                   |                        |                       |                        |                            |            |         |                   |
| 1008711641   | 7392080 | 3/23/2021  | 594196 | 4815526 | 184.0                | on Water Well Record |                     |        | 808                                   |                        |                       |                        |                            |            |         |                   |
| 1008775308   | 7395485 | 6/11/2021  | 594375 | 4815799 | 187.0                | on Water Well Record | 8175 Britannia Rd   | Milton | 1121                                  |                        |                       |                        |                            |            |         | Abandoned-Other   |
| 1008856119   | 7403572 | 8/17/2021  | 594231 | 4815696 | 185.1                | on Water Well Record | . Britannia Rd      |        | 982                                   | Auger                  |                       |                        | 5.1                        | Monitoring |         | Observation Wells |
| 1008856122   | 7403573 | 8/17/2021  | 594334 | 4815601 | 185.6                | on Water Well Record | . Britannia Rd      |        | 921                                   | Auger                  |                       |                        | 5.1                        | Monitoring |         | Observation Wells |
| 1008940007   | 7409319 | 11/24/2021 | 594336 | 4815565 | 184.7                | on Water Well Record |                     |        | 889                                   |                        |                       |                        |                            |            |         |                   |
| 1008960462   | 7411273 | 12/22/2021 | 594431 | 4815788 | 187.0                | on Water Well Record |                     |        | 1131                                  |                        |                       |                        |                            |            |         |                   |

|                                   |       |
|-----------------------------------|-------|
|                                   | COUNT |
| Monitoring Well /<br>Test Hole    | 31    |
| Dewatering Well                   | 0     |
| Water Supply Well                 | 18    |
| Abandoned Well                    | 29    |
| Unclassified /<br>Unfinished Well | 14    |
| TOTAL                             | 92    |

## Appendix B – Borehole Logs

# Log of Borehole 1- 1

Project No. BRM-23015226-A0

Drawing No. 2

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: February 20,2024

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

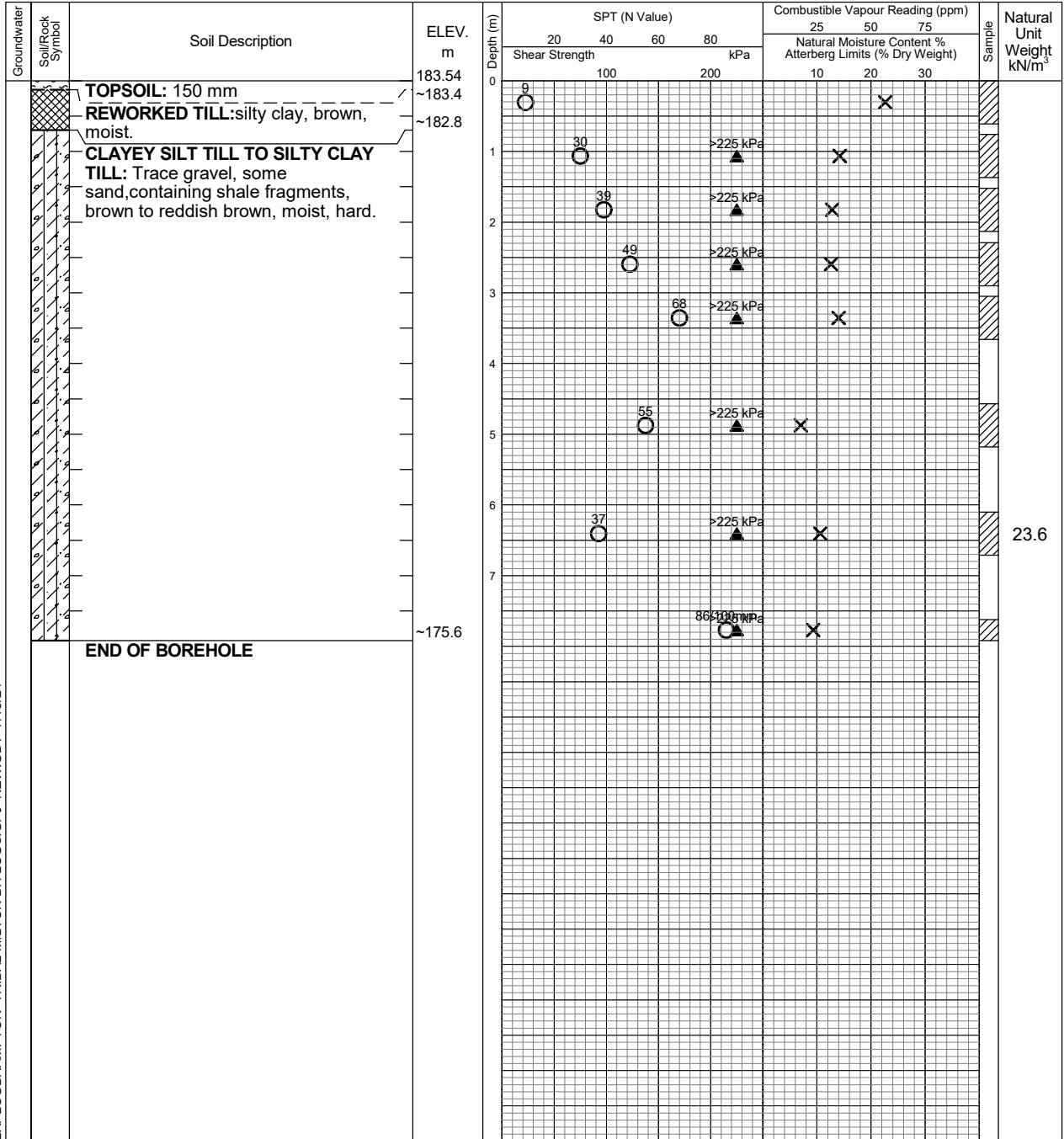
Undrained Triaxial at

% Strain at Failure

Penetrometer

Drill Type: Solid Auger 110mm

Datum: Geodetic



EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

|                 |                 |                  |
|-----------------|-----------------|------------------|
| Elapsed Time    | Water Level (m) | Hole Open to (m) |
| Upon Completion | Dry             | Open             |



# Log of Borehole 1- 3

Project No. BRM-23015226-A0

Drawing No. 4

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: February 23,2024

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

Undrained Triaxial at

% Strain at Failure

Penetrometer

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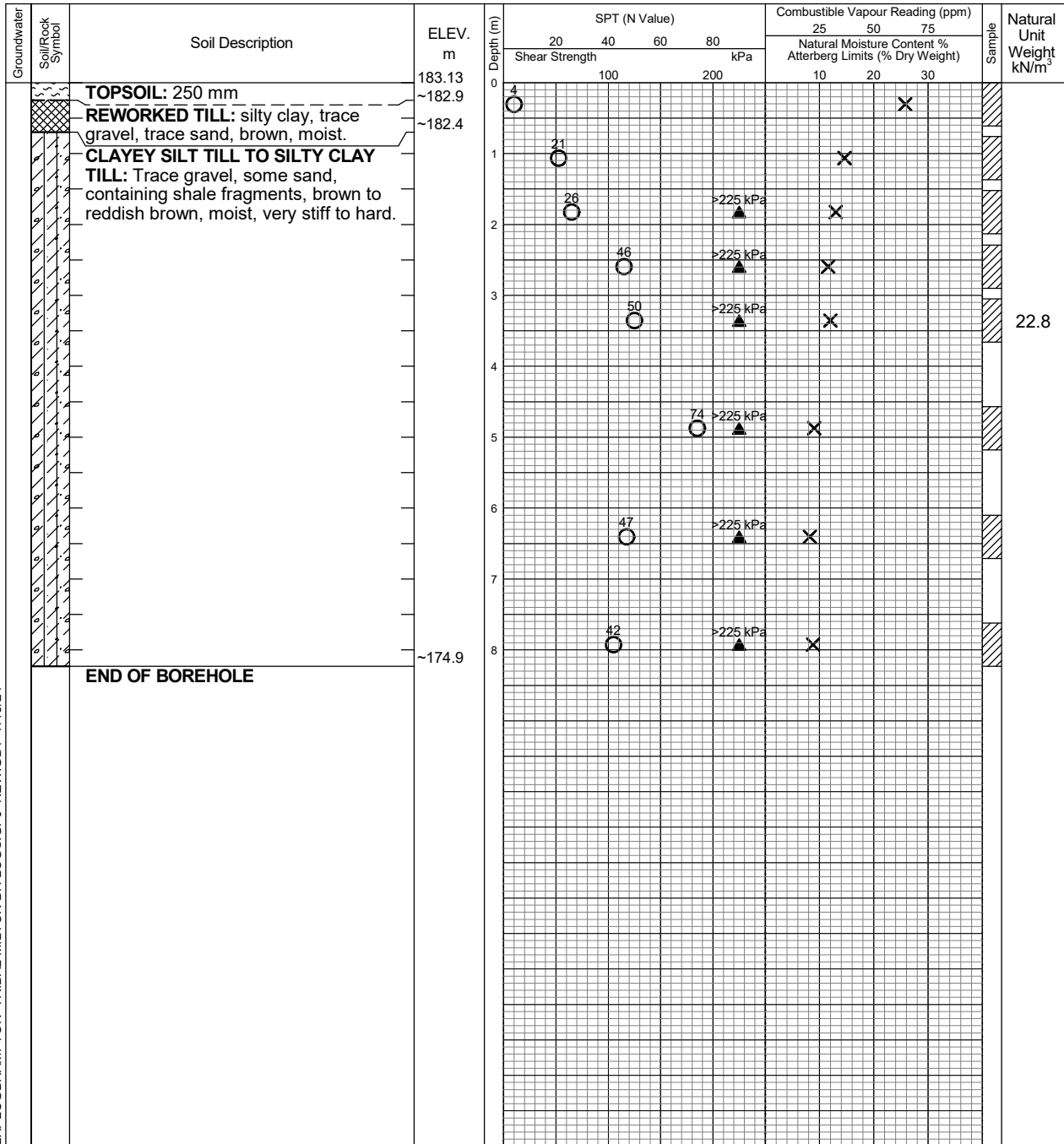
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Datum: Geodetic



EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

|                 |                 |                  |
|-----------------|-----------------|------------------|
| Elapsed Time    | Water Level (m) | Hole Open to (m) |
| Upon Completion | Dry             | Open             |

# Log of Borehole 1- 4

Project No. BRM-23015226-A0

Drawing No. 5

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: February 21, 2024

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

Undrained Triaxial at

% Strain at Failure

Penetrometer

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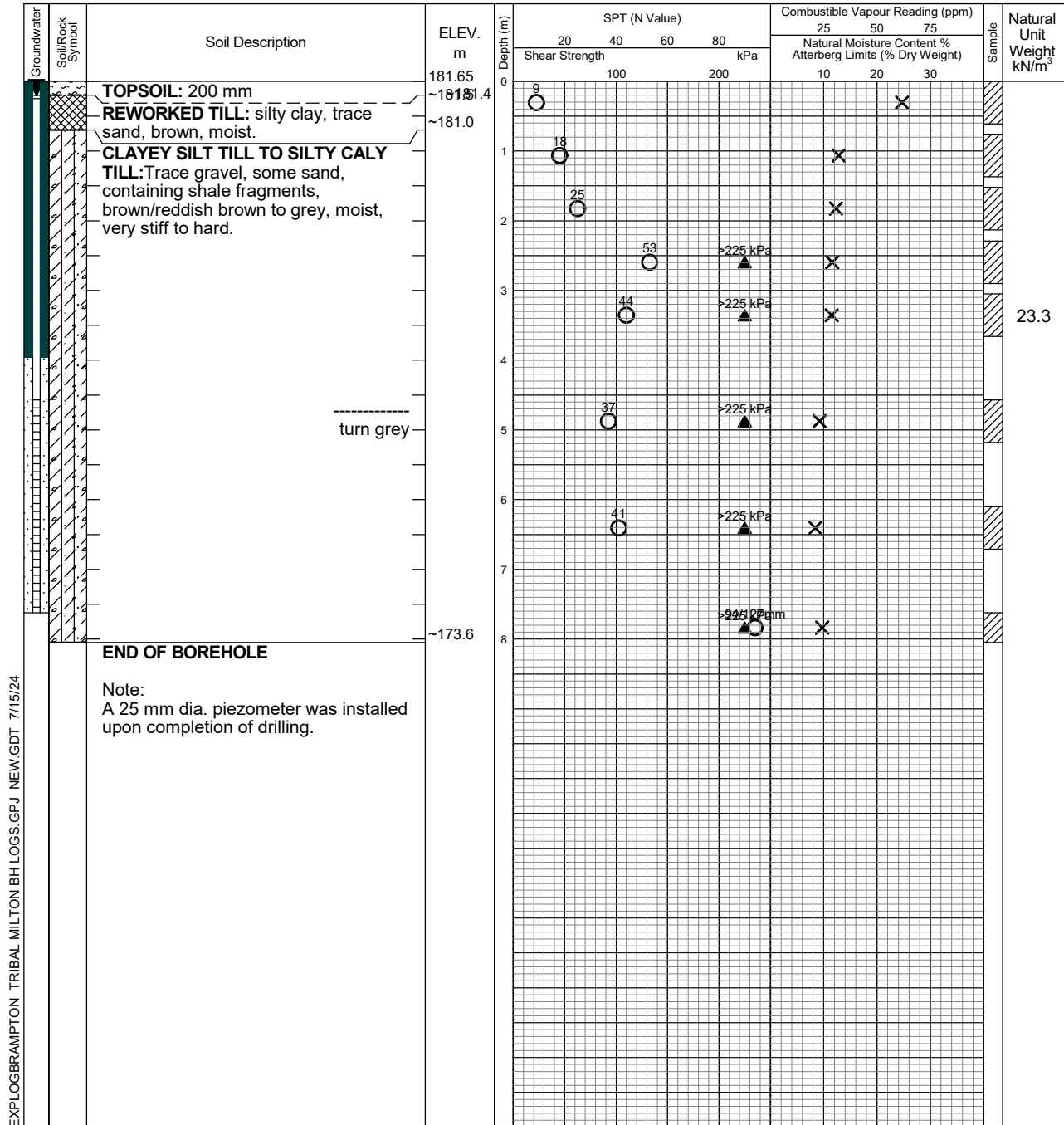
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Datum: Geodetic



New identity of Trow Associates Inc.

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.23            |                  |
| July 4, 2024    | 0.25            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.37            |                  |
| July 4, 2024    | 0.35            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | 7.31            | Open             |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | 7.01            | Open             |
| June 26, 2024   | 0.29            |                  |
| July 4, 2024    | 0.36            |                  |

# Log of Borehole 1- 8

Project No. BRM-23015226-A0

Drawing No. 9

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: February 22, 2024

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

Undrained Triaxial at

% Strain at Failure

Penetrometer

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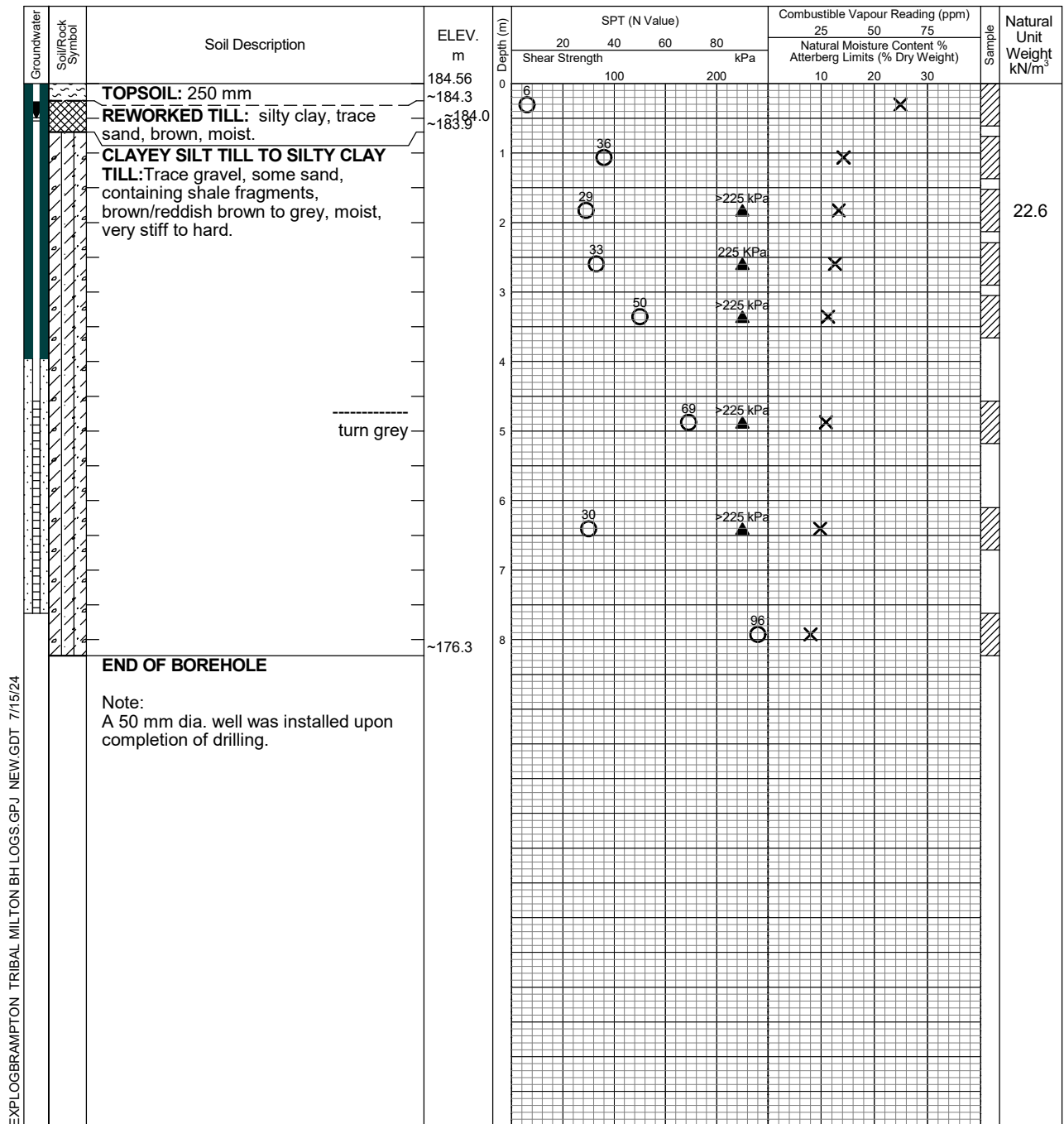
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Datum: Geodetic



EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.49            |                  |
| July 4, 2024    | 0.54            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 1.13            |                  |
| July 4, 2024    | 1.71            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | 7.41            | Open             |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |

# Log of Borehole 1-12

Project No. BRM-23015226-A0

Drawing No. 13

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: June 10, 2024

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

Undrained Triaxial at

% Strain at Failure

Penetrometer

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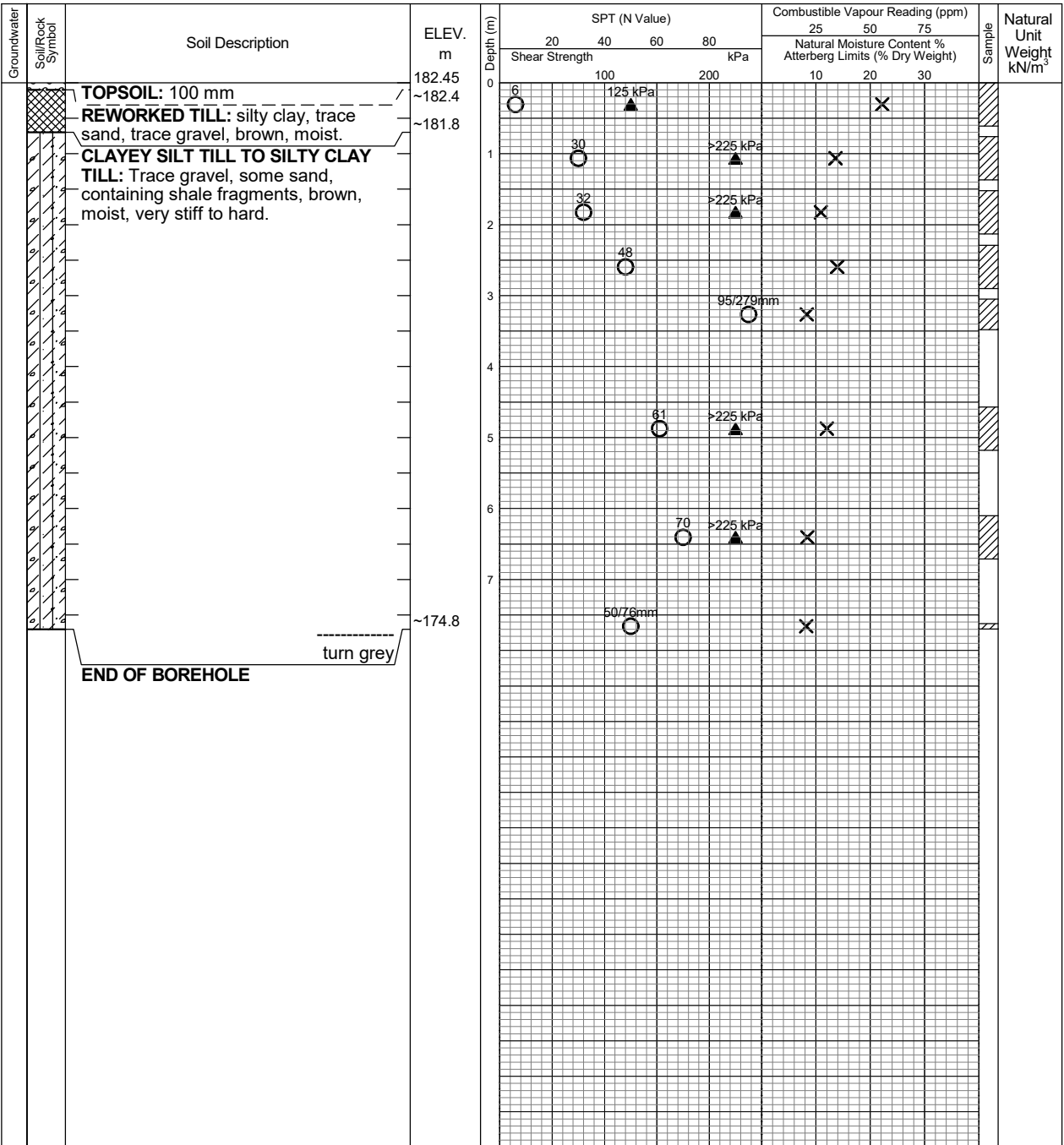
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Datum: Geodetic



EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | 2.44            | Open             |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | 3.65            | Open             |
| June 26, 2024   | 2.13            |                  |
| July 4, 2024    | 1.76            |                  |

# Log of Borehole 1-14

Project No. BRM-23015226-A0

Drawing No. 15

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: June 10, 2024

Auger Sample

SPT (N) Value

### Dynamic Cone Test

Shelby Tube

### Field Vane Test

### Combustible Vapour Reading

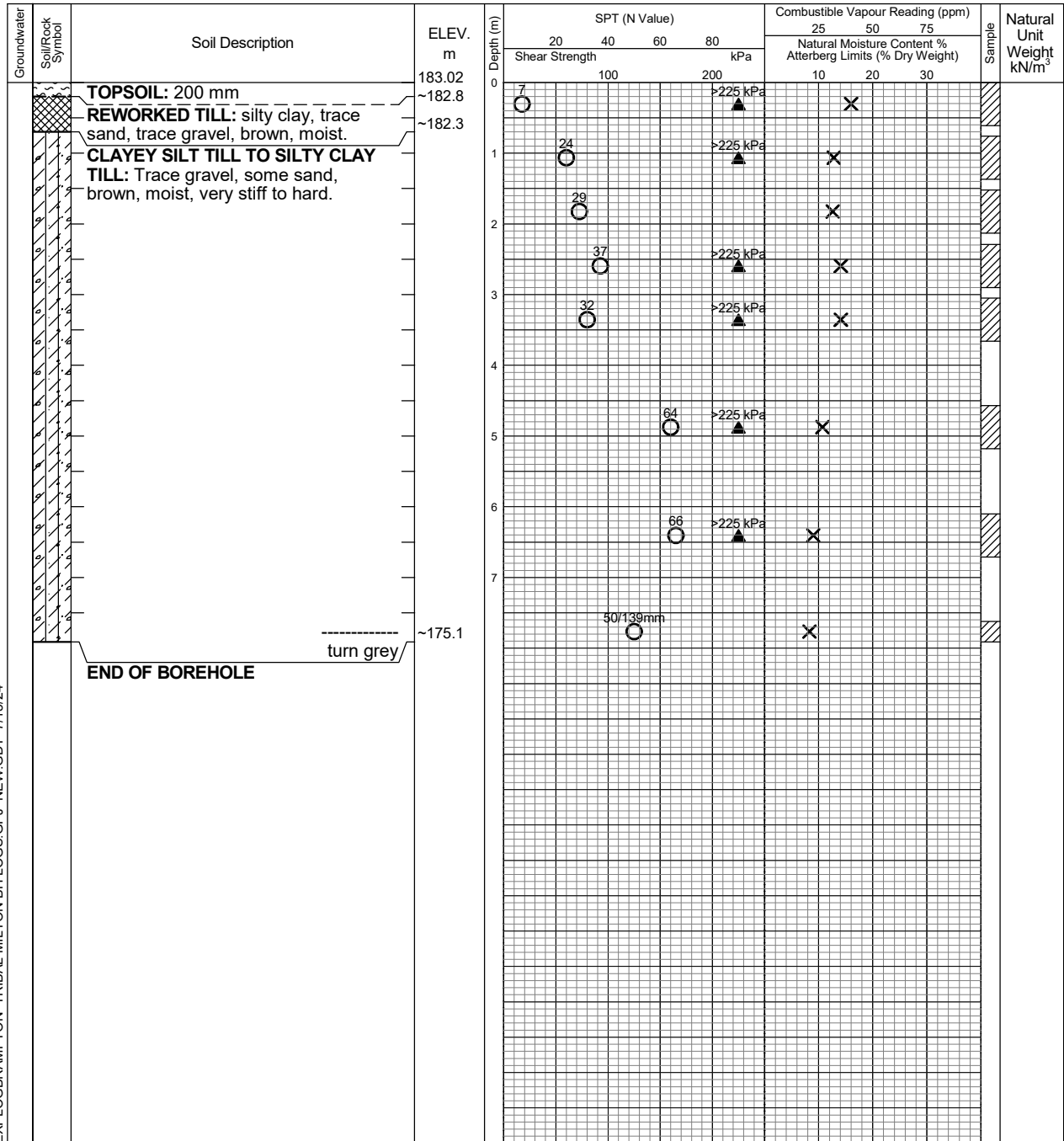
## Natural Moisture

### Plastic and Liquid Limit

### Undrained Triaxial at

### % Strain at Failure

Penetrometer

Datum: Geodetic

EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |



| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 3.28            |                  |
| July 4, 2024    | 0.84            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 1.87            |                  |
| July 4, 2024    | 1.91            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.38            |                  |
| July 4, 2024    | 0.36            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.25            |                  |
| July 4, 2024    | 1.63            |                  |

# Log of Borehole 1-21

Project No. BRM-23015226-A0

Drawing No. 22

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: March 1, 2024

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

Undrained Triaxial at

% Strain at Failure

Penetrometer

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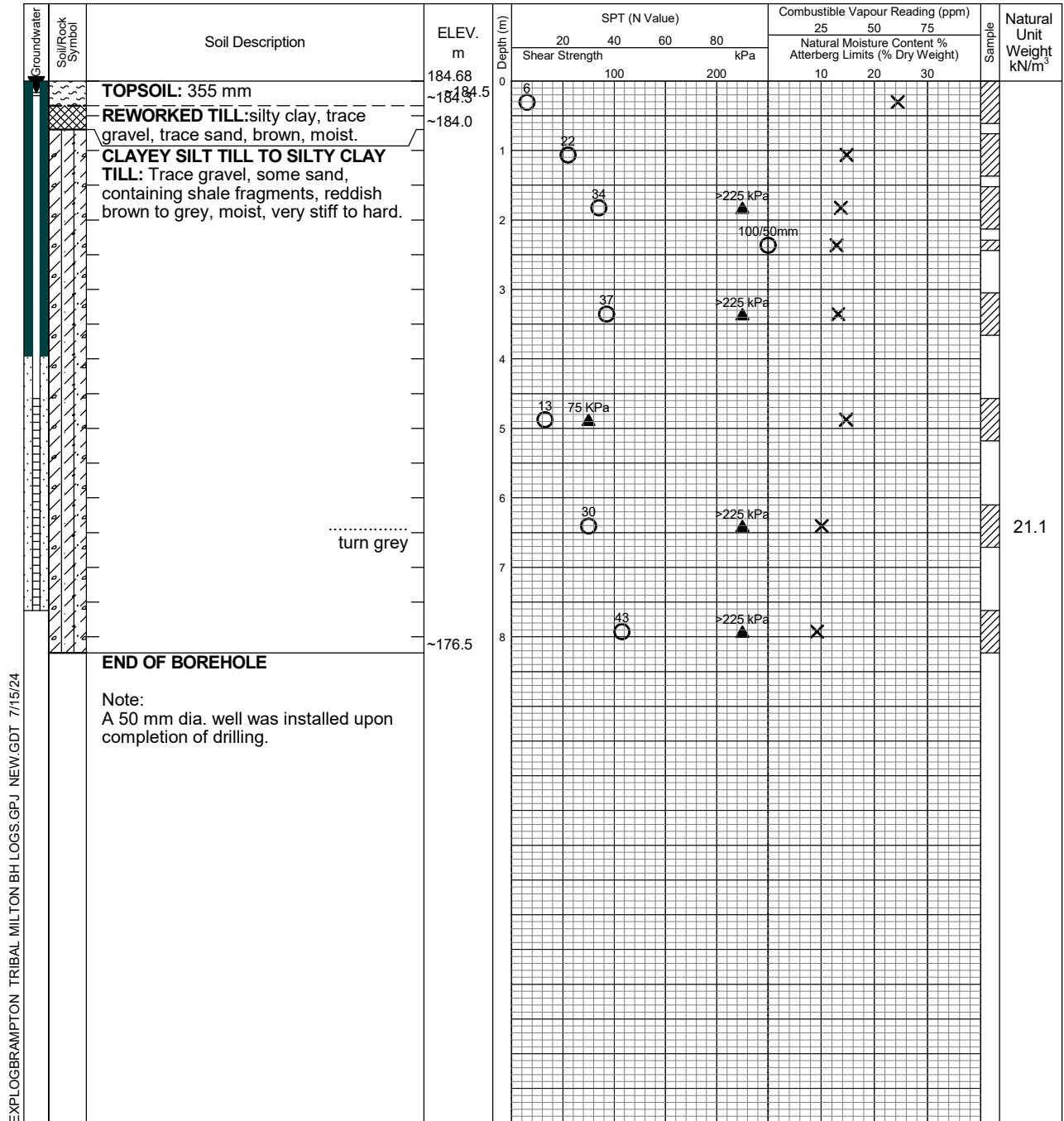
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Datum: Geodetic



EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.17            |                  |
| July 4, 2024    | 0.21            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.49            |                  |
| July 4, 2024    | 2.21            |                  |

# Log of Borehole 1-23

Project No. BRM-23015226-A0

Drawing No. 24

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: February 27, 2024

Auger Sample

SPT (N) Value

Dynamic Cone Test

Shelby Tube

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

Undrained Triaxial at

% Strain at Failure

Penetrometer

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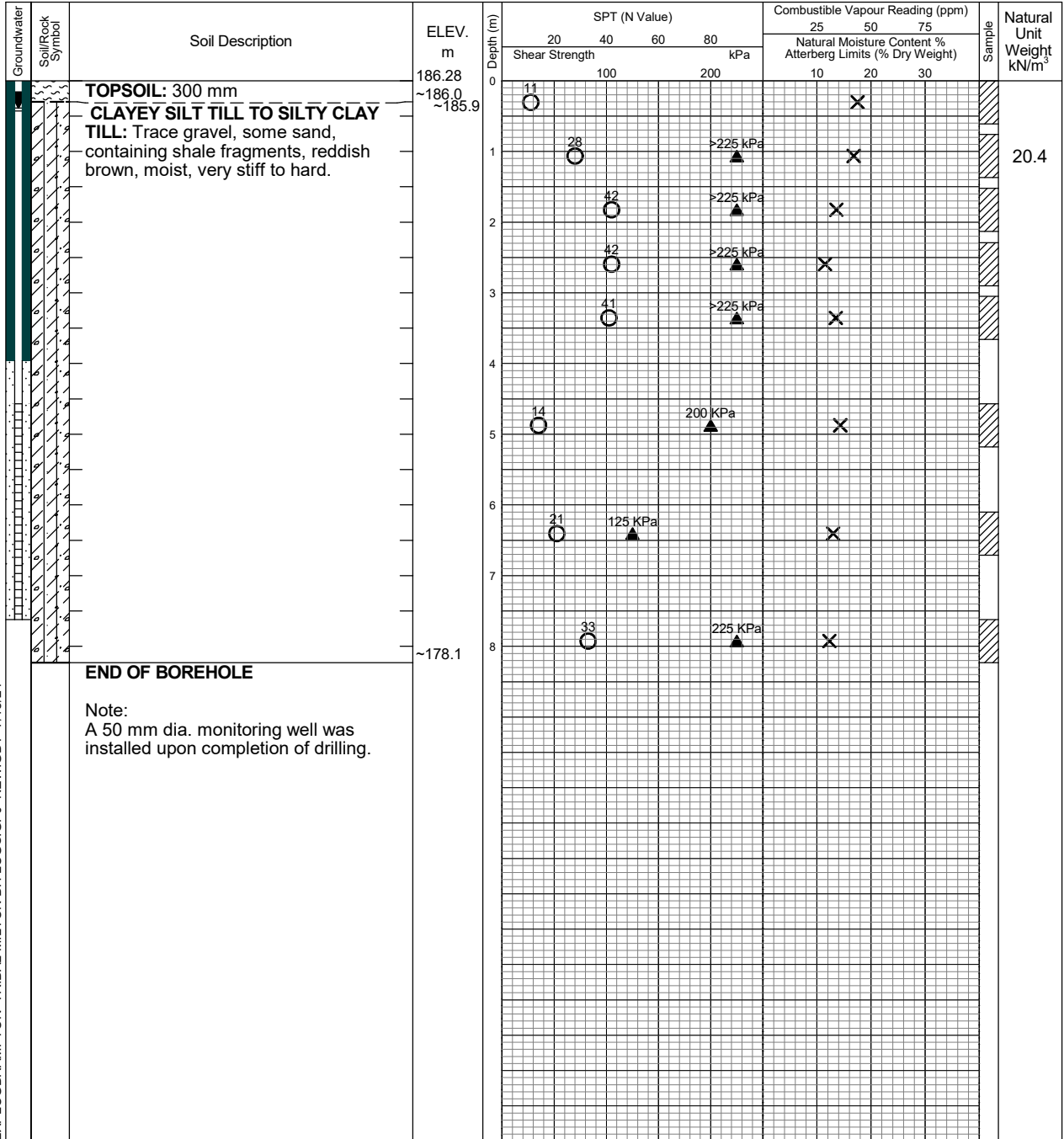
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Datum: Geodetic



EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.42            |                  |
| July 4, 2024    | 0.43            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.51            |                  |
| July 4, 2024    | 1.09            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.24            |                  |
| July 4, 2024    | 0.62            |                  |

# Log of Borehole 1-26

Project No. BRM-23015226-A0

Drawing No. 27

Project: Geotechnical and Hydrogeological Investigation

Sheet No. 1 of 1

Location: Britannia rd and First line ,Milton

See Borehole Location Plan

Date Drilled: February 26, 2024

Auger Sample

SPT (N) Value

Drill Type: Solid Auger 110mm

Dynamic Cone Test

Shelby Tube

Datum: Geodetic

Field Vane Test

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit

Undrained Triaxial at

% Strain at Failure

Penetrometer

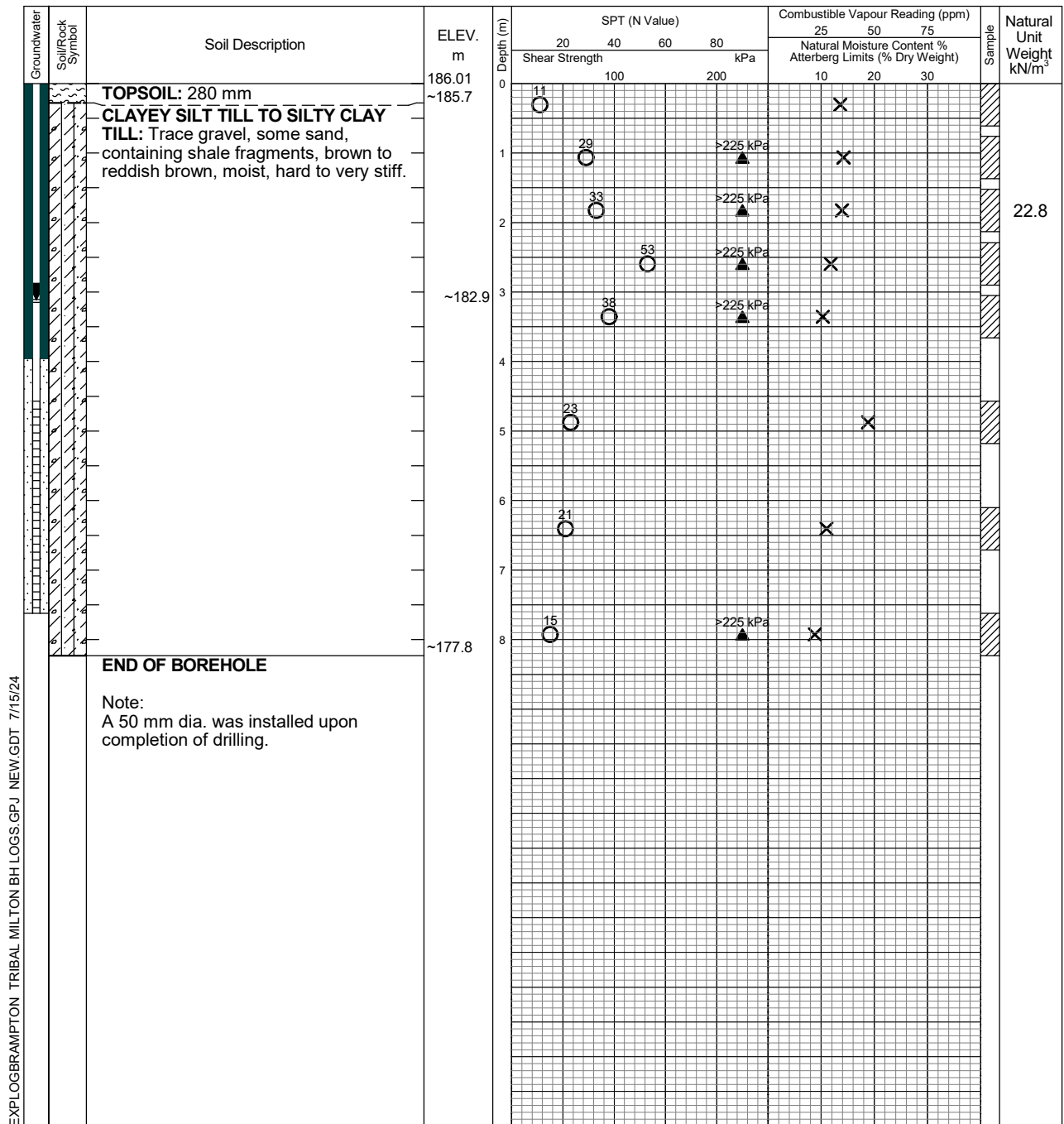
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EXPLOGBRAMPTON TRIBAL MILTON BH LOGS.GPJ NEW.GDT 7/15/24



New identity of Trow Associates Inc.

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.40            |                  |
| July 4, 2024    | 3.15            |                  |

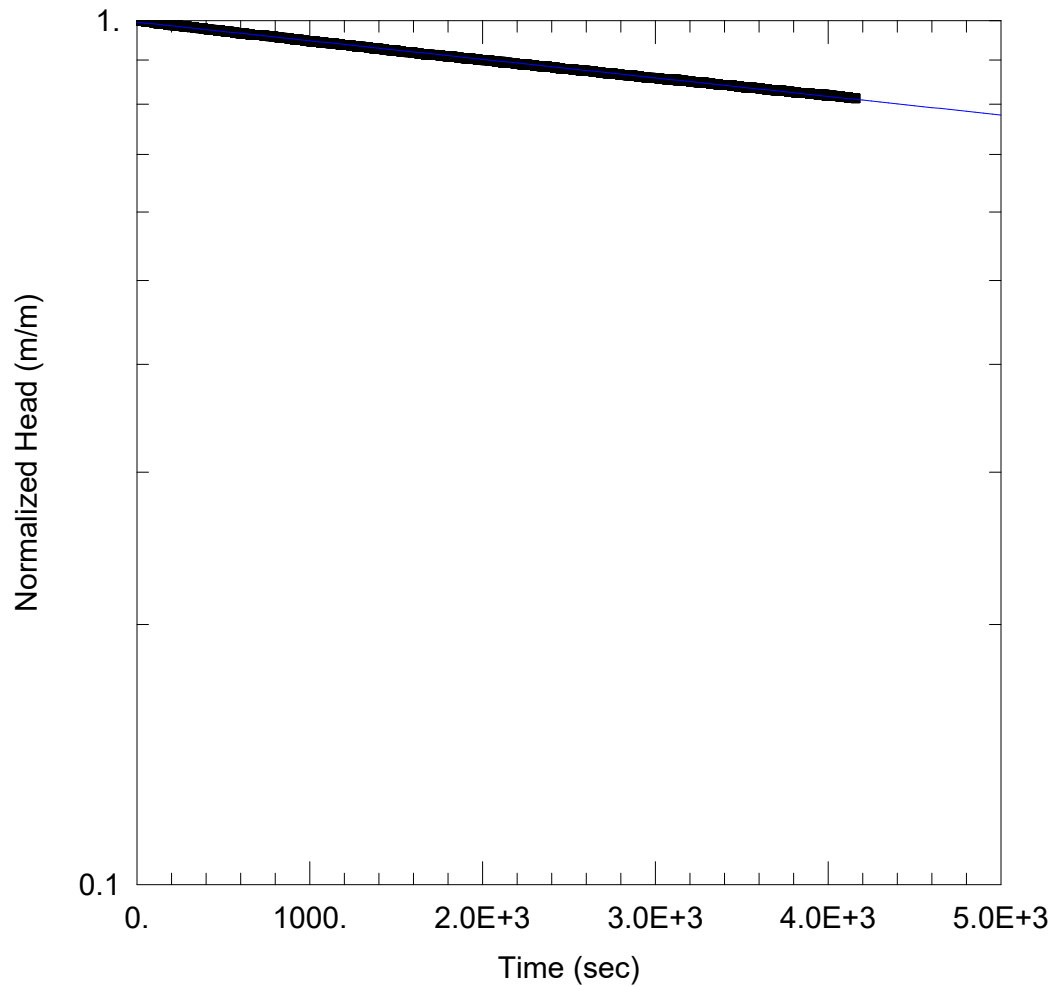
| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.80            |                  |
| July 4, 2024    | 1.85            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.26            |                  |
| July 4, 2024    | 0.24            |                  |

| Elapsed Time    | Water Level (m) | Hole Open to (m) |
|-----------------|-----------------|------------------|
| Upon Completion | Dry             | Open             |
| June 26, 2024   | 0.90            |                  |
| July 4, 2024    | 0.88            |                  |



## Appendix C – SWRT Procedures and Results



#### BH 1-05 RISING HEAD

Data Set: \...\BH 1-05 RH.aqt  
Date: 07/15/24

Time: 10:50:15

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-05 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 7.15 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-05 Rising Head)

