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File No. 1-17-0206-46.1
Brampton Office

November 22, 2019

1467 Bathurst Holdings Inc.
1 York Street, Suite 1100
Toronto, Ontario
M5J 0B6

Attention: 1467 Bathurst Holdings Inc.

RE: HYDROGEOLOGICAL INVESTIGATION REPORT
1467 BATHURST STREET
TORONTO, ONTARIO

Dear Sir/Madam:

Terraprobe Inc. is pleased to provide 1467 Bathurst Holdings Inc. with the result of the hydrogeological investigation for 1467 Bathurst Street, Toronto, Ontario.

The property is currently commercial: vacant (former gas station) lands on the west portion and a surface parking lot on the east portion. It is understood that based on the development concept plan that the Property would be developed with two (2) 30-storey residential buildings and one (1) 35-story and rooftop amenity residential building (west tower) with five (5) level of underground parking. It is noted that the City of Toronto requires both documents are submitted together as a part of development applications. Further, the Toronto Water required that the water quality data must be collected within nine (9) months prior to the date of submission. If the submission is nine (9) months after the sample collection date noted in the report, new groundwater samples will have to be collected prior to submission.

If you have any questions or concerns regarding either of the documents, please do not hesitate to contact the undersigned.

Yours truly,

Terraprobe Inc.

Narjes Alijani, M.Sc., P.Geo.
Project Manager

R. Baker Wohayeb, M. A. Sc., P. Eng., QP_{RA}
Principal

Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

HYDROGEOLOGICAL INVESTIGATION
1467 BATHURST STREET
TORONTO, ONTARIO
M5P 3G8

Prepared for:

1467 Bathurst Holdings Inc.
1 York Street, Suite 1100
Toronto, Ontario
M5J 0B6

File No 1-17-0206-46
Issued: December 4, 2017
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EXECUTIVE SUMMARY

Terraprobe Inc. (Terraprobe) was retained by 1467 Bathurst Holdings Inc. to conduct a hydrogeological investigation for the proposed redevelopment of municipal address 1467 Bathurst Street in Toronto, Ontario (the "Site"). The report is currently updated to reflect the impacts of the new design on the estimated short-term construction dewatering and long-term foundation drainage. Furthermore, groundwater quality was assessed in comparison to the City of Toronto Sanitary and Storm Sewer Discharge By-Law to provide comments on discharge options.

The Site is bounded by private laneway followed by a community building to the north, commercial building to the east, and St. Clair Avenue West to the south and Bathurst Street to the west. The Site is currently vacant (former gas station) on the west portion and a surface parking lot on the east portion. The purpose of the investigation is to assess the groundwater conditions and dewatering requirements for the proposed construction activities and long-term foundation drainage at the Site.

The conclusions of the investigation are as follows:

- The proposed redevelopment will include three (3) high-rise mixed-use buildings resting on a shared five (5)- level underground parking structure beneath a majority of the Site area. The P5 finished floor elevation (FFE) was determined to be at a depth of 15.4 m (141.94 masl) below proposed average grading elevation 157.34 masl; and 16.0 m below the average existing ground surface elevation (157.94 masl) measured at monitoring wells locations.

- The hydrogeological conditions and requirements for the Site are summarized below:

Soil Conditions	
Fill	1.2 to 2.3 m thick
Cohesionless Sands and Silts	14.5 to 20.6 m thick
Silty Clay Glacial Till	At least 9.3 m thick

Groundwater Conditions	
Highest Groundwater Elevation	149.33 masl
Zone of Influence	50.5 m

Groundwater Quality		
	City of Toronto Storm Sewer Limits	**City of Toronto Sanitary and Combined Sewer Limits**
Untreated Groundwater (Sample ID – BH1401)	Exceeds	Exceeds
Treatment Required Prior to Discharge (Yes/No)	Yes	Yes

Groundwater Quantity - Short Term (Construction) with Permeable and Impermeable Shoring System

Underground Parking Level	**Groundwater Seepage (Safety Factor – 1.5)**		**2-Year Rainfall Event**		**Total Discharge Volume (Seepage + Rainfall)**	
	L/day	**L/min**	**L/day**	**L/min**	**L/day**	**L/min**
P5 (Permeable - Lagging Wall)	330,000	229.2	197,000	136.8	**527,000**	**365.9**
P5 (Impermeable Shoring-Caisson Wall)	3,000	2.1	197,000	136.8	**200,000**	**138,9**

Groundwater Quantity - Long Term (Post Construction) with Three (3) Options

Underground Parking Level	**Groundwater Seepage (Safety Factor – 1.5)**		**Infiltration (2-Year Rainfall Event)**		**Total Discharge Volume**	
	L/day	**L/min**	**L/day**	**L/min**	**L/day**	**L/min**
P5 (Drained Foundation along with Lagging Wall)	240,000	166.6	5,000	3.5	**245,000**	**170.1**
P5 (Permeable Raft Foundation along with Caisson Walls)	167,000	115,9	5,000	3.5	**172,000**	**119.4**
P5 (Drained Foundation along with Caisson Walls)	137,000	95.1	5,000	3.5	**142,000**	**98.6**

MECP Regulation Requirements	Permeable Shoring	Impermeable Shoring
Environmental Activity and Sector Registry (EASR) Posting	Not Required	Required
Short Term Permit to Take Water (PTTW)	Required	Not Required
Long Term Permit to Take Water (PTTW)	Required	Required
Municipality Requirements, if connected to municipal sewer		
Short Term Discharge Agreement	Required	
Long Term Discharge Agreement	Required	

If the subfloor drainage system (weeper system) will be connected to city sewer, a Discharge Agreement will have to be obtained from the city. The groundwater will be required enhanced filtration or treatment prior to discharge to either of the City of Toronto's storm or sanitary sewer system.

To avoid long term dewatering, the final building design should consider waterproofing both the foundation walls and the subfloor.

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1.0 INTRODUCTION

Terraprobe Inc. (Terraprobe) was retained by 1467 Bathurst Holdings Inc. to conduct a hydrogeological investigation for the proposed redevelopment of municipal address 1467 Bathurst Street in Toronto, Ontario (the "Site"). A site location plan is provided as **Figure 1**.

The Site is bound by a private laneway and a community building to the north, a commercial building to the east, St. Clair Avenue West to the south and Bathurst Street to the west. The Site currently consists of vacant commercial lands (former gas station) within the west portion and an at-grade parking lot within the east portion. It is understood that the proposed redevelopment of the Site will include constructing two 30-storey residential towers and one 35-story and rooftop amenity residential tower (west tower) resting on a shared five (5)-level underground parking structure. A review of an East-West cross-section (Section A) prepared by Quadrangle Architects Limited, Section No. 1, dated October 9, 2019 indicates that the average ground surface elevation is proposed at 157.34 mal, and base of the underground parking level 5 is proposed at El. 141.94 ± m above sea level (masl) (15.4 ± meters below the proposed ground surface).

Terraprobe completed a hydrogeological assessment project for the Site, in 2017. As part of this investigation five (5) monitoring wells were installed groundwater level and to conduct hydraulic conductivity testing of the subsoil profile presented within the screen interval. The report was revised due to changes proposed in development plans. The current revised report issued to reflect the anticipated changes in the estimated construction dewatering flow rates considering the current final designs. Additionally, a selected existing monitoring well was sampled to provide an updated groundwater quality assessment. Historical groundwater level monitoring data were also reviewed to confirm the groundwater conditions at the Site.

Based on the information secured from this investigation, interpretation, analysis, and advice with respect to the hydrogeological engineering aspects of the proposed development concepts are provided.

2.0 SCOPE OF WORK

The scope of work for the hydrogeologic investigation consisted of the following:

- Background Review. Previous hydrogeological assessment reports and findings from the long-term groundwater level monitoring were reviewed for the current revised report. Additionally, Ontario Geological Survey (OGS) maps, Ministry of the Environment, Conservation and Parks (MECP), Toronto Region and Conservation Authority (TRCA), and Ministry of Natural Resources and Forestry (MNRF) databases were reviewed to understand the regional setting of the Site, and to confirm nearby natural heritage features and groundwater receptors.

- Assessment of groundwater control requirements. An assessment of the groundwater inflow rates and volumes for the currently proposed design was completed. The information obtained from the rising head test and soil grain size information was utilized in order to provide an assessment of the potential groundwater control requirements during construction and for the long-term foundation drainage following construction.

- Completion of groundwater sampling and analysis. Groundwater sampling was completed in order to verify groundwater quality. The results of the analysis were compared to the groundwater quality criteria within the City of Toronto Sanitary and Storm Sewer Discharge By Laws to assess treatment and discharge options for the disposal of pumped groundwater.

- Report preparation. A hydrogeological report has been prepared for the project. A summary of the local groundwater conditions in the area has been completed. An evaluation of the proposed construction methods and an assessment of the potential requirements for dewatering and long-term drainage were completed. Recommendations regarding the estimates of the groundwater control volumes and rates are provided. Regulatory requirements for the groundwater takings will be discussed.

- The above scope of work has been prepared in accordance with all the following:
    - Ontario Water Resources Act
    - Ontario Regulation 387/04
    - Toronto Municipal Code Chapter 681-Sewers

3.0 DESCRIPTION OF SITE CONDITIONS

3.1 Site Location and Description

The Site is bound by a private laneway and a community building to the north, a commercial building to the east, St. Clair Avenue West to the south and Bathurst Street to the west. The Site is rectangular in shape, with a total area of approximately 0.75 ha (1.8 acres), and currently consists of vacant lands and a parking lot. The proposed redevelopment will include 3 high-rise mixed-use buildings resting on shared 5- level underground parking structure beneath a majority of the Site area. The P5 FFE was determined to be at a depth of 15.4 ± m below the proposed average ground surface (El. 141.94 ± masl). A site location plan is provided as **Figure 1**.

3.2 Regional Geology and Physiography

The Site is located within the physiographic region of Southern Ontario known as the South Slope, where the physiographic surface soil geology comprises Till Plains (drumlinized). The South Slope is situated on the south side of the Oak Ridges Moraine, and includes a strip south of the Peel Plain. The slope is smoothed, faintly drumlinized, and scarred at intervals by valleys and tributaries of the Rouge, Don, and Humber River systems (Chapman and Putnam, 1984).

A review of the surface geological map for the Site prepared by Ontario Geological Survey (OGS, 2003) indicates that the Site is located within Till (5b) plain comprising sandy silt to silty sand. A review of the stratigraphy of the Site using Oak Ridges Moraine Group (ORMGR) cross-section tool indicates that Thorncliffe Formation is located beneath the Newmarket till underlaying the Site. The cross-section also indicates that the bedrock is expected at depths ranging from 55 to 59 mbgs. Bedrock within the vicinity of the Site comprises shale and limestone of the Georgian Bay Formation (OGS, 2007)

3.3 Site Topography and Drainage

The Site and surrounding lands are located within a well developed commercial and residential neighbourhood of the City of Toronto. The Site has an average ground surface elevation of 158± masl and slopes to the southeast from an elevation of 159± masl at the northwest corner to 157± masl at the southeast corner.

A response from the governing Conservation Authority indicates that the Site is not regulated by the Conservation Authority. The nearest watercourse is a creek Located within Nordhiemer Ravine, which is located approximately 150 m southeast of the Site. A review of the Source Water Protection Atlas interactive map provided by Ministry of the Environment, Conservation and Parks (MECP) on October 9, 2019 indicates that the creek is flowing from the northeast in a southeasterly direction approximately 300 m east of intersection of St Clair Avenue West and Bathurst Street southeast of the Site. The creek was

noted to have been realigned in the vicinity of the Site (in close proximity to Health Street West). Groundwater and surface water are expected to flow into this creek, which eventually flows into Lake Ontario. Storm water at the Site is expected to drain into landscaped areas on the Site or towards the catch basins onsite and along the municipal roads adjacent to the Site.

3.4 Natural heritage Features and Watershed Setting

The Site is located within Lower Don River sub-watershed of Don River watershed, which lies in the Toronto and Region Conservation Authority (TRCA) jurisdiction.

The Natural Heritage Area online mapping tool provided by Ministry of Natural Resources and Forestry (MNRF) was reviewed on October 9, 2019. A record review indicates wetland features along the Nordhiemer Ravine, with the closest record located approximately 350 m northeast of the Site. The above mentioned wetland features are not evaluated as per Ontario Wetland Evaluation System (OWES).

Records of wooded lands are also scattered to the east and south of the Site. Additionally, there are no records for Areas of Natural and Scientific Interest (ANSI) within or in close proximity of the Site.

3.5 A Review of the Previous Reports

A previous hydrogeological assessment report titled Hydrogeological Study for Category 3 PTTW (final Report) prepared by Terrapex Inc. on September 23, 2014 was reviewed for the current study. Findings from the study are summarised below:

- Beneath a layer of Fill material underlaying the Site native soil consists of silty sand/sand and silt, sand and clayey silt to the termination depth of investigation at 14.7 mbgs.

- Terrapex has been monitoring groundwater level at the Site from 2001. Groundwater is generally present in unconfined conditions within the fine sand/silt and sand at depths ranging between approximately 8.5 to 9.5 mbgs. Groundwater flow is interpreted as flowing in a southeasterly direction.

- The estimated horizontal hydraulic conductivity ranges from 2 x 10^{-5} m/s to 6 x 10^{-5} m/s for the sandy silt to sand layer. It ranges from 5.0 x 10^{-5} to 5.8 x 10^{-6} m/s for silt and clayey silt unit, and is estimated at 1.0 x 10^{-7} m/s for clay.

- A maximum drawdown of 1.76 m is anticipated after 30 days of pumping. A radius of influence (ROI) of 38 m and 40 m are anticipated in the east-west and north-south directions, respectively. The estimated pumping rate could range between 2 and 8 L/min per dewatering well, for a total combined extraction rate of 137 L/min.

- There are no groundwater uses within the estimated ROI and 750 radius of the Site. Furthermore, no impact is anticipated to the watercourse (Nordhiemer Ravine) pertaining the proposed dewatering activities.

Long-term groundwater level monitoring data provided by Terrapex Inc. will be used to understand groundwater fluctuation and to estimate anticipated construction dewatering flow rate, if applicable.

4.0 SITE GEOLOGY AND HYDROGEOLOGY

In general earth fill is underlain by native deposits of dense cohesionless sands and silts, followed by silty clay glacial till. Groundwater levels were measured at elevations of approximately ±146.4 to 148.4 masl.

4.1 Subsurface Investigation

A subsurface investigation was completed by Terraprobe which involved the advancement of five (5) boreholes (BH101 to BH105) on April 12 to 17, 2017 to depths ranging from 18.5 m to 26.5 m below ground surface (bgs). Monitoring wells were installed within each completed borehole. Previous subsurface investigations were completed by others to address the environmental concerns associated with the former gas station within the west portion of the Site. At the time of this investigation, several of these monitoring wells were present. The subsoil profile for the boreholes completed by Terraprobe (2017) on the Site, are recorded on the Borehole Logs in **Appendix A**. A summary of the geotechnical laboratory tests completed by Terraprobe is provided in **Appendix B**. The locations of the monitoring wells monitored during this investigation are shown on **Figure 2**.

Stable groundwater levels at the Site were measured in the Terraprobe monitoring wells (BH101 to BH105) and several of the existing monitoring wells. In-situ permeability (rising head) testing was conducted at BH103 and BH105 wit the detaies presented in Section 4.1.4 below.

4.1.1 Subsoil Profile

Five (5) boreholes were advanced at the Site by Terraprobe in 2017. Previous boreholes were also advanced at the Site by others over the years. The Borehole Location Plan is provided as **Figure 2**. The details from the boreholes are provided as the Borehole Log in **Appendix A**. A summary of the geotechnical laboratory results is provided as **Appendix B**.

Borehole elevations and coordinates are provided relative to geodetic datum (NAD 83). The horizontal coordinates are reported relative to the Universal Transverse Mercator geographic coordinate system (UTM Zone 17T). These elevations are provided for the purpose of relating borehole stratigraphy and should not be used or relied on for other purposes.

The following stratigraphic interpretation is provided on the basis of the borehole findings from the 2017 Terraprobe investigation, as well as geotechnical laboratory testing conducted on selected Terraprobe soil samples in 2017. It should be noted that the subsurface conditions are confirmed at the borehole locations only, and may vary between and beyond the borehole locations. The boundaries between the various strata as noted on the borehole logs represent an inferred transition rather than a precise plane of geological change.

The following provides a summary of the soil conditions encountered during the subsurface investigation completed by Terraprobe in 2017:

Pavement and Earth Fill Materials

BH103 to BH105 encountered an asphalt pavement (40 to 450 mm thick) overlying a 90 to 100 mm thick aggregate layer. BH101 and BH102 encountered no surficial topsoil or pavement at ground surface.

Underlying the surficial materials, the boreholes were advanced through a layer of earth fill that extended to depths of 1.5 m to 2.3 m below grade (Elev. 155.1 to 156.5 masl). The earth fill varied in composition but generally consisted of sandy silt to silty sand. It contained clay, gravel, construction debris, and rootlets. The earth fill was typically dark brown, brown, or grey, and was moist. Due to inconsistent placement and the inherent heterogeneity of earth fill materials, the relative density of the earth fill varied but was on average loose.

Sands and Silts

Underlying the earth fill, the boreholes encountered undisturbed native cohesionless deposits ranging from sandy silt to silty sand (generally "sands and silts") at 0.5 m to 2.3 m below grade (Elev. 155.1 to 156.5 masl). Sands and silts were between 14.5 m to 20.6 m in thickness (where penetrated) and extended to depths of approximately 16.8 m to 22.9 m below grade (Elev. 134.8 to 140.8 masl). The subsurface profile indicates that the sands and silts are thickest in the west and southwest portions of Site, and are least thick in the east portion of Site.

Sands and silts were observed to contain trace clay, and occasional thin seams of silt and clayey silt on which some perched water may exist. BH103 reached target investigation depth within this unit at 18.5 m below grade (Elev. 139.7 masl).

Silty Clay Till

Underlying sands and silts, BH101, BH102, BH104, and BH105 encountered an undisturbed native deposit of glacial till with a matrix of silty clay. This cohesive till was encountered at 16.8 m to 22.9 m below grade (Elev. 134.8 to 140.8 masl). These boreholes reached target investigation depth within this stratum at Elev. 131.2 to 138.5 masl. The silty clay till contained trace sand (with occasional sandy seams) and trace gravel. It was generally grey and moist.

4.1.2 Groundwater Monitoring

Monitoring Wells Installed by Terraprobe

The monitoring wells installed by Terraprobe were constructed of PVC pipe with an interior diameter of 50 mm (BH101-BH105). Monitoring wells were completed with screen lengths of 3.1 m and finished to depths ranging from 12.2 m to 25.8 mbgs. The monitoring wells were installed in the boreholes upon

completion of drilling. The screen depth, groundwater levels and corresponding groundwater elevations are provided on the borehole logs in **Appendix A**. Groundwater level was monitored manually by Terraprobe as part of investigations for the previous and current report for all monitoring wells installed by Terraprobe. **Table 4-1** presents groundwater levels measured at the monitoring wells installed by Terraprobe.

Table 4-1: Summary of the Groundwater Level Monitoring

Well ID		Monitoring Well Depth (mbgs)	Groundwater Level					
			Apr. 18-20, 2017	Nov. 3, 2017	Dec. 3, 2017	Dec. 8, 2017	Dec. 6, 2018	Oct. 10, 2019
BH 101	mbgs	26.0	24.5	-	-	<26	-	-
	masl		133.9	-	-	>132.4	-	-
BH 102	mbgs	26.0	11.3	-	10.2	10.2	9.7	9.2
	masl		146.4	-	147.5	147.5	148.1	148.5
BH 103	mbgs	14.7	11.6	10.7	10.6	10.6	10.2	9.8
	masl		146.6	147.5	147.6	147.6	148	148.4
BH 104	mbgs	12.2	10.7	10.2	10.1	10.1	9.8	9.5
	masl		146.7	147.2	147.3	147.3	147.6	147.9
BH 105	mbgs	26.0	25.2	24.0	24.5	24.5	24.0	24.6
	masl		132.8	134.0	133.5	133.5	134.1	133.4

mbgs: meters below ground surface
masl: meters above sea level

A review of the groundwater level measured within the monitoring wells installed by Terraprobe indicates that groundwater level ranges between 146.6 masl and 148.4 masl within the shallow monitoring wells. It ranges from below 132.8 masl to 148.5 masl within the deep monitoring wells during the monitoring program.

Historical Groundwater Level Monitoring Data

Terrapex Inc. conducted a long-term groundwater monitoring program for the Site. Historical water level monitoring data completed by others (Terrapex Inc.) in previous/existing monitoring wells within a monitoring period between April 2017 and March 2019 was reviewed for this study. The water level data compiled by Terrapex Inc. is provided in **Appendix C**, with a summary presented in **Table 4-2**:

Table 4-2: A Summary of the Long-Term Groundwater Level Monitoring (Terrapex Inc. 2017-2019)

Monitoring Well ID	Monitoring Well Screen Interval		The Highest Groundwater Level	
			March 2018-March 2019	April 2017-March 2018
MW4	5.1-11.2	masl	148.47	147.91
PW2	6.1-12.2	masl	148.28	147.76
EW101, EW102, EW103, EW104, EW105, EW106, EW107, EW108, EW109, EW110, EW111, EW112, EW113, EW114, EW115, EW116, EW117, EW118, EW119, EW120, EW121, EW122, MW1101, MW1102, MW1103, MW1104, MW1105, MW1106, MW1301, MW1302, MW1303, MW1304, MW802, MW803, MW1511	7.6-13.7	masl	149.33	148.20
MW104, MW1401, MW1404, MW1405, MW1510, MW1511, MW1802, MW1806	9.1-12.9	masl	148.6	148.41
BH1SMC, MW106, MW107, MW108, MW1402, MW1403, MW1503, MW1504, MW1509, MW1512,	10.1-13.7	masl	148.74	148.08
MW103,	11.3-14.3	masl	-	147.72
MW1801	15.8-18.9	masl	148.56	-
MW101, MW102, MW105, MW1501, MW1502	22.9-25.9	masl	148.37	147.18
MW1601	27.4-28.9	masl	-	-

masl: meters above sea level
mbgs: meters below ground surface

A review of **Table 4-2** indicates that regardless of the screen intervals, the groundwater level ranges from approximately 147.18 ± to 149.33 ± masl over the monitoring period between April 2017 and March 2019. The highest water level recorded onsite to date was at 149.33 masl at MW1301 measured on September 12, 2018. Groundwater levels are expected to fluctuate seasonally depending on the amount of precipitation and surface run off. For design purposes the groundwater level was assumed at ±149.33 masl.

4.1.3 Groundwater Quality

A groundwater quality assessment program was previously completed for the Site. However, the results passed nine (9) months time frame required by the City of Toronto invalidating the previous water quality assessment. As such, one (1) set of groundwater samples was collected by Terraprobe on October 11, 2019 and submitted to characterize groundwater quality for evaluation against the City of Toronto Storm and Sanitary Sewer Use By-Law parameters. Groundwater samples were collected directly from monitoring well BH1401.

BH1401 was developed and one (1) set of unfiltered groundwater samples was collected in accordance with City of Toronto Storm and Sanitary Sewer use by-law sampling protocols. Upon sampling, all of the

bottles were placed in ice and packed in a cooler at about 4° C for shipment to the analytical laboratory. Sample analysis was performed by SGS Canada Inc., a third party laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA).

The groundwater quality test results and a certificate of analysis are presented in **Appendix D**. The samples were compared to the following:

- City of Toronto Municipal Code Chapter 681 Table 1 – Limits for Sanitary and Combined Sewers Discharge
- City of Toronto Municipal Code Chapter 681 Table 2 – Limits for Storm Sewer Discharge

The exceedances, together with the storm and sanitary criteria, are presented in **Table 4-3**.

Table 4-3- Exceedance Table and Groundwater Quality Results

Parameter	BH 1401 Groundwater Quality Results (mg/L)	City of Toronto Storm Sewer Use Limits (mg/L)	City of Toronto Sanitary Sewer Use Limits (mg/L)
3,3-Dichlorobenzidine	**<0.001**	**0.0008**	0.002
Bis (2-ethylhexyl) phthalate	**0.10**	**0.0088**	**0.012**
PAHs (Total)	**0.020**	**0.0020**	**0.005**
Pentachlorophenol	**<0.005**	0.002	0.005
Tetrachloroethylene	**0.0143**	0.0044	1.0
Polychlorinated Biphenyls	**0.0006**	0.0004	0.001
Total Suspended Solids (TSS)	**505**	**15**	**350**
Manganese	**1.19**	**0.05**	5.0
Arsenic	**0.0263**	**0.02**	1.0
Copper	**0.0921**	**0.04**	2.0
Lead	**0.453**	**0.12**	1.0
Phosphorous	**0.621**	**0.4**	10.0
Zinc	**0.057**	**0.04**	2.0
Biochemical Oxygen Demand (BOD5)	**43**	**15**	300
4AAP-Phenolics	**0.156**	**0.008**	1.0

As shown above, exceedances were recorded for groundwater samples in comparison with the City of Toronto Sanitary and Storm Sewer By-Law. A review of the results shows that groundwater quality at monitoring well BH1401 exceeds on 3,3-Dichlorobenzidine, Bis (2-ethylhexyl) phthalate, PAHs (Total), Pentachlorophenol, Tetrachloroethylene, Polychlorinated Biphenyls, TSS, Arsenic, Copper, Lead, Manganese, Phosphorous, Zinc, Biochemical Oxygen Demand (BOD5), and 4AAP-Phenolics in comparison to the City of Toronto Storm Sewer By-Law. The results review also indicates exceedances for Bis (2-ethylhexyl) phthalate, PAHs (Total) and TSS compare to the City of Toronto Sanitary Sewer By-Law at BH1401.

Additionally, groundwater quality previously exceeded for Ethylbenzene, Benzene, Toluene, and Xylene Mixture, in comparison with the City of Toronto Storm By-Law; and for Benzene in comparison with the City of Toronto Sanitary By-Law threshold.

The proposed underground parking will be constructed at a depth of 15.4 mbgs. Groundwater levels measured within monitoring wells regardless of the screened intervals, ranges from approximately 147.18 ± to 149.33 ± masl over the long-term monitoring program between April 2017 and March 2019. A review of the groundwater quality results suggests that short-term dewatering discharge could be directed to the City of Toronto Sanitary sewer system with treatment required to control TSS, Bis(2-ethylhexyl) phthalate, PAHs, and Benzene levels below the applicable By Law limits. Furthermore, pre-treatment should be considered to treat the elevated parameters noted above, if discharged groundwater is proposed to be directed to the City of Toronto Storm Sewer System. Alternatively, dewatering effluent could be hauled and disposed using a licenced contractor.

Pre-treatment to lower TSS could involve use of settling weir tanks and/or filter bags during construction. The final design for any dewatering effluent pre-treatment system is the responsibility of contractors undertaking construction.

Pre-treatment facilities should be designed for long-term foundation drainage discharge to the City of Toronto Sanitary or Storm Sewer System. Alternatively, a waterproof structure could be designed for the underground parking structure.

4.1.4 Aquifer Performance Tests

Hydraulic conductivity from the Site was determined based on the rising water level recovery of selected monitoring wells (rising head test). This test involves the rapid removal of water from a single well and monitoring the water level recovery. The results of the rising head test were analysed using the Bouwer and Rice method (1976). Findings are summarized in **Table 4-4**, with the results of the analysis are presented in **Appendix E**.

Table 4-4- Summary of the Estimated Hydraulic Conductivities using Rising Head Test

Monitoring Well	Ground Surface Elevation (masl)	Strata Screened Within	Hydraulic Conductivity (m/s)
BH103	158.2	Sands and Silts	7.36×10^{-6}
BH104	157.4	Sands and Silts	6.83×10^{-7}

As documented by Freeze and Cherry (1979), the typical hydraulic conductivity of the strata investigated at the Site range from:

- Sand Silt 10^{-5} m/s to 10^{-7} m/s
- Silty Clay 10^{-7} m/s to 10^{-10} m/s

The hydraulic conductivity field results are relatively consistent with the published values associated with the geological materials which were tested. Based on the analyses, the horizontal hydraulic conductivity of the wells from the rising head tests and the literature were used for the water taking calculations. The values used at the Site for the calculations are 4.02 x 10-6 m/s was considered for native sands and silts in the fill and native layers, which is average of the estimated hydraulic conductivity using rising head method, and a rate of 1.0 x 10^{-8} m/s was considered for silty clay deposits.

5.0 DISCUSSION AND ANALYSIS

5.1 Summary of Hydrogeological Conditions

The results of the investigation completed by Terraprobe indicate the following hydrogeologic features for the Site:

- Underlying the earth fill, native deposits of dense cohesionless sands and silts, followed by silty clay glacial till were encountered.
- The groundwater table for design purposes should be considered to be Elev. 149.33 ± masl at the Site.
- Based on a review of the rising head test data completed at the Site and literature values, the rate of hydraulic conductivity considered for sands and silts was 4.02 x 10^{-6} m/s and 1.0 x 10^{-8} m/s for silty clay soils.

5.2 Proposed Development Plan

A cross-section prepared by Quadrangle Architects Limited, dated November 21, 2019, drawing no. A-451 was reviewed for the current assessment. Based on the cross-section, the proposed redevelopment will include a shared 5- level underground parking structure (P5) beneath a majority of the Site. The P5 FFE was determined to be at a depth of 15.4 m below existing grade (Elev. 141.94 ±masl).

Additionally, development plans (draft) prepared by Quadrangle Architects Limited, dated September 26, 2019 were reviewed. Based on the plans two (2) 30-story residential buildings and one (1) 35-story and rooftop amenity residential building (west tower) are proposed for the proposed development. The towers share the underground parking structure. A permeable shoring system (i.e. lagging wall) along the property boundaries was assumed for this study. The dimensions of proposed excavation and the construction area for the proposed development includes:

Bottom of lowest structure..... 141.94 masl
Base of excavation..... 140.94 masl
Excavation Area.....Approximately 118.5 x 66.5 m

5.3 A review of Geotechnical Investigation Report

The geotechnical investigation report, prepared by Terraprobe, dated October 15, 2019 with file no. 1-17-0206-2-Rev1 was reviewed for the comments provided on shoring and foundation design. Based on the report the shoring cut-off wall approach is recommended as it will provide a fully-continuous temporary groundwater cut-off barrier, which will enable the Site to be dewatered during construction without including more flow into the excavation.

5.4 Short-Term Groundwater Control Requirements (Construction Dewatering)

For P5, the excavation will extend to an elevation of approximately 141.94 ± masl, which is approximately 7.4 m below the assumed elevation of the groundwater table at the Site (Elev. 149.33± masl). In order to provide dry, safe and stable excavation conditions, the groundwater table should be lowered to an elevation of 140.2 ± masl, approximately 1.7 ± m below the lowest anticipated excavation depth.