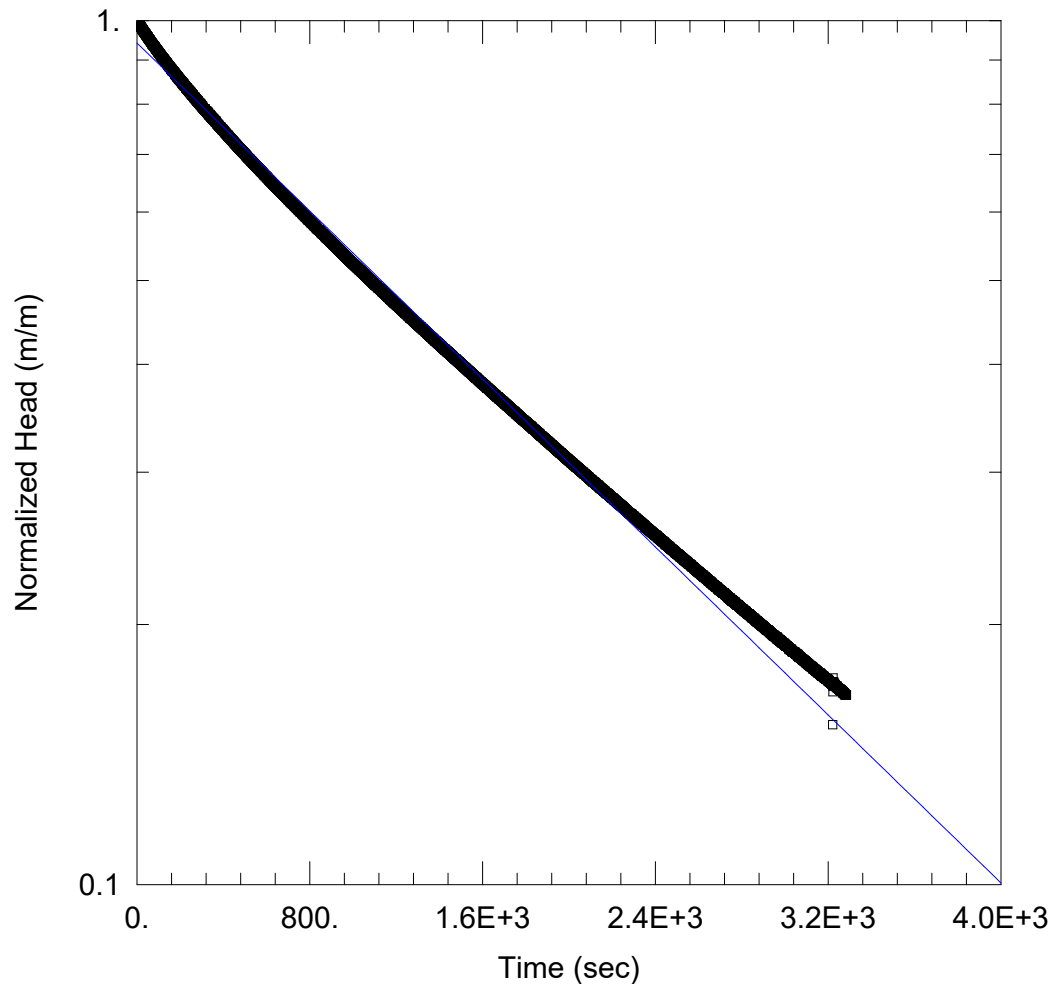
Initial Displacement: 1.872 m  
Total Well Penetration Depth: 7.15 m  
Casing Radius: 0.0254 m

Static Water Column Height: 7.15 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
 $K = 2.323E-8$  m/sec

Solution Method: Hvorslev  
 $y_0 = 1.864$  m



### BH 1-07 RISING HEAD

Data Set: \...\BH 1-07 RH.aqt  
Date: 07/15/24

Time: 10:49:19

### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-07 Rising Head  
Test Date: July 4, 2024

### AQUIFER DATA

Saturated Thickness: 7.08 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (BH 1-07 Rising Head)

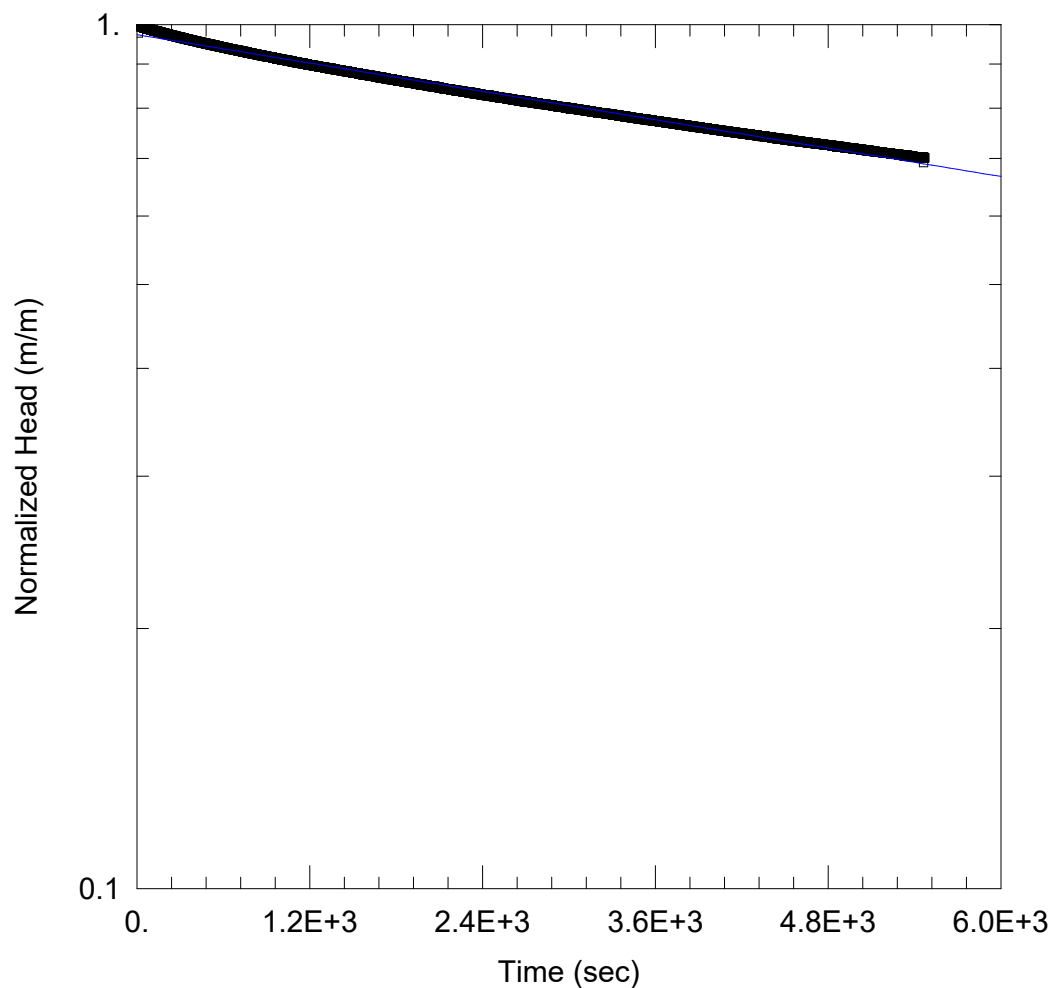
Initial Displacement: 2.22 m  
Total Well Penetration Depth: 7.08 m  
Casing Radius: 0.0254 m

Static Water Column Height: 7.08 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

### SOLUTION

Aquifer Model: Unconfined  
 $K = 2.627E-7$  m/sec

Solution Method: Hvorslev  
 $y_0 = 2.091$  m



#### BH 1-08 RISING HEAD

Data Set: \...\BH 1-08 RH.aqt

Date: 07/15/24

Time: 10:48:29

#### PROJECT INFORMATION

Company: EXP Services Inc.

Client: Tribal Development

Project: BRM-23015226-A0

Location: Tribal Milton Phase 1

Test Well: BH 1-08 Rising Head

Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 6.94 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-08 Rising Head)

Initial Displacement: 2.047 m

Static Water Column Height: 6.94 m

Total Well Penetration Depth: 6.94 m

Screen Length: 3. m

Casing Radius: 0.0254 m

Well Radius: 0.0762 m

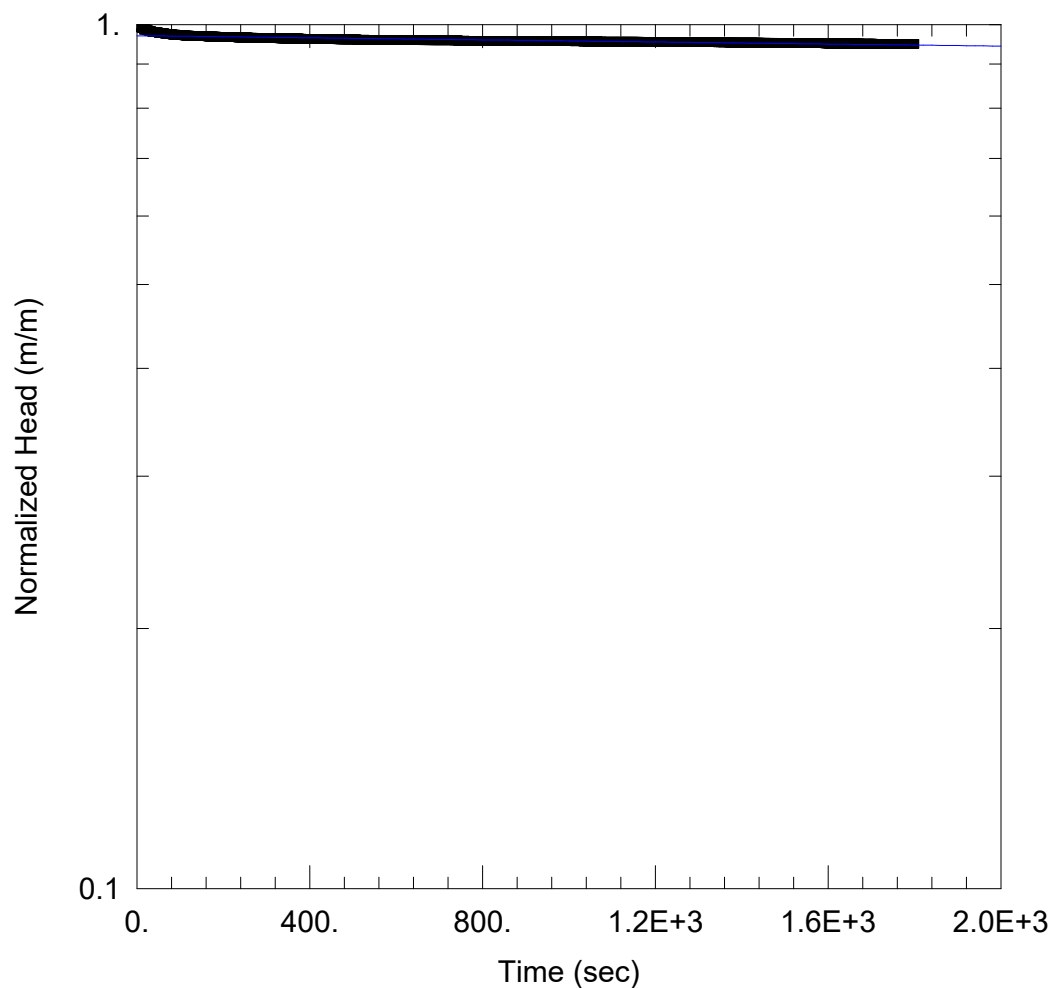
#### SOLUTION

Aquifer Model: Unconfined

Solution Method: Hvorslev

$K = 2.488E-8$  m/sec

$y_0 = 1.992$  m



#### BH 1-09 RISING HEAD

Data Set: \...\BH 1-09 RH.aqt

Date: 07/15/24

Time: 10:45:47

#### PROJECT INFORMATION

Company: EXP Services Inc.

Client: Tribal Development

Project: BRM-23015226-A0

Location: Tribal Milton Phase 1

Test Well: BH 1-09 Rising Head

Test Date: July 5, 2024

#### AQUIFER DATA

Saturated Thickness: 3.91 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-09 Rising Head)

Initial Displacement: 1.29 m

Static Water Column Height: 3.91 m

Total Well Penetration Depth: 3.91 m

Screen Length: 3. m

Casing Radius: 0.0254 m

Well Radius: 0.0762 m

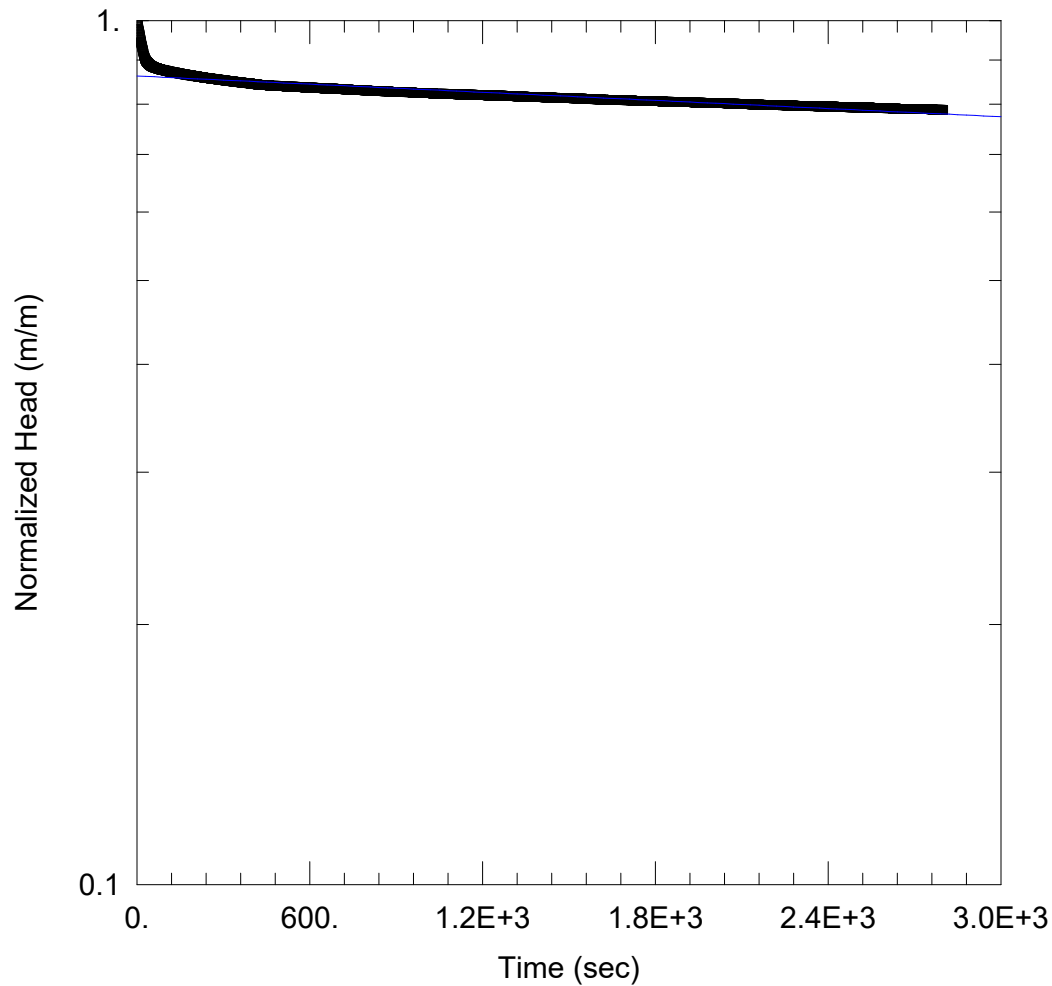
#### SOLUTION

Aquifer Model: Unconfined

Solution Method: Hvorslev

$K = 6.507\text{E-}9$  m/sec

$y_0 = 1.252$  m



### BH 1-18 RISING HEAD

Data Set: \...\BH 1-18 RH.aqt  
Date: 07/15/24

Time: 10:41:41

### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-18 Rising Head  
Test Date: July 4, 2024

### AQUIFER DATA

Saturated Thickness: 5.49 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (BH 1-18 Rising Head)

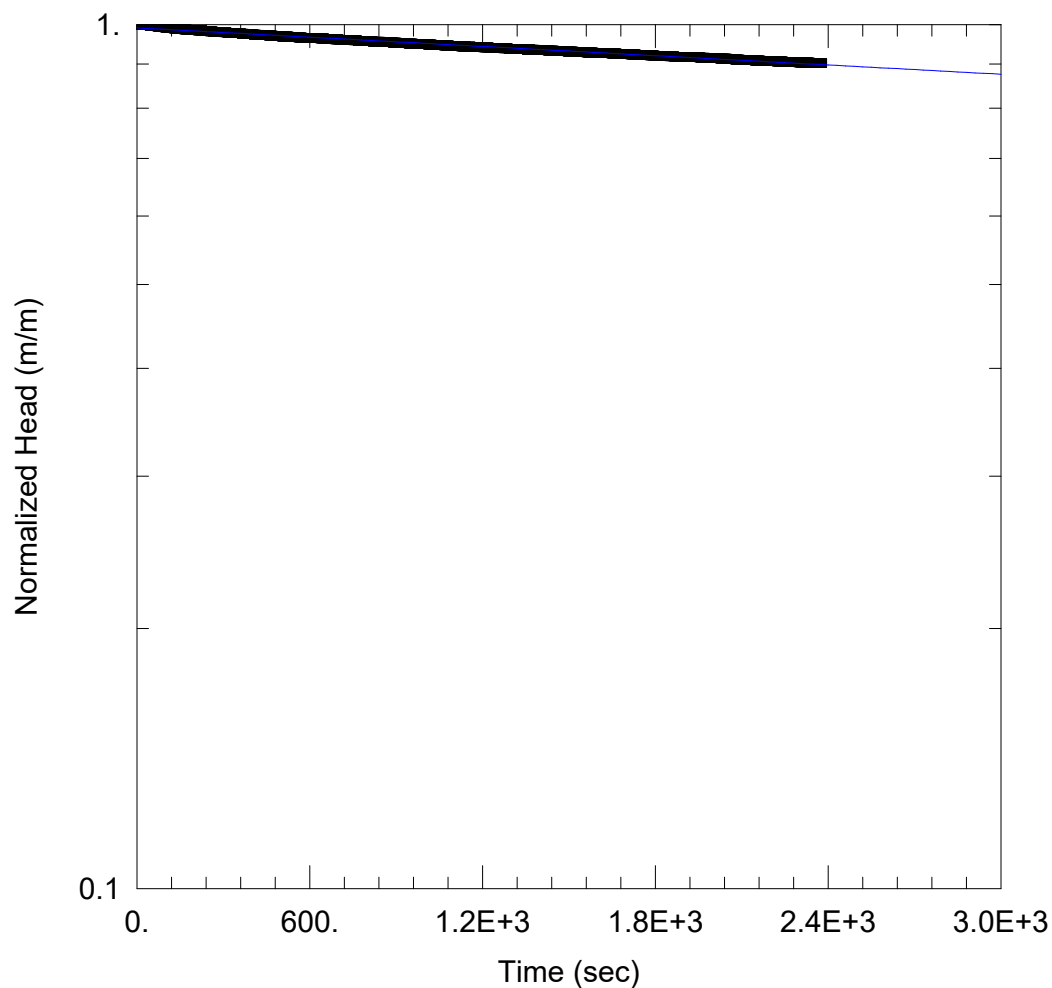
Initial Displacement: 2.716 m  
Total Well Penetration Depth: 5.49 m  
Casing Radius: 0.0254 m

Static Water Column Height: 5.49 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

### SOLUTION

Aquifer Model: Unconfined  
 $K = 1.696E-8$  m/sec

Solution Method: Hvorslev  
 $y_0 = 2.343$  m



### BH 1-19 RISING HEAD

Data Set: \...\BH 1-19 RH.aqt

Date: 07/15/24

Time: 10:40:52

### PROJECT INFORMATION

Company: EXP Services Inc.

Client: Tribal Development

Project: BRM-23015226-A0

Location: Tribal Milton Phase 1

Test Well: BH 1-19 Rising Head

Test Date: July 4, 2024

### AQUIFER DATA

Saturated Thickness: 6.94 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

### WELL DATA (BH 1-19 Rising Head)

Initial Displacement: 3.75 m

Static Water Column Height: 6.94 m

Total Well Penetration Depth: 6.94 m

Screen Length: 3. m

Casing Radius: 0.0254 m

Well Radius: 0.0762 m

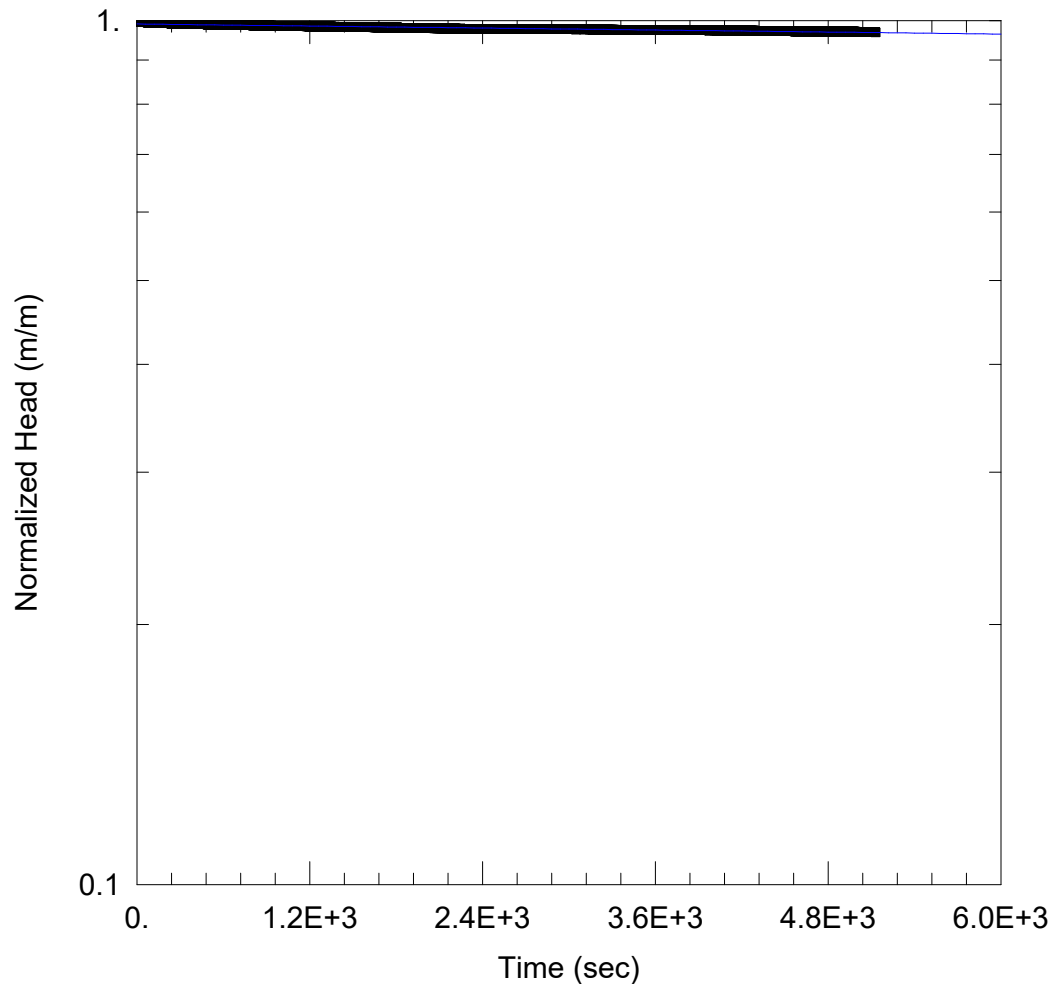
### SOLUTION

Aquifer Model: Unconfined

Solution Method: Hvorslev

$K = 1.625E-8$  m/sec

$y_0 = 3.716$  m



#### BH 1-20 RISING HEAD

Data Set: \...\BH 1-20 RH.aqt  
Date: 07/15/24

Time: 10:19:34

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-20 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 5.61 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-20 Rising Head)

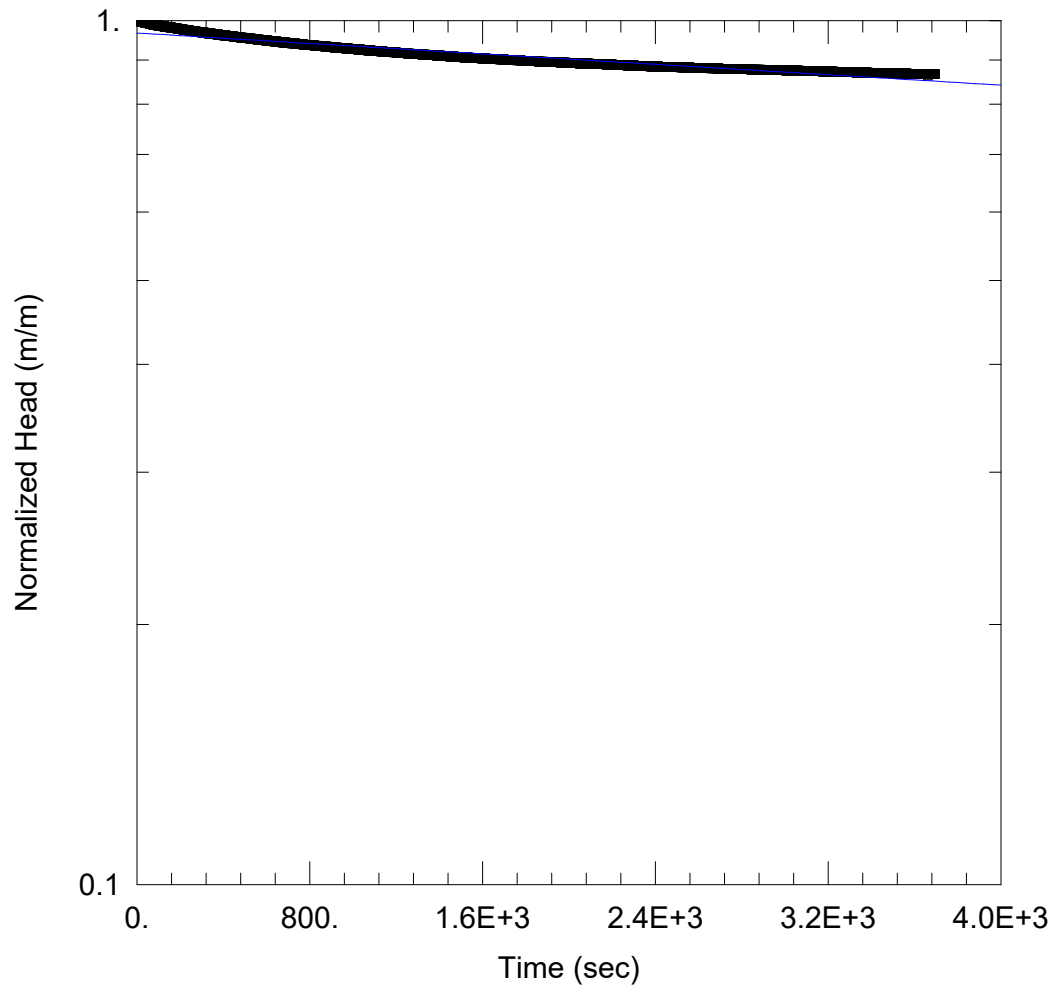
Initial Displacement: 3.271 m  
Total Well Penetration Depth: 5.61 m  
Casing Radius: 1. m

Static Water Column Height: 5.61 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
 $K = 2.725E-6$  m/sec

Solution Method: Hvorslev  
 $y_0 = 3.24$  m



#### BH 1-21 RISING HEAD

Data Set: \...\BH 1-21 RH.aqt  
Date: 07/15/24

Time: 10:17:54

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-21 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 7.22 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-21 Rising Head)

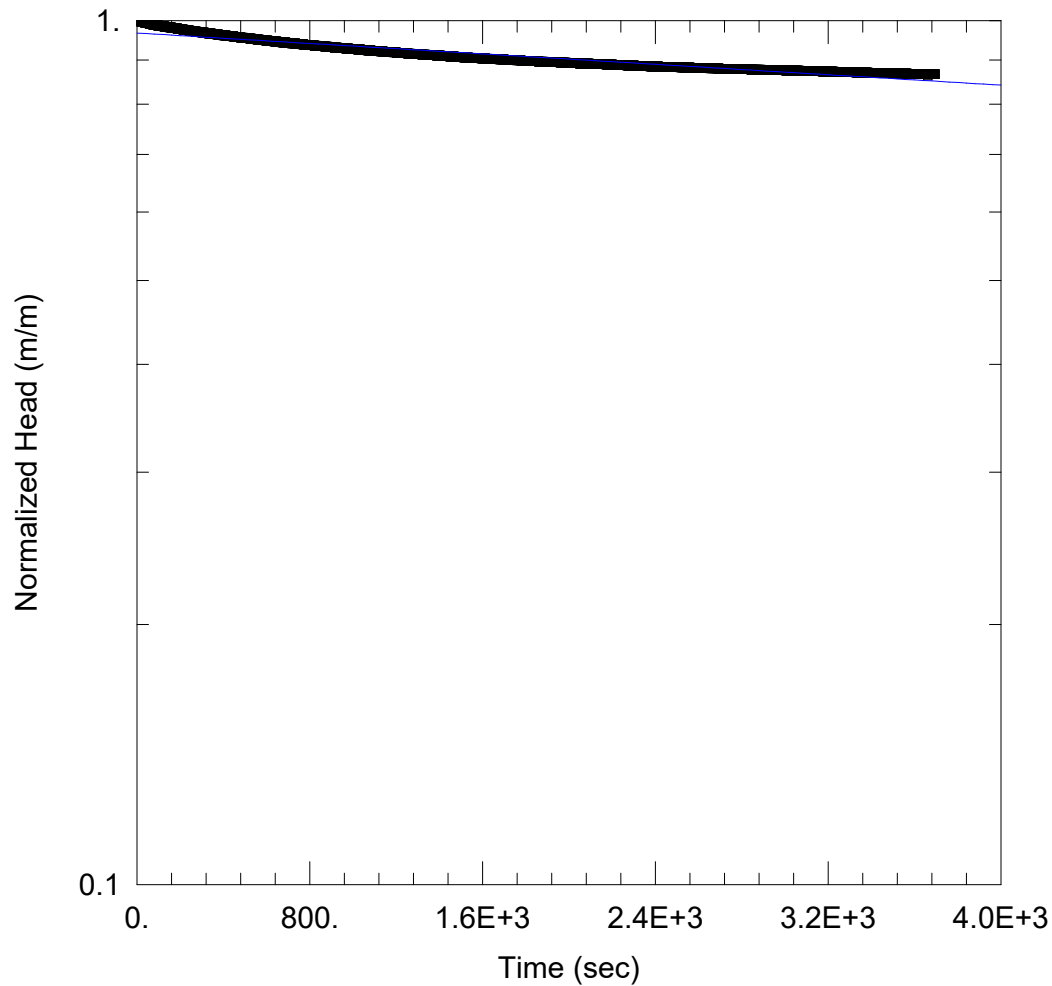
Initial Displacement: 4.203 m  
Total Well Penetration Depth: 7.22 m  
Casing Radius: 0.0254 m

Static Water Column Height: 7.22 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
 $K = 1.63E-8$  m/sec

Solution Method: Hvorslev  
 $y_0 = 4.065$  m



#### BH 1-22 RISING HEAD

Data Set: \...\BH 1-22 RH.aqt  
Date: 07/15/24

Time: 10:17:30

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-22 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 7.22 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-22 Rising Head)

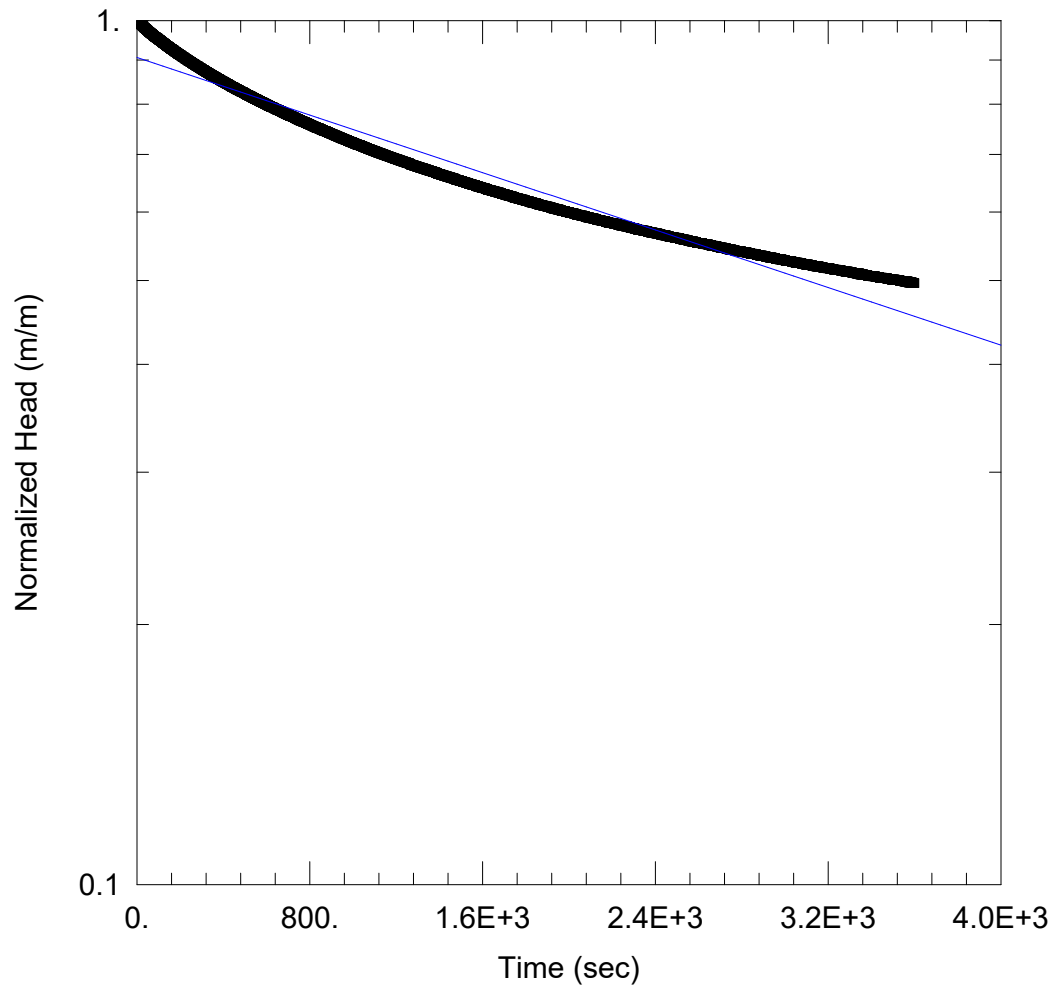
Initial Displacement: 4.203 m  
Total Well Penetration Depth: 7.22 m  
Casing Radius: 0.0254 m

Static Water Column Height: 7.22 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
 $K = 1.63E-8$  m/sec

Solution Method: Hvorslev  
 $y_0 = 4.065$  m



#### BH 1-23 RISING HEAD

Data Set: \...\BH 1-23 RH.aqt  
Date: 07/15/24

Time: 10:16:54

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-23 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 7.23 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-23 Rising Head)

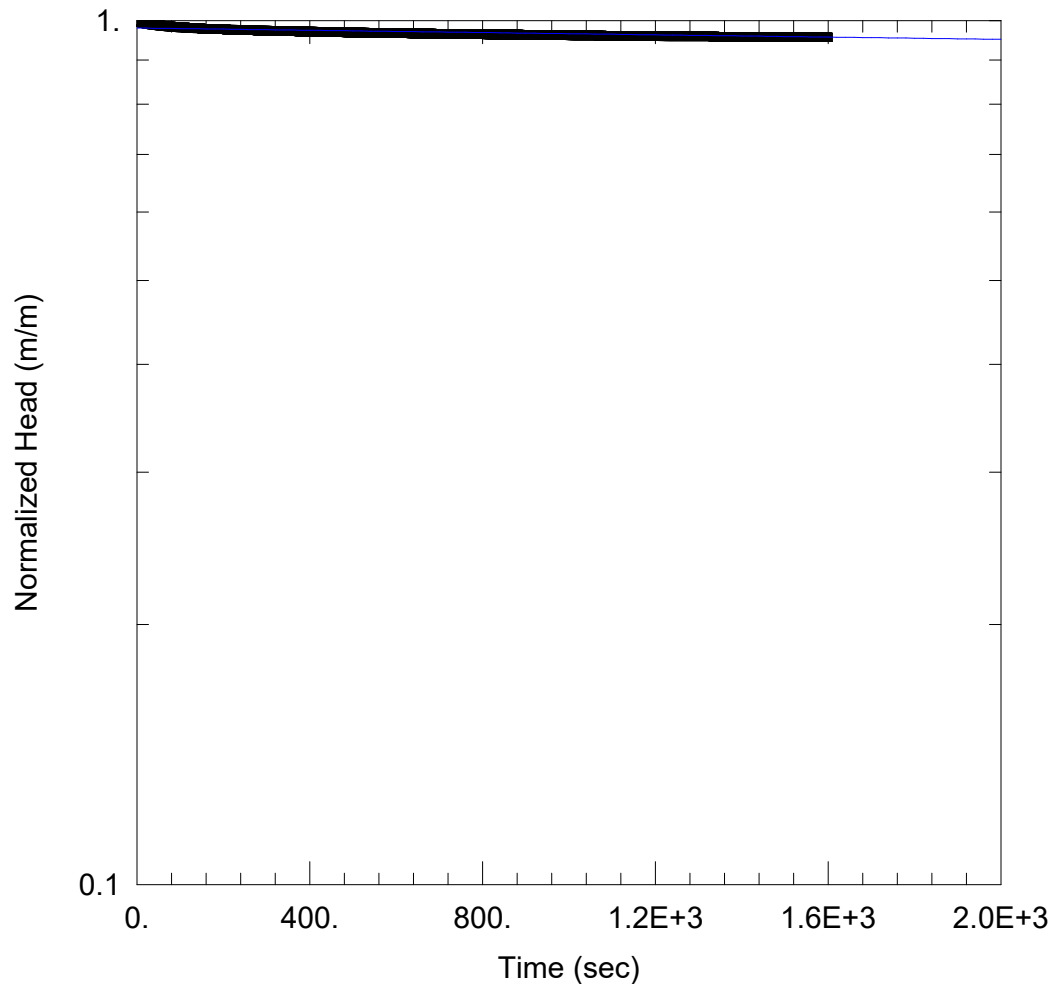
Initial Displacement: 3.351 m  
Total Well Penetration Depth: 7.23 m  
Casing Radius: 0.0254 m

Static Water Column Height: 7.23 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
 $K = 8.995E-8$  m/sec

Solution Method: Hvorslev  
 $y_0 = 3.036$  m



#### BH 1-24 RISING HEAD

Data Set: \...\BH 1-24 RH.aqt  
Date: 07/15/24

Time: 10:16:09

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-24 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 6.47 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-24 Rising Head)

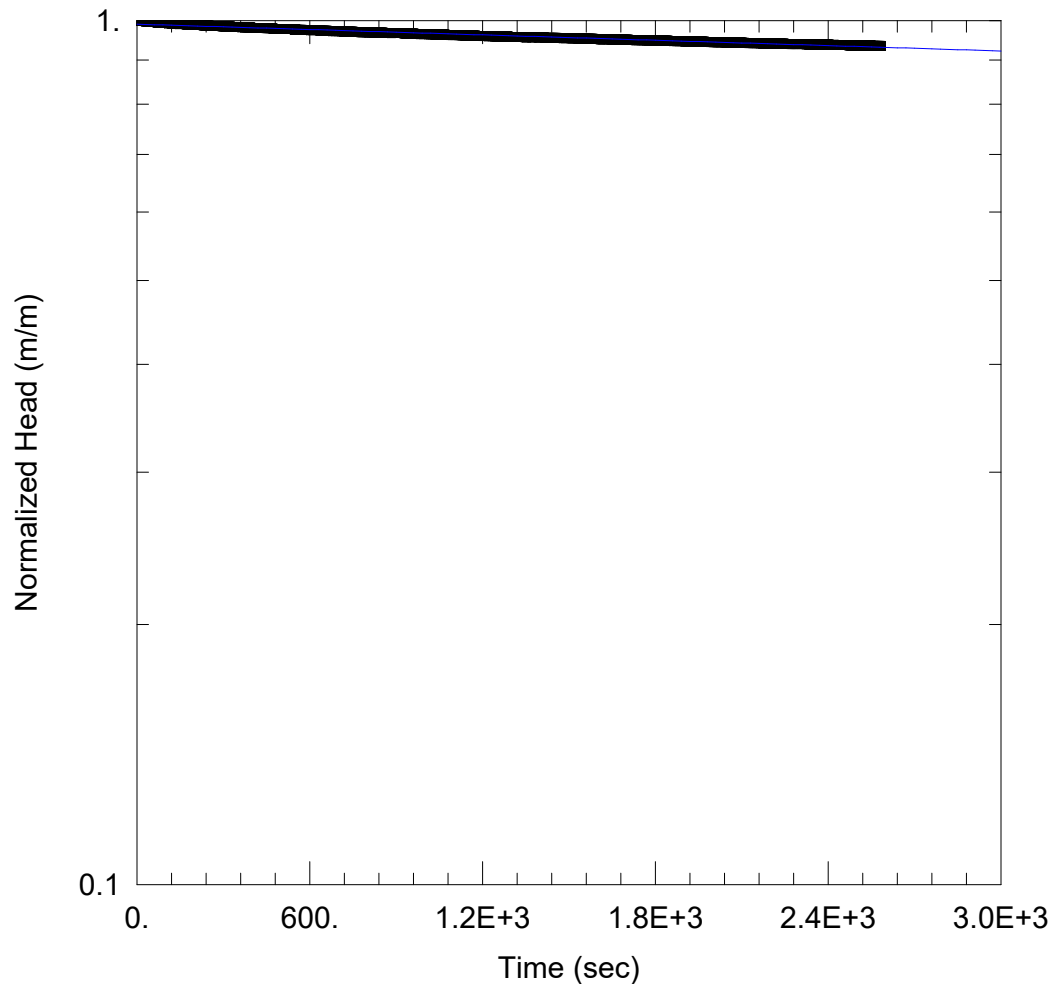
Initial Displacement: 3.885 m  
Total Well Penetration Depth: 6.47 m  
Casing Radius: 0.0254 m

Static Water Column Height: 6.47 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
K = 7.097E-9 m/sec

Solution Method: Hvorslev  
 $y_0$  = 3.808 m



#### BH 1-25 RISING HEAD

Data Set: \...\BH 1-25 RH.aqt  
Date: 07/15/24

Time: 10:15:07

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-25 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 6.99 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-25 Rising Head)

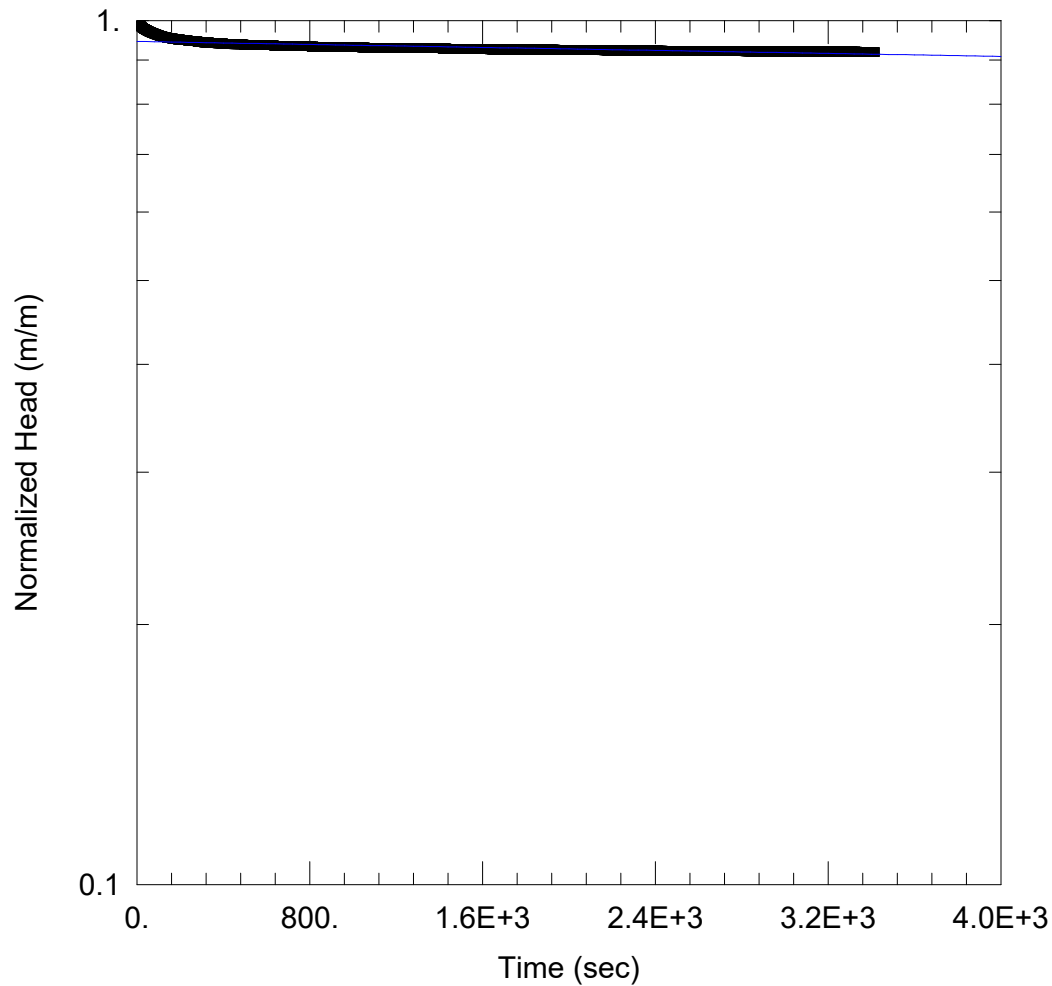
Initial Displacement: 3.672 m  
Total Well Penetration Depth: 6.99 m  
Casing Radius: 0.0254 m

Static Water Column Height: 6.99 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
 $K = 1.119\text{E-}8$  m/sec

Solution Method: Hvorslev  
 $y_0 = 3.637$  m



#### BH 1-26 RISING HEAD

Data Set: \...\BH 1-26 RH.aqt  
Date: 07/15/24

Time: 10:14:17

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-26 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 4.37 m

Anisotropy Ratio ( $K_z/K_r$ ): 1.