A numerical analysis was conducted utilizing computer software (Slide 7.014, released March 30, 2016, developed by Rocscience Inc.), utilizing the Finite Element Modelling (FEM) method. FEM for groundwater seepage indicates the short-term (construction) dewatering requirements as provided below. The finite element model results are presented in **Appendix F.**

The short-term (construction) dewatering estimates for the Site are as follows:

- As recommended by geotechnical engineering design impermeable shoring using caisson walls was considered for construction dewatering estimation. The estimated dewatering flow rate could reach to:
    - 2,000 L/day, and it could reach to 3,000 L/day of groundwater seepage into excavation, considering a safety factor of 1.5 the upward dewatering limit.

  The above estimate does not take into account storm water management from rainfall events. The collection system should also account for a typical 2-year design storm event which will generate approximately 197,000 L/day from the Site. As such, the estimated short-term dewatering flow rate could reach to 200,000 L/day. The dewatering system should be designed to take into account removal of rainfall from the excavation. According to O. Reg. 63/16, a plan for discharge must consider the conveyance of storm water from a 100-year storm event which translates to approximately 741,000 L/day.

- As requested by 1467 Bathurst Holdings Inc., construction dewatering flow rate was also estimated using permeable shoring (i.e. lagging wall). The estimated dewatering flow rate could reach:
    - 220,000 L/day, and it could reach to 330,000 L/day of groundwater seepage is anticipated into excavation, considering a safety factor of 1.5.

  The above estimate does not take into account storm water management from rainfall events. The collection system should also account for a typical 2-year design storm event which will generate approximately 197,000 L from the Site. As such, the estimated short-term dewatering flow rate could reach to 528,000 L/day. The dewatering system should be designed to take into account removal of rainfall from the excavation. According to O. Reg. 63/16, a plan for discharge must consider the conveyance of storm water from a 100-year storm event which translates to approximately 741,000 L.

Considering the subsoil profile, engineering design and groundwater conditions beneath the Site, Permeable shoring is not recommended.

5.5 Long-Term Groundwater Control Requirements (Post Construction)

Design drawings for the proposed sub-floor drainage system were not available to Terraprobe. Long-term foundation drainage was calculated considering permeable shoring as requested by 1467 Bathurst Holdings Inc., and impermeable shoring as recommended by geotechnical investigation.

- Drained foundations:

  As requested by 1467 Bathurst Holdings Inc., it is assumed that proposed underground structure will be a drained structure and Lagging walls will be considered as a shoring design for short term construction. The approximate groundwater takings are as follows:

  - 240,000 ± L/day of groundwater seepage when a factor of safety of 1.5 is applied

In addition, infiltration through the drainage board around the building perimeter can anticipated during a typical 2-year design storm event which is anticipated to generate an additional volume of approximately 5,000 L/day at the Site. Therefore, the total anticipated discharge is 245,000 L/day, when a factor of safety of 1.5 is applied.

- Raft Foundations along with Caisson Walls:

  It is assumed that proposed underground structure will be a raft foundation along with the caisson walls around the foundation. The approximate groundwater takings are as follows:

  - 167,000 ± L/day of groundwater seepage when a factor of safety of 1.5 is applied

In addition, infiltration through the drainage board around the building perimeter can anticipated during a typical 2-year design storm event which is anticipated to generate an additional volume of approximately 5,000 L/day at the Site. Therefore, the total anticipated discharge is 172,000 L/day, when a factor of safety of 1.5 is applied.

- Drained Foundations along with Caisson Walls:

  It is assumed that proposed underground structure will be a drained foundation along with the caisson walls around the foundation. The approximate groundwater takings are as follows:

  - 137,000 ± L/day of groundwater seepage when a factor of safety of 1.5 is applied

In addition, infiltration through the drainage board around the building perimeter can anticipated during a typical 2-year design storm event which is anticipated to generate an additional volume of approximately 5,000 L/day at the Site. Therefore, the total anticipated discharge is 142,000 L/day, when a factor of safety of 1.5 is applied.

If waterproofing of the structure is considered for the proposed development, long-term foundation drainage is not anticipated.

5.6 Assessment of Potential Impacts

5.6.1 Short Term Discharge of Pumped Groundwater (Construction Dewatering)

The flow from the groundwater control system will be directed towards the local sewer. The dewatering system must be appropriately filtered in order to prevent the pumping of fines and loss of ground during the dewatering activities. The untreated groundwater quality sample collected from the Site exceeded discharge limits for the storm and sanitary sewers. The flow of groundwater from the dewatering system at the Site must be treated prior to discharge to the local storm sewers to comply with the City of Toronto's Sewer Use By-law.

Sampling of discharge from the dewatering system will be required during initial discharge and on an on-going basis as required by the City during active dewatering. Visual monitoring of the dewatering discharge should be conducted daily. Adjustments to the dewatering system should be made if an increase in turbidity or sediment is noted.

5.6.2 Long Term Discharge of Pumped Groundwater (Post Construction)

If a permeable structure is considered for the underground parking structure a permanent dewatering system would be required. Considering available options, long term foundation discharge rate could range from 98.6 L/min to 170.1 L/min at the P5 level. The estimated seepage rates are summarized in **Table 5-1**. The estimated value considers the anticipated groundwater and storm water.

Table 5-1- Summary of Anticipated Foundation Drainage

Shoring	Anticipated Seepage (L/min)	Anticipated Seepage (L/s)
Drained Foundation using Lagging Walls for short term construction	170.1	2.84
Raft Foundation along with Caisson Wall	119.4	1.99
Drained Foundation along with Caisson Wall	98.6	1.64

To reduce potential flows into the local sewer system consideration should be given to reuse of the groundwater on the property as irrigation water or waterproofing the structure. Any discharge to the sewer system must comply with the City of Toronto's Sewer Use By-law. If the local sewers do not have the required capacity then the underground parking structure below the expected groundwater level must be a waterproofed structure.

5.6.3 Zone of Influence (ZOI) Groundwater

The Zone of Influence (ZOI), also known as Radius of Influence (R_0), was calculated based on the anticipated maximum drawdown required and the average hydraulic conductivity recorded at the Site. The native stratigraphy at the Site generally consists of sand and silt deposits overlying clayey silt glacial till. The ZOIs were calculated for short-term (construction) and long-term drainage from the Site.

Equation: $R_0 = 3000*dH*K^{0.5}$

Where dH is the dewatering thickness (m)
K is the hydraulic conductivity (m/s)

Zone of Influence (also known as Radius of Influence or R_0) Calculations:

$R_0 = 3000*8.4\ m*4.02x\ 10^{-6}\ m/s^{\ 0.5}$
$R_0 = 50.5\pm\ m$

5.6.4 Geotechnical Considerations (Ground Settlement)

The Site is bound by a private laneway and a community building to the north, a commercial building to the east, St. Clair Avenue West to the south and Bathurst Street to the west. The groundwater table is located within the sand and silt layer. The final design of subsurface drainage or waterproofing for the underground parking structure is unknown at this time.

Changes in the groundwater table have the potential to cause settlement based on the change in effective stress. Within the zone of influence, changes in groundwater level have the potential to cause settlement based on the change in the effective stresses that will result from dewatering and draining the soil. The buildings to the north, south and west are located within the ZOI surrounding of the Site.

Consideration of the impermeable shoring is proposed by geotechnical engineering design report prepared by Terraprobe, dated October 15, 2019. If the impermeable shoring is considered negligible ground settlement is anticipated. However, if permeable shoring is proposed for the proposed development, ground settlement analysis should be completed by a geotechnical engineer.

Both the temporary construction dewatering system and the permanent drainage system must be properly installed and screened to ensure sediments and fines will not be removed, which is typically a primary cause of dewatering related settlement.

5.6.5 Surface Water, Wetlands and Areas of Natural Significance

No water bodies were identified on the Site or within the conceptual ZOI. A response from the governing Conservation Authority indicates that the Site is not regulated by the TRCA. The nearest watercourse is a creek within Nordhiemer Ravine, which is located approximately 150 m southeast of the Site. Groundwater and surface water are expected to flow into this creek, which flows southeast into Lake Ontario. Storm water at the Site is expected to drain to landscaped areas on the Site or towards stormwater catch basins onsite and along the municipal roads adjacent to the Site.

There are no wetlands or other sensitive features on the Site or within the ZOI (groundwater) to be affected by potential dewatering activities.

5.6.6 Water Supply Wells and Zone of Influence

The Site is located in a serviced area of Toronto. The Site and surrounding area are provided with municipal piped water and sewer supply. The MECP well records database was searched for records located on the Property and within a 250 m radius. According to the Water Well record search, approximately 119 wells are listed as being used for monitoring, test holes and dewatering purposes within 250 m of the Site (Figure 1).

No domestic water wells are located within a 250 m radius of the Site. As such, it is expected that there would be no impact to drinking water wells.

5.6.7 Contamination Sources

The Site was historically occupied by a gas station on the west portion. The immediately surrounding area of the Site currently consists mostly of residential and commercial areas.

Environmental sampling and/or analysis of the soil or groundwater under O.Reg. 153/04 was not conducted by Terraprobe. As such, Terraprobe cannot comment of the groundwater quality as it related to O.Reg. 153/04 for the Site.

Environmental studies including a Risk Assessment are reportedly being completed for the Site. Additional information pertaining to the environmental considerations at the Site are discussed under separate cover by other consultants.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The conclusions of the investigation are as follows:

- The proposed redevelopment will include several high-rise mixed-use buildings resting on a shared 5-level underground parking structure beneath a majority of the Site. The P5 FFE was determined to be at a depth of 15.4 m below proposed average grade (Elev. 141.9 ±masl).

- The hydrogeological conditions and requirements for the Site are summarized below:

Soil Conditions (Using Boreholes Drilled by Terraprobe)	
Fill	1.2 to 2.3 m thick
Cohesionless Sands and Silts	14.5 to 20.6 m thick
Silty Clay Glacial Till	At least 9.3 m thick

Groundwater Conditions	
The Highest Groundwater Elevation	149.33 masl
Zone of Influence	50.5 m

Groundwater Quality		
	City of Toronto Storm Sewer Limits	**City of Toronto Sanitary and Combined Sewer Limits**
Untreated Groundwater (Sample ID – BH1401) from west side (BH1401)	Exceeds	Exceeds
Treatment Required Prior to Discharge (Yes/No)	Yes	Yes

Groundwater Quantity - Short Term (Construction) with Permeable Shoring System						
Underground Parking Level	**Groundwater Seepage (Safety Factor – 1. 5)**		**2-Year Rainfall Event**		**Total Discharge Volume (Seepage + Rainfall)**	
	L/day	**L/min**	**L/day**	**L/min**	**L/day**	**L/min**
P5 (Permeable Shoring-Lagging Wall)	330,000	229.2	197,000	136.8	**527,000**	**365.9**
P5 (Impermeable Shoring-Caisson Wall)	3,000	2.1	197,000	136.8	**200,000**	**138,9**

Groundwater Quantity - Long Term (Post Construction) with Three (3) Options						
Underground Parking Level	**Groundwater Seepage (Safety Factor – 1.5)**		**Infiltration (2-Year Rainfall Event)**		**Total Discharge Volume**	
	L/day	**L/min**	**L/day**	**L/min**	**L/day**	**L/min**
P5 (Drained Foundation using Lagging Walls for short term construction)	240,000	166.6	5,000	3.5	**245,000**	**170.1**
P5 (Raft Foundation along with Caisson Walls)	167,000	115,9	5,000	3.5	**172,000**	**119.4**
P5 (Drained Foundation along with Caisson Walls)	137,000	95.1	5,000	3.5	**142,000**	**98.6**

MECP Regulation Requirements	**Permeable Shoring**	**Impermeable Shoring**
Environmental Activity and Sector Registry (EASR) Posting	Not Required	Required
Short Term Permit to Take Water (PTTW)	Required	Not Required
Long Term Permit to Take Water (PTTW)	Required	Required

Municipality Requirements, if connected to municipal sewer	
Short Term Discharge Agreement	Required
Long Term Discharge Agreement	Required

7.0 LIMITATIONS OF LIABILITY

This report was prepared at the request of, and for the exclusive use of 1467 Bathurst Holdings Inc. and its affiliates ("the Intended User") is intended to provide an assessment of the hydrogeological conditions of the Property located at 1467 Bathurst Street in the City of Toronto, Ontario (the Site). No one other than the Intended User has the right to use and rely on the work without first obtaining the written authorization of Terraprobe Inc. and Oxford Properties Group.

Terraprobe Inc. expressly excludes liability to any party except the Intended User for any use of, and/or reliance upon, the work. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Terraprobe 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, including consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The assessment should not be considered a comprehensive audit that eliminates all risks of encountering hydrogeological problems. The information presented in this report is based on information collected during the completion of the hydrogeological study by Terraprobe Inc. It was based on the conditions on the Site at the time of the hydrogeological study by a review of historical information and field investigation to assess the hydrogeological conditions of the Site, as reported herein.

There is no warranty expressed or implied by this report regarding the hydrogeological conditions for the Site. Professional judgement was exercised in gathering and analysing information collected by reviewing previous reports, data provided by government and are open to public and field work investigation. The conclusions presented are the product of professional care and competence, and cannot be construed as an absolute guarantee.

In the event that during future work new information regarding the hydrogeological conditions of the Site is encountered, or in the event that the outstanding responses from the regulatory agencies indicate outstanding issues on file with respect to the Site, Terraprobe Inc. should be notified in order that we may re-evaluate the findings of this assessment and provide amendments, as required.

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8.0 CLOSURE

We trust this report meets with your requirements. Should you have any questions regarding the information presented, please do not hesitate to contact our office.

Yours truly,

Terraprobe Inc.

Narjes Alijani, M.Sc., P.Geo.
Project Manager

R. Baker Wohayeb, M.A.Sc., P.Eng., QPRA
Principal

LICENSED PROFESSIONAL ENGINEER
R. B. WOHAYEB
100051508
NOV 22, 2019
PROVINCE OF ONTARIO

9.0 REFERENCES

1. Chapman, L.J. and D.F. Putnam, 1984. The Physiography of Southern Ontario. Ontario.

2. Geological Survey. Ontario Geological Survey (OGS), 2003. Surficial Geology of Southern Ontario. Miscellaneous Release – Data 128 – revised.

3. Geological Survey. Ontario Geological Survey (OGS), 2007. Bedrock Geology of Ontario. Miscellaneous Release – MRD 219.

4. Groundwater, R. Allan Freeze and John A. Cherry, 1979, Prentic-Hall, P. 406.

5. Hydrogeological Study for Category 3 PTTW (final Report), 1467 Bathurst Street, Toronto, Ontario, September 2014, Terrapex Environmental Ltd.

6. Ministry of the Environment, Conservation and Parks, 2019, Source Protection Information Atlas Interactive Map.

7. Ministry of Natural Resources and Forestry, 2019, Natural Heritage Area Online Mapping Tool.

8. Oak Ridges Moraine Group, 2019, Database and Interactive mapping.

9. Terraprobe Inc., Geotechnical Engineering Design Report, 1467 Bathurst Street/490 St. Clair Avenue West, Toronto, Ontario, October 15, 2019, File No. 1-17-0206-2-Rev1.

FIGURES

TERRAPROBE INC.

Terraprobe Inc.

Consulting Geotechnical & Environmental Engineering
Construction Materials, Inspection & Testing

11 Indell Lane - Brampton Ontario L6T 3Y3 (905) 796-2650

Reference:

Toronto Maps v2

Notes:

Legend:

- Property Boundary
- Study Area, 250m
- Approximate Borehole with Monitoring Well Location by Terraprobe 2017
- Approximate Existing Monitoring Well Location by Others
- MOECC Monitoring Wells in Study Area

Project Title:

Hydrogeological Study

Site Location:

1467 Bathurst Street, St. Michael's College, Toronto, Ontario

Figure Title:

SITE LOCATION PLAN

Designed By: SM	*File No.:* 1-17-0206-46
Drawn By: MV	*Scale:* As Shown
Reviewed By: MB	*Figure No.:* 1
Date: May 2019	

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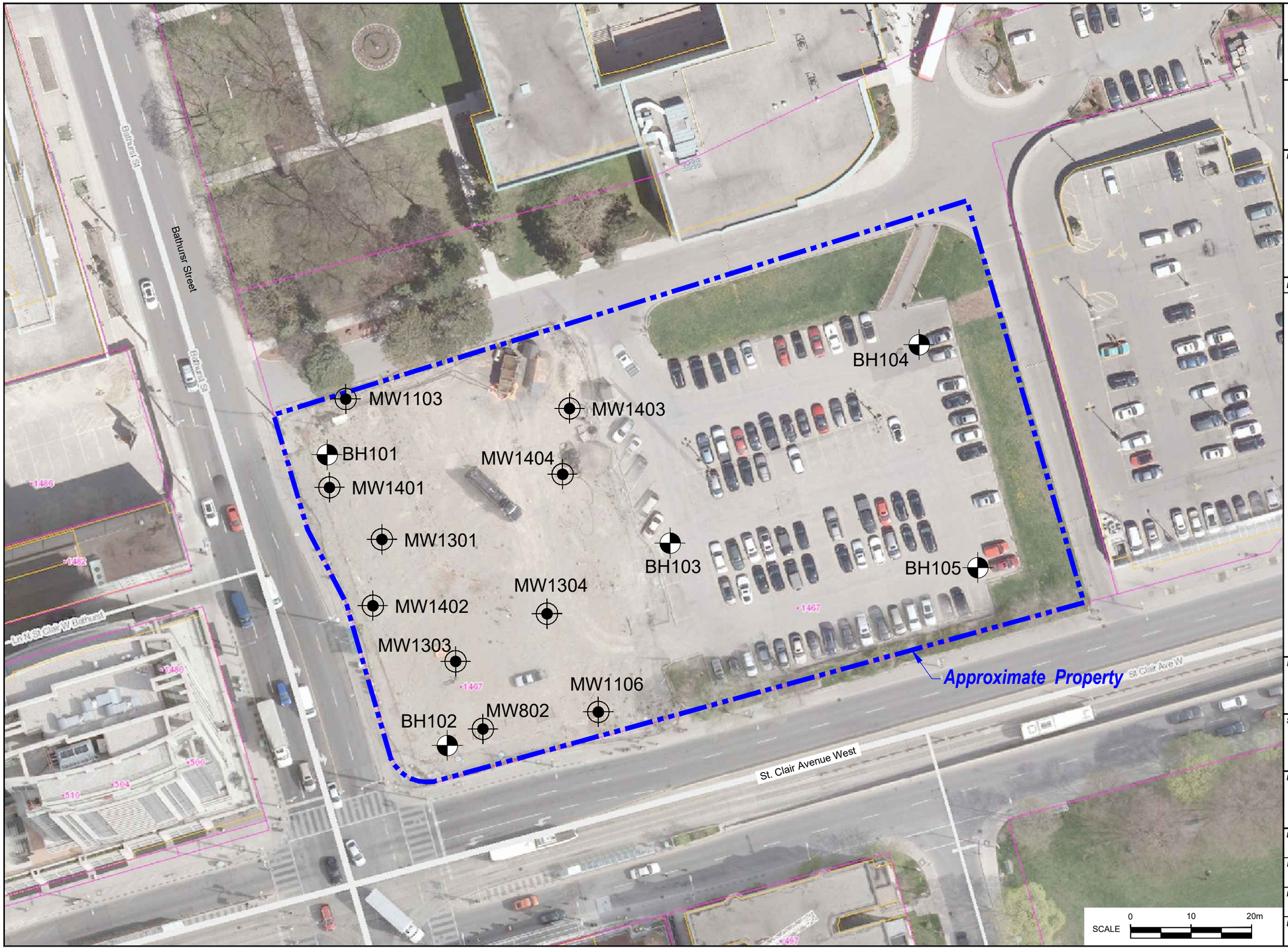

Terraprobe Inc.

Consulting Geotechnical & Environmental Engineering
Construction Materials, Inspection & Testing

11 Indell Lane - Brampton Ontario L6T 3Y3 (905) 796-2650

Reference:

Toronto Maps v2

Notes:

Legend:

- Approximate Property Boundary
- Approximate Borehole with Monitoring Well Location by Terraprobe 2017
- Approximate Existing Monitoring Well Location by Others

Project Title:

Hydrogeological Study

Site Location:

1467 Bathurst Street, St. Michael's College, Toronto, Ontario

Figure Title:

MONITORING WELL LOCATION PLAN (EXISTING CONDITION)

Designed By: SM	**File No.:** 1-17-0206-46
Drawn By: MV	**Scale:** As Shown
Reviewed By: MB	**Figure No.:** 2
Date: May 2019	

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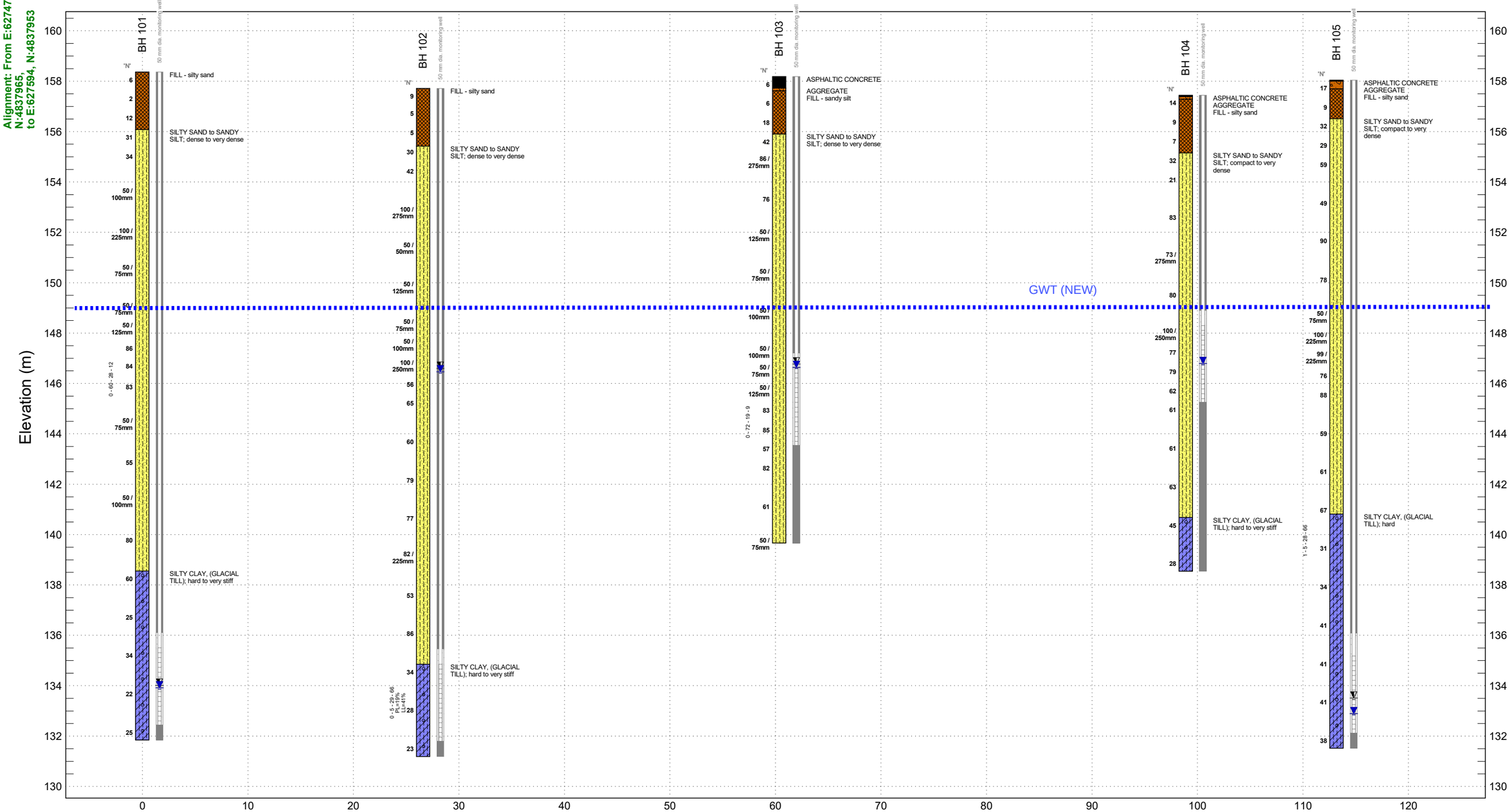
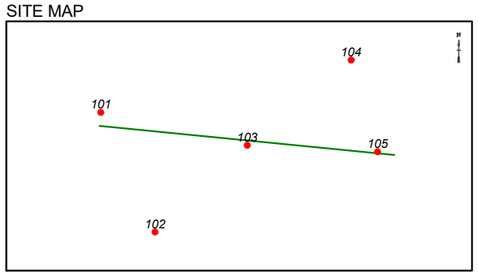
Alignment: From E:627474, N:4837965, to E:627594, N:4837953



SITE MAP



LITHOLOGY GRAPHIC LEGEND

- Fill
- Aggregate
- Silty Sand
- Silty Clay Till
- Asphalt

INTERPRETIVE LEGEND

- Unstabilized water level on completion of drilling
- Stabilized water level, most recent
- 30 SPT N-Value

- *FILL*
- *GRAVELS (gravel to gravelly sand)*
- *SILT TO SAND (not till)*
- *COHESIONLESS TILLS*
- *COHESIVE SOILS (clayey silt to clay, incl. tills)*

Terraprobe
11 Indell Lane, Brampton Ontario L6T 3Y3
(905) 796-2650

Title: **fIGURE 3. SUBSURFACE PROFILE**

File No.: **1-17-0206-46**

Report: !SECTION - TABLOID - ELEV

APPENDIX A

TERRAPROBE INC.

Terraprobe

ABBREVIATIONS AND TERMINOLOGY

SAMPLING METHODS

AS	auger sample
CORE	cored sample
DP	direct push
FV	field vane
GS	grab sample
SS	split spoon
ST	shelby tube
WS	wash sample

PENETRATION RESISTANCE

Standard Penetration Test (SPT) resistance ('N' values) is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a standard 50 mm (2 in.) diameter split spoon sampler for a distance of 0.3 m (12 in.).

Dynamic Cone Test (DCT) resistance is defined as the number of blows by a hammer weighing 63.6 kg (140 lb.) falling freely for a distance of 0.76 m (30 in.) required to advance a conical steel point of 50 mm (2 in.) diameter and with 60° sides on 'A' size drill rods for a distance of 0.3 m (12 in.)."