#### WELL DATA (BH 1-26 Rising Head)

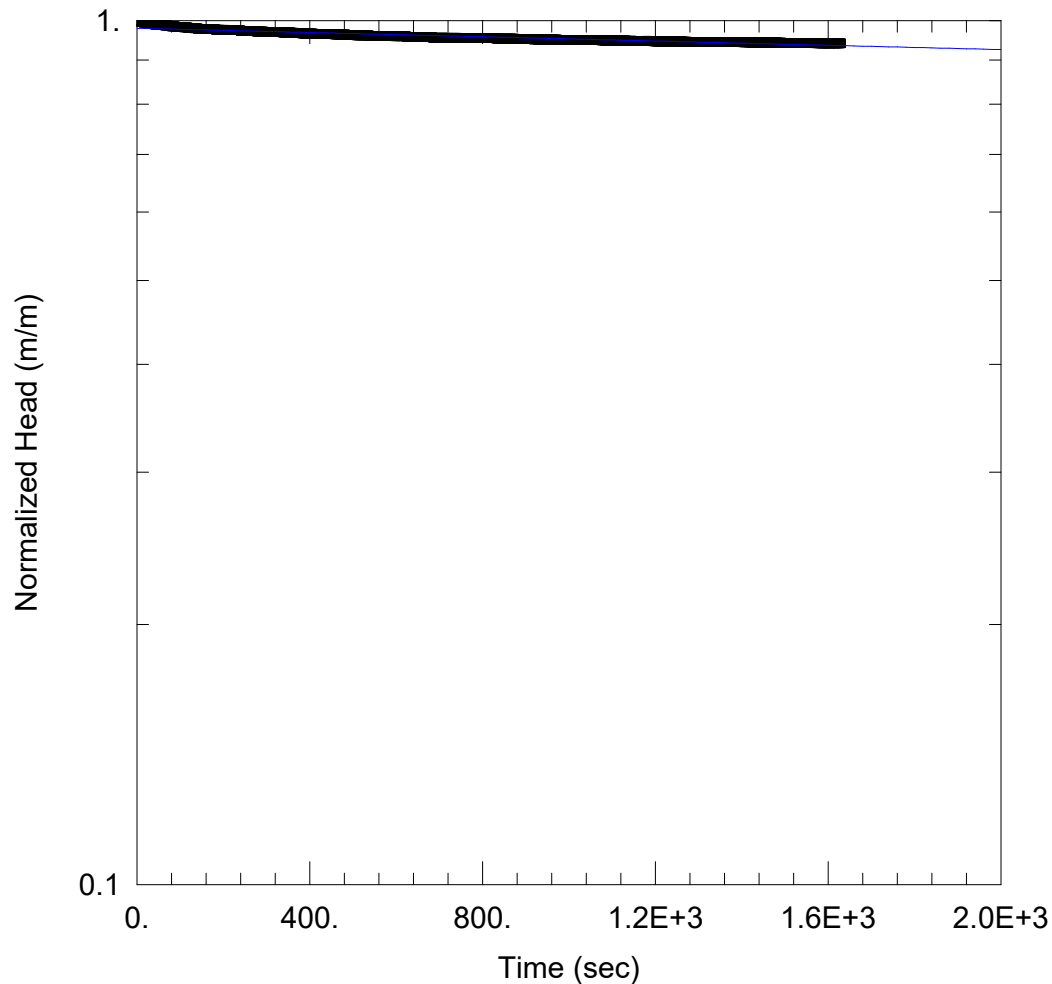
Initial Displacement: 2.394 m  
Total Well Penetration Depth: 4.37 m  
Casing Radius: 0.0254 m

Static Water Column Height: 4.37 m  
Screen Length: 3. m  
Well Radius: 0.0762 m

#### SOLUTION

Aquifer Model: Unconfined  
 $K = 4.668\text{E-}9$  m/sec

Solution Method: Hvorslev  
 $y_0 = 2.264$  m



#### BH 1-27 RISING HEAD

Data Set: \...\BH 1-27 RH.aqt  
Date: 07/15/24

Time: 10:01:52

#### PROJECT INFORMATION

Company: EXP Services Inc.  
Client: Tribal Development  
Project: BRM-23015226-A0  
Location: Tribal Milton Phase 1  
Test Well: BH 1-27 Rising Head  
Test Date: July 4, 2024

#### AQUIFER DATA

Saturated Thickness: 5.68 m      Anisotropy Ratio (Kz/Kr): 1.

#### WELL DATA (BH 1-27 Rising Head)

Initial Displacement: 3.108 m      Static Water Column Height: 5.68 m  
Total Well Penetration Depth: 5.68 m      Screen Length: 3. m  
Casing Radius: 0.0254 m      Well Radius: 0.0762 m

#### SOLUTION

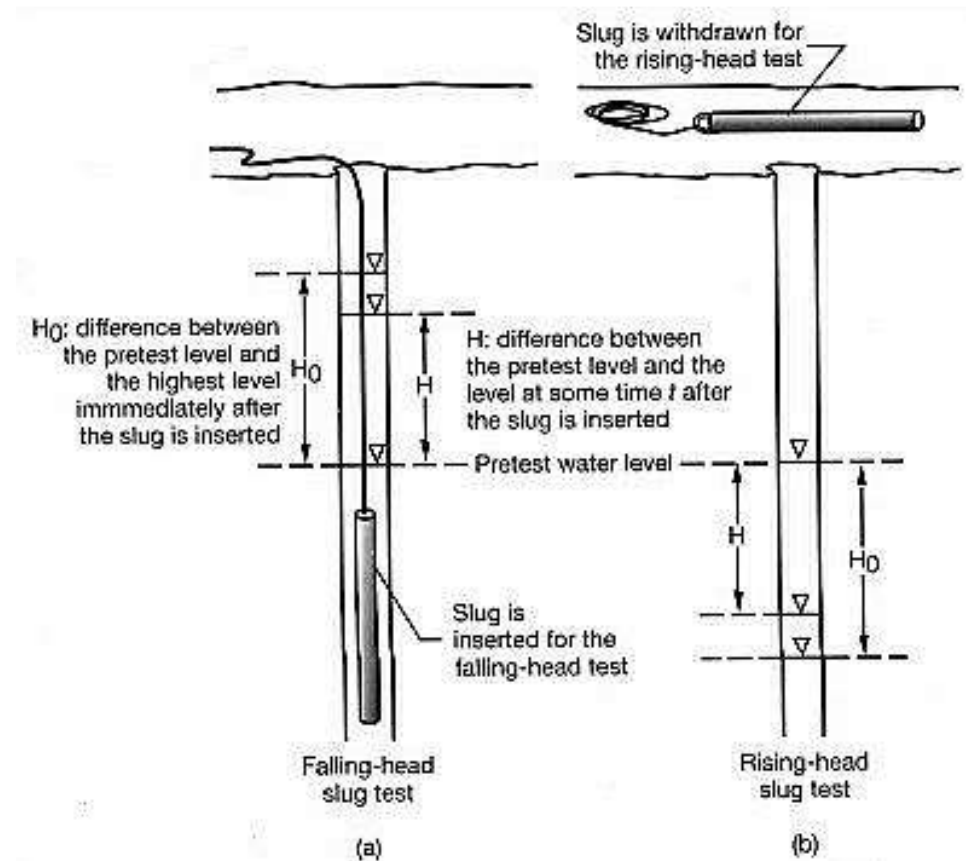
Aquifer Model: Unconfined      Solution Method: Hvorslev  
K = 1.337E-8 m/sec      y0 = 3.045 m

# Single Well Response Test Procedure

A Single Well Response Test (SWRT), also known as a bail test or a slug test, is conducted in order to determine the saturated hydraulic conductivity ( $K$ ) of an aquifer. The method of the SWRT is to characterize the change of groundwater level in a well or borehole over time.

In order to ensure consistency and repeatability, all **exp** employees are to follow the procedure outlined in this document when conducting SWRTs.

The figure below depicts a schematic of a slug and bail test and the respective water level changes.





## Slug Test Procedure

### Equipment Required

- Copy of a signed health and safety plan
- Copy of the work program
- PPE as required by Site-Specific HASP
- Copy of the monitoring well location plan/site plan
- Waterproof pen and bound field note book
- SWRT field data Entry form
- Disposable gloves
- Duct tape
- Deionized water
- Alconox (phosphate free detergent)
- Spray bottles
- Electronic water level meter and spare batteries
- Solid PVC or stainless steel slug of known volume or clean water
- String (nylon)
- Water pressure transducer (data logger) and baro-logger
- Watch or stop watch with second hand
- Plastic sheeting

### Testing Procedure

1. Remove cap from well and collect static water level
2. Remove waterra tubing/bailer and place in garbage bag. Record static water level measurement again.
3. Lower the slug into the well and record the dynamic water level.
4. Record the drawdown (for the slug test) at set five (5) second intervals for the first five (5) minutes, then reduce to every one (1) minute.
5. Continue recording the drawdown until 95% recovery is reached. To calculate this value: Find the difference between the dynamic water level and the static water level, then multiply by 95% (.95). Add the resulting value to the dynamic water level.  
$$(\text{Static Water Level} - \text{Dynamic Water Level}) \times .95 + \text{Static Water Level} = 95\% \text{ Recovery Value}$$
6. Once complete, replace the waterra tubing/bailer and re-secure the well cap.

**Note:** If the well is deep, more than one slug may be inserted by attaching the slugs to a series.

Slugs must be washed with methanol, then lab grade soap, and then rinsed with de-ionized water after each use.



Based on the recorded observations, the hydraulic conductivity (in m/s) of the aquifer will be determined. In order to determine the hydraulic conductivity; the well diameter, radius of the borehole and length of the screen will also be required.

## Bail Test Procedure

### Equipment Required

- 20 L (5 gal) Graduated pail
- Stop watch or watch with seconds
- Garbage bags
- Water level meter
- Field sheets/log book
- Latex Gloves
- Bailer and Rope

### Procedure

1. Remove cap from well and collect static water level.
2. If using a **bailer**:
  - a. Affix the rope to the bailer.
  - b. Remove the waterra tubing and place in garbage bag
  - c. Record static water level measurement again.
  - d. Record how much water was removed by either counting the number of full bailers or emptying removed water into a container.
  - e. Quickly lower the bailer into the well and remove.
  - f. Continue this process until the water level will reduce no further.
  - g. Record the dynamic water level.
3. If using **waterra** to bail the water:
  - a. Pump the water into graduated bucket until the water level will reduce no further.
  - b. Record how much water has been removed.
  - c. Record the dynamic water level.
4. Record the recovery at set five (5) second intervals for the first (5) minutes, then reduce to every one (1) minute.
5. Continue recording the drawdown/recovery until 95% recovery is reached.
6. Once complete, replace any waterra tubing that may have been removed from the well and re-secure the well cap.

EXP Services Inc.

*Milton Link Phase One, Milton, Ontario  
Preliminary Hydrogeological Investigation and Water Balance Assessment  
BRM-23015226-A0  
June 18, 2026*

## Appendix D – Laboratory's Certificates of Analysis



Your P.O. #: ENV-BRM  
Your Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your C.O.C. #: 999448-01-01

**Attention: Francois Chartier**

exp Services Inc  
1595 Clark Blvd  
Brampton, ON  
CANADA L6T 4V1

**Report Date: 2024/07/11**  
Report #: R8230870  
Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C4K4216**

**Received: 2024/07/04, 17:57**

Sample Matrix: Water  
# Samples Received: 1

| Analyses                              | Date     |            | Date Analyzed | Laboratory Method            | Analytical Method    |
|---------------------------------------|----------|------------|---------------|------------------------------|----------------------|
|                                       | Quantity | Extracted  |               |                              |                      |
| Dissolved Aluminum (0.2 u, clay free) | 1        | N/A        | 2024/07/08    | CAM SOP-00447                | EPA 6020B m          |
| Alkalinity                            | 1        | N/A        | 2024/07/08    | CAM SOP-00448                | SM 24 2320 B m       |
| Chromium (VI) in Water                | 1        | N/A        | 2024/07/10    | CAM SOP-00436                | EPA 7199 m           |
| Free (WAD) Cyanide                    | 1        | N/A        | 2024/07/09    | CAM SOP-00457                | OMOE E3015 m         |
| Dissolved Oxygen                      | 1        | 2024/07/05 | 2024/07/05    | CAM SOP-00427                | SM 24 4500 O G m     |
| Hardness (calculated as CaCO3)        | 1        | N/A        | 2024/07/08    | CAM SOP<br>00102/00408/00447 | SM 2340 B            |
| Mercury                               | 1        | 2024/07/09 | 2024/07/09    | CAM SOP-00453                | EPA 7470A m          |
| Dissolved Metals by ICPMS             | 1        | N/A        | 2024/07/08    | CAM SOP-00447                | EPA 6020B m          |
| Total Metals Analysis by ICPMS        | 1        | 2024/07/09 | 2024/07/09    | CAM SOP-00447                | EPA 6020B m          |
| Sulphide (as H2S) (1)                 | 1        | N/A        | 2024/07/10    | AB WI-00065                  | Auto Calc            |
| Total Sulphide (1)                    | 1        | N/A        | 2024/07/10    | AB SOP-00080                 | SM 24 4500 S2-A D Fm |
| Total Ammonia-N                       | 1        | N/A        | 2024/07/10    | CAM SOP-00441                | USGS I-2522-90 m     |
| pH (2)                                | 1        | 2024/07/06 | 2024/07/06    | CAM SOP-00413                | SM 24th - 4500H+ B   |
| Phenols (4AAP)                        | 1        | N/A        | 2024/07/08    | CAM SOP-00444                | OMOE E3179 m         |
| Field Measured pH (3)                 | 1        | N/A        | 2024/07/11    |                              | Field pH Meter       |
| Field Temperature (3)                 | 1        | N/A        | 2024/07/11    |                              | Field Thermometer    |
| Total Phosphorus (Colourimetric)      | 1        | 2024/07/08 | 2024/07/11    | CAM SOP-00407                | SM 24 4500-P I       |
| Turbidity                             | 1        | N/A        | 2024/07/06    | CAM SOP-00417                | SM 24 2130 B         |
| Un-ionized Ammonia (4)                | 1        | 2024/07/05 | 2024/07/11    | Auto Calc.                   | PWQO                 |

**Remarks:**

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or



Your P.O. #: ENV-BRM  
 Your Project #: BRM-23015226-A0  
 Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
 Your C.O.C. #: 999448-01-01

**Attention: Francois Chartier**

exp Services Inc  
 1595 Clark Blvd  
 Brampton, ON  
 CANADA L6T 4V1

**Report Date: 2024/07/11**  
 Report #: R8230870  
 Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C4K4216**

**Received: 2024/07/04, 17:57**

implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Bureau Veritas Calgary (19th), 4000 19th Street NE, Calgary, AB, T2E 6P8

(2) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

(3) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.

(4) Un-ionized ammonia is calculated using the total ammonia result and field data provided by the client for pH and temperature.

Encryption Key



**AUTHORIZED REPORT  
 RAPPORT AUTORISÉ**

Bureau Veritas

11 Jul 2024 18:27:02

Please direct all questions regarding this Certificate of Analysis to:

Patricia Legette, Project Manager

Email: Patricia.Legette@bureauveritas.com

Phone# (905)817-5799

=====

This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

### PWQO METALS AND INORGANICS (WATER)

|                                                                                                               |                                 |          |                  |         |          |                  |      |          |
|---------------------------------------------------------------------------------------------------------------|---------------------------------|----------|------------------|---------|----------|------------------|------|----------|
| Bureau Veritas ID                                                                                             |                                 |          | ZQI071           |         |          | ZQI071           |      |          |
| Sampling Date                                                                                                 |                                 |          | 2024/07/04 10:45 |         |          | 2024/07/04 10:45 |      |          |
| COC Number                                                                                                    |                                 |          | 999448-01-01     |         |          | 999448-01-01     |      |          |
|                                                                                                               | UNITS                           | Criteria | BH 1-20          | RDL     | QC Batch | BH 1-20 Lab-Dup  | RDL  | QC Batch |
| Calculated Parameters                                                                                         |                                 |          |                  |         |          |                  |      |          |
| Hardness (CaCO3)                                                                                              | mg/L                            | -        | 3700             | 1.0     | 9496888  |                  |      |          |
| Sulphide (as H2S)                                                                                             | mg/L                            | 0.002    | ND               | 0.0020  | 9501286  |                  |      |          |
| Total Un-ionized Ammonia                                                                                      | mg/L                            | 0.02     | 0.0049           | 0.00055 | 9497525  |                  |      |          |
| Field Measurements                                                                                            |                                 |          |                  |         |          |                  |      |          |
| Field Temperature                                                                                             | Celsius                         | -        | 16.6             | N/A     | ONSITE   |                  |      |          |
| Field Measured pH                                                                                             | pH                              | 6.5:8.5  | 7.47             |         | ONSITE   |                  |      |          |
| Inorganics                                                                                                    |                                 |          |                  |         |          |                  |      |          |
| Total Ammonia-N                                                                                               | mg/L                            | -        | 0.45             | 0.050   | 9500413  |                  |      |          |
| Dissolved Oxygen                                                                                              | mg/L                            | -        | 4.48             | 0.050   | 9497461  |                  |      |          |
| pH                                                                                                            | pH                              | 6.5:8.5  | 7.63             |         | 9498984  |                  |      |          |
| Phenols-4AAP                                                                                                  | mg/L                            | 0.001    | ND               | 0.0010  | 9500711  |                  |      |          |
| Total Phosphorus                                                                                              | mg/L                            | 0.01     | 0.006            | 0.004   | 9500890  |                  |      |          |
| Total Sulphide                                                                                                | mg/L                            | 0.002    | ND (1)           | 0.0018  | 9506942  |                  |      |          |
| Turbidity                                                                                                     | NTU                             | -        | 1.4              | 0.1     | 9498980  |                  |      |          |
| WAD Cyanide (Free)                                                                                            | ug/L                            | 5        | ND               | 1       | 9500164  |                  |      |          |
| Alkalinity (Total as CaCO3)                                                                                   | mg/L                            | -        | 260              | 1.0     | 9498981  |                  |      |          |
| Metals                                                                                                        |                                 |          |                  |         |          |                  |      |          |
| Dissolved (0.2u) Aluminum (Al)                                                                                | ug/L                            | 15       | ND               | 5       | 9499058  |                  |      |          |
| Chromium (VI)                                                                                                 | ug/L                            | 1        | ND               | 0.50    | 9500412  |                  |      |          |
| Mercury (Hg)                                                                                                  | ug/L                            | 0.2      | ND               | 0.10    | 9502565  | ND               | 0.10 | 9502565  |
| Total Antimony (Sb)                                                                                           | ug/L                            | 20       | 0.75             | 0.50    | 9502809  |                  |      |          |
| Total Arsenic (As)                                                                                            | ug/L                            | 100      | 2.2              | 1.0     | 9502809  |                  |      |          |
| Total Beryllium (Be)                                                                                          | ug/L                            | 11       | ND               | 0.40    | 9502809  |                  |      |          |
| No Fill                                                                                                       | No Exceedance                   |          |                  |         |          |                  |      |          |
| Grey                                                                                                          | Exceeds 1 criteria policy/level |          |                  |         |          |                  |      |          |
| Black                                                                                                         | Exceeds both criteria/levels    |          |                  |         |          |                  |      |          |
| RDL = Reportable Detection Limit                                                                              |                                 |          |                  |         |          |                  |      |          |
| QC Batch = Quality Control Batch                                                                              |                                 |          |                  |         |          |                  |      |          |
| Lab-Dup = Laboratory Initiated Duplicate                                                                      |                                 |          |                  |         |          |                  |      |          |
| Criteria: Ontario Provincial Water Quality Objectives                                                         |                                 |          |                  |         |          |                  |      |          |
| Ref. to MOEE Water Management document dated Feb.1999                                                         |                                 |          |                  |         |          |                  |      |          |
| ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.                     |                                 |          |                  |         |          |                  |      |          |
| N/A = Not Applicable                                                                                          |                                 |          |                  |         |          |                  |      |          |
| (1) Sample pH <9, preservation incomplete. Due to volatility of analyte, a low bias in the results is likely. |                                 |          |                  |         |          |                  |      |          |



Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

### PWQO METALS AND INORGANICS (WATER)

| Bureau Veritas ID                                                                         |                                 |          | ZQI071              |       |          | ZQI071              |     |          |
|-------------------------------------------------------------------------------------------|---------------------------------|----------|---------------------|-------|----------|---------------------|-----|----------|
| Sampling Date                                                                             |                                 |          | 2024/07/04<br>10:45 |       |          | 2024/07/04<br>10:45 |     |          |
| COC Number                                                                                |                                 |          | 999448-01-01        |       |          | 999448-01-01        |     |          |
|                                                                                           | UNITS                           | Criteria | BH 1-20             | RDL   | QC Batch | BH 1-20<br>Lab-Dup  | RDL | QC Batch |
| Total Boron (B)                                                                           | ug/L                            | 200      | 1100                | 10    | 9502809  |                     |     |          |
| Total Cadmium (Cd)                                                                        | ug/L                            | 0.2      | ND                  | 0.090 | 9502809  |                     |     |          |
| Total Chromium (Cr)                                                                       | ug/L                            | -        | ND                  | 5.0   | 9502809  |                     |     |          |
| Total Cobalt (Co)                                                                         | ug/L                            | 0.9      | 3.6                 | 0.50  | 9502809  |                     |     |          |
| Total Copper (Cu)                                                                         | ug/L                            | 5        | ND                  | 0.90  | 9502809  |                     |     |          |
| Total Iron (Fe)                                                                           | ug/L                            | 300      | 400                 | 100   | 9502809  |                     |     |          |
| Total Lead (Pb)                                                                           | ug/L                            | 5        | ND                  | 0.50  | 9502809  |                     |     |          |
| Total Molybdenum (Mo)                                                                     | ug/L                            | 40       | 11                  | 0.50  | 9502809  |                     |     |          |
| Total Nickel (Ni)                                                                         | ug/L                            | 25       | 9.3                 | 1.0   | 9502809  |                     |     |          |
| Total Selenium (Se)                                                                       | ug/L                            | 100      | ND                  | 2.0   | 9502809  |                     |     |          |
| Total Silver (Ag)                                                                         | ug/L                            | 0.1      | ND                  | 0.090 | 9502809  |                     |     |          |
| Total Thallium (Tl)                                                                       | ug/L                            | 0.3      | 0.051               | 0.050 | 9502809  |                     |     |          |
| Total Tungsten (W)                                                                        | ug/L                            | 30       | ND                  | 1.0   | 9502809  |                     |     |          |
| Total Uranium (U)                                                                         | ug/L                            | 5        | 12                  | 0.10  | 9502809  |                     |     |          |
| Total Vanadium (V)                                                                        | ug/L                            | 6        | ND                  | 0.50  | 9502809  |                     |     |          |
| Total Zinc (Zn)                                                                           | ug/L                            | 30       | 12                  | 5.0   | 9502809  |                     |     |          |
| Total Zirconium (Zr)                                                                      | ug/L                            | 4        | ND                  | 1.0   | 9502809  |                     |     |          |
| No Fill                                                                                   | No Exceedance                   |          |                     |       |          |                     |     |          |
| Grey                                                                                      | Exceeds 1 criteria policy/level |          |                     |       |          |                     |     |          |
| Black                                                                                     | Exceeds both criteria/levels    |          |                     |       |          |                     |     |          |
| RDL = Reportable Detection Limit                                                          |                                 |          |                     |       |          |                     |     |          |
| QC Batch = Quality Control Batch                                                          |                                 |          |                     |       |          |                     |     |          |
| Lab-Dup = Laboratory Initiated Duplicate                                                  |                                 |          |                     |       |          |                     |     |          |
| Criteria: Ontario Provincial Water Quality Objectives                                     |                                 |          |                     |       |          |                     |     |          |
| Ref. to MOEE Water Management document dated Feb.1999                                     |                                 |          |                     |       |          |                     |     |          |
| ND = Not Detected at a concentration equal or greater than the indicated Detection Limit. |                                 |          |                     |       |          |                     |     |          |



Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

### ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Bureau Veritas ID                                                                         |                                 |          | ZQI071              | ZQI071              |      |          |
|-------------------------------------------------------------------------------------------|---------------------------------|----------|---------------------|---------------------|------|----------|
| Sampling Date                                                                             |                                 |          | 2024/07/04<br>10:45 | 2024/07/04<br>10:45 |      |          |
| COC Number                                                                                |                                 |          | 999448-01-01        | 999448-01-01        |      |          |
|                                                                                           | UNITS                           | Criteria | BH 1-20             | BH 1-20<br>Lab-Dup  | RDL  | QC Batch |
| Metals                                                                                    |                                 |          |                     |                     |      |          |
| Dissolved Aluminum (Al)                                                                   | ug/L                            | -        | ND                  | ND                  | 25   | 9500383  |
| Dissolved Antimony (Sb)                                                                   | ug/L                            | 20       | ND                  | ND                  | 2.5  | 9500383  |
| Dissolved Arsenic (As)                                                                    | ug/L                            | 100      | ND                  | ND                  | 5.0  | 9500383  |
| Dissolved Barium (Ba)                                                                     | ug/L                            | -        | 17                  | 19                  | 10   | 9500383  |
| Dissolved Beryllium (Be)                                                                  | ug/L                            | 11       | ND                  | ND                  | 2.0  | 9500383  |
| Dissolved Bismuth (Bi)                                                                    | ug/L                            | -        | ND                  | ND                  | 5.0  | 9500383  |
| Dissolved Boron (B)                                                                       | ug/L                            | 200      | 1400                | 1300                | 50   | 9500383  |
| Dissolved Cadmium (Cd)                                                                    | ug/L                            | 0.2      | ND (1)              | ND (1)              | 0.45 | 9500383  |
| Dissolved Calcium (Ca)                                                                    | ug/L                            | -        | 490000              | 490000              | 1000 | 9500383  |
| Dissolved Chromium (Cr)                                                                   | ug/L                            | -        | ND                  | ND                  | 25   | 9500383  |
| Dissolved Cobalt (Co)                                                                     | ug/L                            | 0.9      | 3.7                 | 3.7                 | 2.5  | 9500383  |
| Dissolved Copper (Cu)                                                                     | ug/L                            | 5        | ND                  | ND                  | 4.5  | 9500383  |
| Dissolved Iron (Fe)                                                                       | ug/L                            | 300      | ND (1)              | ND (1)              | 500  | 9500383  |
| Dissolved Lead (Pb)                                                                       | ug/L                            | 5        | ND                  | ND                  | 2.5  | 9500383  |
| Dissolved Lithium (Li)                                                                    | ug/L                            | -        | 220                 | 230                 | 25   | 9500383  |
| Dissolved Magnesium (Mg)                                                                  | ug/L                            | -        | 610000              | 620000              | 250  | 9500383  |
| Dissolved Manganese (Mn)                                                                  | ug/L                            | -        | 500                 | 500                 | 10   | 9500383  |
| Dissolved Molybdenum (Mo)                                                                 | ug/L                            | 40       | 10                  | 9.6                 | 2.5  | 9500383  |
| Dissolved Nickel (Ni)                                                                     | ug/L                            | 25       | 9.8                 | 8.8                 | 5.0  | 9500383  |
| Dissolved Phosphorus (P)                                                                  | ug/L                            | -        | ND                  | ND                  | 500  | 9500383  |
| Dissolved Potassium (K)                                                                   | ug/L                            | -        | 22000               | 22000               | 1000 | 9500383  |
| Dissolved Selenium (Se)                                                                   | ug/L                            | 100      | ND                  | ND                  | 10   | 9500383  |
| Dissolved Silicon (Si)                                                                    | ug/L                            | -        | 5300                | 5400                | 250  | 9500383  |
| No Fill                                                                                   | No Exceedance                   |          |                     |                     |      |          |
| Grey                                                                                      | Exceeds 1 criteria policy/level |          |                     |                     |      |          |
| Black                                                                                     | Exceeds both criteria/levels    |          |                     |                     |      |          |
| RDL = Reportable Detection Limit                                                          |                                 |          |                     |                     |      |          |
| QC Batch = Quality Control Batch                                                          |                                 |          |                     |                     |      |          |
| Lab-Dup = Laboratory Initiated Duplicate                                                  |                                 |          |                     |                     |      |          |
| Criteria: Ontario Provincial Water Quality Objectives                                     |                                 |          |                     |                     |      |          |
| Ref. to MOEE Water Management document dated Feb.1999                                     |                                 |          |                     |                     |      |          |
| ND = Not Detected at a concentration equal or greater than the indicated Detection Limit. |                                 |          |                     |                     |      |          |
| (1) RDL exceeds criteria                                                                  |                                 |          |                     |                     |      |          |



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

| Bureau Veritas ID                                                                         |                                 |          | ZQI071              | ZQI071              |      |          |
|-------------------------------------------------------------------------------------------|---------------------------------|----------|---------------------|---------------------|------|----------|
| Sampling Date                                                                             |                                 |          | 2024/07/04<br>10:45 | 2024/07/04<br>10:45 |      |          |
| COC Number                                                                                |                                 |          | 999448-01-01        | 999448-01-01        |      |          |
|                                                                                           | UNITS                           | Criteria | BH 1-20             | BH 1-20<br>Lab-Dup  | RDL  | QC Batch |
| Dissolved Silver (Ag)                                                                     | ug/L                            | 0.1      | ND (1)              | ND (1)              | 0.45 | 9500383  |
| Dissolved Sodium (Na)                                                                     | ug/L                            | -        | 270000              | 270000              | 500  | 9500383  |
| Dissolved Strontium (Sr)                                                                  | ug/L                            | -        | 10000               | 10000               | 5.0  | 9500383  |
| Dissolved Tellurium (Te)                                                                  | ug/L                            | -        | ND                  | ND                  | 5.0  | 9500383  |
| Dissolved Thallium (Tl)                                                                   | ug/L                            | 0.3      | ND                  | ND                  | 0.25 | 9500383  |
| Dissolved Tin (Sn)                                                                        | ug/L                            | -        | ND                  | ND                  | 5.0  | 9500383  |
| Dissolved Titanium (Ti)                                                                   | ug/L                            | -        | ND                  | ND                  | 25   | 9500383  |
| Dissolved Tungsten (W)                                                                    | ug/L                            | 30       | ND                  | ND                  | 5.0  | 9500383  |
| Dissolved Uranium (U)                                                                     | ug/L                            | 5        | 11                  | 11                  | 0.50 | 9500383  |
| Dissolved Vanadium (V)                                                                    | ug/L                            | 6        | ND                  | ND                  | 2.5  | 9500383  |
| Dissolved Zinc (Zn)                                                                       | ug/L                            | 30       | ND                  | ND                  | 25   | 9500383  |
| Dissolved Zirconium (Zr)                                                                  | ug/L                            | 4        | ND (1)              | ND (1)              | 5.0  | 9500383  |
| No Fill                                                                                   | No Exceedance                   |          |                     |                     |      |          |
| Grey                                                                                      | Exceeds 1 criteria policy/level |          |                     |                     |      |          |
| Black                                                                                     | Exceeds both criteria/levels    |          |                     |                     |      |          |
| RDL = Reportable Detection Limit                                                          |                                 |          |                     |                     |      |          |
| QC Batch = Quality Control Batch                                                          |                                 |          |                     |                     |      |          |
| Lab-Dup = Laboratory Initiated Duplicate                                                  |                                 |          |                     |                     |      |          |
| Criteria: Ontario Provincial Water Quality Objectives                                     |                                 |          |                     |                     |      |          |
| Ref. to MOEE Water Management document dated Feb.1999                                     |                                 |          |                     |                     |      |          |
| ND = Not Detected at a concentration equal or greater than the indicated Detection Limit. |                                 |          |                     |                     |      |          |
| (1) RDL exceeds criteria                                                                  |                                 |          |                     |                     |      |          |



Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

TEST SUMMARY

Bureau Veritas ID: ZQI071  
Sample ID: BH 1-20  
Matrix: Water

Collected: 2024/07/04  
Shipped:  
Received: 2024/07/04

| Test Description                      | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst                 |
|---------------------------------------|-----------------|---------|------------|---------------|-------------------------|
| Dissolved Aluminum (0.2 u, clay free) | ICP/MS          | 9499058 | N/A        | 2024/07/08    | Indira HarryPaul        |
| Alkalinity                            | AT              | 9498981 | N/A        | 2024/07/08    | Surinder Rai            |
| Chromium (VI) in Water                | IC              | 9500412 | N/A        | 2024/07/10    | Surleen Kaur Romana     |
| Free (WAD) Cyanide                    | SKAL/CN         | 9500164 | N/A        | 2024/07/09    | Prgya Panchal           |
| Dissolved Oxygen                      | DO              | 9497461 | 2024/07/05 | 2024/07/05    | Amrutha Anilkumar       |
| Hardness (calculated as CaCO3)        |                 | 9496888 | N/A        | 2024/07/08    | Automated Statchk       |
| Mercury                               | CV/AA           | 9502565 | 2024/07/09 | 2024/07/09    | Aswathy Neduveli Suresh |
| Dissolved Metals by ICPMS             | ICP/MS          | 9500383 | N/A        | 2024/07/08    | Indira HarryPaul        |
| Total Metals Analysis by ICPMS        | ICP/MS          | 9502809 | 2024/07/09 | 2024/07/09    | Nan Raykha              |
| Sulphide (as H2S)                     | CALC            | 9501286 | N/A        | 2024/07/10    | Automated Statchk       |
| Total Sulphide                        | SPEC            | 9506942 | N/A        | 2024/07/10    | Ly Vu                   |
| Total Ammonia-N                       | SKAL/NH4        | 9500413 | N/A        | 2024/07/10    | Yogesh Patel            |
| pH                                    | AT              | 9498984 | 2024/07/06 | 2024/07/06    | Nachiketa Gohil         |
| Phenols (4AAP)                        | TECH/PHEN       | 9500711 | N/A        | 2024/07/08    | Chloe Pollock           |
| Field Measured pH                     | PH              | ONSITE  | N/A        | 2024/07/11    | Patricia Legette        |
| Field Measured pH                     | PH              | ONSITE  | N/A        | 2024/07/11    | Patricia Legette        |
| Total Phosphorus (Colourimetric)      | SKAL/P          | 9500890 | 2024/07/08 | 2024/07/11    | Vidhi Khatri            |
| Turbidity                             | AT              | 9498980 | N/A        | 2024/07/06    | Gurparteek KAUR         |
| Un-ionized Ammonia                    | CALC/NH3        | 9497525 | 2024/07/11 | 2024/07/11    | Automated Statchk       |

Bureau Veritas ID: ZQI071 Dup  
Sample ID: BH 1-20  
Matrix: Water

Collected: 2024/07/04  
Shipped:  
Received: 2024/07/04

| Test Description          | Instrumentation | Batch   | Extracted  | Date Analyzed | Analyst                 |
|---------------------------|-----------------|---------|------------|---------------|-------------------------|
| Mercury                   | CV/AA           | 9502565 | 2024/07/09 | 2024/07/09    | Aswathy Neduveli Suresh |
| Dissolved Metals by ICPMS | ICP/MS          | 9500383 | N/A        | 2024/07/08    | Indira HarryPaul        |



Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

### GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

|           |        |
|-----------|--------|
| Package 1 | 24.7°C |
|-----------|--------|

Sample ZQI071 [BH 1-20] : Metals Analysis: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

**Results relate only to the items tested.**

BUREAU  
VERITAS

Bureau Veritas Job #: C4K4216

Report Date: 2024/07/11

## QUALITY ASSURANCE REPORT

exp Services Inc

Client Project #: BRM-23015226-A0

Site Location: BRITANNIA RD &amp; FIRST LINE - PHASE 1

Your P.O. #: ENV-BRM

Sampler Initials: TM

| QC Batch | Parameter                      | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank     |       | RPD       |           | QC Standard |           |
|----------|--------------------------------|------------|--------------|-----------|--------------|-----------|------------------|-------|-----------|-----------|-------------|-----------|
|          |                                |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value            | UNITS | Value (%) | QC Limits | % Recovery  | QC Limits |
| 9497461  | Dissolved Oxygen               | 2024/07/05 |              |           |              |           |                  |       | 0.11      | 30        |             |           |
| 9498980  | Turbidity                      | 2024/07/06 |              |           | 104          | 80 - 120  | ND, RDL=0.1      | NTU   | NC        | 20        |             |           |
| 9498981  | Alkalinity (Total as CaCO3)    | 2024/07/08 |              |           | 98           | 85 - 115  | ND, RDL=1.0      | mg/L  | 1.1       | 20        |             |           |
| 9498984  | pH                             | 2024/07/06 |              |           | 102          | 98 - 103  |                  |       | 0.76      | N/A       |             |           |
| 9499058  | Dissolved (0.2u) Aluminum (Al) | 2024/07/08 | 103          | 80 - 120  | 103          | 80 - 120  | ND,RDL=5         | ug/L  | 3.4       | 20        |             |           |
| 9500164  | WAD Cyanide (Free)             | 2024/07/09 | 104          | 80 - 120  | 104          | 80 - 120  | ND,RDL=1         | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Aluminum (Al)        | 2024/07/08 | 99           | 80 - 120  | 101          | 80 - 120  | ND, RDL=4.9      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Antimony (Sb)        | 2024/07/08 | 100          | 80 - 120  | 103          | 80 - 120  | ND, RDL=0.50     | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Arsenic (As)         | 2024/07/08 | 97           | 80 - 120  | 99           | 80 - 120  | ND, RDL=1.0      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Barium (Ba)          | 2024/07/08 | 97           | 80 - 120  | 102          | 80 - 120  | ND, RDL=2.0      | ug/L  | 11        | 20        |             |           |
| 9500383  | Dissolved Beryllium (Be)       | 2024/07/08 | 108          | 80 - 120  | 99           | 80 - 120  | ND, RDL=0.40     | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Bismuth (Bi)         | 2024/07/08 | 95           | 80 - 120  | 102          | 80 - 120  | ND, RDL=1.0      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Boron (B)            | 2024/07/08 | NC           | 80 - 120  | 99           | 80 - 120  | ND, RDL=10       | ug/L  | 5.3       | 20        |             |           |
| 9500383  | Dissolved Cadmium (Cd)         | 2024/07/08 | 96           | 80 - 120  | 97           | 80 - 120  | ND,<br>RDL=0.090 | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Calcium (Ca)         | 2024/07/08 | NC           | 80 - 120  | 102          | 80 - 120  | ND, RDL=200      | ug/L  | 1.8       | 20        |             |           |
| 9500383  | Dissolved Chromium (Cr)        | 2024/07/08 | 93           | 80 - 120  | 94           | 80 - 120  | ND, RDL=5.0      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Cobalt (Co)          | 2024/07/08 | 99           | 80 - 120  | 100          | 80 - 120  | ND, RDL=0.50     | ug/L  | 0.41      | 20        |             |           |
| 9500383  | Dissolved Copper (Cu)          | 2024/07/08 | 102          | 80 - 120  | 103          | 80 - 120  | ND, RDL=0.90     | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Iron (Fe)            | 2024/07/08 | 99           | 80 - 120  | 100          | 80 - 120  | ND, RDL=100      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Lead (Pb)            | 2024/07/08 | 95           | 80 - 120  | 101          | 80 - 120  | ND, RDL=0.50     | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Lithium (Li)         | 2024/07/08 | 100          | 80 - 120  | 103          | 80 - 120  | ND, RDL=5.0      | ug/L  | 0.33      | 20        |             |           |
| 9500383  | Dissolved Magnesium (Mg)       | 2024/07/08 | NC           | 80 - 120  | 101          | 80 - 120  | ND, RDL=50       | ug/L  | 2.4       | 20        |             |           |
| 9500383  | Dissolved Manganese (Mn)       | 2024/07/08 | NC           | 80 - 120  | 98           | 80 - 120  | ND, RDL=2.0      | ug/L  | 0.33      | 20        |             |           |
| 9500383  | Dissolved Molybdenum (Mo)      | 2024/07/08 | 96           | 80 - 120  | 96           | 80 - 120  | ND, RDL=0.50     | ug/L  | 9.1       | 20        |             |           |
| 9500383  | Dissolved Nickel (Ni)          | 2024/07/08 | 94           | 80 - 120  | 98           | 80 - 120  | ND, RDL=1.0      | ug/L  | 11        | 20        |             |           |
| 9500383  | Dissolved Phosphorus (P)       | 2024/07/08 | 97           | 80 - 120  | 101          | 80 - 120  | ND, RDL=100      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Potassium (K)        | 2024/07/08 | 102          | 80 - 120  | 104          | 80 - 120  | ND, RDL=200      | ug/L  | 0.80      | 20        |             |           |
| 9500383  | Dissolved Selenium (Se)        | 2024/07/08 | 97           | 80 - 120  | 99           | 80 - 120  | ND, RDL=2.0      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Silicon (Si)         | 2024/07/08 | 97           | 80 - 120  | 100          | 80 - 120  | ND, RDL=50       | ug/L  | 1.5       | 20        |             |           |



Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

## QUALITY ASSURANCE REPORT(CONT'D)

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

| QC Batch | Parameter                | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank      |       | RPD       |           | QC Standard |           |
|----------|--------------------------|------------|--------------|-----------|--------------|-----------|-------------------|-------|-----------|-----------|-------------|-----------|
|          |                          |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value             | UNITS | Value (%) | QC Limits | % Recovery  | QC Limits |
| 9500383  | Dissolved Silver (Ag)    | 2024/07/08 | 92           | 80 - 120  | 95           | 80 - 120  | ND,<br>RDL=0.090  | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Sodium (Na)    | 2024/07/08 | NC           | 80 - 120  | 101          | 80 - 120  | ND, RDL=100       | ug/L  | 0.52      | 20        |             |           |
| 9500383  | Dissolved Strontium (Sr) | 2024/07/08 | NC           | 80 - 120  | 98           | 80 - 120  | ND, RDL=1.0       | ug/L  | 3.0       | 20        |             |           |
| 9500383  | Dissolved Tellurium (Te) | 2024/07/08 | 95           | 80 - 120  | 100          | 80 - 120  | ND, RDL=1.0       | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Thallium (Tl)  | 2024/07/08 | 98           | 80 - 120  | 103          | 80 - 120  | ND,<br>RDL=0.050  | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Tin (Sn)       | 2024/07/08 | 97           | 80 - 120  | 99           | 80 - 120  | ND, RDL=1.0       | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Titanium (Ti)  | 2024/07/08 | 97           | 80 - 120  | 97           | 80 - 120  | ND, RDL=5.0       | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Tungsten (W)   | 2024/07/08 | 99           | 80 - 120  | 106          | 80 - 120  | ND, RDL=1.0       | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Uranium (U)    | 2024/07/08 | 96           | 80 - 120  | 98           | 80 - 120  | ND, RDL=0.10      | ug/L  | 2.2       | 20        |             |           |
| 9500383  | Dissolved Vanadium (V)   | 2024/07/08 | 95           | 80 - 120  | 96           | 80 - 120  | ND, RDL=0.50      | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Zinc (Zn)      | 2024/07/08 | 93           | 80 - 120  | 99           | 80 - 120  | ND, RDL=5.0       | ug/L  | NC        | 20        |             |           |
| 9500383  | Dissolved Zirconium (Zr) | 2024/07/08 | 103          | 80 - 120  | 103          | 80 - 120  | ND, RDL=1.0       | ug/L  | NC        | 20        |             |           |
| 9500412  | Chromium (VI)            | 2024/07/10 | 100          | 80 - 120  | 102          | 80 - 120  | ND, RDL=0.50      | ug/L  | NC        | 20        |             |           |
| 9500413  | Total Ammonia-N          | 2024/07/10 | NC           | 75 - 125  | 97           | 80 - 120  | ND,<br>RDL=0.050  | mg/L  | 1.7       | 20        |             |           |
| 9500711  | Phenols-4AAP             | 2024/07/08 | 100          | 80 - 120  | 100          | 80 - 120  | ND,<br>RDL=0.0010 | mg/L  | NC        | 20        |             |           |
| 9500890  | Total Phosphorus         | 2024/07/11 | 111          | 80 - 120  | 99           | 80 - 120  | ND,<br>RDL=0.004  | mg/L  | 12        | 20        | 105         | 80 - 120  |
| 9502565  | Mercury (Hg)             | 2024/07/09 | 91           | 75 - 125  | 95           | 80 - 120  | ND, RDL=0.10      | ug/L  | NC        | 20        |             |           |
| 9502809  | Total Antimony (Sb)      | 2024/07/09 | 102          | 80 - 120  | 101          | 80 - 120  | ND, RDL=0.50      | ug/L  |           |           |             |           |
| 9502809  | Total Arsenic (As)       | 2024/07/09 | 101          | 80 - 120  | 97           | 80 - 120  | ND, RDL=1.0       | ug/L  | 1.4       | 20        |             |           |
| 9502809  | Total Beryllium (Be)     | 2024/07/09 | 96           | 80 - 120  | 92           | 80 - 120  | ND, RDL=0.40      | ug/L  |           |           |             |           |
| 9502809  | Total Boron (B)          | 2024/07/09 | 88           | 80 - 120  | 85           | 80 - 120  | ND, RDL=10        | ug/L  |           |           |             |           |
| 9502809  | Total Cadmium (Cd)       | 2024/07/09 | 97           | 80 - 120  | 98           | 80 - 120  | ND,<br>RDL=0.090  | ug/L  |           |           |             |           |
| 9502809  | Total Chromium (Cr)      | 2024/07/09 | 96           | 80 - 120  | 94           | 80 - 120  | ND, RDL=5.0       | ug/L  |           |           |             |           |
| 9502809  | Total Cobalt (Co)        | 2024/07/09 | 102          | 80 - 120  | 97           | 80 - 120  | ND, RDL=0.50      | ug/L  |           |           |             |           |
| 9502809  | Total Copper (Cu)        | 2024/07/09 | 101          | 80 - 120  | 100          | 80 - 120  | ND, RDL=0.90      | ug/L  |           |           |             |           |



Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

**QUALITY ASSURANCE REPORT(CONT'D)**

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

| QC Batch | Parameter             | Date       | Matrix Spike |           | SPIKED BLANK |           | Method Blank      |       | RPD       |           | QC Standard |           |
|----------|-----------------------|------------|--------------|-----------|--------------|-----------|-------------------|-------|-----------|-----------|-------------|-----------|
|          |                       |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value             | UNITS | Value (%) | QC Limits | % Recovery  | QC Limits |
| 9502809  | Total Iron (Fe)       | 2024/07/09 | 100          | 80 - 120  | 98           | 80 - 120  | ND, RDL=100       | ug/L  |           |           |             |           |
| 9502809  | Total Lead (Pb)       | 2024/07/09 | 101          | 80 - 120  | 97           | 80 - 120  | ND, RDL=0.50      | ug/L  |           |           |             |           |
| 9502809  | Total Molybdenum (Mo) | 2024/07/09 | 100          | 80 - 120  | 101          | 80 - 120  | ND, RDL=0.50      | ug/L  |           |           |             |           |
| 9502809  | Total Nickel (Ni)     | 2024/07/09 | 97           | 80 - 120  | 94           | 80 - 120  | ND, RDL=1.0       | ug/L  |           |           |             |           |
| 9502809  | Total Selenium (Se)   | 2024/07/09 | 100          | 80 - 120  | 103          | 80 - 120  | ND, RDL=2.0       | ug/L  |           |           |             |           |
| 9502809  | Total Silver (Ag)     | 2024/07/09 | 94           | 80 - 120  | 95           | 80 - 120  | ND,<br>RDL=0.090  | ug/L  |           |           |             |           |
| 9502809  | Total Thallium (Tl)   | 2024/07/09 | 103          | 80 - 120  | 99           | 80 - 120  | ND,<br>RDL=0.050  | ug/L  |           |           |             |           |
| 9502809  | Total Tungsten (W)    | 2024/07/09 | 106          | 80 - 120  | 102          | 80 - 120  | ND, RDL=1.0       | ug/L  |           |           |             |           |
| 9502809  | Total Uranium (U)     | 2024/07/09 | 99           | 80 - 120  | 95           | 80 - 120  | ND, RDL=0.10      | ug/L  |           |           |             |           |
| 9502809  | Total Vanadium (V)    | 2024/07/09 | 97           | 80 - 120  | 94           | 80 - 120  | ND, RDL=0.50      | ug/L  |           |           |             |           |
| 9502809  | Total Zinc (Zn)       | 2024/07/09 | 99           | 80 - 120  | 99           | 80 - 120  | ND, RDL=5.0       | ug/L  |           |           |             |           |
| 9502809  | Total Zirconium (Zr)  | 2024/07/09 | 98           | 80 - 120  | 97           | 80 - 120  | ND, RDL=1.0       | ug/L  |           |           |             |           |
| 9506942  | Total Sulphide        | 2024/07/10 | 110          | 80 - 120  | 104          | 80 - 120  | ND,<br>RDL=0.0018 | mg/L  |           |           |             |           |

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU  
VERITAS

Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

### VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Patricia Legett, Project Manager

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



Bureau Veritas Proprietary Software  
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

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Bureau Veritas  
6740 Campbell Road, Mississauga, Ontario Canada L5N 2L8 Tel: (905) 817-5700 Toll-free: 800-583-6268 Fax: (905) 817-5777 www.bvna.com



NONT-2024-07-429

Page 1 of 1

| INVOICE TO:                                                                                                                                                                                                                                                                                                                                           |                                                      | REPORT TO:                                                                             |                       | PROJECT INFORMATION:                    |                                 | Use Only:                                                                                                                           |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Company Name: #30554 exp Services Inc                                                                                                                                                                                                                                                                                                                 | Company Name: EXP Services Inc                       | Quotation #: C41494                                                                    | Bureau Veritas Job #: | Bottle Order #:                         |                                 |                                                                                                                                     |                  |
| Attention: Accounts Payable                                                                                                                                                                                                                                                                                                                           | Attention: Francois Chartier                         | P.O. #: ENV-BRM                                                                        |                       |                                         | COC #:                          |                                                                                                                                     | Project Manager: |
| Address: 1595 Clark Blvd                                                                                                                                                                                                                                                                                                                              | Address: ryan.alexander@exp.com                      | Project: BRM-23015226-A0                                                               |                       |                                         | COC #:                          |                                                                                                                                     | Project Manager: |
| Brampton ON L6T 4V1                                                                                                                                                                                                                                                                                                                                   | Thabiso Madisa                                       | Site #: Britannia Rd & First Line - Ph                                                 |                       |                                         | COC #:                          |                                                                                                                                     | Project Manager: |
| Tel: (905) 793-9800                                                                                                                                                                                                                                                                                                                                   | Tel: (905) 793-9800 Ext: 2523                        | Sampled By: TM                                                                         |                       |                                         | COC #:                          |                                                                                                                                     | Project Manager: |
| Email: AP@exp.com; Karen.Burke@exp.com                                                                                                                                                                                                                                                                                                                | Email: francois.chartier@exp.com, amara.neku@exp.com |                                                                                        |                       |                                         |                                 | COC #:                                                                                                                              |                  |
| MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY                                                                                                                                                                                                          |                                                      |                                                                                        |                       | ANALYSIS REQUESTED (PLEASE BE SPECIFIC) |                                 |                                                                                                                                     |                  |
| Regulation 153 (2011)                                                                                                                                                                                                                                                                                                                                 |                                                      | Other Regulations                                                                      |                       | Special Instructions                    |                                 | Turnaround Time (TAT) Required:                                                                                                     |                  |
| <input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Medium/Fine                                                                                                                                                                                                                                               |                                                      | <input type="checkbox"/> CCME <input checked="" type="checkbox"/> Sanitary Sewer Bylaw |                       |                                         |                                 | Regular (Standard) TAT:                                                                                                             |                  |
| <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse                                                                                                                                                                                                                                                    |                                                      | <input type="checkbox"/> Reg 558 <input checked="" type="checkbox"/> Storm Sewer Bylaw |                       |                                         |                                 | (will be applied if Rush TAT is not specified)                                                                                      |                  |
| <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other <input type="checkbox"/> For RSC                                                                                                                                                                                                                                                 |                                                      | <input type="checkbox"/> MISA Municipality: Milton                                     |                       |                                         |                                 | Standard TAT = 5-7 Working days for most tests.                                                                                     |                  |
| <input type="checkbox"/> Table 4                                                                                                                                                                                                                                                                                                                      |                                                      | <input checked="" type="checkbox"/> PWQO <input type="checkbox"/> Reg 405 Table        |                       |                                         |                                 | Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details. |                  |
|                                                                                                                                                                                                                                                                                                                                                       |                                                      | <input type="checkbox"/> Other                                                         |                       |                                         |                                 | Job Specific Rush TAT (if applies to entire submission)                                                                             |                  |
| Include Criteria on Certificate of Analysis (COC)? YES                                                                                                                                                                                                                                                                                                |                                                      |                                                                                        |                       |                                         |                                 | Date Required: Time Required:                                                                                                       |                  |
| Sample Barcode Label                                                                                                                                                                                                                                                                                                                                  | Sample (Location) Identification                     | Date Sampled                                                                           | Time Sampled          | Matrix                                  | Field Filtered (please circle): | # of Bottles                                                                                                                        | Comments         |
| 1                                                                                                                                                                                                                                                                                                                                                     | BH 1-20                                              | 24/07/24                                                                               | 10:45                 | GW                                      | Yes                             | 11                                                                                                                                  | Please include   |
| 2                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         | X                               |                                                                                                                                     | COC in final     |
| 3                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         | X                               |                                                                                                                                     | report           |
| 4                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         |                                 |                                                                                                                                     |                  |
| 5                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         |                                 |                                                                                                                                     |                  |
| 6                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         |                                 |                                                                                                                                     |                  |
| 7                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         |                                 |                                                                                                                                     |                  |
| 8                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         |                                 |                                                                                                                                     |                  |
| 9                                                                                                                                                                                                                                                                                                                                                     |                                                      |                                                                                        |                       |                                         |                                 |                                                                                                                                     |                  |
| 10                                                                                                                                                                                                                                                                                                                                                    |                                                      |                                                                                        |                       |                                         |                                 |                                                                                                                                     |                  |
| * RELINQUISHED BY: (Signature/Print)                                                                                                                                                                                                                                                                                                                  |                                                      | Date: (YY/MM/DD)                                                                       | Time                  | RECEIVED BY: (Signature/Print)          |                                 | Date: (YY/MM/DD)                                                                                                                    | Time             |
| Ryan Alexander                                                                                                                                                                                                                                                                                                                                        |                                                      | 24/07/24                                                                               | 5:50                  | Ryan Alexander                          |                                 | 24/07/24                                                                                                                            | 6:55             |
| * UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS. |                                                      |                                                                                        |                       |                                         |                                 | Laboratory Use Only                                                                                                                 |                  |
| * IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.                                                                                                                                                                             |                                                      |                                                                                        |                       |                                         |                                 | Time Sensitive                                                                                                                      |                  |
| * SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.                                                                                                                                                                                      |                                                      |                                                                                        |                       |                                         |                                 | Temperature (°C) on Receipt                                                                                                         |                  |
|                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                                                        |                       |                                         |                                 | Custody Seal                                                                                                                        |                  |
|                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                                                        |                       |                                         |                                 | Present                                                                                                                             |                  |
|                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                                                        |                       |                                         |                                 | Intact                                                                                                                              |                  |
|                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                                                        |                       |                                         |                                 | Yes                                                                                                                                 |                  |
|                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                                                        |                       |                                         |                                 | No                                                                                                                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                       |                                                      |                                                                                        |                       |                                         |                                 | White: Bureau Veritas, Yellow: Client                                                                                               |                  |

Bureau Veritas Canada (2019) Inc.



BUREAU  
VERITAS

Bureau Veritas Job #: C4K4216  
Report Date: 2024/07/11

exp Services Inc  
Client Project #: BRM-23015226-A0  
Site Location: BRITANNIA RD & FIRST LINE - PHASE 1  
Your P.O. #: ENV-BRM  
Sampler Initials: TM

**Exceedance Summary Table – Prov. Water Quality Obj.**  
**Result Exceedances**

| Sample ID | Bureau Veritas ID | Parameter             | Criteria | Result | DL   | UNITS |
|-----------|-------------------|-----------------------|----------|--------|------|-------|
| BH 1-20   | ZQI071-03-Lab Dup | Dissolved Boron (B)   | 200      | 1300   | 50   | ug/L  |
| BH 1-20   | ZQI071-03         | Dissolved Boron (B)   | 200      | 1400   | 50   | ug/L  |
| BH 1-20   | ZQI071-02         | Total Boron (B)       | 200      | 1100   | 10   | ug/L  |
| BH 1-20   | ZQI071-02         | Total Cobalt (Co)     | 0.9      | 3.6    | 0.50 | ug/L  |
| BH 1-20   | ZQI071-03         | Dissolved Cobalt (Co) | 0.9      | 3.7    | 2.5  | ug/L  |
| BH 1-20   | ZQI071-03-Lab Dup | Dissolved Cobalt (Co) | 0.9      | 3.7    | 2.5  | ug/L  |
| BH 1-20   | ZQI071-02         | Total Iron (Fe)       | 300      | 400    | 100  | ug/L  |
| BH 1-20   | ZQI071-02         | Total Uranium (U)     | 5        | 12     | 0.10 | ug/L  |
| BH 1-20   | ZQI071-03-Lab Dup | Dissolved Uranium (U) | 5        | 11     | 0.50 | ug/L  |
| BH 1-20   | ZQI071-03         | Dissolved Uranium (U) | 5        | 11     | 0.50 | ug/L  |

**Detection Limit Exceedances**

| Sample ID | Bureau Veritas ID | Parameter                | Criteria | Result | DL   | UNITS |
|-----------|-------------------|--------------------------|----------|--------|------|-------|
| BH 1-20   | ZQI071-03         | Dissolved Cadmium (Cd)   | 0.2      | <0.45  | 0.45 | ug/L  |
| BH 1-20   | ZQI071-03-Lab Dup | Dissolved Cadmium (Cd)   | 0.2      | <0.45  | 0.45 | ug/L  |
| BH 1-20   | ZQI071-03-Lab Dup | Dissolved Iron (Fe)      | 300      | <500   | 500  | ug/L  |
| BH 1-20   | ZQI071-03         | Dissolved Iron (Fe)      | 300      | <500   | 500  | ug/L  |
| BH 1-20   | ZQI071-03-Lab Dup | Dissolved Silver (Ag)    | 0.1      | <0.45  | 0.45 | ug/L  |
| BH 1-20   | ZQI071-03         | Dissolved Silver (Ag)    | 0.1      | <0.45  | 0.45 | ug/L  |
| BH 1-20   | ZQI071-03-Lab Dup | Dissolved Zirconium (Zr) | 4        | <5.0   | 5.0  | ug/L  |
| BH 1-20   | ZQI071-03         | Dissolved Zirconium (Zr) | 4        | <5.0   | 5.0  | ug/L  |

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.



Your Project #: Campobello job# C4K4216

**Attention: Patricia Legette**

BUREAU VERITAS  
CAMPOBELLO  
6740 CAMPOBELLO ROAD  
MISSISSAUGA, ON  
CANADA L5N 2L8

**Report Date: 2024/07/10**

Report #: R3525428

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C450275**

**Received: 2024/07/05, 14:03**

Sample Matrix: Water  
# Samples Received: 1

| Analyses                       | Date     |           | Laboratory Method       | Analytical Method    |
|--------------------------------|----------|-----------|-------------------------|----------------------|
|                                | Quantity | Extracted |                         |                      |
| Sulphide (as H <sub>2</sub> S) | 1        | N/A       | 2024/07/10              | Auto Calc            |
| Total Sulphide                 | 1        | N/A       | 2024/07/10 AB SOP-00080 | SM 24 4500 S2-A D Fm |

**Remarks:**

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

\* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: Campobello job# C4K4216

**Attention: Patricia Legette**

BUREAU VERITAS  
CAMPOBELLO  
6740 CAMPOBELLO ROAD  
MISSISSAUGA, ON  
CANADA L5N 2L8

**Report Date: 2024/07/10**

Report #: R3525428

Version: 1 - Final

**CERTIFICATE OF ANALYSIS**

**BUREAU VERITAS JOB #: C450275**

**Received: 2024/07/05, 14:03**

Encryption Key



**AUTHORIZED REPORT  
RAPPORT AUTORISÉ**

Bureau Veritas

10 Jul 2024 16:05:48

Please direct all questions regarding this Certificate of Analysis to:  
Stephanie Rodriguez Camacho, Customer Solutions Representative  
Email: [Stephanie.Rodriguez@bureauveritas.com](mailto:Stephanie.Rodriguez@bureauveritas.com)  
Phone# (403) 291-3077

=====

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Bureau Veritas Job #: C450275  
Report Date: 2024/07/10

BUREAU VERITAS  
Client Project #: Campobello job# C4K4216  
Sampler Initials: TM

### RESULTS OF CHEMICAL ANALYSES OF WATER

|                                                                                                                                                   |       |                     |        |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------------|--------|----------|
| Bureau Veritas ID                                                                                                                                 |       | CQQ564              |        |          |
| Sampling Date                                                                                                                                     |       | 2024/07/04<br>10:45 |        |          |
|                                                                                                                                                   | UNITS | BH 1-20             | RDL    | QC Batch |
| Calculated Parameters                                                                                                                             |       |                     |        |          |
| Sulphide (as H <sub>2</sub> S)                                                                                                                    | mg/L  | <0.0020             | 0.0020 | B428320  |
| Anions                                                                                                                                            |       |                     |        |          |
| Total Sulphide                                                                                                                                    | mg/L  | <0.0018 (1)         | 0.0018 | B432632  |
| RDL = Reportable Detection Limit<br>(1) Sample pH <9, preservation incomplete. Due to volatility of analyte, a low bias in the results is likely. |       |                     |        |          |



Bureau Veritas Job #: C450275  
Report Date: 2024/07/10

BUREAU VERITAS  
Client Project #: Campobello job# C4K4216  
Sampler Initials: TM

TEST SUMMARY

**Bureau Veritas ID:** CQQ564  
**Sample ID:** BH 1-20  
**Matrix:** Water

**Collected:** 2024/07/04  
**Shipped:**  
**Received:** 2024/07/05

| Test Description  | Instrumentation | Batch   | Extracted | Date Analyzed | Analyst           |
|-------------------|-----------------|---------|-----------|---------------|-------------------|
| Sulphide (as H2S) | CALC            | B428320 | N/A       | 2024/07/10    | Automated Statchk |
| Total Sulphide    | SPEC            | B432632 | N/A       | 2024/07/10    | Ly Vu             |



Bureau Veritas Job #: C450275  
Report Date: 2024/07/10

BUREAU VERITAS  
Client Project #: Campobello job# C4K4216  
Sampler Initials: TM

### GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

|           |       |
|-----------|-------|
| Package 1 | 1.6°C |
|-----------|-------|

**Results relate only to the items tested.**



Bureau Veritas Job #: C450275  
Report Date: 2024/07/10

QUALITY ASSURANCE REPORT

BUREAU VERITAS  
Client Project #: Campobello job# C4K4216  
Sampler Initials: TM

| QC Batch                                                                                                                                                                                     | Parameter      | Date       | Matrix Spike |           | Spiked Blank |           | Method Blank |       | RPD       |           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------|--------------|-----------|--------------|-----------|--------------|-------|-----------|-----------|
|                                                                                                                                                                                              |                |            | % Recovery   | QC Limits | % Recovery   | QC Limits | Value        | UNITS | Value (%) | QC Limits |
| B432632                                                                                                                                                                                      | Total Sulphide | 2024/07/10 | 110          | 80 - 120  | 104          | 80 - 120  | <0.0018      | mg/L  | NC        | 20        |
| Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.                                                                       |                |            |              |           |              |           |              |       |           |           |
| Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.                                                       |                |            |              |           |              |           |              |       |           |           |
| Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.                                  |                |            |              |           |              |           |              |       |           |           |
| Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.                                                            |                |            |              |           |              |           |              |       |           |           |
| NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL). |                |            |              |           |              |           |              |       |           |           |



Bureau Veritas Job #: C450275  
Report Date: 2024/07/10

BUREAU VERITAS  
Client Project #: Campobello job# C4K4216  
Sampler Initials: TM

## VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Suwan (Sze Yeung) Fock, B.Sc., Scientific Specialist



Bureau Veritas Proprietary Software  
Logiciel Propriétaire de Bureau Veritas

Automated Statchk

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Scott Cantwell, General Manager responsible for Alberta Environmental laboratory operations.