COHESIONLESS SOILS

Compactness	'N' value
very loose	< 4
loose	4 – 10
compact	10 – 30
dense	30 – 50
very dense	> 50

COHESIVE SOILS

Consistency	'N' value	Undrained Shear Strength (kPa)
very soft	< 2	< 12
soft	2 – 4	12 – 25
firm	4 – 8	25 – 50
stiff	8 – 15	50 – 100
very stiff	15 – 30	100 – 200
hard	> 30	> 200

COMPOSITION

Term (e.g)	% by weight
trace silt	< 10
some silt	10 – 20
silty	20 – 35
sand *and* silt	> 35

TESTS AND SYMBOLS

MH	mechanical sieve and hydrometer analysis
w, w_c	water content
w_L, LL	liquid limit
w_P, PL	plastic limit
I_P, PI	plasticity index
k	coefficient of permeability
γ	soil unit weight, bulk
G_s	specific gravity
φ'	internal friction angle
c'	effective cohesion
c_u	undrained shear strength

▽	Unstabilized water level
▼	1st water level measurement
▼	2nd water level measurement
▼	Most recent water level measurement
3.0 +	Undrained shear strength from field vane (with sensitivity)
C_c	compression index
c_v	coefficient of consolidation
m_v	coefficient of compressibility
e	void ratio
PID	photoionization detector
FID	flame ionization detector

FIELD MOISTURE DESCRIPTIONS

Damp	refers to a soil sample that does not exhibit any observable pore water from field/hand inspection.
Moist	refers to a soil sample that exhibits evidence of existing pore water (e.g. sample feels cool, cohesive soil is at plastic limit) but does not have visible pore water
Wet	refers to a soil sample that has visible pore water

LOG OF BOREHOLE 101

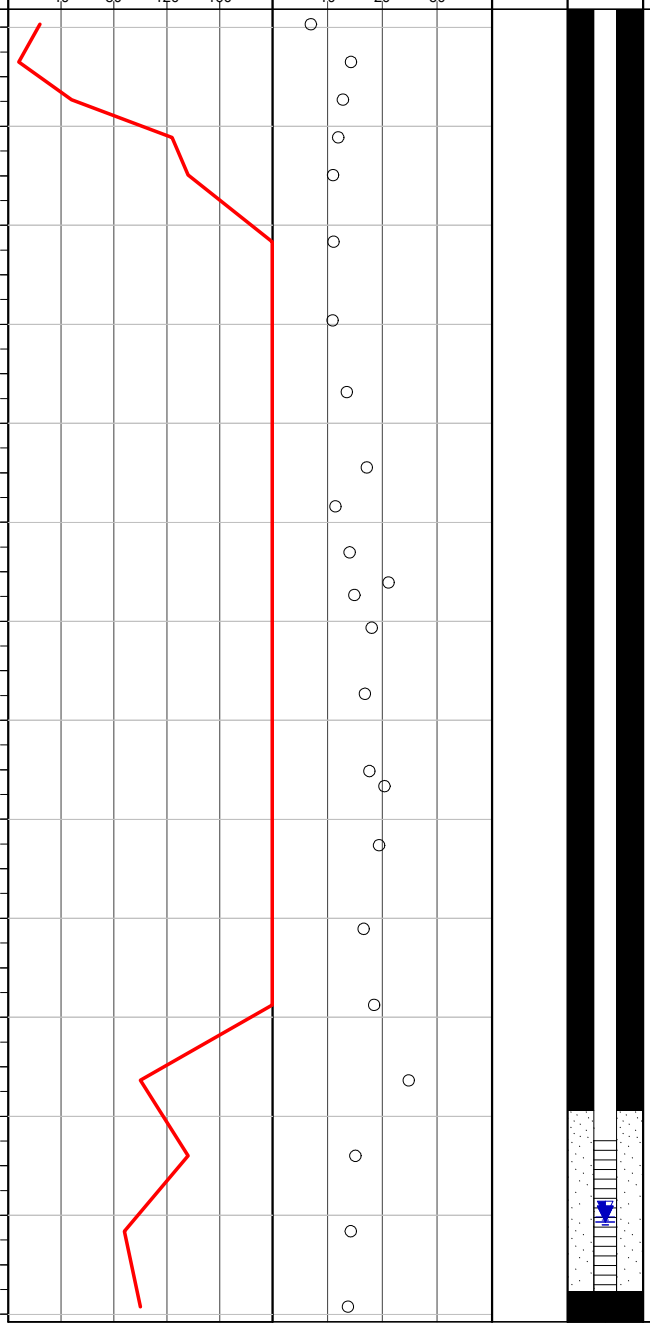
Terraprobe

Project No.	: 1-17-0206-01	Client	: Bentall Kennedy (Canada) Limited Partnership	Originated by	: JK
Date started	: 17 April 2017	Project	: 1467 Bathurst Street	Compiled by	: JK
Sheet No.	: 1 of 1	Location	: Toronto, Ontario	Checked by	: MD

Position : E: 627475, N: 4837970 (UTM 17T) — Elevation Datum : Geodetic

Rig type : Track-mounted — Drilling Method : Hollow stem augers / mud rotary

Elev Depth (m)	Description	Number	Type	SPT 'N' Value	Lab Data and Comments
158.4	**GROUND SURFACE**				
	FILL, silty sand, some gravel, trace clay, very loose to compact, brown, moist	1	SS	6	
		2	SS	2	
		3	SS	12	
156.1 / 2.3	**SILTY SAND to SANDY SILT**, trace to some clay, dense to very dense, brown, moist	4	SS	31	
		5	SS	34	...at 3.0m, switched to mud rotary
		6	SS	50 / 100mm	
	...at 6.1 m, brown with orange	7	SS	100 / 225mm	
	...at 7.6 m, to sandy silt, some gravel, wet	8	SS	50 / 75mm	
		9	SS	50 / 75mm	
	...at 9.9 m, to silty sand	10	SS	50 / 125mm	...at 9.9m, hydrocarbon odour to 10.7m
		11	SS	86	
	...at 11.4 m, clayey silt seam	12A / 12B	SS	84	
	...at 11.8 m, silty sand, grey ...at 12.2 m, wet	13	SS	83	0 60 28 12
		14	SS	50 / 75mm	
	...at 15.5 m, silt seam	15A / 15B	SS	55	
		16	SS	50 / 100mm	
		17	SS	80	
138.6 / 19.8	**SILTY CLAY**, trace sand, trace gravel, hard to very stiff, grey, moist (GLACIAL TILL)	18	SS	60	
		19	SS	25	
		20	SS	34	
		21	SS	22	
131.9 / 26.5		22	SS	25	



END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Apr 19, 2017	24.4	134.0
Apr 20, 2017	24.5	133.9

file: 1-17-0206 borehole_logs.gpj

LOG OF BOREHOLE 102

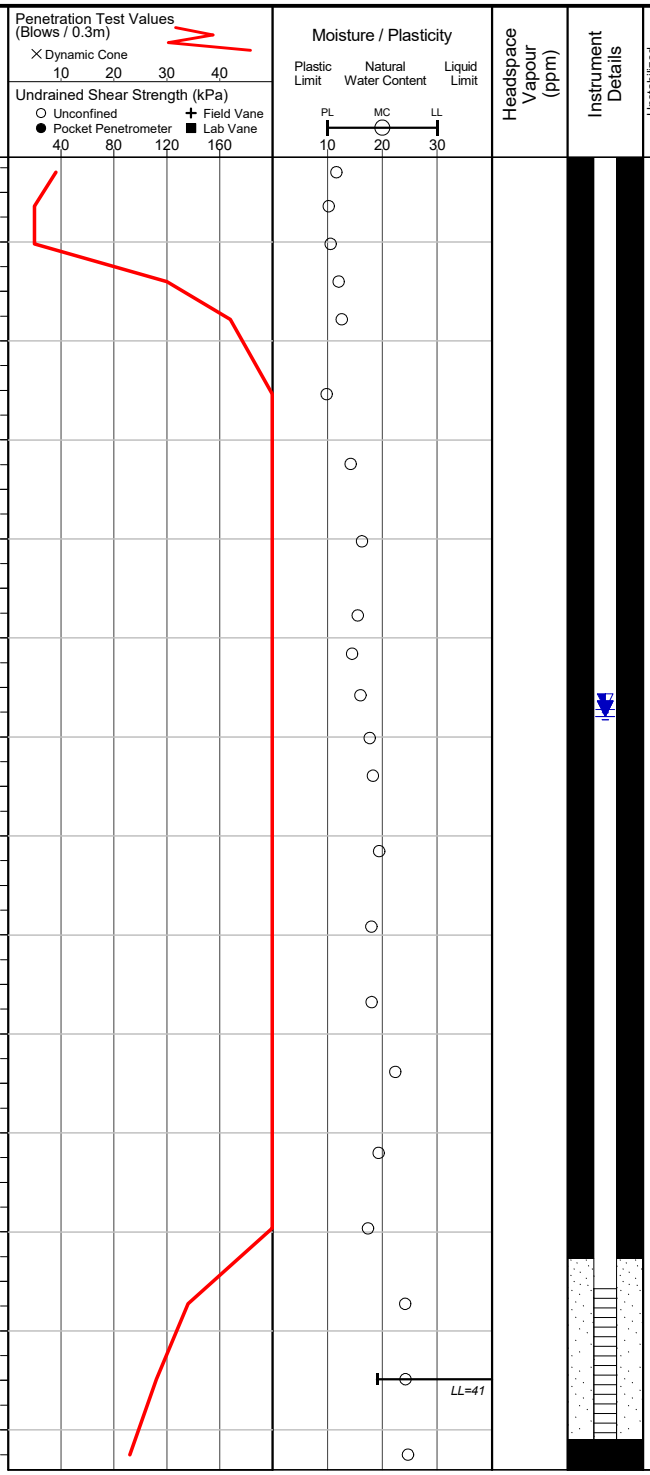
Terraprobe

Project No.	: 1-17-0206-01	Client	: Bentall Kennedy (Canada) Limited Partnership	Originated by	: JK
Date started	: 12 April 2017	Project	: 1467 Bathurst Street	Compiled by	: JK
Sheet No.	: 1 of 1	Location	: Toronto, Ontario	Checked by	: MD

Position : E: 627497, N: 4837922 (UTM 17T) — Elevation Datum : Geodetic

Rig type : Track-mounted — Drilling Method : Hollow stem augers / mud rotary

Elev / Depth (m)	Description	Number	Type	SPT 'N' Value	Lab Data and Comments
157.7	**GROUND SURFACE**				
	FILL, silty sand, trace to some gravel, trace clay, loose, brown, moist	1	SS	9	
		2	SS	5	
		3	SS	5	
155.4 / 2.3	**SILTY SAND to SANDY SILT**, trace to some clay, dense to very dense, brown, moist	4	SS	30	
		5	SS	42	...at 3.0m, switched to mud rotary
		6	SS	100 / 275mm	
	...at 6.1 m, greyish brown, moist to wet	7	SS	50 / 50mm	
	...at 7.6 m, brown with mottled orange	8	SS	50 / 125mm	
	...at 9.1 m, grey	9	SS	50 / 75mm	
	...at 9.9 m, sand, some silt	10	SS	50 / 100mm	...at 9.8m, strong petroleum hydrocarbon odour
	...at 10.7 m, wet	11	SS	100 / 250mm	...at 10.7m, strong petroleum hydrocarbon odour
	...at 11.4 m, silty sand, brown	12	SS	56	
		13	SS	65	
		14	SS	60	
	...at 15.2 m, grey with dark orange	15	SS	79	
	...at 16.8 m, silt seams	16	SS	77	
	...at 18.3 m, sandy silt, grey	17	SS	82 / 225mm	
	...at 19.8 m, silty sand	18	SS	53	
	...at 21.3 m, sandy silt	19	SS	86	
134.8 / 22.9	**SILTY CLAY**, trace sand, trace gravel, hard to very stiff, grey, moist (GLACIAL TILL)	20	SS	34	
		21	SS	28	0 5 29 66
131.2 / 26.5		22	SS	23	



END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Apr 18, 2017	11.2	146.6
Apr 19, 2017	11.3	146.4

file: 1-17-0206 borehole_logs.gpj

LOG OF BOREHOLE 103

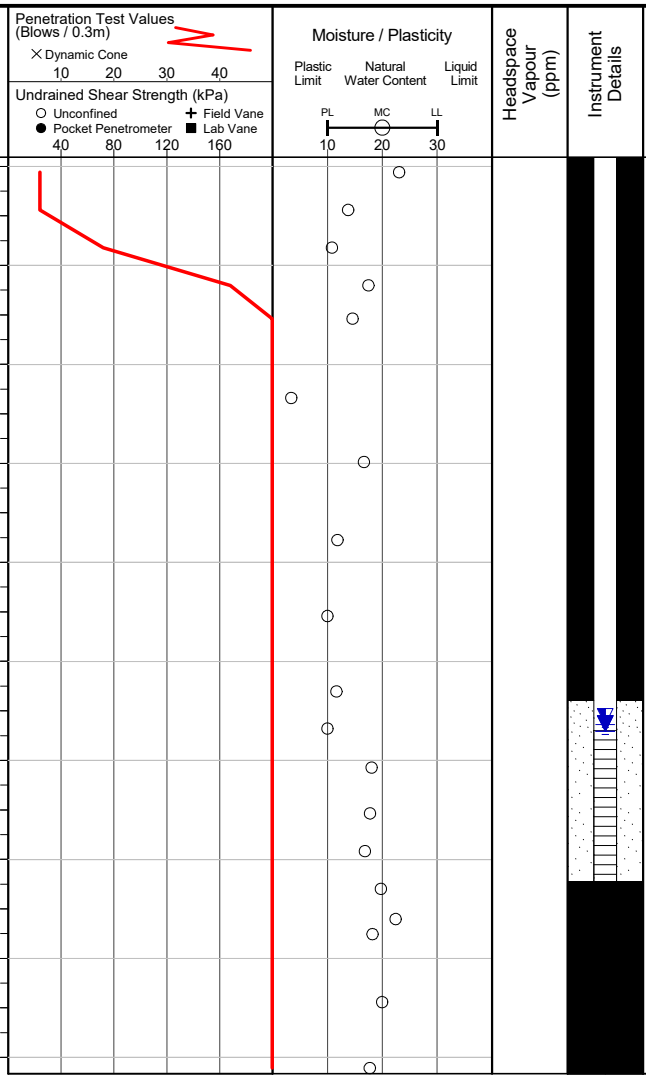
Terraprobe

Project No.	: 1-17-0206-01	Client	: Bentall Kennedy (Canada) Limited Partnership	Originated by	: JK
Date started	: 12 April 2017	Project	: 1467 Bathurst Street	Compiled by	: JK
Sheet No.	: 1 of 1	Location	: Toronto, Ontario	Checked by	: MD

Position : E: 627534, N: 4837957 (UTM 17T) Elevation Datum : Geodetic

Rig type : Track-mounted Drilling Method : Hollow stem augers / mud rotary

Elev Depth (m)	Description	Number	Type	SPT 'N' Value	Lab Data and Comments
158.2	**GROUND SURFACE**				
157.7 / 0.5	450mm **ASPHALTIC CONCRETE**	1	SS	6	
157.6 / 0.6	90mm **AGGREGATE**	2	SS	6	
	FILL, sandy silt, some clay, trace gravel, loose to compact, brown, moist	3	SS	18	
155.9 / 2.3	...at 0.8 m, brown to dark brown, trace rootlets	4	SS	42	
	SILTY SAND to SANDY SILT, trace to some clay, dense to very dense, brown, wet	5	SS	86 / 275mm	...at 3.0m, switched to mud rotary
	...at 4.6 m, sand, damp	6	SS	76	
	...at 6.1 m, silty sand, wet	7	SS	50 / 125mm	...at 5.5m, grinding to 5.8m
		8	SS	50 / 75mm	
	...at 9.1 m, grey	9	SS	50 / 100mm	
		10	SS	50 / 100mm	...at 10.7m, strong petroleum hydrocarbon odour to 14.5m
		11	SS	50 / 75mm	
	...at 12.2 m, silt seams	12	SS	50 / 125mm	
	...at 13.0 m, sand, some silt, trace clay	13	SS	83	
		14	SS	85	0 72 19 9
		15	SS	57	
	...at 15.2 m, silt, brown ...at 15.5 m, silty sand, trace clay	16A 16B	SS	82	
		17	SS	61	
139.7 / 18.5	...at 18.3 m, sandy silt, grey	18	SS	50 / 75mm	



END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Apr 18, 2017	11.5	146.7
Apr 19, 2017	11.6	146.6

file: 1-17-0206 borehole_logs.gpj

LOG OF BOREHOLE 104

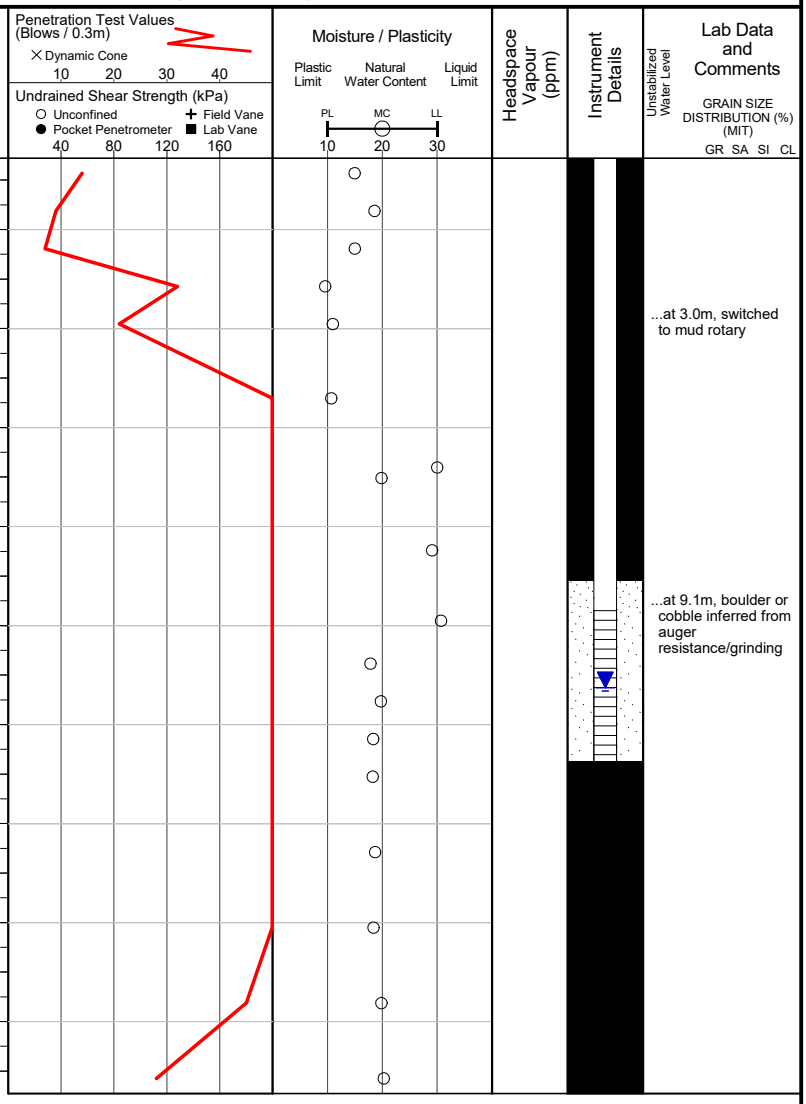
Terraprobe

Project No.	: 1-17-0206-01	Client	: Bentall Kennedy (Canada) Limited Partnership	Originated by	: JK
Date started	: 10 April 2017	Project	: 1467 Bathurst Street	Compiled by	: JK
Sheet No.	: 1 of 1	Location	: Toronto, Ontario	Checked by	: MD

Position : E: 627576, N: 4837991 (UTM 17T) — Elevation Datum : Geodetic

Rig type : Track-mounted — Drilling Method : Hollow stem augers / mud rotary

Elev / Depth (m)	Description	Number	Type	SPT 'N' Value
157.4	**GROUND SURFACE**			
	50mm **ASPHALTIC CONCRETE**	1	SS	14
	100mm **AGGREGATE**	2	SS	9
	FILL, silty sand, trace gravel, trace construction debris, loose to compact, brown to dark brown, moist	3	SS	7
155.1 / 2.3	...at 0.8 m, dark grey ...at 1.5 m, dark brown with grey	4	SS	32
	SILTY SAND to SANDY SILT, trace to some clay, compact to very dense, brown, moist	5	SS	21
	...at 4.6 m, silt, some sand	6	SS	83
	...at 6.4 m, silty sand	7A / 7B	SS	73 / 275mm
	...at 7.6 m, wet, brown with orange	8	SS	80
	...at 9.1 m, clayey silt seams	9	SS	100 / 250mm
	...at 9.9 m, silty sand, brown with orange	10	SS	77
	...at 10.7 m, greyish brown, very dense	11	SS	79
	...at 11.4 m, grey	12	SS	62
		13	SS	61
		14	SS	61
		15	SS	63
140.6 / 16.8	**SILTY CLAY**, trace sand, trace gravel, hard to very stiff, grey, moist (GLACIAL TILL)	16	SS	45
138.5 / 18.9		17	SS	28



END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Apr 18, 2017	10.7	146.7

file: 1-17-0206 borehole_logs.gpj

LOG OF BOREHOLE 105

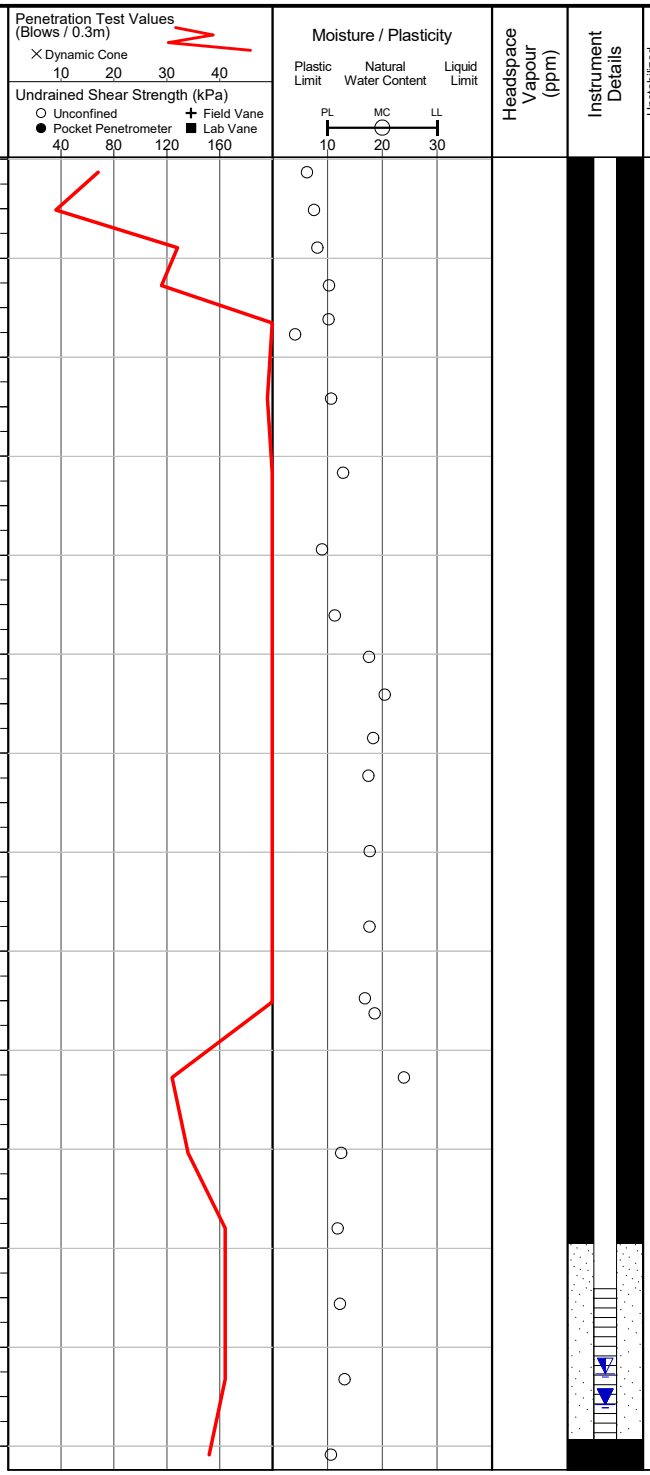
Terraprobe

Project No.	: 1-17-0206-01	Client	: Bentall Kennedy (Canada) Limited Partnership	Originated by	: JK
Date started	: 11 April 2017	Project	: 1467 Bathurst Street	Compiled by	: JK
Sheet No.	: 1 of 1	Location	: Toronto, Ontario	Checked by	: MD

Position : E: 627587, N: 4837954 (UTM 17T) — Elevation Datum : Geodetic

Rig type : Track-mounted — Drilling Method : Hollow stem augers / mud rotary

Elev Depth (m)	Description	Number	Type	SPT 'N' Value	Lab Data and Comments
158.0	**GROUND SURFACE**				
157.7 / 0.3	40mm **ASPHALTIC CONCRETE**	1	SS	17	
	300mm **AGGREGATE**	2	SS	9	
156.5 / 1.5	**FILL**, silty sand, trace gravel, compact, dark brown, moist	3	SS	32	
	...at 0.8 m, brown/grey, loose	4	SS	29	
	SILTY SAND to SANDY SILT, trace to some clay, compact to very dense, brown, moist	5A 5B	SS	59	...at 3.0m, switched to mud rotary
	...at 3.5 m, fine sand				
	...at 4.6 m, silty sand, brown with orange	6	SS	49	
	...at 6.1 m, sandy silt, very dense below	7	SS	90	
	...at 7.6 m, silty sand	8	SS	78	
		9	SS	50 / 75mm	
	...at 9.9 m, interbedded with silt seams, wet	10	SS	100 / 225mm	
		11	SS	99 / 225mm	
	...at 11.4 m, silty sand	12	SS	76	
	...at 12.2 m, interbedded with wet silt seams	13	SS	88	
		14	SS	59	
		15	SS	61	
140.8 / 17.2	**SILTY CLAY**, trace sand, trace gravel, hard, grey, moist (GLACIAL TILL)	16A 16B	SS	67	
		17	SS	31	1 5 28 66
	...at 19.8 m, some sand to sandy	18	SS	34	
		19	SS	41	
		20	SS	41	
		21	SS	41	
131.5 / 26.5		22	SS	38	



END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

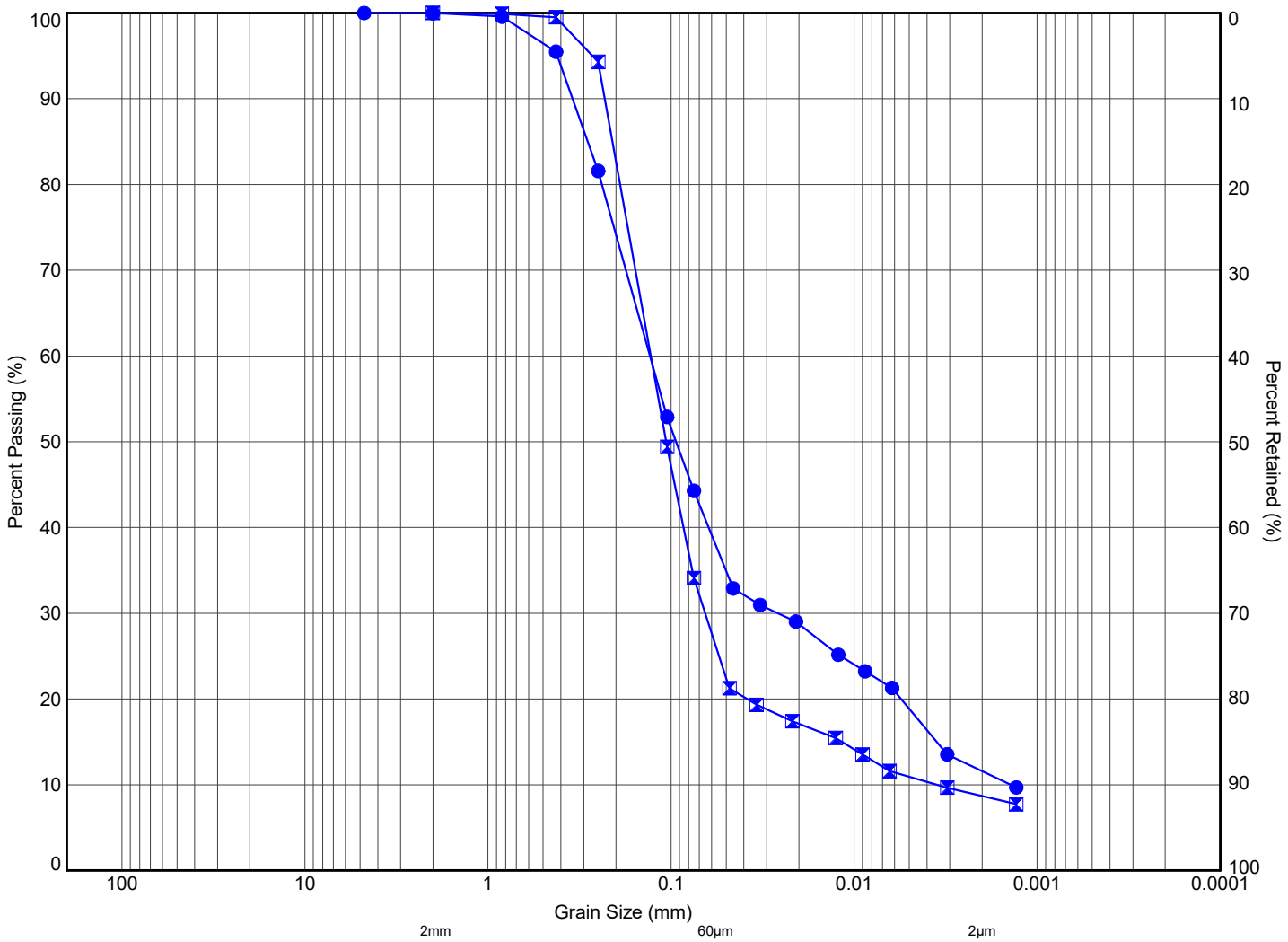
WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Apr 18, 2017	24.6	133.5
Apr 20, 2017	25.2	132.8

file: 1-17-0206 borehole_logs.gpj

APPENDIX B

TERRAPROBE INC.



MIT SYSTEM

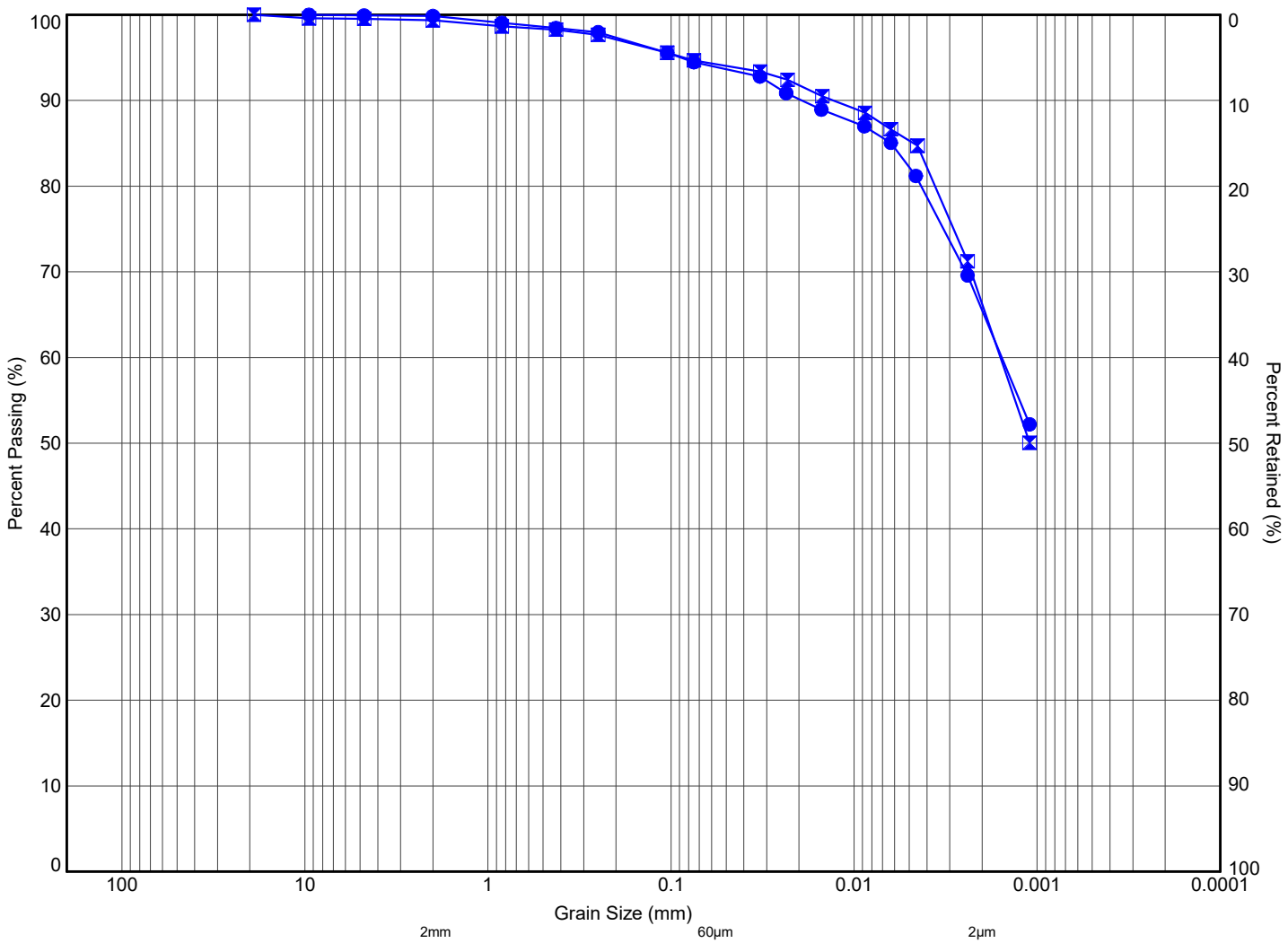
	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	*(Fines, %)*
●	**101**	SS13	12.5	145.9	0	60	28	12	
⊠	**103**	SS14	14.0	144.2	0	72	19	9	

Terraprobe
11 Indell Lane, Brampton Ontario L6T 3Y3
(905) 796-2650

Title:

GRAIN SIZE DISTRIBUTION
SANDS

File No.: **1-17-0206-01**



MIT SYSTEM	COBBLES	GRAVEL			SAND			SILT	CLAY
		COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE		

MIT SYSTEM

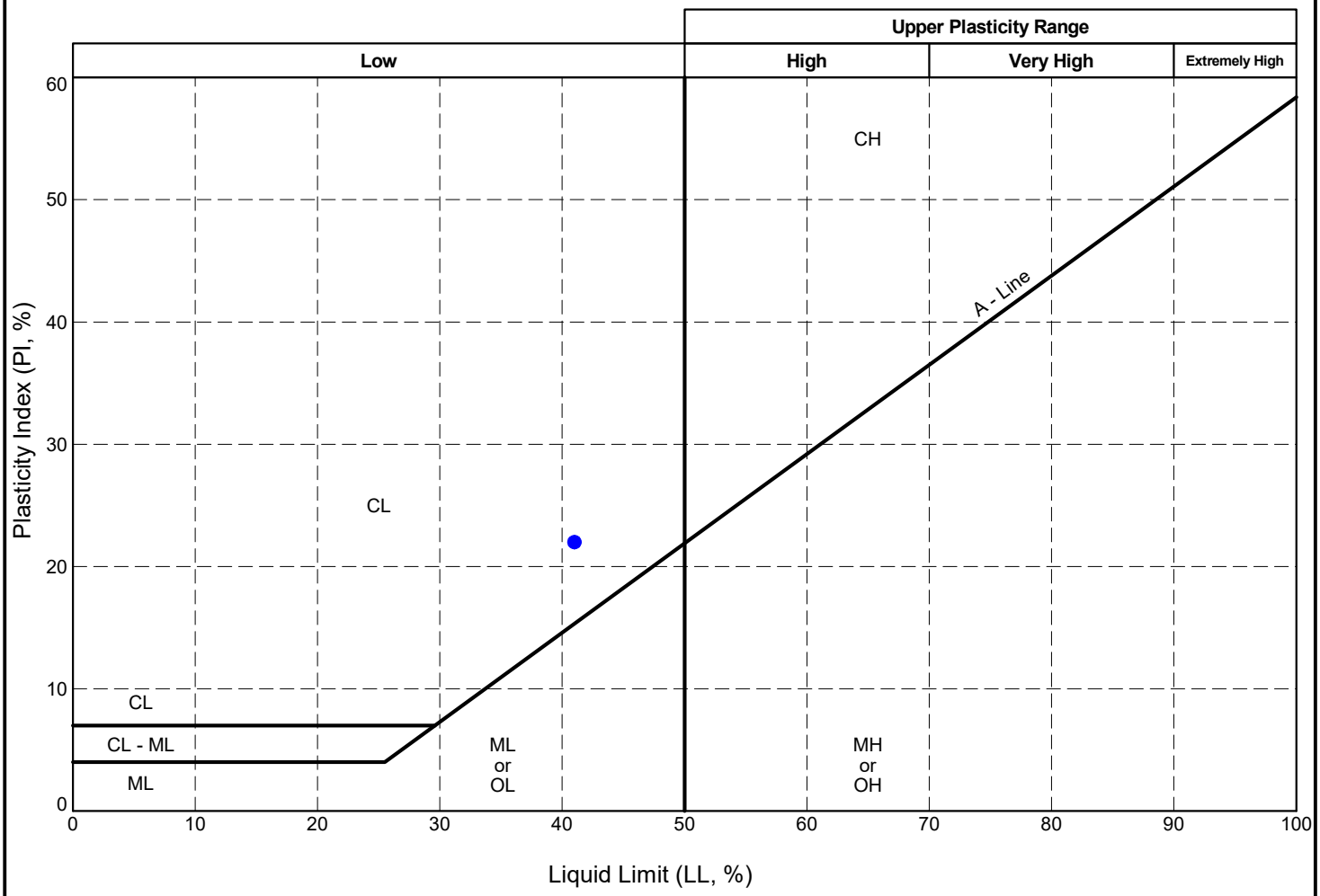
	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	*(Fines, %)*
●	**102**	SS21	24.7	133.0	0	5	29	66	
⊠	**105**	SS17	18.6	139.4	1	5	28	66	

Terraprobe
11 Indell Lane, Brampton Ontario L6T 3Y3
(905) 796-2650

Title:

GRAIN SIZE DISTRIBUTION
SILTY CLAY TILL

File No.: **1-17-0206-01**



	Borehole	Sample	Depth (m)	Elev. (m)	LL (%)	PL (%)	PI (%)
●	102	SS21	24.7	133.0	41	19	22

Terraprobe
11 Indell Lane, Brampton Ontario L6T 3Y3
(905) 796-2650

Title:

ATTERBERG LIMITS CHART
SILTY CLAY TILL

File No.:

1-17-0206-01

APPENDIX C

TERRAPROBE INC.

Terrapex Ground Water Monitoring Data
1467 Bathurst Street, Toronto, Ontario

WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
BH1SMC	158.36	10.4 - 13.4	3.05	06-Apr-17	11.38	11.45	146.91
BH1SMC	158.38	10.4 - 13.4	3.05	18-Jul-17	11.53	11.61	146.76
BH1SMC	158.38	10.4 - 13.4	3.05	21-Sep-17	-	-	-
BH1SMC	158.38	10.4 - 13.4	3.05	17-Oct-17	10.75	10.83	147.55
BH1SMC	158.38	10.4 - 13.4	3.05	20-Nov-17	10.67	10.75	147.63
BH1SMC	158.38	10.4 - 13.4	3.05	9-Mar-18	10.68	10.76	147.62
BH1SMC	158.38	10.4 - 13.4	3.05	15-May-18	10.60	10.68	147.70
BH1SMC	158.38	10.4 - 13.4	3.05	11-Jul-18	10.41	10.49	147.89
BH1SMC	158.38	10.4 - 13.4	3.05	12-Sep-18	10.33	10.41	147.98
EW101	158.53	7.6 - 13.7	6.10	21-Sep-17	10.99	10.81	147.73
EW101	158.53	7.6 - 13.7	6.10	20-Nov-17	10.74	10.55	147.98
EW101	158.53	7.6 - 13.7	6.10	9-Mar-18	10.67	10.48	148.05
EW101	158.53	7.6 - 13.7	6.10	15-May-18	10.61	10.42	148.11
EW101	158.53	7.6 - 13.7	6.10	11-Jul-18	10.43	10.24	148.29
EW101	158.53	7.6 - 13.7	6.10	12-Sep-18	10.27	10.08	148.45
EW102	158.60	7.6 - 13.7	6.10	06-Apr-17	12.03	11.89	146.72
EW102	158.61	7.6 - 13.7	6.10	18-Jul-17	11.99	11.78	146.83
EW102	158.61	7.6 - 13.7	6.10	21-Sep-17	11.00	10.79	147.82
EW102	158.61	7.6 - 13.7	6.10	20-Nov-17	10.75	10.54	148.07
EW102	158.61	7.6 - 13.7	6.10	9-Mar-18	10.75	10.54	148.07
EW102	158.61	7.6 - 13.7	6.10	15-May-18	10.69	10.48	148.13
EW102	158.61	7.6 - 13.7	6.10	11-Jul-18	10.50	10.29	148.32
EW102	158.61	7.6 - 13.7	6.10	12-Sep-18	10.40	10.19	148.42
EW103	158.75	7.6 - 13.7	6.10	06-Apr-17	12.30	12.26	146.49
EW103	158.64	7.6 - 13.7	6.10	18-Jul-17	12.48	11.89	146.74
EW103	158.64	7.6 - 13.7	6.10	21-Sep-17	11.35	10.76	147.87
EW103	158.64	7.6 - 13.7	6.10	20-Nov-17	11.20	10.62	148.02
EW103	158.64	7.6 - 13.7	6.10	9-Mar-18	11.10	10.52	148.12
EW103	158.64	7.6 - 13.7	6.10	15-May-18	10.79	10.21	148.44
EW103	158.64	7.6 - 13.7	6.10	11-Jul-18	10.86	10.28	148.36
EW103	158.64	7.6 - 13.7	6.10	12-Sep-18	10.73	10.15	148.49
EW104	158.51	7.6 - 13.7	6.10	06-Apr-17	12.39	11.96	146.56
EW104	158.50	7.6 - 13.7	6.10	18-Jul-17	12.42	11.99	146.51
EW104	158.50	7.6 - 13.7	6.10	21-Sep-17	11.09	10.66	147.84
EW104	158.50	7.6 - 13.7	6.10	20-Nov-17	10.73	10.30	148.20
EW104	158.50	7.6 - 13.7	6.10	9-Mar-18	10.84	10.41	148.09
EW104	158.50	7.6 - 13.7	6.10	15-May-18	10.77	10.34	148.16
EW104	158.50	7.6 - 13.7	6.10	11-Jul-18	10.58	10.15	148.35
EW104	158.50	7.6 - 13.7	6.10	12-Sep-18	10.20	9.76	148.74
EW105	158.57	7.6 - 13.7	6.10	06-Apr-17	Dry at 12.17 m	-	-
EW105	158.53	7.6 - 13.7	6.10	18-Jul-17	12.60	11.80	146.73
EW105	158.53	7.6 - 13.7	6.10	21-Sep-17	11.54	10.74	147.79
EW105	158.53	7.6 - 13.7	6.10	20-Nov-17	11.22	10.42	148.11
EW105	158.53	7.6 - 13.7	6.10	9-Mar-18	11.27	10.47	148.06
EW105	158.53	7.6 - 13.7	6.10	15-May-18	11.21	10.41	148.12
EW105	158.53	7.6 - 13.7	6.10	11-Jul-18	11.04	10.24	148.29
EW105	158.53	7.6 - 13.7	6.10	12-Sep-18	10.86	10.06	148.47

Terrapex Ground Water Monitoring Data
1467 Bathurst Street, Toronto, Ontario

WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
EW106	158.53	7.6 - 13.7	6.10	06-Apr-17	12.21	-	-
EW106	158.45	7.6 - 13.7	6.10	18-Jul-17	12.19	11.65	146.80
EW106	158.45	7.6 - 13.7	6.10	21-Sep-17	11.25	10.72	147.74
EW106	158.45	7.6 - 13.7	6.10	20-Nov-17	11.00	10.46	147.99
EW106	158.45	7.6 - 13.7	6.10	9-Mar-18	10.99	10.45	148.00
EW106	158.45	7.6 - 13.7	6.10	15-May-18	10.94	10.40	148.06
EW106	158.45	7.6 - 13.7	6.10	11-Jul-18	10.76	10.22	148.23
EW106	158.45	7.6 - 13.7	6.10	12-Sep-18	10.70	10.16	148.29
EW107	158.64	7.6 - 13.7	6.10	06-Apr-17	12.01	11.71	146.93
EW107	158.60	7.6 - 13.7	6.10	18-Jul-17	-	-	-
EW107	158.60	7.6 - 13.7	6.10	21-Sep-17	11.19	10.93	147.68
EW107	158.60	7.6 - 13.7	6.10	20-Nov-17	10.90	10.64	147.96
EW107	158.60	7.6 - 13.7	6.10	9-Mar-18	10.94	10.68	147.93
EW107	158.60	7.6 - 13.7	6.10	15-May-18	10.86	10.60	148.00
EW107	158.60	7.6 - 13.7	6.10	11-Jul-18	10.70	10.44	148.16
EW107	158.60	7.6 - 13.7	6.10	12-Sep-18	10.59	10.33	148.27
EW108	158.65	7.6 - 13.7	6.10	06-Apr-17	11.59	-	-
EW108	158.56	7.6 - 13.7	6.10	18-Jul-17	11.93	11.68	146.87
EW108	158.56	7.6 - 13.7	6.10	21-Sep-17	11.19	10.94	147.62
EW108	158.56	7.6 - 13.7	6.10	17-Oct-17	10.75	10.50	148.06
EW108	158.56	7.6 - 13.7	6.10	20-Nov-17	10.86	10.61	147.95
EW108	158.56	7.6 - 13.7	6.10	9-Mar-18	10.94	10.69	147.87
EW108	158.56	7.6 - 13.7	6.10	15-May-18	10.87	10.62	147.94
EW108	158.56	7.6 - 13.7	6.10	11-Jul-18	10.70	10.45	148.11
EW108	158.56	7.6 - 13.7	6.10	12-Sep-18	10.59	10.34	148.23
EW109	158.44	7.6 - 13.7	6.10	06-Apr-17	12.08	11.70	146.74
EW109	158.42	7.6 - 13.7	6.10	18-Jul-17	12.08	11.68	146.74
EW109	158.42	7.6 - 13.7	6.10	21-Sep-17	11.08	10.68	147.74
EW109	158.42	7.6 - 13.7	6.10	20-Nov-17	10.83	10.43	147.99
EW109	158.42	7.6 - 13.7	6.10	9-Mar-18	10.83	10.43	147.99
EW109	158.42	7.6 - 13.7	6.10	15-May-18	10.80	10.40	148.03
EW109	158.42	7.6 - 13.7	6.10	11-Jul-18	10.60	10.20	148.22
EW109	158.42	7.6 - 13.7	6.10	12-Sep-18	10.44	10.04	148.39
EW110	158.31	7.6 - 13.7	6.10	06-Apr-17	12.22	11.73	146.58
EW110	158.27	7.6 - 13.7	6.10	18-Jul-17	12.14	11.61	146.66
EW110	158.27	7.6 - 13.7	6.10	21-Sep-17	11.06	10.53	147.75
EW110	158.27	7.6 - 13.7	6.10	20-Nov-17	10.80	10.26	148.01
EW110	158.27	7.6 - 13.7	6.10	9-Mar-18	10.82	10.28	147.99
EW110	158.27	7.6 - 13.7	6.10	15-May-18	10.75	10.21	148.06
EW110	158.27	7.6 - 13.7	6.10	11-Jul-18	10.55	10.01	148.26
EW110	158.27	7.6 - 13.7	6.10	12-Sep-18	10.50	9.96	148.32
EW111	158.13	7.6 - 13.7	6.10	06-Apr-17	12.05	11.45	146.68
EW111	158.04	7.6 - 13.7	6.10	18-Jul-17	12.04	11.34	146.70
EW111	158.04	7.6 - 13.7	6.10	21-Sep-17	11.02	10.32	147.71
EW111	158.04	7.6 - 13.7	6.10	20-Nov-17	10.79	10.10	147.94
EW111	158.04	7.6 - 13.7	6.10	9-Mar-18	10.77	10.08	147.96
EW111	158.04	7.6 - 13.7	6.10	15-May-18	10.71	10.02	148.02
EW111	158.04	7.6 - 13.7	6.10	11-Jul-18	10.51	9.82	148.22
EW111	158.04	7.6 - 13.7	6.10	12-Sep-18	10.43	9.74	148.30

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WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
EW112	158.08	7.6 - 13.7	6.10	06-Apr-17	11.70	11.28	146.80
EW112	158.15	7.6 - 13.7	6.10	18-Jul-17	11.71	11.39	146.77
EW112	158.15	7.6 - 13.7	6.10	21-Sep-17	10.81	10.49	147.66
EW112	158.15	7.6 - 13.7	6.10	17-Oct-17	10.63	10.31	147.84
EW112	158.15	7.6 - 13.7	6.10	20-Nov-17	10.58	10.26	147.89
EW112	158.15	7.6 - 13.7	6.10	9-Mar-18	10.58	10.26	147.89
EW112	158.15	7.6 - 13.7	6.10	15-May-18	10.50	10.18	147.97
EW112	158.15	7.6 - 13.7	6.10	11-Jul-18	10.32	10.00	148.16
EW112	158.15	7.6 - 13.7	6.10	12-Sep-18	10.23	9.91	148.24
EW113	158.26	7.6 - 13.7	6.10	06-Apr-17	12.24	11.29	146.96
EW113	158.32	7.6 - 13.7	6.10	18-Jul-17	11.75	11.00	147.32
EW113	158.32	7.6 - 13.7	6.10	21-Sep-17	11.44	10.69	147.63
EW113	158.32	7.6 - 13.7	6.10	17-Oct-17	11.27	10.51	147.81
EW113	158.32	7.6 - 13.7	6.10	20-Nov-17	11.21	10.45	147.87
EW113	158.32	7.6 - 13.7	6.10	9-Mar-18	11.20	10.44	147.88
EW113	158.32	7.6 - 13.7	6.10	15-May-18	11.14	10.38	147.94
EW113	158.32	7.6 - 13.7	6.10	11-Jul-18	10.96	10.20	148.12
EW113	158.32	7.6 - 13.7	6.10	12-Sep-18	10.84	10.08	148.24
EW114	158.53	7.6 - 13.7	6.10	06-Apr-17	11.31	10.86	147.66
EW114	158.55	7.6 - 13.7	6.10	18-Jul-17	12.09	11.68	146.87
EW114	158.55	7.6 - 13.7	6.10	21-Sep-17	11.36	10.95	147.60
EW114	158.55	7.6 - 13.7	6.10	17-Oct-17	11.18	10.77	147.78
EW114	158.55	7.6 - 13.7	6.10	20-Nov-17	11.12	10.71	147.84
EW114	158.55	7.6 - 13.7	6.10	9-Mar-18	11.09	10.68	147.87
EW114	158.55	7.6 - 13.7	6.10	15-May-18	11.06	10.65	147.90
EW114	158.55	7.6 - 13.7	6.10	11-Jul-18	10.89	10.48	148.07
EW114	158.55	7.6 - 13.7	6.10	12-Sep-18	10.60	10.19	148.36
EW115	158.40	7.6 - 13.7	6.10	06-Apr-17	11.92	11.40	147.00
EW115	158.41	7.6 - 13.7	6.10	18-Jul-17	11.96	11.55	146.86
EW115	158.41	7.6 - 13.7	6.10	21-Sep-17	11.27	10.85	147.56
EW115	158.41	7.6 - 13.7	6.10	20-Nov-17	11.04	10.63	147.78
EW115	158.41	7.6 - 13.7	6.10	9-Mar-18	11.05	10.64	147.77
EW115	158.41	7.6 - 13.7	6.10	15-May-18	10.97	10.56	147.85
EW115	158.41	7.6 - 13.7	6.10	11-Jul-18	10.80	10.39	148.02
EW115	158.41	7.6 - 13.7	6.10	12-Sep-18	10.70	10.29	148.12
EW116	158.12	7.6 - 13.7	6.10	06-Apr-17	11.68	11.44	146.68
EW116	158.10	7.6 - 13.7	6.10	18-Jul-17	11.52	11.28	146.82
EW116	158.10	7.6 - 13.7	6.10	21-Sep-17	10.75	10.51	147.59
EW116	158.10	7.6 - 13.7	6.10	17-Oct-17	10.57	10.32	147.78
EW116	158.10	7.6 - 13.7	6.10	20-Nov-17	10.52	10.28	147.83
EW116	158.10	7.6 - 13.7	6.10	9-Mar-18	10.54	10.30	147.80
EW116	158.10	7.6 - 13.7	6.10	15-May-18	-	-	-
EW116	158.10	7.6 - 13.7	6.10	11-Jul-18	10.27	10.03	148.07
EW116	158.10	7.6 - 13.7	6.10	12-Sep-18	10.17	9.92	148.18
EW117	157.91	7.6 - 13.7	6.10	06-Apr-17	11.58	11.14	146.77
EW117	157.91	7.6 - 13.7	6.10	18-Jul-17	11.60	11.16	146.75
EW117	157.98	7.6 - 13.7	6.10	21-Sep-17	10.67	10.31	147.68
EW117	157.98	7.6 - 13.7	6.10	20-Nov-17	10.46	10.09	147.90
EW117	157.98	7.6 - 13.7	6.10	9-Mar-18	10.45	10.08	147.91
EW117	157.98	7.6 - 13.7	6.10	15-May-18	10.37	10.00	147.99
EW117	157.98	7.6 - 13.7	6.10	11-Jul-18	10.18	9.81	148.18
EW117	157.98	7.6 - 13.7	6.10	12-Sep-18	10.11	9.73	148.25

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WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
EW118	157.79	7.6 - 13.7	6.10	06-Apr-17	11.32	10.98	146.81
EW118	157.78	7.6 - 13.7	6.10	18-Jul-17	11.37	11.01	146.77
EW118	157.78	7.6 - 13.7	6.10	21-Sep-17	10.54	10.18	147.60
EW118	157.78	7.6 - 13.7	6.10	20-Nov-17	10.31	9.95	147.83
EW118	157.78	7.6 - 13.7	6.10	9-Mar-18	10.30	9.94	147.85
EW118	157.78	7.6 - 13.7	6.10	15-May-18	10.23	9.87	147.92
EW118	157.78	7.6 - 13.7	6.10	11-Jul-18	10.05	9.69	148.09
EW118	157.78	7.6 - 13.7	6.10	12-Sep-18	9.96	9.60	148.19
EW119	157.60	7.6 - 13.7	6.10	06-Apr-17	11.68	11.04	146.56
EW119	157.60	7.6 - 13.7	6.10	18-Jul-17	11.44	10.80	146.80
EW119	157.60	7.6 - 13.7	6.10	21-Sep-17	10.68	10.04	147.56
EW119	157.60	7.6 - 13.7	6.10	20-Nov-17	10.45	9.80	147.80
EW119	157.60	7.6 - 13.7	6.10	9-Mar-18	10.44	9.80	147.80
EW119	157.60	7.6 - 13.7	6.10	15-May-18	10.38	9.74	147.86
EW119	157.60	7.6 - 13.7	6.10	11-Jul-18	10.19	9.55	148.05
EW119	157.60	7.6 - 13.7	6.10	12-Sep-18	10.09	9.45	148.15
EW120	157.35	7.6 - 13.7	6.10	06-Apr-17	11.86	11.46	145.89
EW120	157.35	7.6 - 13.7	6.10	18-Jul-17	10.91	10.51	146.84
EW120	157.35	7.6 - 13.7	6.10	21-Sep-17	10.25	9.84	147.51
EW120	157.35	7.6 - 13.7	6.10	20-Nov-17	10.02	9.61	147.74
EW120	157.35	7.6 - 13.7	6.10	9-Mar-18	10.03	9.63	147.73
EW120	157.35	7.6 - 13.7	6.10	15-May-18	9.96	9.56	147.80
EW120	157.35	7.6 - 13.7	6.10	11-Jul-18	9.78	9.38	147.97
EW120	157.35	7.6 - 13.7	6.10	12-Sep-18	9.68	9.28	148.07
EW121	157.74	7.6 - 13.7	6.10	06-Apr-17	11.24	10.84	146.90
EW121	157.74	7.6 - 13.7	6.10	18-Jul-17	10.14	9.74	148.00
EW121	157.74	7.6 - 13.7	6.10	21-Sep-17	10.68	10.28	147.46
EW121	157.74	7.6 - 13.7	6.10	20-Nov-17	10.46	10.06	147.68
EW121	157.74	7.6 - 13.7	6.10	9-Mar-18	10.48	10.08	147.67
EW121	157.74	7.6 - 13.7	6.10	15-May-18	10.41	10.01	147.74
EW121	157.74	7.6 - 13.7	6.10	11-Jul-18	10.22	9.82	147.92
EW121	157.74	7.6 - 13.7	6.10	12-Sep-18	10.12	9.72	148.02
EW122	158.14	7.6 - 13.7	6.10	06-Apr-17	11.66	11.24	146.90
EW122	158.15	7.6 - 13.7	6.10	18-Jul-17	12.17	11.76	146.39
EW122	158.15	7.6 - 13.7	6.10	21-Sep-17	11.07	10.65	147.50
EW122	158.15	7.6 - 13.7	6.10	20-Nov-17	10.83	10.42	147.73
EW122	158.15	7.6 - 13.7	6.10	9-Mar-18	10.85	10.44	147.71
EW122	158.15	7.6 - 13.7	6.10	15-May-18	10.79	10.38	147.77
EW122	158.15	7.6 - 13.7	6.10	11-Jul-18	10.60	10.19	147.96
EW122	158.15	7.6 - 13.7	6.10	12-Sep-18	10.47	10.06	148.10
MW101	158.55	22.9 - 25.9	3.05	20-Apr-17	24.40	24.56	133.99
MW101	158.55	22.9 - 25.9	3.05	18-Jul-17	Dry at 25.98 m	-	-
MW101	158.55	22.9 - 25.9	3.05	16-Aug-17	Dry at 26.14 m	-	-
MW101	158.55	22.9 - 25.9	3.05	21-Sep-17	Dry at 26.29 m	-	-
MW101	158.55	22.9 - 25.9	3.05	28-Sep-17	Dry at 26.29 m	-	-
MW101	158.55	22.9 - 25.9	3.05	12-Oct-17	Dry at 25.75 m	-	-
MW101	158.55	22.9 - 25.9	3.05	17-Oct-17	Dry at 26.18 m	-	-
MW101	158.55	22.9 - 25.9	3.05	20-Nov-17	Dry at 26.563	-	-
MW101	158.55	22.9 - 25.9	3.05	9-Mar-18	Dry at 25.786 m	-	-
MW101	158.55	22.9 - 25.9	3.05	15-May-18	-	-	-
MW101	158.55	22.9 - 25.9	3.05	11-Jul-18	-	-	-
MW101	158.55	22.9 - 25.9	3.05	12-Sep-18	-	-	-

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WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
MW102	157.84	22.9 - 25.9	3.05	19-Apr-17	11.17	11.30	146.54
MW102	157.84	22.9 - 25.9	3.05	18-Jul-17	10.94	11.06	146.77
MW102	157.84	22.9 - 25.9	3.05	21-Sep-17	10.15	10.27	147.57
MW102	157.84	22.9 - 25.9	3.05	12-Oct-17	10.02	10.14	147.70
MW102	157.84	22.9 - 25.9	3.05	20-Nov-17	9.98	10.11	147.74
MW102	157.84	22.9 - 25.9	3.05	9-Mar-18	9.95	10.08	147.77
MW102	157.84	22.9 - 25.9	3.05	15-May-18	9.90	10.03	147.81
MW102	157.84	22.9 - 25.9	3.05	11-Jul-18	9.77	9.90	147.94
MW102	157.84	22.9 - 25.9	3.05	12-Sep-18	9.58	9.71	148.13
MW103	158.33	11.3 - 14.3	3.05	19-Apr-17	11.48	11.55	146.78
MW103	158.33	11.3 - 14.3	3.05	18-Jul-17	11.34	11.41	146.92
MW103	158.33	11.3 - 14.3	3.05	21-Sep-17	10.76	10.83	147.50
MW103	158.33	11.3 - 14.3	3.05	20-Nov-17	10.55	10.62	147.72
MW103	158.33	11.3 - 14.3	3.05	9-Mar-18	10.55	10.62	147.71
MW103	158.33	11.3 - 14.3	3.05	26-Mar-18	10.56	10.63	147.70
MW103	158.33	11.3 - 14.3	3.05	15-May-18	10.48	10.55	147.78
MW103	158.33	11.3 - 14.3	3.05	11-Jul-18	10.29	10.36	147.97
MW103	158.33	11.3 - 14.3	3.05	12-Sep-18	10.21	10.28	148.06
MW104	157.58	9.1 - 12.2	3.05	19-Apr-17	10.55	10.65	146.93
MW104	157.58	9.1 - 12.2	3.05	18-Jul-17	10.54	10.63	146.95
MW104	157.58	9.1 - 12.2	3.05	21-Sep-17	10.22	10.31	147.27
MW104	157.58	9.1 - 12.2	3.05	20-Nov-17	10.03	10.13	147.45
MW104	157.58	9.1 - 12.2	3.05	9-Mar-18	10.02	10.12	147.46
MW104	157.58	9.1 - 12.2	3.05	15-May-18	9.96	10.06	147.52
MW104	157.58	9.1 - 12.2	3.05	11-Jul-18	9.82	9.92	147.66
MW104	157.58	9.1 - 12.2	3.05	12-Sep-18	9.76	9.86	147.72
MW105	158.19	22.9 - 25.9	3.05	20-Apr-17	25.05	25.16	133.03
MW105	158.19	22.9 - 25.9	3.05	18-Jul-17	24.01	24.12	134.07
MW105	158.19	22.9 - 25.9	3.05	21-Sep-17	24.12	24.22	133.97
MW105	158.19	22.9 - 25.9	3.05	28-Sep-17	24.10	24.21	133.98
MW105	158.19	22.9 - 25.9	3.05	12-Oct-17	23.91	24.02	134.17
MW105	158.19	22.9 - 25.9	3.05	20-Nov-17	-	-	-
MW105	158.19	22.9 - 25.9	3.05	9-Mar-18	23.92	24.03	134.16
MW105	158.19	22.9 - 25.9	3.05	15-May-18	23.87	23.98	134.21
MW105	158.19	22.9 - 25.9	3.05	11-Jul-18	24.80	24.91	133.28
MW105	158.19	22.9 - 25.9	3.05	12-Sep-18	23.87	23.98	134.21
MW106	157.76	10.7 - 13.7	3.05	18-Apr-17	10.75	10.89	146.87
MW106	157.76	10.7 - 13.7	3.05	18-Jul-17	10.68	10.81	146.95
MW106	157.76	10.7 - 13.7	3.05	21-Sep-17	10.26	10.39	147.37
MW106	157.76	10.7 - 13.7	3.05	12-Oct-17	10.12	10.26	147.50
MW106	157.76	10.7 - 13.7	3.05	20-Nov-17	10.07	10.21	147.56
MW106	157.76	10.7 - 13.7	3.05	9-Mar-18	10.06	10.20	147.56
MW106	157.76	10.7 - 13.7	3.05	26-Mar-18	10.10	10.24	147.53
MW106	157.76	10.7 - 13.7	3.05	15-May-18	10.00	10.14	147.62
MW106	157.76	10.7 - 13.7	3.05	11-Jul-18	9.83	9.97	147.79
MW106	157.76	10.7 - 13.7	3.05	12-Sep-18	9.74	9.88	147.88
MW107	158.57	10.7 - 13.7	3.05	19-Apr-17	11.59	11.69	146.88
MW107	158.57	10.7 - 13.7	3.05	18-Jul-17	11.42	11.52	147.04
MW107	158.57	10.7 - 13.7	3.05	21-Sep-17	10.92	11.02	147.55
MW107	158.57	10.7 - 13.7	3.05	20-Nov-17	10.68	10.78	147.79
MW107	158.57	10.7 - 13.7	3.05	9-Mar-18	10.61	10.71	147.86
MW107	158.57	10.7 - 13.7	3.05	15-May-18	10.46	10.56	148.02
MW107	158.57	10.7 - 13.7	3.05	11-Jul-18	10.44	10.54	148.04
MW107	158.57	10.7 - 13.7	3.05	12-Sep-18	10.35	10.45	148.12