Sent to: Bureau Veritas Calgary (19th)  
4000 19th Street NE  
Calgary, AB, T2E 6P8  
Tel: (403) 291-3077

## Appendix E – In-Situ Infiltration Tests Results

Britannia Road and First Line - Tribal Milton Phase 1  
 BRM-23015226-A0  
 Low Impact Design (LID) Calculations for Infiltration Gallery

| Test Location | Hydraulic Conductivity (K <sub>fs</sub> ) (m/s) | Hydraulic Conductivity (K <sub>fs</sub> ) (cm/s) | Infiltration Rate (IR) (mm/hr) | Discrete Design Infiltration Rate(DIR) (mm/hr) | Percolation Time (min/cm) |
|---------------|-------------------------------------------------|--------------------------------------------------|--------------------------------|------------------------------------------------|---------------------------|
| INF 1-20      | 9.6E-08                                         | 9.6E-06                                          | 25                             | 10                                             | 61                        |
| INF 1-20 redo | 2.2E-08                                         | 2.2E-06                                          | 17                             | 7                                              | 90                        |
|               |                                                 |                                                  |                                |                                                |                           |
|               |                                                 |                                                  |                                |                                                |                           |
|               |                                                 |                                                  |                                |                                                |                           |
|               |                                                 |                                                  |                                |                                                |                           |
|               |                                                 |                                                  |                                |                                                |                           |
|               |                                                 |                                                  |                                |                                                |                           |

| Geology Units                                              | Geometric Mean of K <sub>fs</sub> (m/s) | Geometric Mean of K <sub>fs</sub> (cm/s) | Infiltration Rate (I) (mm/hr)* | Ratio of Mean Measured Infiltration Rates | Safety Correction Factor (SCF) |
|------------------------------------------------------------|-----------------------------------------|------------------------------------------|--------------------------------|-------------------------------------------|--------------------------------|
| Overlying Geology Unit                                     | 4.57E-08                                | 4.57E-06                                 | 20                             | 1.0                                       | 2.5                            |
| Underlying Geology Unit (1.5 m below the bottom of trench) | 4.57E-08                                | 4.57E-06                                 | 20                             |                                           |                                |

|                                       |                |    |                           |    |
|---------------------------------------|----------------|----|---------------------------|----|
| Design Infiltration Rate(DIR) (mm/hr) | Minimum        | 7  | Percolation Time (min/cm) | 61 |
|                                       | Maximum        | 10 |                           | 90 |
|                                       | Geometric Mean | 8  |                           | 74 |

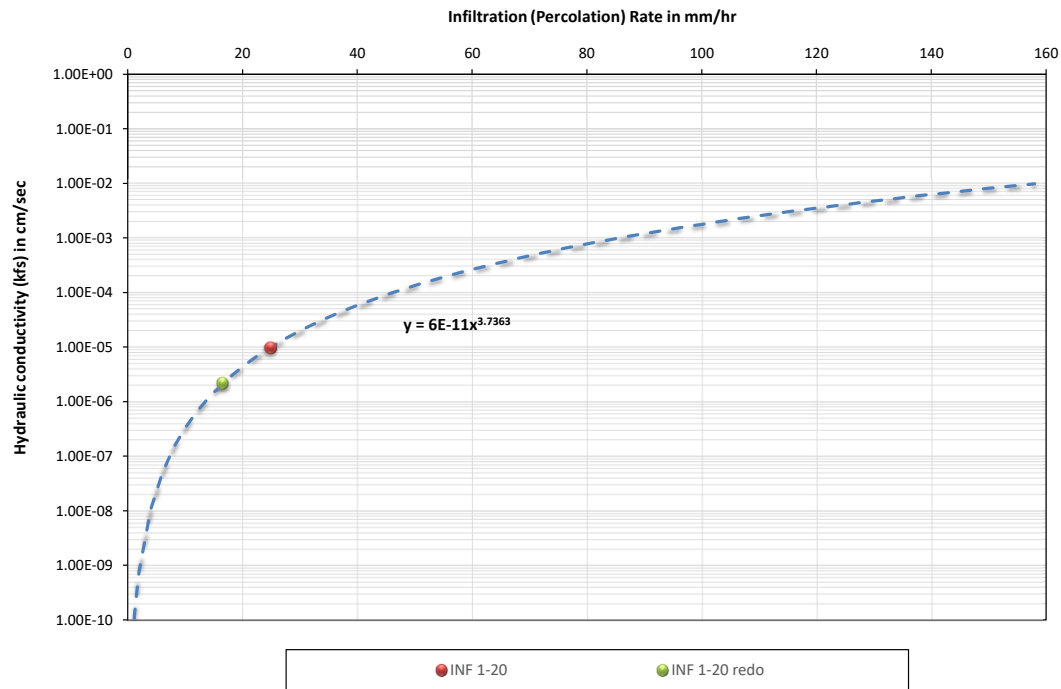
Note:  
 Analytical Solutions (CVC and TRCA 2010)

$$Infiltration\ Rate\ (IR) = \left(\frac{K_{fs}}{6 \times 10^{-11}}\right)^{\frac{1}{3.7363}}$$

$$Design\ Infiltration\ Rate\ (DIR) = \frac{IR}{SCF}$$

Kfs: hydraulic conductivity (cm/sec)  
 IR: infiltration rate (mm/hr)  
 DIR: design infiltration rate (mm/hr)  
 SCF: Safety Correction Factor (based on the chart recommended by CVC and TRCA, 2010)

**Figure : Approximate relationship between infiltration rate and hydraulic conductivity  
(LID SWM planning and Design Guide, Appendix C1)**



## Appendix F – Water Balance Assessment (Site Specific)

## Appendix F-1: Model Input

Britannia Road and First Line, Milton (Phase 1)  
BRM-23015226-A0

| Period    | Month | Average<br>Temperature<br>(°C) | Average<br>Precipitation<br>(mm) |
|-----------|-------|--------------------------------|----------------------------------|
| 1981-2010 | 1     | -6.30                          | 52.77                            |
| 1981-2010 | 2     | -5.20                          | 60.00                            |
| 1981-2010 | 3     | -0.90                          | 57.20                            |
| 1981-2010 | 4     | 6.00                           | 76.50                            |
| 1981-2010 | 5     | 12.30                          | 79.30                            |
| 1981-2010 | 6     | 17.40                          | 74.80                            |
| 1981-2010 | 7     | 20.00                          | 73.50                            |
| 1981-2010 | 8     | 19.00                          | 79.30                            |
| 1981-2010 | 9     | 14.80                          | 86.20                            |
| 1981-2010 | 10    | 8.40                           | 68.30                            |
| 1981-2010 | 11    | 2.80                           | 88.50                            |
| 1981-2010 | 12    | -2.90                          | 65.90                            |

**Note:**

|              |                 |      |
|--------------|-----------------|------|
| Station Name | Gerogetown WWTP |      |
| Station ID   | 6152695         |      |
| Longitude    | -79.88          |      |
| Latitude     | 43.64           |      |
| Elevation    | 221.0           | masl |

## Appendix F-2: Model Output

Britannia Road and First Line, Milton (Phase 1)  
BRM-23015226-A0

| Date                           | Month     | PET           | P             | P-PET | Soil Moisture | AET           | PET-AET | Snow Storage  | Surplus       |
|--------------------------------|-----------|---------------|---------------|-------|---------------|---------------|---------|---------------|---------------|
| 1981-2010                      | January   | 8.4           | 67.8          | 24.7  | 135.0         | 8.4           | 0.0     | 34.7          | 39.7          |
| 1981-2010                      | February  | 10.3          | 60.0          | 38.7  | 135.0         | 10.3          | 0.0     | 45.8          | 38.7          |
| 1981-2010                      | March     | 19.2          | 57.2          | 64.8  | 135.0         | 19.2          | 0.0     | 18.9          | 64.8          |
| 1981-2010                      | April     | 36.8          | 76.5          | 58.6  | 135.0         | 36.8          | 0.0     | 0.0           | 58.6          |
| 1981-2010                      | May       | 67.7          | 79.3          | 11.6  | 135.0         | 67.7          | 0.0     | 0.0           | 11.6          |
| 1981-2010                      | June      | 98.6          | 74.8          | -23.8 | 111.2         | 98.6          | 0.0     | 0.0           | 0.0           |
| 1981-2010                      | July      | 114.6         | 73.5          | -41.1 | 77.3          | 107.4         | 7.2     | 0.0           | 0.0           |
| 1981-2010                      | August    | 91.6          | 79.3          | -12.3 | 70.3          | 86.3          | 5.2     | 0.0           | 0.0           |
| 1981-2010                      | September | 54.0          | 86.2          | 32.2  | 102.6         | 54.0          | 0.0     | 0.0           | 0.0           |
| 1981-2010                      | October   | 28.7          | 68.3          | 39.6  | 135.0         | 28.7          | 0.0     | 0.0           | 7.1           |
| 1981-2010                      | November  | 15.1          | 88.5          | 73.4  | 135.0         | 15.1          | 0.0     | 0.0           | 73.4          |
| 1981-2010                      | December  | 9.5           | 65.9          | 42.8  | 135.0         | 9.5           | 0.0     | 13.6          | 42.8          |
| <b>Annual rate<br/>(mm/yr)</b> |           | <b>554.50</b> | <b>877.30</b> |       |               | <b>542.00</b> |         | <b>113.00</b> | <b>335.30</b> |

### Note:

|              |                 |      |
|--------------|-----------------|------|
| Station Name | Gerogetown WWTP |      |
| Station ID   | 6152695         |      |
| Longitude    | -79.88          |      |
| Latitude     | 43.64           |      |
| Elevation    | 221.0           | masl |

## APPENDIX F-3

### Average Infiltration Factors

Britannia Road and First Line, Milton (Phase 1)  
BRM-23015226-A0

#### F-3-1. Average Infiltration Factor – Pre Development Conditions

Un-Mitigated

| Category                                                    | Weighted Infiltration Factor |
|-------------------------------------------------------------|------------------------------|
| Topography/Slope                                            | 0.13                         |
| Soil Type<br>Glaciolacustrine deposits<br>(Silty to Clayey) | 0.10                         |
| Cover<br>Landscaped Areas                                   | 0.10                         |
| <b>Total weighted Infiltration factor</b>                   | <b>0.33</b>                  |

#### F-3-2. Average Infiltration Factor – Post Development Conditions

Un-Mitigated

| Category                                                    | Weighted Infiltration Factor |
|-------------------------------------------------------------|------------------------------|
| Topography/Slope                                            | 0.132                        |
| Soil Type<br>Glaciolacustrine deposits<br>(Silty to Clayey) | 0.10                         |
| Cover<br>Landscaped areas                                   | 0.10                         |
| <b>Total weighted Infiltration factor</b>                   | <b>0.33</b>                  |

Notes:

Landscaped area considered equivalent to Cultivated Cover

Assumed existing and proposed slopes are similar

## Appendix F-4

### Summary of Pre and Post-Development Water Balance

Britannia Road and First Line, Milton (Phase 1)  
BRM-23015226-A0

#### F-4-1. Climate Data

| Item               | Pre-Development<br>mm/a | Post-Development<br>mm/a |
|--------------------|-------------------------|--------------------------|
| Precipitation      | 877.30                  | 877.30                   |
| Evapotranspiration | 542.00                  | 542.00                   |
| Water Surplus      | 335.30                  | 335.30                   |
| Infiltration Rate  | 111.32                  | 111.32                   |
| Runoff             | 223.98                  | 223.98                   |

#### F-4-2. Pre-Developed Area Statistics

|                                                      |                      |             |
|------------------------------------------------------|----------------------|-------------|
| Open spaces/Landscaped                               | 216,019 sq.m.        | 29.2%       |
| Building                                             | 0 sq.m.              | 0.0%        |
| Areas with depth of water table < 1.0 m (impervious) | 523,100 sq.m.        | 70.8%       |
| Impervious (Water Body, Pavement) Surfaces           | 0 sq.m.              | 0.0%        |
| <b>TOTAL</b>                                         | <b>739,119 sq.m.</b> | <b>100%</b> |

#### F-4-3. Post Development Area Statistics

##### Commercial Development

|                                                                           |                      |       |
|---------------------------------------------------------------------------|----------------------|-------|
| Building Roofs                                                            | 244,472 sq.m.        | 33.1% |
| ROW (roads, sidewalks, parking and also with water table < 1.0 m) - Paved | 310,600 sq.m.        | 42.0% |
| SWM                                                                       | 35,200 sq.m.         | 4.8%  |
| Landscaped and Woodlot Areas (excluding depth of water table < 1.0 m)     | 148,847 sq.m.        | 20.1% |
| <b>TOTAL</b>                                                              | <b>739,119 sq.m.</b> |       |

#### F-4-4-1. Annual Pre-Development Water Balance

| Land Use                                                   | Area<br>(sq.m.) | Precipitation<br>(cu.m.)                 | Actual Evapotranspiration<br>(cu.m.) | Infiltration Rate<br>(cu.m.) | Run-off<br>(cu.m.) |
|------------------------------------------------------------|-----------------|------------------------------------------|--------------------------------------|------------------------------|--------------------|
| Building                                                   | 0               | 0                                        | 0                                    | 0                            | 0                  |
| Total Impervious (Water Bodies and high water level areas) | 523,100         | 458,916                                  | 283,520                              | 0                            | 175,395            |
| Open Spaces                                                | 216,019         | 189,513                                  | 117,082                              | 24,047                       | 48,384             |
| <b>TOTAL</b>                                               | <b>739,119</b>  | <b>648,429</b>                           | <b>400,602</b>                       | <b>24,047</b>                | <b>223,779</b>     |
|                                                            |                 | <b>Pre-development Infiltration Rate</b> | <b>542.000</b>                       | <b>32.535</b>                | <b>302.765</b>     |
|                                                            |                 | 100                                      | 62                                   | 4                            | 35                 |

#### F-4-5-1. Annual Post-Development Water Balance

| Land Use                                                              | Area<br>(sq.m.) | Precipitation<br>(cu.m.)                  | Actual Evapotranspiration<br>(cu.m.) | Infiltration Rate<br>(cu.m.) | Run-off<br>(cu.m.) |
|-----------------------------------------------------------------------|-----------------|-------------------------------------------|--------------------------------------|------------------------------|--------------------|
| Building Roofs                                                        | 244,472         | 214,475                                   | 0                                    | 0                            | 214,475            |
| ROW (roads, sidewalks, parking) - Paved                               | 310,600         | 272,489                                   | 0                                    | 0                            | 272,489            |
| SWM and also with depth of water table < 1.0 m                        | 35,200          | 30,881                                    | 19,078                               | 0                            | 11,803             |
| Landscaped and Woodlot Areas (excluding depth of water table < 1.0 m) | 148,847         | 130,583                                   | 80,675                               | 16,570                       | 33,339             |
| <b>TOTAL</b>                                                          | <b>739,119</b>  | <b>648,429</b>                            | <b>99,753</b>                        | <b>16,570</b>                | <b>532,106</b>     |
|                                                                       |                 | <b>Post-development Infiltration Rate</b> | <b>134.963</b>                       | <b>22.42</b>                 | <b>719.92</b>      |
|                                                                       |                 | 100.0                                     | 15.4                                 | 2.6                          | 82.1               |

#### F-4-6-1. Comparison of Pre-Development and Post-Development

| Item                                      | Precipitation<br>(cu.m.) | Actual Evapotranspiration<br>(cu.m.) | Run-off<br>(cu.m.) | Infiltration Rate<br>(cu.m.) |
|-------------------------------------------|--------------------------|--------------------------------------|--------------------|------------------------------|
| Pre-Development                           | 648,429                  | 400,602                              | 223,779            | 24,047                       |
| Post Development                          | 648,429                  | 99,753                               | 532,106            | 16,570                       |
| <b>Pre-development Infiltration Rate</b>  |                          |                                      |                    | <b>32.5</b>                  |
| <b>Post-development Infiltration Rate</b> |                          |                                      |                    | <b>22.4</b>                  |
| <b>Deficit Post Development</b>           |                          |                                      |                    | <b>7,478</b>                 |

## APPENDIX F-5

### Britannia Road and First Line, Milton (Phase 1)

BRM-23015226-A0

Estimate of Area for Infiltration System

#### 1. Design Infiltration Rate

| Item                                        | Value  | Unit                    |
|---------------------------------------------|--------|-------------------------|
| Geometric mean of design infiltration rates | 8      | mm/h                    |
|                                             | 192.00 | mm/day                  |
|                                             | 0.19   | m/day/m <sup>2</sup>    |
|                                             | 0.38   | m/48 hrs/m <sup>2</sup> |

#### 2. Climate Data

|                                                       |        |             |
|-------------------------------------------------------|--------|-------------|
| Total precipitation based on weather station records  | 877.30 | mm/yr       |
| Total rain in an eight (8) month precipitation period | 584.87 | mm/8 months |
| Based on a 16-week precipitation period               | 36.55  | mm/2 week   |
| Based on a 16-week precipitation period               | 0.037  | m/2 weeks   |

#### 3. Roof and Resulted Runoff Volume

|                                                                  |         |                        |
|------------------------------------------------------------------|---------|------------------------|
| Total roof area                                                  | 244,472 | m <sup>2</sup>         |
| Rooftop runoff volume in an eight (8) month precipitation period | 142,984 | m <sup>3</sup> /year   |
| Total rooftop runoff volume per 2 week                           | 8,936   | m <sup>3</sup> /2 week |

#### 4. Estimated Deficit Volume

|                                                       |        |                        |
|-------------------------------------------------------|--------|------------------------|
| Estimated deficit based on water balance calculations | 7,478  | m <sup>3</sup> /yr     |
| Deficit over available water (roof runoff)            | 5%     | -                      |
| Min. Storage to infiltrate to meet deficit            | 467.35 | m <sup>3</sup> /2 week |
| mm Retention                                          | 0.6    | mm                     |

|                                                                               |       |                |
|-------------------------------------------------------------------------------|-------|----------------|
| Area of infiltration system required to mitigate infiltrate deficit (rounded) | 1,215 | m <sup>2</sup> |
| % of total site area                                                          | 0.16% |                |

Note: only roof water to be infiltrated (clean water)

## Appendix G – Construction Flow Rate Calculations

## APPENDIX G: Construction Dewatering Calculations

Britannia Rd and First Line - Phase 1  
BRM-23015226-A0

Table G-1: Flow all Sides of the Excavation

| Parameters                                                                         | Symbols   | Unit                | Three Industrial Buildings one side at a time (slab-on-grade) | Utility Trench |
|------------------------------------------------------------------------------------|-----------|---------------------|---------------------------------------------------------------|----------------|
| Ground Elevation                                                                   | -         | mASL                | 186.28                                                        | 186.28         |
| Highest Groundwater Elevation                                                      | -         | mASL                | 186.28                                                        | 186.28         |
| Lowest Footing Elevation                                                           | -         | mASL                | 183.28                                                        | 182.28         |
| Dewatered Elevation Target                                                         | -         | mASL                | 182.28                                                        | 181.28         |
| Top of the Water-Bearing Zone                                                      | -         | mASL                | 186.28                                                        | 186.28         |
| Base of the Water-Bearing Zone                                                     | -         | mASL                | 171.00                                                        | 171.00         |
| Height of Water Table Above the Base of Water-Bearing Zone                         | H         | m                   | 15.28                                                         | 15.28          |
| Height of Dewatering Target Above the Base of Water-Bearing Zone                   | $h_w$     | m                   | 11.28                                                         | 10.28          |
| Hydraulic Conductivity                                                             | K         | m/s                 | 2.31E-07                                                      | 2.31E-07       |
| Length of Excavation                                                               | -         | m                   | 30.00                                                         | 30.00          |
| Width of Excavation                                                                | -         | m                   | 1.50                                                          | 3.00           |
| Method to Calculate Radius of Influence                                            | -         | -                   | Sichardt                                                      | Sichardt       |
| Radius of Influence from Sides of Excavation                                       | Ro        | m                   | 5.77                                                          | 7.21           |
| Distance to Linear Source from Sides of excavation                                 | $Lo=Ro/2$ | m                   | 2.88                                                          | 3.60           |
| Dewatering Flow Rate (unconfined linear flow component)                            | Q         | m <sup>3</sup> /day | 23.16                                                         | 23.35          |
| Factor of Safety                                                                   | FS        | -                   | 2.00                                                          | 2.00           |
| Dewatering Flow Rate (multiplied by factor of safety)                              | Q.FS      | m <sup>3</sup> /day | 46.33                                                         | 46.70          |
| Precipitation Event                                                                | -         | mm/day              | 25                                                            | 25             |
| Volume from Precipitation                                                          | -         | m3/day              | 1.125                                                         | 2.25           |
| Dewatering Flow Rate <b>Without Safety Factor</b> (including rainwater collection) | -         | m3/day              | 24.29                                                         | 25.60          |
| Dewatering Flow Rate <b>With Safety Factor</b> (including rainwater collection)    | -         | m3/day              | 47.45                                                         | 48.95          |

|                                                |   |                     |        |        |
|------------------------------------------------|---|---------------------|--------|--------|
| Precipitation Event 2 year storm (~57.3 mm)    | - | m <sup>3</sup> /day | 2.5785 | 5.157  |
| Precipitation Event 100 year storm (~124.9 mm) | - | m <sup>3</sup> /day | 5.6205 | 11.241 |

### Notes:

mASL - meters above sea level

### Analytical Solution for Estimating Plane Flow from an Unconfined Aquifer to a Fully-Penetrating Excavation

$$Q_w = Kx \frac{H^2 - h_w^2}{L_o}$$

Where:

Q<sub>w</sub> = Flow rate per unit length of excavation (m<sup>3</sup>/s)

K = Hydraulic conductivity (m/s)

H = Height of static water table above base of water-bearing zone (m)

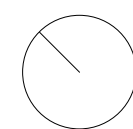
h<sub>w</sub> = Height of target water level above the base of water-bearing zone (m)

(Based on the Dupuit Equation)

EXP Services Inc.

*Milton Link Phase One, Milton, Ontario  
Preliminary Hydrogeological Investigation and Water Balance Assessment  
BRM-23015226-A0  
June 18, 2026*

## Appendix H – Site Plan



0 100 200 400