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WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
MW108	158.22	10.7 - 13.7	3.05	18-Apr-17	11.29	11.42	146.80
MW108	158.22	10.7 - 13.7	3.05	18-Jul-17	11.18	11.31	146.91
MW108	158.22	10.7 - 13.7	3.05	21-Sep-17	10.80	10.93	147.29
MW108	158.22	10.7 - 13.7	3.05	20-Nov-17	10.62	10.75	147.47
MW108	158.22	10.7 - 13.7	3.05	9-Mar-18	-	-	-
MW108	158.22	10.7 - 13.7	3.05	26-Mar-18	10.67	10.80	147.43
MW108	158.22	10.7 - 13.7	3.05	15-May-18	10.57	10.70	147.53
MW108	158.22	10.7 - 13.7	3.05	4-Jun-18	10.39	10.52	147.71
MW108	158.22	10.7 - 13.7	3.05	11-Jul-18	10.38	10.51	147.71
MW108	158.22	10.7 - 13.7	3.05	12-Sep-18	10.37	10.50	147.72
MW1101	158.61	7.7 - 12.2	4.50	06-Apr-17	11.73	11.18	147.43
MW1101	158.61	7.7 - 12.2	4.50	18-Jul-17	12.07	11.50	147.11
MW1101	158.61	7.7 - 12.2	4.50	21-Sep-17	11.46	10.89	147.73
MW1101	158.61	7.7 - 12.2	4.50	20-Nov-17	11.11	10.53	148.08
MW1101	158.61	7.7 - 12.2	4.50	29-Nov-17	11.11	10.53	148.08
MW1101	158.61	7.7 - 12.2	4.50	9-Mar-18	11.11	10.53	148.08
MW1101	158.61	7.7 - 12.2	4.50	15-May-18	11.06	10.48	148.14
MW1101	158.61	7.7 - 12.2	4.50	11-Jul-18	-	-	-
MW1101	158.61	7.7 - 12.2	4.50	12-Sep-18	-	-	-
MW1102	158.54	7.7 - 12.2	4.50	06-Apr-17	Dry at 11.70	-	-
MW1102	158.56	7.7 - 12.2	4.50	18-Jul-17	Dry at 11.55 m	-	-
MW1102	158.56	7.7 - 12.2	4.50	21-Sep-17	11.40	10.79	147.77
MW1102	158.56	7.7 - 12.2	4.50	20-Nov-17	11.17	10.56	148.00
MW1102	158.56	7.7 - 12.2	4.50	29-Nov-17	11.15	10.54	148.02
MW1102	158.56	7.7 - 12.2	4.50	9-Mar-18	11.16	10.55	148.01
MW1102	158.56	7.7 - 12.2	4.50	27-Mar-18	11.14	10.53	148.03
MW1102	158.56	7.7 - 12.2	4.50	15-May-18	11.10	10.49	148.07
MW1102	158.56	7.7 - 12.2	4.50	11-Jul-18	-	-	-
MW1102	158.56	7.7 - 12.2	4.50	12-Sep-18	-	-	-
MW1103	158.70	7.7 - 12.2	4.50	06-Apr-17	12.81	12.14	146.55
MW1103	158.67	7.7 - 12.2	4.50	18-Jul-17	12.66	11.95	146.71
MW1103	158.67	7.7 - 12.2	4.50	21-Sep-17	11.54	10.83	147.83
MW1103	158.67	7.7 - 12.2	4.50	28-Sep-17	11.48	10.77	147.90
MW1103	158.67	7.7 - 12.2	4.50	20-Nov-17	11.29	10.58	148.09
MW1103	158.67	7.7 - 12.2	4.50	9-Mar-18	11.31	10.60	148.07
MW1103	158.67	7.7 - 12.2	4.50	27-Mar-18	11.28	10.57	148.11
MW1103	158.67	7.7 - 12.2	4.50	15-May-18	11.19	10.48	148.20
MW1103	158.67	7.7 - 12.2	4.50	11-Jul-18	11.00	10.29	148.38
MW1103	158.67	7.7 - 12.2	4.50	12-Sep-18	10.90	10.19	148.48
MW1104	157.97	7.7 - 12.2	4.50	06-Apr-17	11.58	10.68	147.29
MW1104	157.97	7.7 - 12.2	4.50	18-Jul-17	Dry at 11.65 m	-	-
MW1104	157.97	7.7 - 12.2	4.50	21-Sep-17	11.27	10.32	147.64
MW1104	157.97	7.7 - 12.2	4.50	28-Sep-17	11.22	10.27	147.70
MW1104	157.97	7.7 - 12.2	4.50	20-Nov-17	11.04	10.09	147.88
MW1104	157.97	7.7 - 12.2	4.50	9-Mar-18	11.04	10.09	147.88
MW1104	157.97	7.7 - 12.2	4.50	26-Mar-18	11.08	10.13	147.85
MW1104	157.97	7.7 - 12.2	4.50	15-May-18	10.98	10.03	147.94
MW1104	157.97	7.7 - 12.2	4.50	11-Jul-18	10.79	9.84	148.13
MW1104	157.97	7.7 - 12.2	4.50	12-Sep-18	10.68	9.73	148.24

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WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
MW1105	157.83	7.7 - 12.2	4.50	06-Apr-17	11.37	11.05	146.78
MW1105	157.84	7.7 - 12.2	4.50	18-Jul-17	11.43	11.11	146.73
MW1105	157.84	7.7 - 12.2	4.50	21-Sep-17	10.56	10.24	147.61
MW1105	157.84	7.7 - 12.2	4.50	28-Sep-17	10.51	10.19	147.66
MW1105	157.84	7.7 - 12.2	4.50	12-Oct-17	10.40	10.08	147.76
MW1105	157.48	7.7 - 12.2	4.50	20-Nov-17	10.33	9.65	147.83
MW1105	157.48	7.7 - 12.2	4.50	9-Mar-18	10.32	9.63	147.85
MW1105	157.48	7.7 - 12.2	4.50	26-Mar-18	10.34	9.66	147.82
MW1105	157.48	7.7 - 12.2	4.50	15-May-18	10.25	9.57	147.92
MW1105	157.48	7.7 - 12.2	4.50	11-Jul-18	10.06	9.38	148.10
MW1105	157.48	7.7 - 12.2	4.50	12-Sep-18	9.97	9.29	148.20
MW1106	157.32	7.7 - 12.2	4.50	06-Apr-17	11.12	10.45	146.87
MW1106	157.35	7.7 - 12.2	4.50	18-Jul-17	11.16	10.52	146.83
MW1106	157.35	7.7 - 12.2	4.50	11-Aug-17	-	-	-
MW1106	157.35	7.7 - 12.2	4.50	21-Sep-17	10.53	9.89	147.46
MW1106	157.35	7.7 - 12.2	4.50	20-Nov-17	10.31	9.67	147.68
MW1106	157.35	7.7 - 12.2	4.50	9-Mar-18	10.32	9.67	147.68
MW1106	157.35	7.7 - 12.2	4.50	26-Mar-18	10.32	9.67	147.68
MW1106	157.35	7.7 - 12.2	4.50	15-May-18	10.23	9.58	147.77
MW1106	157.35	7.7 - 12.2	4.50	11-Jul-18	10.07	9.43	147.92
MW1106	157.35	7.7 - 12.2	4.50	12-Sep-18	9.98	9.33	148.02
MW1301	158.40	7.7 - 12.2	4.50	06-Apr-17	12.57	11.72	146.68
MW1301	158.44	7.7 - 12.2	4.50	18-Jul-17	12.56	11.75	146.70
MW1301	158.40	7.7 - 12.2	4.50	11-Aug-17	-	-	-
MW1301	158.44	7.7 - 12.2	4.50	21-Sep-17	11.53	10.72	147.72
MW1301	158.44	7.7 - 12.2	4.50	20-Nov-17	11.26	10.45	147.99
MW1301	158.44	7.7 - 12.2	4.50	9-Mar-18	11.27	10.46	147.98
MW1301	158.44	7.7 - 12.2	4.50	26-Mar-18	11.27	10.46	147.98
MW1301	158.44	7.7 - 12.2	4.50	15-May-18	11.19	10.38	148.06
MW1301	158.44	7.7 - 12.2	4.50	4-Jun-18	11.13	10.32	148.12
MW1301	158.44	7.7 - 12.2	4.50	11-Jul-18	11.03	10.22	148.22
MW1301	158.44	7.7 - 12.2	4.50	12-Sep-18	9.93	9.12	149.33
MW1302	158.43	7.7 - 12.2	4.50	06-Apr-17	12.30	-	-
MW1302	158.42	7.7 - 12.2	4.50	18-Jul-17	12.87	12.12	146.30
MW1302	158.42	7.7 - 12.2	4.50	21-Sep-17	11.50	10.74	147.67
MW1302	158.42	7.7 - 12.2	4.50	17-Oct-17	11.34	10.59	147.83
MW1302	158.42	7.7 - 12.2	4.50	20-Nov-17	11.28	10.53	147.89
MW1302	158.42	7.7 - 12.2	4.50	9-Mar-18	11.23	10.48	147.94
MW1302	158.42	7.7 - 12.2	4.50	27-Mar-18	11.25	10.50	147.92
MW1302	158.42	7.7 - 12.2	4.50	15-May-18	11.21	10.46	147.96
MW1302	158.42	7.7 - 12.2	4.50	11-Jul-18	11.05	10.30	148.12
MW1302	158.42	7.7 - 12.2	4.50	12-Sep-18	10.95	10.20	148.22
MW1303	157.97	7.7 - 12.2	4.50	06-Apr-17	11.91	11.56	146.41
MW1303	158.01	7.7 - 12.2	4.50	18-Jul-17	11.57	11.25	146.76
MW1303	158.01	7.7 - 12.2	4.50	21-Sep-17	10.71	10.39	147.62
MW1303	158.01	7.7 - 12.2	4.50	17-Oct-17	10.54	10.22	147.79
MW1303	158.01	7.7 - 12.2	4.50	20-Nov-17	10.48	10.16	147.86
MW1303	158.01	7.7 - 12.2	4.50	9-Mar-18	10.47	10.15	147.86
MW1303	158.01	7.7 - 12.2	4.50	26-Mar-18	10.48	10.16	147.85
MW1303	158.01	7.7 - 12.2	4.50	15-May-18	10.42	10.10	147.91
MW1303	158.01	7.7 - 12.2	4.50	11-Jul-18	-	-	-
MW1303	158.01	7.7 - 12.2	4.50	12-Sep-18	-	-	-

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MW1304	158.09	7.7 - 12.2	4.50	06-Apr-17	12.38	11.25	146.84
MW1304	158.06	7.7 - 12.2	4.50	18-Jul-17	12.40	11.21	146.85
MW1304	158.06	7.7 - 12.2	4.50	21-Sep-17	11.69	10.50	147.55
MW1304	158.06	7.7 - 12.2	4.50	28-Sep-17	11.64	10.45	147.61
MW1304	158.06	7.7 - 12.2	4.50	17-Oct-17	11.52	10.33	147.73
MW1304	158.06	7.7 - 12.2	4.50	20-Nov-17	11.46	10.27	147.79
MW1304	158.06	7.7 - 12.2	4.50	9-Mar-18	11.47	10.28	147.78
MW1304	158.06	7.7 - 12.2	4.50	26-Mar-18	11.50	10.31	147.75
MW1304	158.06	7.7 - 12.2	4.50	15-May-18	11.41	10.22	147.84
MW1304	158.06	7.7 - 12.2	4.50	11-Jul-18	11.23	10.04	148.03
MW1304	158.06	7.7 - 12.2	4.50	12-Sep-18	11.12	9.93	148.13
MW1401	158.50	9.1 - 12.2	3.05	06-Apr-17	12.88	-	-
MW1401	158.52	9.1 - 12.2	3.05	18-Jul-17	-	-	-
MW1401	158.52	9.1 - 12.2	3.05	21-Sep-17	11.63	10.71	147.81
MW1401	158.52	9.1 - 12.2	3.05	28-Sep-17	11.56	10.65	147.87
MW1401	158.52	9.1 - 12.2	3.05	20-Nov-17	11.32	10.41	148.11
MW1401	158.52	9.1 - 12.2	3.05	29-Nov-17	11.31	10.40	148.12
MW1401	158.52	9.1 - 12.2	3.05	9-Mar-18	11.28	10.37	148.15
MW1401	158.52	9.1 - 12.2	3.05	26-Mar-18	11.47	10.56	147.96
MW1401	158.52	9.1 - 12.2	3.05	15-May-18	11.17	10.26	148.27
MW1401	158.52	9.1 - 12.2	3.05	4-Jun-18	11.07	10.16	148.36
MW1401	158.52	9.1 - 12.2	3.05	11-Jul-18	10.97	10.06	148.46
MW1401	158.52	9.1 - 12.2	3.05	12-Sep-18	10.86	9.95	148.57
MW1402	158.51	10.7 - 13.7	3.05	06-Apr-17	12.66	12.22	146.29
MW1402	158.16	10.7 - 13.7	3.05	18-Jul-17	12.66	11.49	146.67
MW1402	158.16	10.7 - 13.7	3.05	21-Sep-17	11.61	10.45	147.71
MW1402	158.16	10.7 - 13.7	3.05	28-Sep-17	11.56	10.39	147.77
MW1402	158.16	10.7 - 13.7	3.05	20-Nov-17	11.38	10.21	147.95
MW1402	158.16	10.7 - 13.7	3.05	9-Mar-18	11.38	10.21	147.95
MW1402	158.16	10.7 - 13.7	3.05	15-May-18	11.32	10.15	148.02
MW1402	158.16	10.7 - 13.7	3.05	11-Jul-18	11.13	9.96	148.20
MW1402	158.16	10.7 - 13.7	3.05	12-Sep-18	11.04	9.86	148.30
MW1403	158.53	10.7 - 13.7	3.05	06-Apr-17	12.58	12.00	146.53
MW1403	158.81	10.7 - 13.7	3.05	18-Jul-17	12.62	11.82	146.99
MW1403	158.81	10.7 - 13.7	3.05	21-Sep-17	12.00	11.19	147.61
MW1403	158.81	10.7 - 13.7	3.05	20-Nov-17	11.76	10.96	147.86
MW1403	158.81	10.7 - 13.7	3.05	9-Mar-18	11.75	10.95	147.87
MW1403	158.81	10.7 - 13.7	3.05	15-May-18	11.69	10.89	147.92
MW1403	158.81	10.7 - 13.7	3.05	11-Jul-18	11.51	10.71	148.10
MW1403	158.81	10.7 - 13.7	3.05	12-Sep-18	11.41	10.61	148.20
MW1404	158.67	9.1 - 12.2	3.05	06-Apr-17	12.46	-	-
MW1404	158.74	9.1 - 12.2	3.05	18-Jul-17	12.53	11.82	146.92
MW1404	158.74	9.1 - 12.2	3.05	21-Sep-17	11.86	11.15	147.59
MW1404	158.74	9.1 - 12.2	3.05	12-Oct-17	11.71	11.00	147.75
MW1404	158.74	9.1 - 12.2	3.05	20-Nov-17	11.61	10.90	147.85
MW1404	158.74	9.1 - 12.2	3.05	9-Mar-18	11.61	10.90	147.85
MW1404	158.74	9.1 - 12.2	3.05	26-Mar-18	11.62	10.91	147.83
MW1404	158.74	9.1 - 12.2	3.05	15-May-18	11.54	10.83	147.92
MW1404	158.74	9.1 - 12.2	3.05	11-Jul-18	11.35	10.64	148.10
MW1404	158.74	9.1 - 12.2	3.05	12-Sep-18	11.25	10.54	148.21

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MW1405	158.57	9.1 - 12.2	3.05	06-Apr-17	11.80	10.83	147.74
MW1405	158.57	9.1 - 12.2	3.05	18-Jul-17	11.85	11.86	146.71
MW1405	158.57	9.1 - 12.2	3.05	21-Sep-17	10.76	10.77	147.80
MW1405	158.57	9.1 - 12.2	3.05	20-Nov-17	11.36	10.51	148.06
MW1405	158.57	9.1 - 12.2	3.05	9-Mar-18	11.35	10.50	148.07
MW1405	158.57	9.1 - 12.2	3.05	15-May-18	11.30	10.45	148.12
MW1405	158.57	9.1 - 12.2	3.05	11-Jul-18	11.12	10.27	148.30
MW1405	158.57	9.1 - 12.2	3.05	12-Sep-18	10.99	10.14	148.43
MW1501	158.62	22.9 - 25.9	3.05	16-Aug-17	20.06	19.22	139.39
MW1501	158.62	22.9 - 25.9	3.05	21-Sep-17	17.90	17.07	141.55
MW1501	158.62	22.9 - 25.9	3.05	12-Oct-17	17.64	16.81	141.81
MW1501	158.62	22.9 - 25.9	3.05	17-Oct-17	17.45	16.62	142.00
MW1501	158.62	22.9 - 25.9	3.05	20-Nov-17	17.57	16.74	141.89
MW1501	158.62	22.9 - 25.9	3.05	9-Mar-18	17.16	16.33	142.29
MW1501	158.62	22.9 - 25.9	3.05	15-May-18	17.34	16.51	142.11
MW1501	158.62	22.9 - 25.9	3.05	11-Jul-18	17.53	16.70	141.93
MW1501	158.62	22.9 - 25.9	3.05	12-Sep-18	17.49	16.66	141.97
MW1502	158.18	22 - 24.7	2.74	16-Aug-17	12.67	11.74	146.43
MW1502	158.18	22 - 24.7	2.74	21-Sep-17	12.27	11.34	146.83
MW1502	158.18	22 - 24.7	2.74	12-Oct-17	12.15	11.22	146.96
MW1502	158.18	22 - 24.7	2.74	20-Nov-17	12.08	11.16	147.03
MW1502	158.18	22 - 24.7	2.74	9-Mar-18	11.92	11.00	147.18
MW1502	158.18	22 - 24.7	2.74	15-May-18	11.84	10.92	147.26
MW1502	158.18	22 - 24.7	2.74	11-Jul-18	11.71	10.79	147.39
MW1502	158.18	22 - 24.7	2.74	12-Sep-18	11.66	10.74	147.44
MW1503	158.33	10.4 - 13.4	3.05	16-Aug-17	12.46	11.38	146.95
MW1503	158.33	10.4 - 13.4	3.05	21-Sep-17	11.82	10.74	147.59
MW1503	158.33	10.4 - 13.4	3.05	17-Oct-17	11.65	10.57	147.75
MW1503	158.33	10.4 - 13.4	3.05	20-Nov-17	11.58	10.50	147.83
MW1503	158.33	10.4 - 13.4	3.05	9-Mar-18	11.52	10.44	147.89
MW1503	158.33	10.4 - 13.4	3.05	26-Mar-18	11.57	10.49	147.84
MW1503	158.33	10.4 - 13.4	3.05	15-May-18	11.50	10.42	147.91
MW1503	158.33	10.4 - 13.4	3.05	4-Jun-18	11.42	10.34	147.99
MW1503	158.33	10.4 - 13.4	3.05	11-Jul-18	11.32	10.24	148.09
MW1503	158.33	10.4 - 13.4	3.05	12-Sep-18	10.68	9.60	148.73
MW1504	158.49	10.7 - 13.7	3.05	16-Aug-17	12.40	11.57	146.92
MW1504	158.49	10.7 - 13.7	3.05	21-Sep-17	11.56	10.73	147.76
MW1504	158.49	10.7 - 13.7	3.05	28-Sep-17	11.53	10.70	147.79
MW1504	158.49	10.7 - 13.7	3.05	20-Nov-17	11.28	10.45	148.04
MW1504	158.49	10.7 - 13.7	3.05	9-Mar-18	11.31	10.48	148.01
MW1504	158.49	10.7 - 13.7	3.05	26-Mar-18	11.32	10.49	148.00
MW1504	158.49	10.7 - 13.7	3.05	15-May-18	11.25	10.42	148.07
MW1504	158.49	10.7 - 13.7	3.05	11-Jul-18	11.07	10.24	148.25
MW1504	158.49	10.7 - 13.7	3.05	12-Sep-18	10.87	10.04	148.45
MW1509	158.64	10.7 - 13.7	3.05	11-Aug-17	-	-	-
MW1509	158.64	10.7 - 13.7	3.05	16-Aug-17	12.40	11.46	147.18
MW1509	158.64	10.7 - 13.7	3.05	21-Sep-17	11.87	10.93	147.71
MW1509	158.64	10.7 - 13.7	3.05	20-Nov-17	11.62	10.68	147.97
MW1509	158.64	10.7 - 13.7	3.05	29-Nov-17	11.62	10.68	147.96
MW1509	158.64	10.7 - 13.7	3.05	9-Mar-18	11.61	10.67	147.97
MW1509	158.64	10.7 - 13.7	3.05	27-Mar-18	11.59	10.65	147.99
MW1509	158.64	10.7 - 13.7	3.05	15-May-18	11.55	10.61	148.03
MW1509	158.64	10.7 - 13.7	3.05	11-Jul-18	11.37	10.43	148.21
MW1509	158.64	10.7 - 13.7	3.05	12-Sep-18	11.23	10.29	148.35
MW1510	158.19	9.1 - 12.2	3.05	11-Aug-17	-	-	-

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MW1510	158.19	9.1 - 12.2	3.05	16-Aug-17	10.98	11.06	147.13
MW1510	158.19	9.1 - 12.2	3.05	21-Sep-17	10.65	10.73	147.46
MW1510	158.19	9.1 - 12.2	3.05	20-Nov-17	10.43	10.51	147.68
MW1510	158.19	9.1 - 12.2	3.05	9-Mar-18	10.42	10.50	147.69
MW1510	158.19	9.1 - 12.2	3.05	15-May-18	10.36	10.44	147.75
MW1510	158.19	9.1 - 12.2	3.05	11-Jul-18	10.19	10.27	147.92
MW1510	158.19	9.1 - 12.2	3.05	12-Sep-18	10.10	10.18	148.01
MW1511	158.28	9.8 - 12.8	3.05	16-Aug-17	11.25	11.32	146.97
MW1511	158.28	9.8 - 12.8	3.05	21-Sep-17	11.05	11.12	147.17
MW1511	158.28	9.8 - 12.8	3.05	20-Nov-17	10.88	10.95	147.33
MW1511	158.28	9.8 - 12.8	3.05	9-Mar-18	10.91	10.98	147.31
MW1511	158.28	9.8 - 12.8	3.05	26-Mar-18	10.94	11.01	147.28
MW1511	158.28	9.8 - 12.8	3.05	15-May-18	10.84	10.91	147.37
MW1511	158.28	9.8 - 12.8	3.05	11-Jul-18	10.67	10.74	147.54
MW1511	158.28	9.8 - 12.8	3.05	12-Sep-18	10.61	10.68	147.61
MW1512	158.23	10.1 - 13.1	3.05	16-Aug-17	11.06	11.21	147.02
MW1512	158.23	10.1 - 13.1	3.05	21-Sep-17	10.71	10.86	147.37
MW1512	158.23	10.1 - 13.1	3.05	20-Nov-17	10.52	10.67	147.56
MW1512	158.23	10.1 - 13.1	3.05	9-Mar-18	10.53	10.68	147.55
MW1512	158.23	10.1 - 13.1	3.05	26-Mar-18	10.54	10.69	147.54
MW1512	158.23	10.1 - 13.1	3.05	15-May-18	10.46	10.61	147.62
MW1512	158.23	10.1 - 13.1	3.05	11-Jul-18	10.27	10.42	147.81
MW1512	158.23	10.1 - 13.1	3.05	12-Sep-18	10.19	10.34	147.90
MW1601	158.58	27.4 - 28.9	1.52	12-Oct-17	Dry at 31.00 m	-	-
MW1601	158.58	27.4 - 28.9	1.52	17-Oct-17	Dry at >30 m	-	-
MW1601	158.58	27.4 - 28.9	1.52	20-Nov-17	Dry at 31.848	-	-
MW1601	158.58	27.4 - 28.9	1.52	9-Mar-18	Dry	-	-
MW1601	158.58	27.4 - 28.9	1.52	15-May-18	Dry	-	-
MW1601	158.58	27.4 - 28.9	1.52	11-Jul-18	Dry	-	-
MW1601	158.58	27.4 - 28.9	1.52	12-Sep-18	Dry	-	-
MW1801	158.43	15.8 - 18.9	3.05	15-May-18	11.27	10.39	148.04
MW1801	158.43	15.8 - 18.9	3.05	11-Jul-18	10.52	9.64	148.78
MW1801	158.43	15.8 - 18.9	3.05	12-Sep-18	10.97	10.09	148.34
MW1802	158.61	9.1 - 12.2	3.05	15-May-18	10.39	10.51	148.10
MW1802	158.61	9.1 - 12.2	3.05	4-Jun-18	10.31	10.43	148.18
MW1802	158.61	9.1 - 12.2	3.05	11-Jul-18	10.20	10.32	148.29
MW1802	158.61	9.1 - 12.2	3.05	12-Sep-18	10.08	10.20	148.41
MW1806	157.84	9.8 - 12.9	3.05	15-May-18	10.16	10.29	147.56
MW1806	157.84	9.8 - 12.9	3.05	11-Jul-18	9.97	10.11	147.74
MW1806	157.84	9.8 - 12.9	3.05	12-Sep-18	9.90	10.03	147.81
MW4	158.03	5.1 - 11.2	6.10	06-Apr-17	Dry at 11.92 m	-	-
MW4	158.08	5.1 - 11.2	6.10	18-Jul-17	Dry at 11.69 m	-	-
MW4	158.08	5.1 - 11.2	6.10	21-Sep-17	10.82	10.41	147.67
MW4	158.08	5.1 - 11.2	6.10	20-Nov-17	10.59	10.19	147.90
MW4	158.08	5.1 - 11.2	6.10	9-Mar-18	10.58	10.18	147.91
MW4	158.08	5.1 - 11.2	6.10	15-May-18	10.52	10.12	147.97
MW4	158.08	5.1 - 11.2	6.10	11-Jul-18	10.32	9.92	148.16
MW4	158.08	5.1 - 11.2	6.10	12-Sep-18	10.23	9.83	148.26

Terrapex Ground Water Monitoring Data
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WELL NO.	GROUND ELEVATION	SCREENED INTERVAL	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE	DEPTH TO WATER FROM GROUND	GROUNDWATER ELEVATION
MW802	157.70	7.6 - 13.7	6.10	06-Apr-17	11.67	10.93	146.76
MW802	157.71	7.6 - 13.7	6.10	18-Jul-17	11.71	10.93	146.78
MW802	157.71	7.6 - 13.7	6.10	21-Sep-17	10.93	10.15	147.55
MW802	157.71	7.6 - 13.7	6.10	20-Nov-17	10.70	9.92	147.79
MW802	157.71	7.6 - 13.7	6.10	9-Mar-18	10.70	9.92	147.79
MW802	157.71	7.6 - 13.7	6.10	15-May-18	10.63	9.85	147.86
MW802	157.71	7.6 - 13.7	6.10	11-Jul-18	10.45	9.66	148.05
MW802	157.71	7.6 - 13.7	6.10	12-Sep-18	10.35	9.57	148.14
MW803	158.70	7.6 - 13.7	6.10	06-Apr-17	12.60	11.95	146.75
MW803	158.74	7.6 - 13.7	6.10	18-Jul-17	12.54	11.92	146.82
MW803	158.74	7.6 - 13.7	6.10	21-Sep-17	11.55	10.94	147.81
MW803	158.74	7.6 - 13.7	6.10	20-Nov-17	11.30	10.68	148.07
MW803	158.74	7.6 - 13.7	6.10	9-Mar-18	11.30	10.68	148.06
MW803	158.74	7.6 - 13.7	6.10	15-May-18	11.23	10.61	148.14
MW803	158.74	7.6 - 13.7	6.10	11-Jul-18	11.06	10.44	148.31
MW803	158.74	7.6 - 13.7	6.10	12-Sep-18	10.93	10.31	148.44
PW2	158.23	6.1 - 12.2	6.10	06-Apr-17	11.69	11.28	146.95
PW2	158.35	6.1 - 12.2	6.10	18-Jul-17	11.78	11.45	146.90
PW2	158.35	6.1 - 12.2	6.10	21-Sep-17	11.16	10.83	147.52
PW2	158.35	6.1 - 12.2	6.10	12-Oct-17	11.01	10.68	147.67
PW2	158.35	6.1 - 12.2	6.10	20-Nov-17	10.93	10.60	147.76
PW2	158.35	6.1 - 12.2	6.10	9-Mar-18	10.95	10.62	147.73
PW2	158.35	6.1 - 12.2	6.10	15-May-18	10.86	10.53	147.83
PW2	158.35	6.1 - 12.2	6.10	11-Jul-18	10.69	10.36	147.99
PW2	158.35	6.1 - 12.2	6.10	12-Sep-18	10.60	10.27	148.09

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WELL NO.	GROUND ELEVATION[1]	TOP OF PIPE ELEVATION[2]	BOTTOM OF PIPE ELEVATION[2]	SCREENED INTERVAL[3]	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE[4]	DEPTH TO WATER FROM GROUND[4]	GROUNDWATER ELEVATION[5]	LNAPL THICKNESS[6]
EW101	158.53	158.72	144.83	7.6 - 13.7	6.10	9-Mar-18	10.67	10.48	148.05	None
EW101	158.53	158.72	144.83	7.6 - 13.7	6.10	15-May-18	10.61	10.42	148.11	None
EW101	158.53	158.72	144.83	7.6 - 13.7	6.10	11-Jul-18	10.43	10.24	148.29	None
EW101	158.53	158.72	144.83	7.6 - 13.7	6.10	12-Sep-18	10.27	10.08	148.45	None
EW101	158.53	158.72	144.83	7.6 - 13.7	6.10	20-Dec-18	10.15	9.96	148.58	None
EW101	158.53	158.72	144.83	7.6 - 13.7	6.10	29-Mar-19	10.09	9.90	148.63	None
EW102	158.61	158.82	144.91	7.6 - 13.7	6.10	9-Mar-18	10.75	10.54	148.07	0.01
EW102	158.61	158.82	144.91	7.6 - 13.7	6.10	15-May-18	10.69	10.48	148.13	None
EW102	158.61	158.82	144.91	7.6 - 13.7	6.10	11-Jul-18	10.50	10.29	148.32	None
EW102	158.61	158.82	144.91	7.6 - 13.7	6.10	12-Sep-18	10.40	10.19	148.42	None
EW102	158.61	158.82	144.91	7.6 - 13.7	6.10	20-Dec-18	10.29	10.08	148.53	None
EW102	158.61	158.82	144.91	7.6 - 13.7	6.10	29-Mar-19	10.21	10.00	148.61	None
EW103	158.64	159.22	144.94	7.6 - 13.7	6.10	9-Mar-18	11.10	10.52	148.12	None
EW103	158.64	159.22	144.94	7.6 - 13.7	6.10	15-May-18	-	-	-	None
EW103	158.64	159.22	144.94	7.6 - 13.7	6.10	11-Jul-18	10.86	10.28	148.36	None
EW103	158.64	159.22	144.94	7.6 - 13.7	6.10	12-Sep-18	10.73	10.15	148.49	None
EW103	158.64	159.22	144.94	7.6 - 13.7	6.10	20-Dec-18	10.62	10.04	148.61	None
EW103	158.64	159.22	144.94	7.6 - 13.7	6.10	29-Mar-19	-	-	-	-
EW104	158.50	158.93	144.80	7.6 - 13.7	6.10	9-Mar-18	10.84	10.41	148.09	0.54
EW104	158.50	158.93	144.80	7.6 - 13.7	6.10	15-May-18	10.77	10.34	148.16	0.54
EW104	158.50	158.93	144.80	7.6 - 13.7	6.10	11-Jul-18	10.58	10.15	148.35	0.61
EW104	158.50	158.93	144.80	7.6 - 13.7	6.10	12-Sep-18	10.20	9.76	148.74	0.20
EW104	158.50	158.93	144.80	7.6 - 13.7	6.10	20-Dec-18	10.36	9.93	148.57	0.62
EW104	158.50	158.93	144.80	7.6 - 13.7	6.10	29-Mar-19	10.26	9.83	148.67	0.65
EW105	158.53	159.33	144.83	7.6 - 13.7	6.10	9-Mar-18	11.27	10.47	148.06	0.06
EW105	158.53	159.33	144.83	7.6 - 13.7	6.10	15-May-18	11.21	10.41	148.12	0.16
EW105	158.53	159.33	144.83	7.6 - 13.7	6.10	11-Jul-18	11.04	10.24	148.29	0.18
EW105	158.53	159.33	144.83	7.6 - 13.7	6.10	12-Sep-18	10.86	10.06	148.47	0.03
EW105	158.53	159.33	144.83	7.6 - 13.7	6.10	20-Dec-18	10.82	10.02	148.52	0.20
EW105	158.53	159.33	144.83	7.6 - 13.7	6.10	29-Mar-19	10.73	9.93	148.60	0.19
EW106	158.45	158.99	144.75	7.6 - 13.7	6.10	9-Mar-18	10.99	10.45	148.00	0.05
EW106	158.45	158.99	144.75	7.6 - 13.7	6.10	15-May-18	10.94	10.40	148.06	0.05
EW106	158.45	158.99	144.75	7.6 - 13.7	6.10	11-Jul-18	10.76	10.22	148.23	0.17
EW106	158.45	158.99	144.75	7.6 - 13.7	6.10	12-Sep-18	10.70	10.16	148.29	0.19
EW106	158.45	158.99	144.75	7.6 - 13.7	6.10	20-Dec-18	10.53	9.99	148.46	0.45
EW106	158.45	158.99	144.75	7.6 - 13.7	6.10	29-Mar-19	10.44	9.90	148.55	0.53
EW107	158.60	158.86	144.90	7.6 - 13.7	6.10	9-Mar-18	10.94	10.68	147.93	0.04
EW107	158.60	158.86	144.90	7.6 - 13.7	6.10	15-May-18	10.86	10.60	148.00	0.06
EW107	158.60	158.86	144.90	7.6 - 13.7	6.10	11-Jul-18	10.70	10.44	148.16	0.02
EW107	158.60	158.86	144.90	7.6 - 13.7	6.10	12-Sep-18	10.59	10.33	148.27	0.01
EW107	158.60	158.86	144.90	7.6 - 13.7	6.10	20-Dec-18	10.51	10.25	148.35	0.03
EW107	158.60	158.86	144.90	7.6 - 13.7	6.10	29-Mar-19	10.41	10.15	148.45	0.02
EW108	158.56	158.81	144.86	7.6 - 13.7	6.10	9-Mar-18	10.94	10.69	147.87	None
EW108	158.56	158.81	144.86	7.6 - 13.7	6.10	15-May-18	10.87	10.62	147.94	None
EW108	158.56	158.81	144.86	7.6 - 13.7	6.10	11-Jul-18	10.70	10.45	148.11	None
EW108	158.56	158.81	144.86	7.6 - 13.7	6.10	12-Sep-18	10.59	10.34	148.23	None
EW108	158.56	158.81	144.86	7.6 - 13.7	6.10	20-Dec-18	10.48	10.23	148.33	None
EW108	158.56	158.81	144.86	7.6 - 13.7	6.10	28-Mar-19	10.38	10.13	148.43	None

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WELL NO.	GROUND ELEVATION[1]	TOP OF PIPE ELEVATION[2]	BOTTOM OF PIPE ELEVATION[2]	SCREENED INTERVAL[3]	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE[4]	DEPTH TO WATER FROM GROUND[4]	GROUNDWATER ELEVATION[5]	LNAPL THICKNESS[6]
EW109	158.42	158.82	144.72	7.6 - 13.7	6.10	9-Mar-18	10.83	10.43	147.99	0.06
EW109	158.42	158.82	144.72	7.6 - 13.7	6.10	15-May-18	10.80	10.40	148.03	0.08
EW109	158.42	158.82	144.72	7.6 - 13.7	6.10	11-Jul-18	10.60	10.20	148.22	0.05
EW109	158.42	158.82	144.72	7.6 - 13.7	6.10	12-Sep-18	10.44	10.04	148.39	0.05
EW109	158.42	158.82	144.72	7.6 - 13.7	6.10	20-Dec-18	10.37	9.97	148.45	0.10
EW109	158.42	158.82	144.72	7.6 - 13.7	6.10	29-Mar-19	10.29	9.89	148.53	0.11
EW110	158.27	158.81	144.57	7.6 - 13.7	6.10	9-Mar-18	10.82	10.28	147.99	None
EW110	158.27	158.81	144.57	7.6 - 13.7	6.10	15-May-18	10.75	10.21	148.06	None
EW110	158.27	158.81	144.57	7.6 - 13.7	6.10	11-Jul-18	10.55	10.01	148.26	None
EW110	158.27	158.81	144.57	7.6 - 13.7	6.10	12-Sep-18	10.50	9.96	148.32	None
EW110	158.27	158.81	144.57	7.6 - 13.7	6.10	20-Dec-18	10.35	9.81	148.46	None
EW110	158.27	158.81	144.57	7.6 - 13.7	6.10	28-Mar-19	10.21	9.67	148.61	None
EW111	158.04	158.73	144.34	7.6 - 13.7	6.10	9-Mar-18	10.77	10.08	147.96	None
EW111	158.04	158.73	144.34	7.6 - 13.7	6.10	15-May-18	10.71	10.02	148.02	None
EW111	158.04	158.73	144.34	7.6 - 13.7	6.10	11-Jul-18	10.51	9.82	148.22	None
EW111	158.04	158.73	144.34	7.6 - 13.7	6.10	12-Sep-18	10.43	9.74	148.30	None
EW111	158.04	158.73	144.34	7.6 - 13.7	6.10	20-Dec-18	10.31	9.62	148.43	None
EW111	158.04	158.73	144.34	7.6 - 13.7	6.10	28-Mar-19	10.18	9.49	148.55	None
EW112	158.15	158.47	144.45	7.6 - 13.7	6.10	9-Mar-18	10.58	10.26	147.89	0.03
EW112	158.15	158.47	144.45	7.6 - 13.7	6.10	15-May-18	10.50	10.18	147.97	0.02
EW112	158.15	158.47	144.45	7.6 - 13.7	6.10	11-Jul-18	10.32	10.00	148.16	None
EW112	158.15	158.47	144.45	7.6 - 13.7	6.10	12-Sep-18	10.23	9.91	148.24	None
EW112	158.15	158.47	144.45	7.6 - 13.7	6.10	20-Dec-18	10.11	9.79	148.36	None
EW112	158.15	158.47	144.45	7.6 - 13.7	6.10	28-Mar-19	9.99	9.67	148.48	None
EW113	158.32	159.08	144.62	7.6 - 13.7	6.10	9-Mar-18	11.20	10.44	147.88	0.09
EW113	158.32	159.08	144.62	7.6 - 13.7	6.10	15-May-18	11.14	10.38	147.94	0.18
EW113	158.32	159.08	144.62	7.6 - 13.7	6.10	11-Jul-18	10.96	10.20	148.12	0.20
EW113	158.32	159.08	144.62	7.6 - 13.7	6.10	12-Sep-18	10.84	10.08	148.24	0.02
EW113	158.32	159.08	144.62	7.6 - 13.7	6.10	20-Dec-18	10.76	10.00	148.32	None
EW113	158.32	159.08	144.62	7.6 - 13.7	6.10	28-Mar-19	10.64	9.88	148.44	None
EW114	158.55	158.96	144.85	7.6 - 13.7	6.10	9-Mar-18	11.09	10.68	147.87	0.24
EW114	158.55	158.96	144.85	7.6 - 13.7	6.10	15-May-18	11.06	10.65	147.90	0.44
EW114	158.55	158.96	144.85	7.6 - 13.7	6.10	11-Jul-18	10.89	10.48	148.07	0.45
EW114	158.55	158.96	144.85	7.6 - 13.7	6.10	12-Sep-18	10.60	10.19	148.36	0.13
EW114	158.55	158.96	144.85	7.6 - 13.7	6.10	20-Dec-18	10.69	10.28	148.27	0.36
EW114	158.55	158.96	144.85	7.6 - 13.7	6.10	29-Mar-19	10.60	10.19	148.36	0.36
EW115	158.41	158.82	144.71	7.6 - 13.7	6.10	9-Mar-18	11.05	10.64	147.77	None
EW115	158.41	158.82	144.71	7.6 - 13.7	6.10	15-May-18	10.97	10.56	147.85	None
EW115	158.41	158.82	144.71	7.6 - 13.7	6.10	11-Jul-18	10.80	10.39	148.02	None
EW115	158.41	158.82	144.71	7.6 - 13.7	6.10	12-Sep-18	10.70	10.29	148.12	None
EW115	158.41	158.82	144.71	7.6 - 13.7	6.10	20-Dec-18	10.60	10.19	148.22	None
EW115	158.41	158.82	144.71	7.6 - 13.7	6.10	28-Mar-19	10.49	10.08	148.33	None
EW116	158.10	158.34	144.40	7.6 - 13.7	6.10	9-Mar-18	10.54	10.30	147.80	None
EW116	158.10	158.34	144.40	7.6 - 13.7	6.10	15-May-18	-	-	-	-
EW116	158.10	158.34	144.40	7.6 - 13.7	6.10	11-Jul-18	10.27	10.03	148.07	None
EW116	158.10	158.34	144.40	7.6 - 13.7	6.10	12-Sep-18	10.17	9.92	148.18	None
EW116	158.10	158.34	144.40	7.6 - 13.7	6.10	20-Dec-18	10.05	9.81	148.29	None
EW116	158.10	158.34	144.40	7.6 - 13.7	6.10	28-Mar-19	9.96	9.72	148.38	None

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WELL NO.	GROUND ELEVATION[1]	TOP OF PIPE ELEVATION[2]	BOTTOM OF PIPE ELEVATION[2]	SCREENED INTERVAL[3]	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE[4]	DEPTH TO WATER FROM GROUND[4]	GROUNDWATER ELEVATION[5]	LNAPL THICKNESS[6]
EW117	157.98	158.35	144.28	7.6 - 13.7	6.10	9-Mar-18	10.45	10.08	147.91	Sheen
EW117	157.98	158.35	144.28	7.6 - 13.7	6.10	15-May-18	10.37	10.00	147.99	None
EW117	157.98	158.35	144.28	7.6 - 13.7	6.10	11-Jul-18	10.18	9.81	148.18	None
EW117	157.98	158.35	144.28	7.6 - 13.7	6.10	12-Sep-18	10.11	9.73	148.25	None
EW117	157.98	158.35	144.28	7.6 - 13.7	6.10	20-Dec-18	9.96	9.59	148.40	None
EW117	157.98	158.35	144.28	7.6 - 13.7	6.10	28-Mar-19	9.86	9.49	148.49	None
EW118	157.78	158.14	144.08	7.6 - 13.7	6.10	9-Mar-18	10.30	9.94	147.85	Sheen
EW118	157.78	158.14	144.08	7.6 - 13.7	6.10	15-May-18	10.23	9.87	147.92	None
EW118	157.78	158.14	144.08	7.6 - 13.7	6.10	11-Jul-18	10.05	9.69	148.09	None
EW118	157.78	158.14	144.08	7.6 - 13.7	6.10	12-Sep-18	9.96	9.60	148.19	None
EW118	157.78	158.14	144.08	7.6 - 13.7	6.10	19-Dec-18	9.85	9.49	148.30	None
EW118	157.78	158.14	144.08	7.6 - 13.7	6.10	28-Mar-19	9.72	9.36	148.42	None
EW119	157.60	158.24	143.90	7.6 - 13.7	6.10	9-Mar-18	10.44	9.80	147.80	None
EW119	157.60	158.24	143.90	7.6 - 13.7	6.10	15-May-18	10.38	9.74	147.86	None
EW119	157.60	158.24	143.90	7.6 - 13.7	6.10	11-Jul-18	10.19	9.55	148.05	None
EW119	157.60	158.24	143.90	7.6 - 13.7	6.10	12-Sep-18	10.09	9.45	148.15	None
EW119	157.60	158.24	143.90	7.6 - 13.7	6.10	19-Dec-18	9.98	9.34	148.26	None
EW119	157.60	158.24	143.90	7.6 - 13.7	6.10	28-Mar-19	9.87	9.23	148.37	None
EW120	157.35	157.75	143.65	7.6 - 13.7	6.10	9-Mar-18	10.03	9.63	147.73	None
EW120	157.35	157.75	143.65	7.6 - 13.7	6.10	15-May-18	9.96	9.56	147.80	None
EW120	157.35	157.75	143.65	7.6 - 13.7	6.10	11-Jul-18	9.78	9.38	147.97	None
EW120	157.35	157.75	143.65	7.6 - 13.7	6.10	12-Sep-18	9.68	9.28	148.07	None
EW120	157.35	157.75	143.65	7.6 - 13.7	6.10	19-Dec-18	9.59	9.19	148.17	None
EW120	157.35	157.75	143.65	7.6 - 13.7	6.10	28-Mar-19	9.47	9.07	148.28	None
EW121	157.74	158.14	144.04	7.6 - 13.7	6.10	9-Mar-18	10.48	10.08	147.67	Sheen
EW121	157.74	158.14	144.04	7.6 - 13.7	6.10	15-May-18	10.41	10.01	147.74	None
EW121	157.74	158.14	144.04	7.6 - 13.7	6.10	11-Jul-18	10.22	9.82	147.92	None
EW121	157.74	158.14	144.04	7.6 - 13.7	6.10	12-Sep-18	10.12	9.72	148.02	None
EW121	157.74	158.14	144.04	7.6 - 13.7	6.10	19-Dec-18	10.03	9.63	148.11	None
EW121	157.74	158.14	144.04	7.6 - 13.7	6.10	28-Mar-19	9.92	9.52	148.23	None
EW122	158.15	158.56	144.45	7.6 - 13.7	6.10	9-Mar-18	10.85	10.44	147.71	0.02
EW122	158.15	158.56	144.45	7.6 - 13.7	6.10	15-May-18	10.79	10.38	147.77	0.05
EW122	158.15	158.56	144.45	7.6 - 13.7	6.10	11-Jul-18	10.60	10.19	147.96	0.06
EW122	158.15	158.56	144.45	7.6 - 13.7	6.10	12-Sep-18	10.47	10.06	148.10	0.05
EW122	158.15	158.56	144.45	7.6 - 13.7	6.10	20-Dec-18	10.41	10.00	148.15	0.05
EW122	158.15	158.56	144.45	7.6 - 13.7	6.10	29-Mar-19	10.30	9.89	148.26	0.04
MW101	158.55	158.39	132.65	22.9 - 25.9	3.05	9-Mar-18	Dry at 25.786 m	-	-	-
MW101	158.55	158.39	132.65	22.9 - 25.9	3.05	15-May-18	-	-	-	-
MW101	158.55	158.39	132.65	22.9 - 25.9	3.05	11-Jul-18	-	-	-	-
MW101	158.55	158.39	132.65	22.9 - 25.9	3.05	12-Sep-18	-	-	-	-
MW101	158.55	158.39	132.65	22.9 - 25.9	3.05	19-Dec-18	Dry at 25.78 m	-	-	-
MW101	158.55	158.39	132.65	22.9 - 25.9	3.05	28-Mar-19	Dry at 26.00 m	-	-	-
MW102	157.84	157.71	131.94	22.9 - 25.9	3.05	9-Mar-18	9.95	10.08	147.77	None
MW102	157.84	157.71	131.94	22.9 - 25.9	3.05	15-May-18	9.90	10.03	147.81	None
MW102	157.84	157.71	131.94	22.9 - 25.9	3.05	11-Jul-18	9.77	9.90	147.94	None
MW102	157.84	157.71	131.94	22.9 - 25.9	3.05	12-Sep-18	9.58	9.71	148.13	None
MW102	157.84	157.71	131.94	22.9 - 25.9	3.05	19-Dec-18	9.50	9.63	148.21	None
MW102	157.84	157.71	131.94	22.9 - 25.9	3.05	28-Mar-19	9.37	9.50	148.34	None

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MW1101	158.61	159.19	146.41	7.7 - 12.2	4.50	9-Mar-18	11.11	10.53	148.08	Sheen
MW1101	158.61	159.19	146.41	7.7 - 12.2	4.50	15-May-18	11.06	10.48	148.14	None
MW1101	158.61	159.19	146.41	7.7 - 12.2	4.50	11-Jul-18	-	-	-	-
MW1101	158.61	159.19	146.41	7.7 - 12.2	4.50	12-Sep-18	-	-	-	-
MW1101	158.61	159.19	146.41	7.7 - 12.2	4.50	20-Dec-18	-	-	-	-
MW1101	158.61	159.19	146.41	7.7 - 12.2	4.50	29-Mar-19	-	-	-	-
MW1102	158.56	159.17	146.36	7.7 - 12.2	4.50	9-Mar-18	11.16	10.55	148.01	0.002
MW1102	158.56	159.17	146.36	7.7 - 12.2	4.50	27-Mar-18	11.14	10.53	148.03	0.03
MW1102	158.56	159.17	146.36	7.7 - 12.2	4.50	15-May-18	11.10	10.49	148.07	0.01
MW1102	158.56	159.17	146.36	7.7 - 12.2	4.50	11-Jul-18	-	-	-	-
MW1102	158.56	159.17	146.36	7.7 - 12.2	4.50	12-Sep-18	-	-	-	-
MW1102	158.56	159.17	146.36	7.7 - 12.2	4.50	20-Dec-18	-	-	-	-
MW1102	158.56	159.17	146.36	7.7 - 12.2	4.50	29-Mar-19	-	-	-	-
MW1103	158.67	159.38	146.47	7.7 - 12.2	4.50	9-Mar-18	11.31	10.60	148.07	None
MW1103	158.67	159.38	146.47	7.7 - 12.2	4.50	27-Mar-18	11.28	10.57	148.11	None
MW1103	158.67	159.38	146.47	7.7 - 12.2	4.50	15-May-18	11.19	10.48	148.20	None
MW1103	158.67	159.38	146.47	7.7 - 12.2	4.50	11-Jul-18	11.00	10.29	148.38	None
MW1103	158.67	159.38	146.47	7.7 - 12.2	4.50	12-Sep-18	10.90	10.19	148.48	None
MW1103	158.67	159.38	146.47	7.7 - 12.2	4.50	20-Dec-18	10.76	10.05	148.62	None
MW1103	158.67	159.38	146.47	7.7 - 12.2	4.50	29-Mar-19	10.70	9.99	148.68	None
MW1104	157.97	158.92	145.77	7.7 - 12.2	4.50	9-Mar-18	11.04	10.09	147.88	None
MW1104	157.97	158.92	145.77	7.7 - 12.2	4.50	26-Mar-18	11.08	10.13	147.85	None
MW1104	157.97	158.92	145.77	7.7 - 12.2	4.50	15-May-18	10.98	10.03	147.94	None
MW1104	157.97	158.92	145.77	7.7 - 12.2	4.50	11-Jul-18	10.79	9.84	148.13	None
MW1104	157.97	158.92	145.77	7.7 - 12.2	4.50	12-Sep-18	10.68	9.73	148.24	None
MW1104	157.97	158.92	145.77	7.7 - 12.2	4.50	20-Dec-18	10.56	9.61	148.36	None
MW1104	157.97	158.92	145.77	7.7 - 12.2	4.50	28-Mar-19	10.47	9.52	148.45	None
MW1105	157.48	158.16	145.28	7.7 - 12.2	4.50	9-Mar-18	10.32	9.63	147.85	None
MW1105	157.48	158.16	145.28	7.7 - 12.2	4.50	26-Mar-18	10.34	9.66	147.82	None
MW1105	157.48	158.16	145.28	7.7 - 12.2	4.50	15-May-18	10.25	9.57	147.92	None
MW1105	157.48	158.16	145.28	7.7 - 12.2	4.50	11-Jul-18	10.06	9.38	148.10	None
MW1105	157.48	158.16	145.28	7.7 - 12.2	4.50	12-Sep-18	9.97	9.29	148.20	None
MW1105	157.48	158.16	145.28	7.7 - 12.2	4.50	19-Dec-18	9.85	9.17	148.31	None
MW1105	157.48	158.16	145.28	7.7 - 12.2	4.50	28-Mar-19	9.75	9.07	148.41	None
MW1106	157.35	157.99	145.15	7.7 - 12.2	4.50	9-Mar-18	10.32	9.67	147.68	None
MW1106	157.35	157.99	145.15	7.7 - 12.2	4.50	26-Mar-18	10.32	9.67	147.68	None
MW1106	157.35	157.99	145.15	7.7 - 12.2	4.50	15-May-18	10.23	9.58	147.77	None
MW1106	157.35	157.99	145.15	7.7 - 12.2	4.50	11-Jul-18	10.07	9.43	147.92	None
MW1106	157.35	157.99	145.15	7.7 - 12.2	4.50	12-Sep-18	9.98	9.33	148.02	None
MW1106	157.35	157.99	145.15	7.7 - 12.2	4.50	19-Dec-18	9.88	9.24	148.11	None
MW1106	157.35	157.99	145.15	7.7 - 12.2	4.50	28-Mar-19	9.77	9.13	148.22	None

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MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	9-Mar-18	11.27	10.46	147.98	0.06
MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	26-Mar-18	11.27	10.46	147.98	0.09
MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	15-May-18	11.19	10.38	148.06	0.04
MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	4-Jun-18	11.13	10.32	148.12	0.03
MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	11-Jul-18	11.03	10.22	148.22	0.02
MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	12-Sep-18	-	-	--	None
MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	20-Dec-18	10.79	9.98	148.46	None
MW1301	158.44	159.25	146.24	7.7 - 12.2	4.50	28-Mar-19	10.69	9.88	148.56	None
MW1302	158.42	159.17	146.22	7.7 - 12.2	4.50	9-Mar-18	11.23	10.48	147.94	0.49
MW1302	158.42	159.17	146.22	7.7 - 12.2	4.50	27-Mar-18	11.25	10.50	147.92	0.69
MW1302	158.42	159.17	146.22	7.7 - 12.2	4.50	15-May-18	11.21	10.46	147.96	0.67
MW1302	158.42	159.17	146.22	7.7 - 12.2	4.50	11-Jul-18	11.05	10.30	148.12	0.44
MW1302	158.42	159.17	146.22	7.7 - 12.2	4.50	12-Sep-18	10.95	10.20	148.22	0.01
MW1302	158.42	159.17	146.22	7.7 - 12.2	4.50	20-Dec-18	10.84	10.09	148.33	None
MW1302	158.42	159.17	146.22	7.7 - 12.2	4.50	28-Mar-19	10.75	10.00	148.42	0.02
MW1303	158.01	158.33	145.81	7.7 - 12.2	4.50	9-Mar-18	10.47	10.15	147.86	0.01
MW1303	158.01	158.33	145.81	7.7 - 12.2	4.50	26-Mar-18	10.48	10.16	147.85	None
MW1303	158.01	158.33	145.81	7.7 - 12.2	4.50	15-May-18	10.42	10.10	147.91	None
MW1303	158.01	158.33	145.81	7.7 - 12.2	4.50	11-Jul-18	-	-	-	None
MW1303	158.01	158.33	145.81	7.7 - 12.2	4.50	12-Sep-18	-	-	-	None
MW1303	158.01	158.33	145.81	7.7 - 12.2	4.50	20-Dec-18	10.00	9.68	148.33	None
MW1303	158.01	158.33	145.81	7.7 - 12.2	4.50	28-Mar-19	9.90	9.58	148.43	None
MW1304	158.06	159.25	145.86	7.7 - 12.2	4.50	9-Mar-18	11.47	10.28	147.78	None
MW1304	158.06	159.25	145.86	7.7 - 12.2	4.50	26-Mar-18	11.50	10.31	147.75	None
MW1304	158.06	159.25	145.86	7.7 - 12.2	4.50	15-May-18	11.41	10.22	147.84	None
MW1304	158.06	159.25	145.86	7.7 - 12.2	4.50	11-Jul-18	11.23	10.04	148.03	None
MW1304	158.06	159.25	145.86	7.7 - 12.2	4.50	12-Sep-18	11.12	9.93	148.13	None
MW1304	158.06	159.25	145.86	7.7 - 12.2	4.50	20-Dec-18	10.99	9.80	148.26	None
MW1304	158.06	159.25	145.86	7.7 - 12.2	4.50	28-Mar-19	10.89	9.70	148.36	None
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	9-Mar-18	11.28	10.37	148.15	0.004
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	26-Mar-18	11.47	10.56	147.96	0.03
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	15-May-18	11.17	10.26	148.27	0.05
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	4-Jun-18	11.07	10.16	148.36	0.04
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	11-Jul-18	10.97	10.06	148.46	0.04
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	12-Sep-18	10.86	9.95	148.57	0.04
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	20-Dec-18	10.83	9.92	148.60	0.02
MW1401	158.52	159.43	146.32	9.1 - 12.2	3.05	29-Mar-19	-	-	-	-
MW1402	158.16	159.33	144.46	10.7 - 13.7	3.05	9-Mar-18	11.38	10.21	147.95	None
MW1402	158.16	159.33	144.46	10.7 - 13.7	3.05	15-May-18	11.32	10.15	148.02	None
MW1402	158.16	159.33	144.46	10.7 - 13.7	3.05	11-Jul-18	11.13	9.96	148.20	None
MW1402	158.16	159.33	144.46	10.7 - 13.7	3.05	12-Sep-18	11.04	9.86	148.30	None
MW1402	158.16	159.33	144.46	10.7 - 13.7	3.05	20-Dec-18	10.91	9.73	148.43	None
MW1402	158.16	159.33	144.46	10.7 - 13.7	3.05	28-Mar-19	10.80	9.63	148.53	None

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MW1403	158.81	159.61	145.11	10.7 - 13.7	3.05	9-Mar-18	11.75	10.95	147.87	None
MW1403	158.81	159.61	145.11	10.7 - 13.7	3.05	15-May-18	11.69	10.89	147.92	None
MW1403	158.81	159.61	145.11	10.7 - 13.7	3.05	11-Jul-18	11.51	10.71	148.10	None
MW1403	158.81	159.61	145.11	10.7 - 13.7	3.05	12-Sep-18	11.41	10.61	148.20	None
MW1403	158.81	159.61	145.11	10.7 - 13.7	3.05	20-Dec-18	11.30	10.50	148.31	None
MW1403	158.81	159.61	145.11	10.7 - 13.7	3.05	28-Mar-19	11.23	10.43	148.39	None
MW1404	158.74	159.45	146.54	9.1 - 12.2	3.05	9-Mar-18	11.61	10.90	147.85	None
MW1404	158.74	159.45	146.54	9.1 - 12.2	3.05	26-Mar-18	11.62	10.91	147.83	None
MW1404	158.74	159.45	146.54	9.1 - 12.2	3.05	15-May-18	11.54	10.83	147.92	None
MW1404	158.74	159.45	146.54	9.1 - 12.2	3.05	11-Jul-18	11.35	10.64	148.10	None
MW1404	158.74	159.45	146.54	9.1 - 12.2	3.05	12-Sep-18	11.25	10.54	148.21	None
MW1404	158.74	159.45	146.54	9.1 - 12.2	3.05	20-Dec-18	11.13	10.42	148.32	None
MW1404	158.74	159.45	146.54	9.1 - 12.2	3.05	28-Mar-19	11.06	10.35	148.40	None
MW1405	158.57	159.42	146.37	9.1 - 12.2	3.05	9-Mar-18	11.35	10.50	148.07	0.05
MW1405	158.57	159.42	146.37	9.1 - 12.2	3.05	15-May-18	11.30	10.45	148.12	0.06
MW1405	158.57	159.42	146.37	9.1 - 12.2	3.05	11-Jul-18	11.12	10.27	148.30	0.06
MW1405	158.57	159.42	146.37	9.1 - 12.2	3.05	12-Sep-18	10.99	10.14	148.43	0.02
MW1405	158.57	159.42	146.37	9.1 - 12.2	3.05	20-Dec-18	10.88	10.03	148.54	None
MW1405	158.57	159.42	146.37	9.1 - 12.2	3.05	29-Mar-19	10.83	9.98	148.59	None
MW1501	158.62	159.45	132.72	22.9 - 25.9	3.05	9-Mar-18	17.16	16.33	142.29	None
MW1501	158.62	159.45	132.72	22.9 - 25.9	3.05	15-May-18	17.34	16.51	142.11	None
MW1501	158.62	159.45	132.72	22.9 - 25.9	3.05	11-Jul-18	17.53	16.70	141.93	None
MW1501	158.62	159.45	132.72	22.9 - 25.9	3.05	12-Sep-18	17.49	16.66	141.97	None
MW1501	158.62	159.45	132.72	22.9 - 25.9	3.05	19-Dec-18	17.62	16.79	141.83	None
MW1501	158.62	159.45	132.72	22.9 - 25.9	3.05	28-Mar-19	17.82	16.99	141.63	None
MW1502	158.18	159.10	133.48	22 - 24.7	2.74	9-Mar-18	11.92	11.00	147.18	None
MW1502	158.18	159.10	133.48	22 - 24.7	2.74	15-May-18	11.84	10.92	147.26	None
MW1502	158.18	159.10	133.48	22 - 24.7	2.74	11-Jul-18	11.71	10.79	147.39	None
MW1502	158.18	159.10	133.48	22 - 24.7	2.74	12-Sep-18	11.66	10.74	147.44	None
MW1502	158.18	159.10	133.48	22 - 24.7	2.74	19-Dec-18	11.54	10.62	147.56	None
MW1502	158.18	159.10	133.48	22 - 24.7	2.74	28-Mar-19	11.33	10.41	147.77	None
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	9-Mar-18	11.52	10.44	147.89	0.51
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	26-Mar-18	11.57	10.49	147.84	0.82
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	15-May-18	11.50	10.42	147.91	0.90
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	4-Jun-18	11.42	10.34	147.99	0.96
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	11-Jul-18	11.32	10.24	148.09	1.02
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	12-Sep-18	11.03	9.95	148.38	0.34
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	20-Dec-18	10.88	9.80	148.53	0.56
MW1503	158.33	159.41	144.93	10.4 - 13.4	3.05	29-Mar-19	-	-	--	0.68
MW1504	158.49	159.32	144.79	10.7 - 13.7	3.05	9-Mar-18	11.31	10.48	148.01	0.08
MW1504	158.49	159.32	144.79	10.7 - 13.7	3.05	26-Mar-18	11.32	10.49	148.00	0.14
MW1504	158.49	159.32	144.79	10.7 - 13.7	3.05	15-May-18	11.25	10.42	148.07	0.13
MW1504	158.49	159.32	144.79	10.7 - 13.7	3.05	11-Jul-18	11.07	10.24	148.25	0.15
MW1504	158.49	159.32	144.79	10.7 - 13.7	3.05	12-Sep-18	10.87	10.04	148.45	0.07
MW1504	158.49	159.32	144.79	10.7 - 13.7	3.05	20-Dec-18	10.83	10.00	148.49	0.14
MW1504	158.49	159.32	144.79	10.7 - 13.7	3.05	29-Mar-19	10.75	9.92	148.57	0.36

2018 - 2019 GROUNDWATER MONITORING DATA
1467 Bathurst Street, Toronto, Ontario

WELL NO.	GROUND ELEVATION[1]	TOP OF PIPE ELEVATION[2]	BOTTOM OF PIPE ELEVATION[2]	SCREENED INTERVAL[3]	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE[4]	DEPTH TO WATER FROM GROUND[4]	GROUNDWATER ELEVATION[5]	LNAPL THICKNESS[6]
MW1509	158.64	159.58	144.94	10.7 - 13.7	3.05	9-Mar-18	11.61	10.67	147.97	None
MW1509	158.64	159.58	144.94	10.7 - 13.7	3.05	27-Mar-18	11.59	10.65	147.99	None
MW1509	158.64	159.58	144.94	10.7 - 13.7	3.05	15-May-18	11.55	10.61	148.03	None
MW1509	158.64	159.58	144.94	10.7 - 13.7	3.05	11-Jul-18	11.37	10.43	148.21	None
MW1509	158.64	159.58	144.94	10.7 - 13.7	3.05	12-Sep-18	11.23	10.29	148.35	None
MW1509	158.64	159.58	144.94	10.7 - 13.7	3.05	20-Dec-18	11.10	10.16	148.48	None
MW1509	158.64	159.58	144.94	10.7 - 13.7	3.05	29-Mar-19	11.04	10.10	148.54	None
MW1510	158.19	158.11	145.99	9.1 - 12.2	3.05	9-Mar-18	10.42	10.50	147.69	None
MW1510	158.19	158.11	145.99	9.1 - 12.2	3.05	15-May-18	10.36	10.44	147.75	None
MW1510	158.19	158.11	145.99	9.1 - 12.2	3.05	11-Jul-18	10.19	10.27	147.92	None
MW1510	158.19	158.11	145.99	9.1 - 12.2	3.05	12-Sep-18	10.10	10.18	148.01	None
MW1510	158.19	158.11	145.99	9.1 - 12.2	3.05	19-Dec-18	10.02	10.10	148.10	None
MW1510	158.19	158.11	145.99	9.1 - 12.2	3.05	29-Mar-19	9.95	10.03	148.17	None
MW1511	158.28	158.21	145.48	9.8 - 12.8	3.05	9-Mar-18	10.91	10.98	147.31	None
MW1511	158.28	158.21	145.48	9.8 - 12.8	3.05	26-Mar-18	10.94	11.01	147.28	None
MW1511	158.28	158.21	145.48	9.8 - 12.8	3.05	15-May-18	10.84	10.91	147.37	None
MW1511	158.28	158.21	145.48	9.8 - 12.8	3.05	11-Jul-18	10.67	10.74	147.54	None
MW1511	158.28	158.21	145.48	9.8 - 12.8	3.05	12-Sep-18	10.61	10.68	147.61	None
MW1511	158.28	158.21	145.48	9.8 - 12.8	3.05	19-Dec-18	10.55	10.62	147.67	None
MW1511	158.28	158.21	145.48	9.8 - 12.8	3.05	29-Mar-19	10.46	10.53	147.75	None
MW1512	158.23	158.08	145.13	10.1 - 13.1	3.05	9-Mar-18	10.53	10.68	147.55	None
MW1512	158.23	158.08	145.13	10.1 - 13.1	3.05	26-Mar-18	10.54	10.69	147.54	None
MW1512	158.23	158.08	145.13	10.1 - 13.1	3.05	15-May-18	10.46	10.61	147.62	None
MW1512	158.23	158.08	145.13	10.1 - 13.1	3.05	11-Jul-18	10.27	10.42	147.81	None
MW1512	158.23	158.08	145.13	10.1 - 13.1	3.05	12-Sep-18	10.19	10.34	147.90	None
MW1512	158.23	158.08	145.13	10.1 - 13.1	3.05	19-Dec-18	10.09	10.24	147.99	None
MW1512	158.23	158.08	145.13	10.1 - 13.1	3.05	29-Mar-19	10.02	10.17	148.07	None
MW1601	158.58	159.17	129.68	27.4 - 28.9	1.52	9-Mar-18	Dry	-	-	-
MW1601	158.58	159.17	129.68	27.4 - 28.9	1.52	15-May-18	Dry	-	-	-
MW1601	158.58	159.17	129.68	27.4 - 28.9	1.52	11-Jul-18	Dry	-	-	-
MW1601	158.58	159.17	129.68	27.4 - 28.9	1.52	12-Sep-18	Dry	-	-	-
MW1601	158.58	159.17	129.68	27.4 - 28.9	1.52	19-Dec-18	Dry at 30.0 m	-	-	-
MW1601	158.58	159.17	129.68	27.4 - 28.9	1.52	28-Mar-19	Dry at 31.5 m	-	-	-
MW1801	158.43	159.31	139.53	15.8 - 18.9	3.05	15-May-18	11.27	-	--	None
MW1801	158.43	159.31	139.53	15.8 - 18.9	3.05	11-Jul-18	10.52	-	--	None
MW1801	158.43	159.31	139.53	15.8 - 18.9	3.05	12-Sep-18	10.97	-	--	None
MW1801	158.43	159.31	139.53	15.8 - 18.9	3.05	19-Dec-18	10.83	9.95	148.48	None
MW1801	158.43	159.31	139.53	15.8 - 18.9	3.05	28-Mar-19	10.74	9.86	148.56	None
MW1802	158.61	158.49	146.41	9.1 - 12.2	3.05	15-May-18	10.39	10.51	148.10	None
MW1802	158.61	158.49	146.41	9.1 - 12.2	3.05	4-Jun-18	10.31	10.43	148.18	None
MW1802	158.61	158.49	146.41	9.1 - 12.2	3.05	11-Jul-18	10.20	10.32	148.29	None
MW1802	158.61	158.49	146.41	9.1 - 12.2	3.05	12-Sep-18	10.08	10.20	148.41	None
MW1802	158.61	158.49	146.41	9.1 - 12.2	3.05	20-Dec-18	9.95	10.07	148.54	None
MW1802	158.61	158.49	146.41	9.1 - 12.2	3.05	29-Mar-19	9.89	10.01	148.60	None

2018 - 2019 GROUNDWATER MONITORING DATA
1467 Bathurst Street, Toronto, Ontario

WELL NO.	GROUND ELEVATION[1]	TOP OF PIPE ELEVATION[2]	BOTTOM OF PIPE ELEVATION[2]	SCREENED INTERVAL[3]	SCREEN LENGTH (m)	DATE	DEPTH TO WATER FROM TOP OF PIPE[4]	DEPTH TO WATER FROM GROUND[4]	GROUNDWATER ELEVATION[5]	LNAPL THICKNESS[6]
MW1806	157.84	157.71	144.94	9.8 - 12.9	3.05	15-May-18	10.16	10.29	147.56	None
MW1806	157.84	157.71	144.94	9.8 - 12.9	3.05	11-Jul-18	9.97	10.11	147.74	None
MW1806	157.84	157.71	144.94	9.8 - 12.9	3.05	12-Sep-18	9.90	10.03	147.81	None
MW1806	157.84	157.71	144.94	9.8 - 12.9	3.05	19-Dec-18	9.80	9.93	147.92	None
MW1806	157.84	157.71	144.94	9.8 - 12.9	3.05	29-Mar-19	-	-	-	-
MW4	158.08	158.48	146.88	5.1 - 11.2	6.10	9-Mar-18	10.58	10.18	147.91	None
MW4	158.08	158.48	146.88	5.1 - 11.2	6.10	15-May-18	10.52	10.12	147.97	None
MW4	158.08	158.48	146.88	5.1 - 11.2	6.10	11-Jul-18	10.32	9.92	148.16	None
MW4	158.08	158.48	146.88	5.1 - 11.2	6.10	12-Sep-18	10.23	9.83	148.26	None
MW4	158.08	158.48	146.88	5.1 - 11.2	6.10	20-Dec-18	10.10	9.70	148.39	None
MW4	158.08	158.48	146.88	5.1 - 11.2	6.10	28-Mar-19	10.01	9.61	148.47	None
MW802	157.71	158.49	144.01	7.6 - 13.7	6.10	9-Mar-18	10.70	9.92	147.79	None
MW802	157.71	158.49	144.01	7.6 - 13.7	6.10	15-May-18	10.63	9.85	147.86	None
MW802	157.71	158.49	144.01	7.6 - 13.7	6.10	11-Jul-18	10.45	9.66	148.05	None
MW802	157.71	158.49	144.01	7.6 - 13.7	6.10	12-Sep-18	10.35	9.57	148.14	None
MW802	157.71	158.49	144.01	7.6 - 13.7	6.10	19-Dec-18	10.23	9.45	148.26	None
MW802	157.71	158.49	144.01	7.6 - 13.7	6.10	28-Mar-19	10.17	9.39	148.32	None
MW803	158.74	159.36	145.04	7.6 - 13.7	6.10	9-Mar-18	11.30	10.68	148.06	None
MW803	158.74	159.36	145.04	7.6 - 13.7	6.10	15-May-18	11.23	10.61	148.14	None
MW803	158.74	159.36	145.04	7.6 - 13.7	6.10	11-Jul-18	11.06	10.44	148.31	None
MW803	158.74	159.36	145.04	7.6 - 13.7	6.10	12-Sep-18	10.93	10.31	148.44	None
MW803	158.74	159.36	145.04	7.6 - 13.7	6.10	20-Dec-18	10.81	10.19	148.56	None
MW803	158.74	159.36	145.04	7.6 - 13.7	6.10	29-Mar-19	10.75	10.13	148.61	None
PW2	158.35	158.68	146.15	6.1 - 12.2	6.10	9-Mar-18	10.95	10.62	147.73	None
PW2	158.35	158.68	146.15	6.1 - 12.2	6.10	15-May-18	10.86	10.53	147.83	None
PW2	158.35	158.68	146.15	6.1 - 12.2	6.10	11-Jul-18	-	-	--	None
PW2	158.35	158.68	146.15	6.1 - 12.2	6.10	12-Sep-18	-	-	--	None
PW2	158.35	158.68	146.15	6.1 - 12.2	6.10	20-Dec-18	10.49	10.16	148.19	None
PW2	158.35	158.68	146.15	6.1 - 12.2	6.10	28-Mar-19	10.40	10.07	148.28	None

All existing wells re-surveyed on August 10, 2017

LNAPL Light Non-Aqueous Phase Liquid

1 Elevation of ground surface at well location in metres, relative to geodetic benchmark.

2 Elevation of well pipe in metres, relative to geodetic benchmark.

3 Screened interval of well pipe in metres below grade.

4 Adjusted depth to groundwater, in metres, based on an LNAPL relative density of 0.8.

5 Adjusted elevation of groundwater, in metres relative to geodetic benchmark, based on an LNAPL relative density of 0.8.

6 Measured thickness of LNAPL in metres, if any.

\- Not measured / not available

APPENDIX D

TERRAPROBE INC.

FINAL REPORT

CA14417-OCT19 R1

1-17-0206-46.1 1467 Bathurst Street, Toronto

Prepared for

Terraprobe Inc

FINAL REPORT

First Page

CLIENT DETAILS		LABORATORY DETAILS	
Client	Terraprobe Inc	Project Specialist	Jill Campbell, B.Sc.,GISAS
		Laboratory	SGS Canada Inc.
Address	11 Indell Lane Brampton, ON L6T 3Y3. Canada	Address	185 Concession St., Lakefield ON, K0L 2H0
Contact	Narjes Alijani	Telephone	2165
Telephone	(905) 796-2650	Facsimile	705-652-6365
Facsimile	(905) 796-2250	Email	jill.campbell@sgs.com
Email	nalijani@terraprobe.ca	SGS Reference	CA14417-OCT19
Project	1-17-0206-46.1 1467 Bathurst Street, Toronto	Received	10/11/2019
Order Number		Approved	10/18/2019
Samples	Ground Water (1)	Report Number	CA14417-OCT19 R1
		Date Reported	10/18/2019

COMMENTS

RL - SGS Reporting Limit

Nonylphenol Ethoxylates is the sum of nonylphenol monoethoxylate and nonylphenol diethoxylate.

Total PAH is the sum of anthracene, benzo(a)pyrene, benzo(a)anthracene, benzo(e)pyrene, benzo(b,j)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, dibenzo(a,i)pyrene, dibenzo(a,j)acridine, 7H-dibenzo(c,g)carbazole, fluoranthene, indeno(1,2,3-c,d)pyrene, perylene, phenanthrene and pyrene.

Temperature of Sample upon Receipt: 7 degrees C
Cooling Agent Present:Yes
Custody Seal Present:No

Chain of Custody Number:007965

Benzene, Toluene, Ethylbenzene, and O-xyelene RLs reported as >0.100mg/L due concentration being outside of the linear range of the method. M-P-xylene and Xylene (total) reported as >0.200mg/L due to concentration being outside of the linear range of method. A dilution could not be run to report a valid concentration for these compounds due to limited sample.

Flouride Spike Blank high, all other quality data was in control, data accepted.

SIGNATORIES

Jill Campbell, B.Sc.,GISAS

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FINAL REPORT

CA14417-OCT19 R1

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - General Chemistry** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
General Chemistry					
Biochemical Oxygen Demand (BOD5)	mg/L	2	300	15	43
Total Kjeldahl Nitrogen	as N mg/L	0.5	100		4.5
Total Suspended Solids	mg/L	2	350	15	505

PACKAGE: **SANSEW - Metals and Inorganics** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
Metals and Inorganics					
Fluoride	mg/L	0.06	10		0.25
Cyanide (total)	mg/L	0.01	2	0.02	< 0.01
Aluminum (total)	mg/L	0.001	50		2.20
Antimony (total)	mg/L	0.0009	5		0.0011
Arsenic (total)	mg/L	0.0002	1	0.02	0.0263
Cadmium (total)	mg/L	0.000003	0.7	0.008	0.000097
Chromium (total)	mg/L	0.00008	4	0.08	0.00653
Cobalt (total)	mg/L	0.000004	5		0.00336

FINAL REPORT

CA14417-OCT19 R1

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - Metals and Inorganics** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
Metals and Inorganics (continued)					
Copper (total)	mg/L	0.0002	2	0.04	0.0921
Lead (total)	mg/L	0.00001	1	0.12	0.453
Manganese (total)	mg/L	0.00001	5	0.05	1.19
Molybdenum (total)	mg/L	0.00004	5		0.00612
Nickel (total)	mg/L	0.0001	2	0.08	0.0106
Phosphorus (total)	mg/L	0.003	10	0.4	0.621
Selenium (total)	mg/L	0.00004	1	0.02	0.00051
Silver (total)	mg/L	0.00005	5	0.12	0.00027
Tin (total)	mg/L	0.00006	5		0.00908
Titanium (total)	mg/L	0.00005	5		0.116
Zinc (total)	mg/L	0.002	2	0.04	0.057

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - Microbiology** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
Microbiology					
E. Coli	cfu/100mL	-		200	< 5↑

PACKAGE: **SANSEW - Nonylphenol and Ethoxylates** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
Nonylphenol and Ethoxylates					
Nonylphenol	mg/L	0.001	0.02	0.001	< 0.001
Nonylphenol Ethoxylates	mg/L	0.01	0.2	0.01	< 0.01
Nonylphenol diethoxylate	mg/L	0.01			< 0.01
Nonylphenol monoethoxylate	mg/L	0.01			< 0.01

PACKAGE: **SANSEW - Oil and Grease** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - Oil and Grease** (WATER)

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Parameter	Units	RL	L1	L2	Result
Oil and Grease					
Oil & Grease (total)	mg/L	2			17
Oil & Grease (animal/vegetable)	mg/L	4	150		13
Oil & Grease (mineral/synthetic)	mg/L	4	15		4

PACKAGE: **SANSEW - Other (ORP)** (WATER)

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Parameter	Units	RL	L1	L2	Result
Other (ORP)					
pH	no unit	0.05	11.5	9.5	7.14
Chromium VI	mg/L	0.0002	2	0.04	0.0004
Mercury (total)	mg/L	0.00001	0.01	0.0004	0.00006

PACKAGE: **SANSEW - PAHs** (WATER)

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Parameter	Units	RL	L1	L2	Result

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - PAHs** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
PAHs					
Benzo(b+j)fluoranthene	mg/L	0.0001			< 0.001↑

PACKAGE: **SANSEW - PCBs** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
PCBs					
Polychlorinated Biphenyls (PCBs) - Total	mg/L	0.0001	0.001	0.0004	0.0006

PACKAGE: **SANSEW - Phenols** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
Phenols					
4AAP-Phenolics	mg/L	0.002	1	0.008	0.156

PACKAGE: **SANSEW - SVOCs** (WATER)

Sample Number	8
Sample Name	BH1401

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - SVOCs** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
SVOCs					
di-n-Butyl Phthalate	mg/L	0.002	0.08	0.015	< 0.01↑
Bis(2-ethylhexyl)phthalate	mg/L	0.002	0.012	0.0088	0.10
3,3-Dichlorobenzidine	mg/L	0.0005	0.002	0.0008	< 0.001↑
Pentachlorophenol	mg/L	0.0005	0.005	0.002	< 0.005↑
PAHs (Total)	mg/L	-	0.005	0.002	0.020
Perylene	mg/L	0.0005			< 0.001↑

PACKAGE: **SANSEW - SVOCs - PAHs** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
SVOCs - PAHs					
7Hdibenzo(c,g)carbazole	mg/L	0.0001			< 0.001↑
Anthracene	mg/L	0.0001			0.0023
Benzo(a)anthracene	mg/L	0.0001			0.0013
Benzo(a)pyrene	mg/L	0.0001			0.0004
Benzo[e]pyrene	mg/L	0.0001			< 0.001↑
Benzo(ghi)perylene	mg/L	0.0002			0.0003
Benzo(k)fluoranthene	mg/L	0.0001			0.0004
Chrysene	mg/L	0.0001			0.0010

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - SVOCs - PAHs** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
SVOCs - PAHs (continued)					
Dibenzo(a,h)anthracene	mg/L	0.0001			< 0.001↑
Dibenzo(a,i)pyrene	mg/L	0.0001			< 0.001↑
Dibenzo(a,j)acridine	mg/L	0.0001			< 0.001↑
Fluoranthene	mg/L	0.0001			0.0023
Indeno(1,2,3-cd)pyrene	mg/L	0.0002			0.0003
Phenanthrene	mg/L	0.0001			0.0093
Pyrene	mg/L	0.0001			0.0026

PACKAGE: **SANSEW - VOCs** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
VOCs					
Chloroform	mg/L	0.0005	0.04	0.002	< 0.0005
1,2-Dichlorobenzene	mg/L	0.0005	0.05	0.0056	< 0.0005
1,4-Dichlorobenzene	mg/L	0.0005	0.08	0.0068	< 0.0005
cis-1,2-Dichloroethene	mg/L	0.0005	4	0.0056	< 0.0005
trans-1,3-Dichloropropene	mg/L	0.0005	0.14	0.0056	< 0.0005
Methylene Chloride	mg/L	0.0005	2	0.0052	< 0.0005
1,1,2,2-Tetrachloroethane	mg/L	0.0005	1.4	0.017	< 0.0005

Client: Terraprobe Inc
Project: 1-17-0206-46.1 1467 Bathurst Street, Toronto
Project Manager: Narjes Alijani
Samplers: Usman Arshad & Adil Khan

PACKAGE: **SANSEW - VOCs** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
VOCs (continued)					
Tetrachloroethylene (perchloroethylene)	mg/L	0.0005	1	0.0044	**0.0143**
Trichloroethylene	mg/L	0.0005	0.4	0.0076	0.0047

PACKAGE: **SANSEW - VOCs - BTEX** (WATER)

L1 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016

L2 = SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016

Sample Number	8
Sample Name	BH1401
Sample Matrix	Ground Water
Sample Date	11/10/2019

Parameter	Units	RL	L1	L2	Result
VOCs - BTEX					
Benzene	mg/L	0.0005			>0.100
Ethylbenzene	mg/L	0.0005			>0.100
Toluene	mg/L	0.0005			>0.100
Xylene (total)	mg/L	0.0005			>0.200
m-p-xylene	mg/L	0.0005			>0.200
o-xylene	mg/L	0.0005			>0.100

EXCEEDANCE SUMMARY

Parameter	Method	Units	Result	SANSEW / WATER / - - Toronto Sewer Use By Law Table 1 - Sanitary and Combined Sewer Discharge - BL_100_2016 L1	SANSEW / WATER / - - Toronto Sewer Use By Law Table 2 - Storm Sewer Discharge - BL_100_2016 L2
BH1401					
3,3-Dichlorobenzidine	EPA 3510C/8270D	mg/L	< 0.001		0.0008
Bis(2-ethylhexyl)phthalate	EPA 3510C/8270D	mg/L	0.10	0.012	0.0088
PAHs (Total)	EPA 3510C/8270D	mg/L	0.020	0.005	0.002
Pentachlorophenol	EPA 3510C/8270D	mg/L	< 0.005		0.002
Tetrachloroethylene	EPA 5030B/8260C	mg/L	0.0143		0.0044
Polychlorinated Biphenyls	MOE E3400/EPA 8082A	mg/L	0.0006		0.0004
Total Suspended Solids	SM 2540D	mg/L	505	350	15
Arsenic	SM 3030/EPA 200.8	mg/L	0.0263		0.02
Copper	SM 3030/EPA 200.8	mg/L	0.0921		0.04
Lead	SM 3030/EPA 200.8	mg/L	0.453		0.12
Manganese	SM 3030/EPA 200.8	mg/L	1.19		0.05
Phosphorous	SM 3030/EPA 200.8	mg/L	0.621		0.4
Zinc	SM 3030/EPA 200.8	mg/L	0.057		0.04
Biochemical Oxygen Demand (BOD5)	SM 5210	mg/L	43		15
4AAP-Phenolics	SM 5530B-D	mg/L	0.156		0.008

QC SUMMARY

Biochemical Oxygen Demand

Method: SM 5210 I Internal ref.: ME-CA-IENVIEWL-LAK-AN-007

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Biochemical Oxygen Demand (BOD5)	BOD0024-OCT19	mg/L	2	< 2	5	30	92	70	130	115	70	130

Cyanide by SFA

Method: SM 4500 I Internal ref.: ME-CA-IENVISFA-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Cyanide (total)	SKA0128-OCT19	mg/L	0.01	<0.01	ND	10	93	90	110	76	75	125

Fluoride by Specific Ion Electrode

Method: SM 4500 I Internal ref.: ME-CA-IENVIEWL-LAK-AN-014

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Fluoride	EWL0252-OCT19	mg/L	0.06	<0.06	0	10	111	90	110	123	75	125
Fluoride	EWL0274-OCT19	mg/L	0.06	<0.06	2	10	100	90	110	96	75	125

QC SUMMARY

Hexavalent Chromium by SFA

Method: EPA218.6/EPA3060A | Internal ref.: ME-CA-IENVISKA-LAK-AN-012

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Chromium VI	SKA0135-OCT19	mg/L	0.0002	<0.0002	ND	20	105	80	120	99	75	125

Mercury by CVAAS

Method: EPA 7471A/SM 3112B | Internal ref.: ME-CA-IENVISPE-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Mercury (total)	EHG0017-OCT19	mg/L	0.00001	< 0.00001	ND	20	113	80	120	112	70	130

QC SUMMARY

Metals in aqueous samples - ICP-MS

Method: SM 3030/EPA 200.8 | Internal ref.: ME-CA-IENVISPE-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Silver (total)	EMS0089-OCT19	mg/L	0.00005	<0.00005	ND	20	97	90	110	92	70	130
Aluminum (total)	EMS0089-OCT19	mg/L	0.001	<0.001	6	20	107	90	110	NV	70	130
Arsenic (total)	EMS0089-OCT19	mg/L	0.0002	<0.0002	2	20	103	90	110	100	70	130
Cadmium (total)	EMS0089-OCT19	mg/L	0.000003	<0.000003	4	20	102	90	110	102	70	130
Cobalt (total)	EMS0089-OCT19	mg/L	0.000004	<0.000004	1	20	103	90	110	92	70	130
Chromium (total)	EMS0089-OCT19	mg/L	0.00008	<0.00008	1	20	103	90	110	113	70	130
Copper (total)	EMS0089-OCT19	mg/L	0.0002	<0.0002	0	20	98	90	110	94	70	130
Manganese (total)	EMS0089-OCT19	mg/L	0.00001	<0.00001	3	20	102	90	110	NV	70	130
Molybdenum (total)	EMS0089-OCT19	mg/L	0.00004	<0.00004	4	20	99	90	110	99	70	130
Nickel (total)	EMS0089-OCT19	mg/L	0.0001	<0.0001	1	20	103	90	110	89	70	130
Lead (total)	EMS0089-OCT19	mg/L	0.00001	<0.00001	1	20	92	90	110	90	70	130
Phosphorus (total)	EMS0089-OCT19	mg/L	0.003	<0.003	4	20	105	90	110	NV	70	130
Antimony (total)	EMS0089-OCT19	mg/L	0.0009	<0.0009	ND	20	103	90	110	102	70	130
Selenium (total)	EMS0089-OCT19	mg/L	0.00004	<0.00004	18	20	98	90	110	112	70	130
Tin (total)	EMS0089-OCT19	mg/L	0.00006	<0.00006	1	20	92	90	110	NV	70	130
Titanium (total)	EMS0089-OCT19	mg/L	0.00005	<0.00005	1	20	105	90	110	NV	70	130
Zinc (total)	EMS0089-OCT19	mg/L	0.002	<0.002	0	20	108	90	110	NV	70	130

QC SUMMARY

Microbiology

Method: SM 9222D | Internal ref.: ME-CA-IENVIMIC-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
E. Coli	BAC9235-OCT19	cfu/100mL	-	ACCEPTED	ACCEPTED							

Nonylphenol and Ethoxylates

Method: ASTM D7065-06 | Internal ref.: ME-CA-IENVIGC-LAK-AN-015

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Nonylphenol diethoxylate	GCM0284-OCT19	mg/L	0.01	< 0.01			81	55	120			
Nonylphenol Ethoxylates	GCM0284-OCT19	mg/L	0.01	< 0.01								
Nonylphenol monoethoxylate	GCM0284-OCT19	mg/L	0.01	< 0.01			90	55	120			
Nonylphenol	GCM0284-OCT19	mg/L	0.001	< 0.001			92	55	120			

QC SUMMARY

Oil & Grease

Method: MOE E3401 | Internal ref.: ME-CA-IENVIGC-LAK-AN-019

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (total)	GCM0281-OCT19	mg/L	2	<2	NSS	20	102	75	125			

Oil & Grease-AV/MS

Method: MOE E3401/SM 5520F | Internal ref.: ME-CA-IENVIGC-LAK-AN-019

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Oil & Grease (animal/vegetable)	GCM0281-OCT19	mg/L	4	< 4	NSS	20	NA	70	130			
Oil & Grease (mineral/synthetic)	GCM0281-OCT19	mg/L	4	< 4	NSS	20	NA	70	130			
Oil & Grease (animal/vegetable)	GCM0312-OCT19	mg/L	4	< 4	NSS	20	112	70	130			
Oil & Grease (mineral/synthetic)	GCM0312-OCT19	mg/L	4	< 4	NSS	20	92	70	130			

QC SUMMARY

pH

Method: SM 4500 | Internal ref.: ME-CA-IENVIEWL-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
pH	EWL0255-OCT19	no unit	0.05	NA	0		102			NA		

Phenols by SFA

Method: SM 5530B-D | Internal ref.: ME-CA-IENVISFA-LAK-AN-006

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
4AAP-Phenolics	SKA0134-OCT19	mg/L	0.002	<0.002	10	10	102	90	110	100	75	125
4AAP-Phenolics	SKA0169-OCT19	mg/L	0.002	<0.002	ND	10	102	90	110	107	75	125

QC SUMMARY

Polychlorinated Biphenyls

Method: MOE E3400/EPA 8082A | Internal ref.: ME-CA-[ENV]GC-LAK-AN-001

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Polychlorinated Biphenyls (PCBs) - Total	GCM0244-OCT19	mg/L	0.0001	<0.0001	NSS	30	108	60	140	NSS	60	140

QC SUMMARY

Semi-Volatile Organics

Method: EPA 3510C/8270D | Internal ref.: ME-CA-[ENV]GC-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
7Hdibenzo(c,g)carbazole	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	87	50	140	NSS	50	140
Anthracene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Benzo(a)anthracene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	83	50	140	NSS	50	140
Benzo(a)pyrene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	85	50	140	NSS	50	140
Benzo(b+j)fluoranthene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	88	50	140	NSS	50	140
Benzo[e]pyrene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	73	50	140	NSS	50	140
Benzo(ghi)perylene	GCM0253-OCT19	mg/L	0.0002	< 0.0002	NSS	30	88	50	140	NSS	50	140
Benzo(k)fluoranthene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	85	50	140	NSS	50	140
Bis(2-ethylhexyl)phthalate	GCM0253-OCT19	mg/L	0.002	< 0.002	NSS	30	96	50	140	NSS	50	140
Chrysene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	89	50	140	NSS	50	140
di-n-Butyl Phthalate	GCM0253-OCT19	mg/L	0.002	< 0.002	NSS	30	96	50	140	NSS	50	140
Dibenzo(a,h)anthracene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	86	50	140	NSS	50	140
Dibenzo(a,i)pyrene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	80	50	140	NSS	50	140
Dibenzo(a,j)acridine	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	79	50	140	NSS	50	140
Fluoranthene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	88	50	140	NSS	50	140
Indeno(1,2,3-cd)pyrene	GCM0253-OCT19	mg/L	0.0002	< 0.0002	NSS	30	88	50	140	NSS	50	140
Pentachlorophenol	GCM0253-OCT19	mg/L	0.0005	< 0.0005	NSS	30	91	50	140	NSS	50	140
Perylene	GCM0253-OCT19	mg/L	0.0005	< 0.0005	NSS	30	76	50	140	NSS	50	140
Phenanthrene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	85	50	140	NSS	50	140
Pyrene	GCM0253-OCT19	mg/L	0.0001	< 0.0001	NSS	30	85	50	140	NSS	50	140

QC SUMMARY

Semi-Volatile Organics (continued)

Method: EPA 3510C/8270D | Internal ref.: ME-CA-IENVIGC-LAK-AN-005

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
3,3-Dichlorobenzidine	GCM0283-OCT19	mg/L	0.0005	< 0.0009	NSS	30	77	30	130	NSS	30	130

Suspended Solids

Method: SM 2540D | Internal ref.: ME-CA-IENVIEWL-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Suspended Solids	EWL0279-OCT19	mg/L	2	< 2	0	10	NV	90	110	NA		

Total Nitrogen

Method: SM 4500-N C/4500-NO3- F | Internal ref.: ME-CA-IENVISFA-LAK-AN-002

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
Total Kjeldahl Nitrogen	SKA0166-OCT19	as N mg/L	0.5	<0.5	5	10	100	90	110	85	75	125

QC SUMMARY

Volatile Organics

Method: EPA 5030B/8260C | Internal ref.: ME-CA-IENVIGC-LAK-AN-004

Parameter	QC batch Reference	Units	RL	Method Blank	Duplicate		LCS/Spike Blank			Matrix Spike / Ref.		
					RPD	AC (%)	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
								Low	High		Low	High
1,1,2,2-Tetrachloroethane	GCM0255-OCT19	mg/L	0.0005	<0.0005	ND	30	99	60	130	116	50	140
1,2-Dichlorobenzene	GCM0255-OCT19	mg/L	0.0005	<0.0005	ND	30	100	60	130	97	50	140
1,4-Dichlorobenzene	GCM0255-OCT19	mg/L	0.0005	<0.0005	ND	30	101	60	130	96	50	140
Benzene	GCM0255-OCT19	mg/L	0.0005	<0.0005	NV	30	98	60	130	90	50	140
Chloroform	GCM0255-OCT19	mg/L	0.0005	<0.0005	ND	30	98	60	130	92	50	140
cis-1,2-Dichloroethene	GCM0255-OCT19	mg/L	0.0005	<0.0005	ND	30	98	60	130	94	50	140
Ethylbenzene	GCM0255-OCT19	mg/L	0.0005	<0.0005	NV	30	102	60	130	NV	50	140
m-p-xylene	GCM0255-OCT19	mg/L	0.0005	<0.0005	NV	30	102	60	130	NV	50	140
Methylene Chloride	GCM0255-OCT19	mg/L	0.0005	<0.0005	ND	30	95	60	130	80	50	140
o-xylene	GCM0255-OCT19	mg/L	0.0005	<0.0005	NV	30	102	60	130	NV	50	140
Tetrachloroethylene (perchloroethylene)	GCM0255-OCT19	mg/L	0.0005	<0.0005	5	30	101	60	130	97	50	140
Toluene	GCM0255-OCT19	mg/L	0.0005	<0.0005	NV	30	100	60	130	NV	50	140
trans-1,3-Dichloropropene	GCM0255-OCT19	mg/L	0.0005	<0.0005	ND	30	99	60	130	96	50	140
Trichloroethylene	GCM0255-OCT19	mg/L	0.0005	<0.0005	13	30	100	60	130	83	50	140

QC SUMMARY

Method Blank: a blank matrix that is carried through the entire analytical procedure. Used to assess laboratory contamination.

Duplicate: Paired analysis of a separate portion of the same sample that is carried through the entire analytical procedure. Used to evaluate measurement precision.

LCS/Spike Blank: Laboratory control sample or spike blank refer to a blank matrix to which a known amount of analyte has been added. Used to evaluate analyte recovery and laboratory accuracy without sample matrix effects.

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

Reference Material: a material or substance matrix matched to the samples that contains a known amount of the analyte of interest. A reference material may be used in place of a matrix spike.

RL: Reporting limit

RPD: Relative percent difference

AC: Acceptance criteria

Multielement Scan Qualifier: as the number of analytes in a scan increases, so does the chance of a limit exceedance by random chance as opposed to a real method problem. Thus, in multielement scans, for the LCS and matrix spike, up to 10% of the analytes may exceed the quoted limits by up to 10% absolute and the spike is considered acceptable.

Duplicate Qualifier: for duplicates as the measured result approaches the RL, the uncertainty associated with the value increases dramatically, thus duplicate acceptance limits apply only where the average of the two duplicates is greater than five times the RL.

Matrix Spike Qualifier: for matrix spikes, as the concentration of the native analyte increases, the uncertainty of the matrix spike recovery increases. Thus, the matrix spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

LEGEND

FOOTNOTES

NSS	Insufficient sample for analysis.
RL	Reporting Limit.
↑	Reporting limit raised.
↓	Reporting limit lowered.
NA	The sample was not analysed for this analyte
ND	Non Detect

Samples analysed as received. Solid samples expressed on a dry weight basis. “Temperature Upon Receipt” is representative of the whole shipment and may not reflect the temperature of individual samples.

Analysis conducted on samples submitted pursuant to or as part of Reg. 153/04, are in accordance to the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act” published by the Ministry and dated March 9, 2004 as amended.

SGS provides criteria information (such as regulatory or guideline limits and summary of limit exceedances) as a service. Every attempt is made to ensure the criteria information in this report is accurate and current, however, it is not guaranteed. Comparison to the most current criteria is the responsibility of the client and SGS assumes no responsibility for the accuracy of the criteria levels indicated. This document is issued, on the Client's behalf, by the Company under its General Conditions of Service available on request and accessible at http://www.sgs.com/terms_and_conditions.htm. The Client's attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any other holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents.

This report must not be reproduced, except in full. This report supersedes all previous versions.

-- End of Analytical Report --

SGS Request for Laboratory Services and CHAIN OF CUSTODY

No: 007965

Environment, Health & Safety - Lakefield: 185 Concession St., Lakefield, ON K0L 2H0 Phone: 705-652-2000 Fax: 705-652-6365 Web: www.sgs.com/environment
- London: 657 Consortium Court, London, ON, N6E 2S8 Phone: 519-672-4500 Toll Free: 877-848-8060 Fax: 519-672-0361

Page ____ of ____

Laboratory Information Section - Lab use only

Received By: Kim Shearl
Received Date (mm/dd/yyyy): 10/11/19 (mm\dd\yy)
Received Time: 15:00
Received By (signature):
Custody Seal Present: ☐ No
Custody Seal Intact: ☐ No
Cooling Agent Present: ☑ ice
Temperature Upon Receipt (°C) 7x3
LAB LIMS #: CA-14417-OCT-19

REPORT INFORMATION

Company: Terraprobe
Contact: Narjes Alijani
Address: 11 Indell Lane
Brampton, Ontario, L6T 3Y3
Phone:
Email: Nalijani@terraprobe.ca
Email:

INVOICE INFORMATION

☒ (same as Report Information)
Company:
Contact:
Address:
Phone:
Email:

PROJECT INFORMATION

Quotation #:
P.O. #:
Project #: 1-17-0206-46.1
Site Location/ID: 1467 Bathurst Street, Toronto

TURNAROUND TIME (TAT) REQUIRED

☒ Regular TAT (5-7days)

TAT's are quoted in business days (exclude statutory holidays & weekends). Samples received after 6pm or on weekends: TAT begins next business day

RUSH TAT (Additional Charges May Apply): ☐ 1 Day ☐ 2 Days ☐ 3 Days ☐ 4 Days

PLEASE CONFIRM RUSH FEASIBILITY WITH SGS REPRESENTATIVE PRIOR TO SUBMISSION

Specify Due Date:
Rush Confirmation ID:

REGULATIONS

Regulation 153/04:
☐ Table 1 ☐ R/P/I
☐ Table 2 ☐ I/C/C
☐ Table 3 ☐ A/O
☐ Table ____
Soil Texture: ☐ Coarse ☐ Medium ☐ Fine

Other Regulations:
☐ Reg 347/558 (3 Day min TAT)
☐ PWQO ☐ MMER
☐ CCME ☐ Other:
☐ MISA

Sewer By-Law:
☒ Sanitary
☒ Storm
Municipality: TORONTO

NOTE: DRINKING (POTABLE) WATER SAMPLES FOR HUMAN CONSUMPTION MUST BE SUBMITTED WITH SGS DRINKING WATER CHAIN OF CUSTODY

RECORD OF SITE CONDITION (RSC) ☐ YES ☐ NO

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	# OF BOTTLES	MATRIX	Field Filtered (Y/N)	Metals & Inorganics	PAH ☐ ABN ☐ SVOC(all) ☐	PCB Total ☐ Aroclor ☐	PHC F1-F4 ☐ VOC ☐ BTEX ☐ BTEX/F1 ☐ F2-F4 ☐	VOC ☐ BTEX ☐ THM ☐	Pesticides OC ☐ OP ☐	TCLP M&I ☐ VOC ☐ PCB ☐ B(a)P ☐ ABN ☐ Ignit. ☐	Water Pkg Gen. ☐ Ext. ☐	Sewer Use: Storm + Sanitary						COMMENTS:
1	BH1401	10/11/2019		18	GW	N									X						
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Observations/Comments/Special Instructions

Sampled By (NAME): Usman Arshad & Adil Khan	**Signature:**	adil	Date: 10/11/19 (mm/dd/yy)	Pink Copy - Client
Relinquished by (NAME): Adil Khan	**Signature:**	adil	Date: 10/11/19 (mm/dd/yy)	Yellow & White Copy - SGS

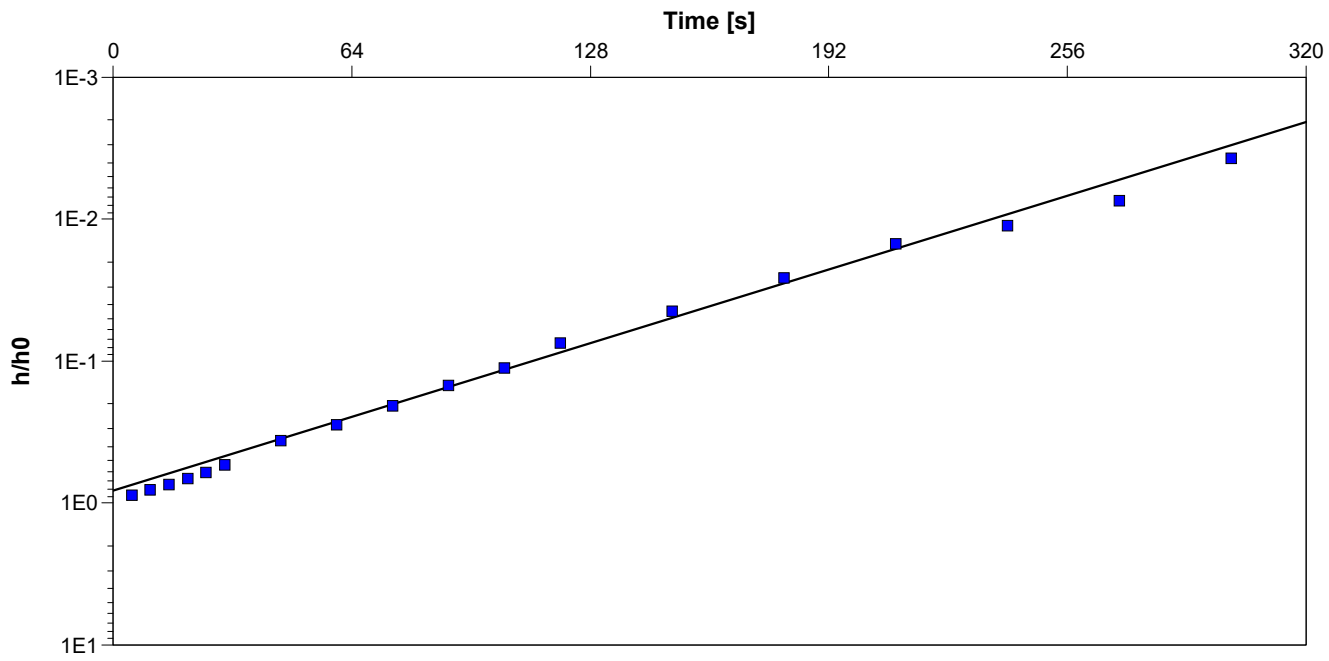
Revision #: 1.1
Date of Issue: 04 April, 2018

APPENDIX E

TERRAPROBE INC.

Terraprobe Consulting Geotechnical & Environmental Engineering Construction Materials Inspection & Testing	**Slug Test Analysis Report**
	Project: 1467 Bathurst St
	Number: 1-17-0206-46
	Client: Bentall Kennedy (Canada) Limited Partnership

Location: Toronto	Slug Test: Rising Head Test - BH103	Test Well: BH103
Test Conducted by: MC		Test Date: 11/3/2017
Analysis Performed by: SM	Rising Head Test - BH103	Analysis Date: 11/15/2017
Aquifer Thickness: 40.00 m		

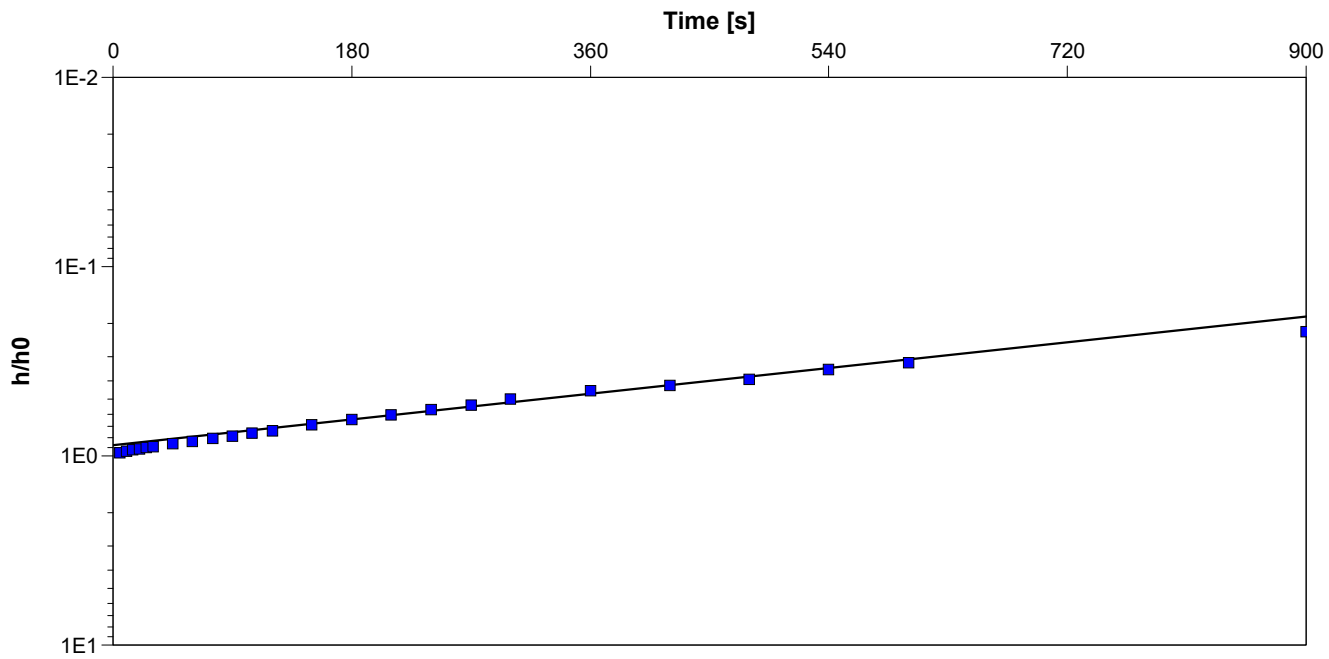


Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH103	7.36×10^{-6}	

Terraprobe Consulting Geotechnical & Environmental Engineering Construction Materials Inspection & Testing	**Slug Test Analysis Report**
	Project: 1467 Bathurst St
	Number: 1-17-0206-46
	Client: Bentall Kennedy (Canada) Limited Partnership

Location: Toronto	Slug Test: Rising Head Test - BH104	Test Well: BH104
Test Conducted by: MC		Test Date: 11/3/2017
Analysis Performed by: SM	Rising Head Test - BH104	Analysis Date: 11/15/2017
Aquifer Thickness: 40.00 m		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
BH104	6.83×10^{-7}	

APPENDIX F

TERRAPROBE INC.

Material Name	Color	KS (m/s)
Silts and Sands		4.02e-006
Lower Clay		1e-008

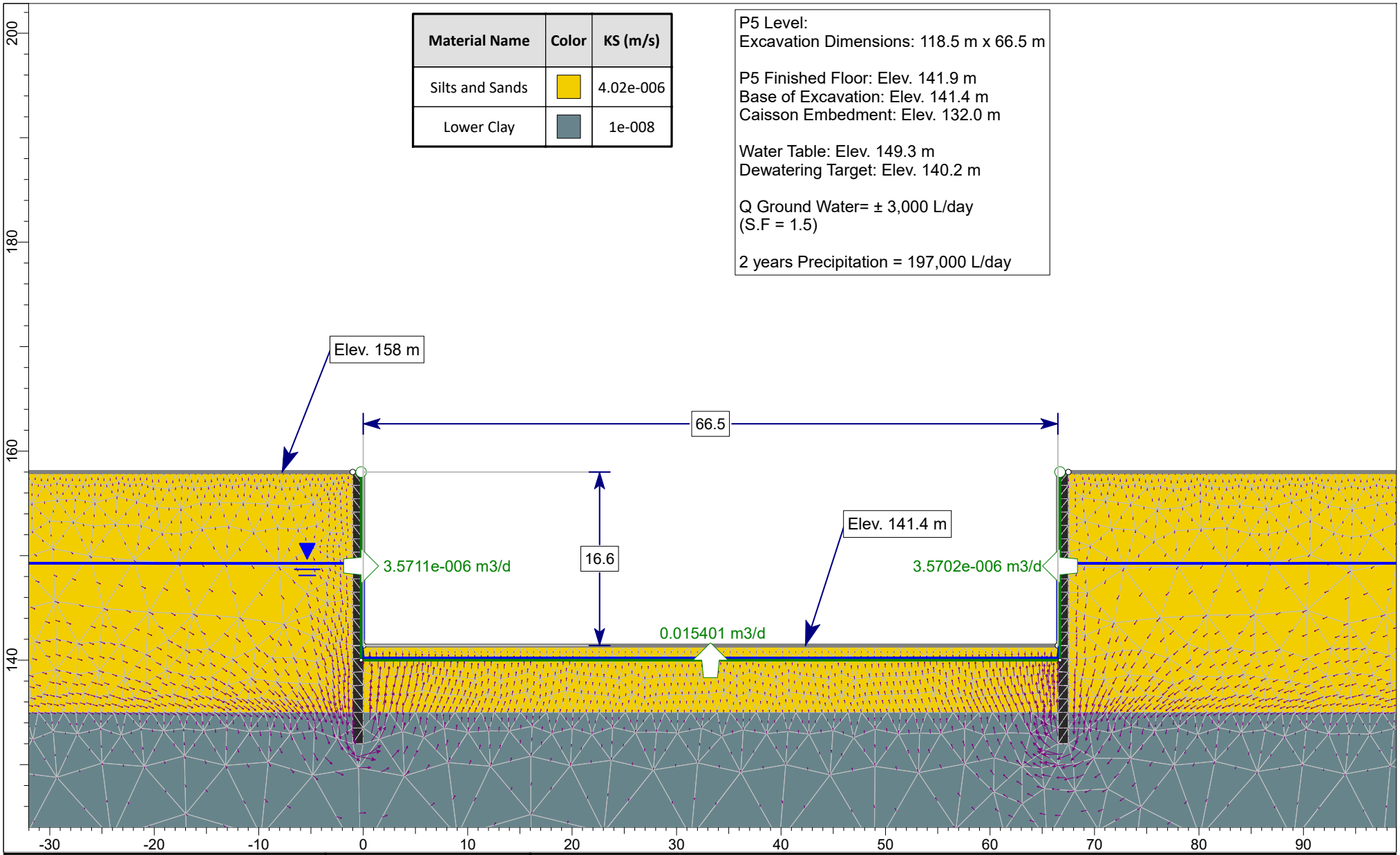
P5 Level:
Excavation Dimensions: 118.5 m x 66.5 m

P5 Finished Floor: Elev. 141.9 m
Base of Excavation: Elev. 141.4 m
Caisson Embedment: Elev. 132.0 m

Water Table: Elev. 149.3 m
Dewatering Target: Elev. 140.2 m

Q Ground Water= ± 3,000 L/day
(S.F = 1.5)

2 years Precipitation = 197,000 L/day



Terraprobe
Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

SLIDEINTERPRET 7.036

Notes
Refer to Hydrogeological Report for factual information supporting this analysis.

Project: **1-17-0206-46 | 1467 Bathurst Street**

Analysis: P5 Level | Dewatering, Short Term Scenario 2, Impermeable Shoring (Caisson Wall)

Date	Scale	File
11/6/2019	1:500	1-17-0206-46.1 SMC Dewatering P5 Level.slmd

By: SAA
Ref. 1

Material Name	Color	KS (m/s)
Silts and Sands		4.02e-006
Lower Clay		1e-008

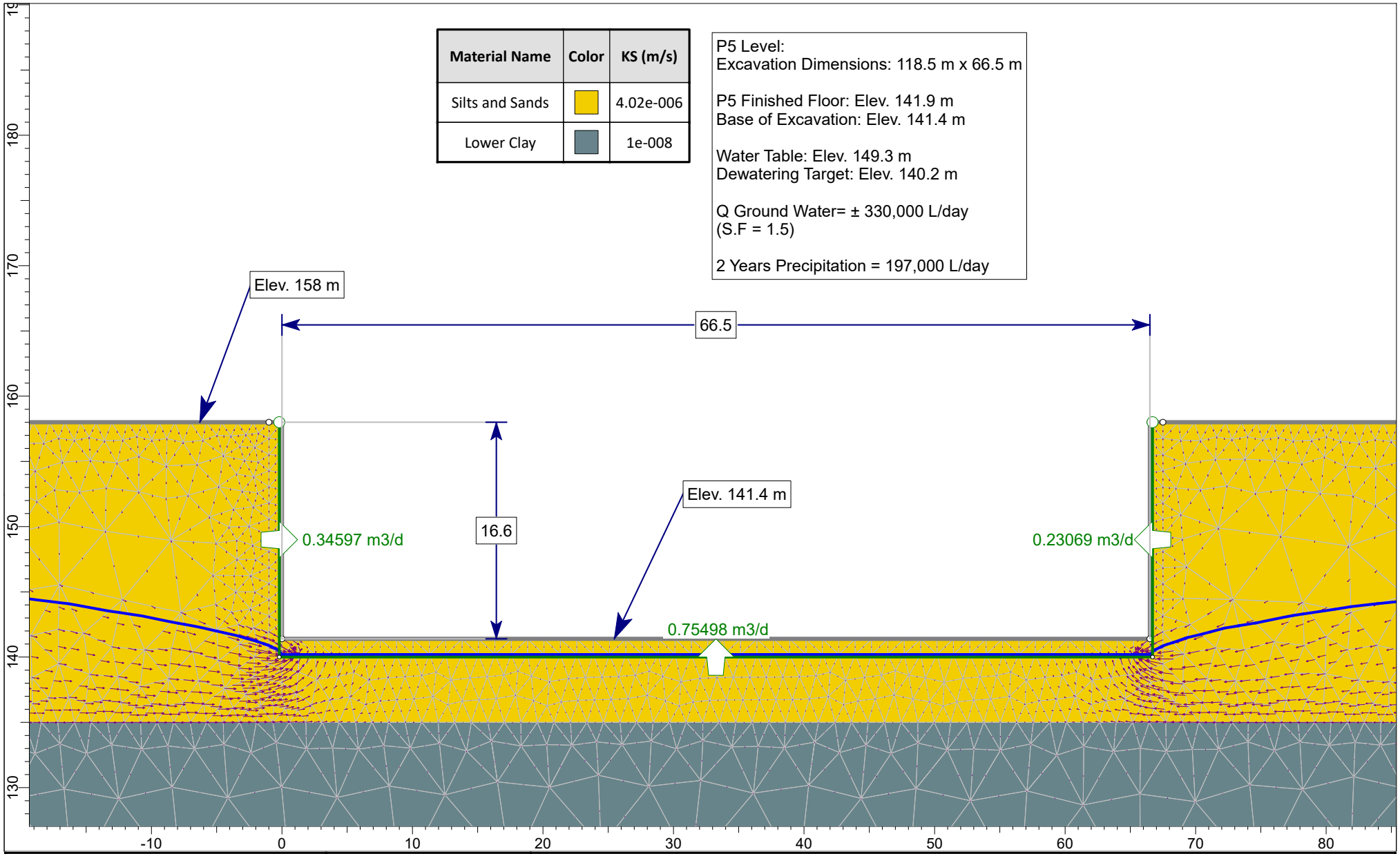
P5 Level:
Excavation Dimensions: 118.5 m x 66.5 m

P5 Finished Floor: Elev. 141.9 m
Base of Excavation: Elev. 141.4 m

Water Table: Elev. 149.3 m
Dewatering Target: Elev. 140.2 m

Q Ground Water= ± 330,000 L/day
(S.F = 1.5)

2 Years Precipitation = 197,000 L/day



Terraprobe
Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

SLIDEINTERPRET 7.036

Notes
Refer to Hydrogeological Report for factual information supporting this analysis.

Project: **1-17-0206-46 | 1467 Bathurst Street**

Analysis: P5 Level | Dewatering, Short Term, Permeable Shoring (Lagging Wall)

Date	Scale	File
11/7/2019	1:400	1-17-0206-46.1 SMC Dewatering P5 Level.slmd

By: SAA
Ref. 2

Material Name	Color	KS (m/s)
Silts and Sands		4.02e-006
Lower Clay		1e-008

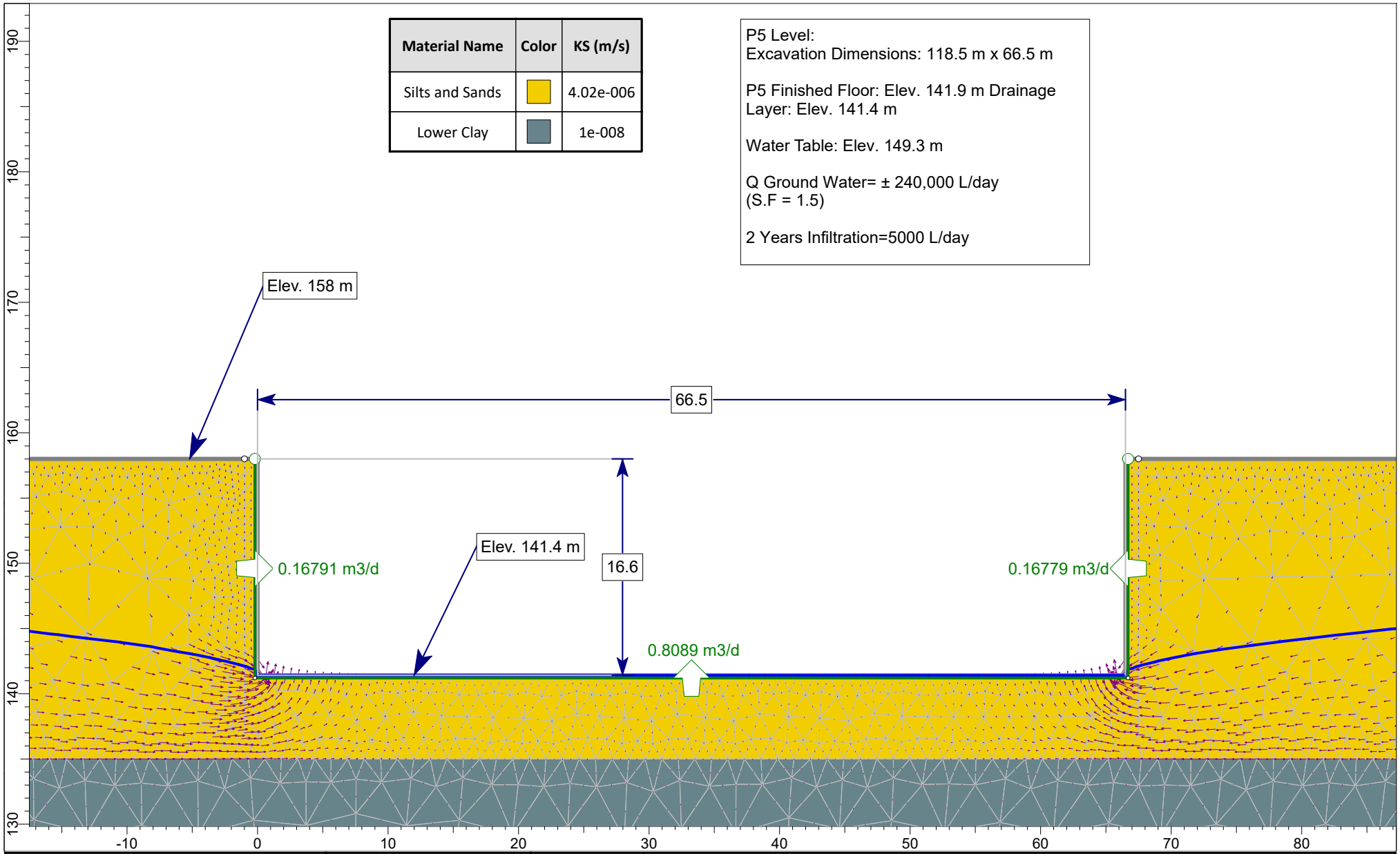
P5 Level:
Excavation Dimensions: 118.5 m x 66.5 m

P5 Finished Floor: Elev. 141.9 m Drainage Layer: Elev. 141.4 m

Water Table: Elev. 149.3 m

Q Ground Water= ± 240,000 L/day
(S.F = 1.5)

2 Years Infiltration=5000 L/day



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Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

SLIDEINTERPRET 7.036

Notes
Refer to Hydrogeological Report for factual information supporting this analysis.

Project: **1-17-0206-46 | 1467 Bathurst Street**

Analysis: P5 Level | Dewatering, Long Term, Permeable Shoring - Drained Foundation

Date	Scale	File
10/16/2019	1:400	1-17-0206-46.1 SMC Dewatering P5 Level.slmd

By: SAA

Ref. 3

Material Name	Color	KS (m/s)
Silts and Sands		4.02e-006
Lower Clay		1e-008

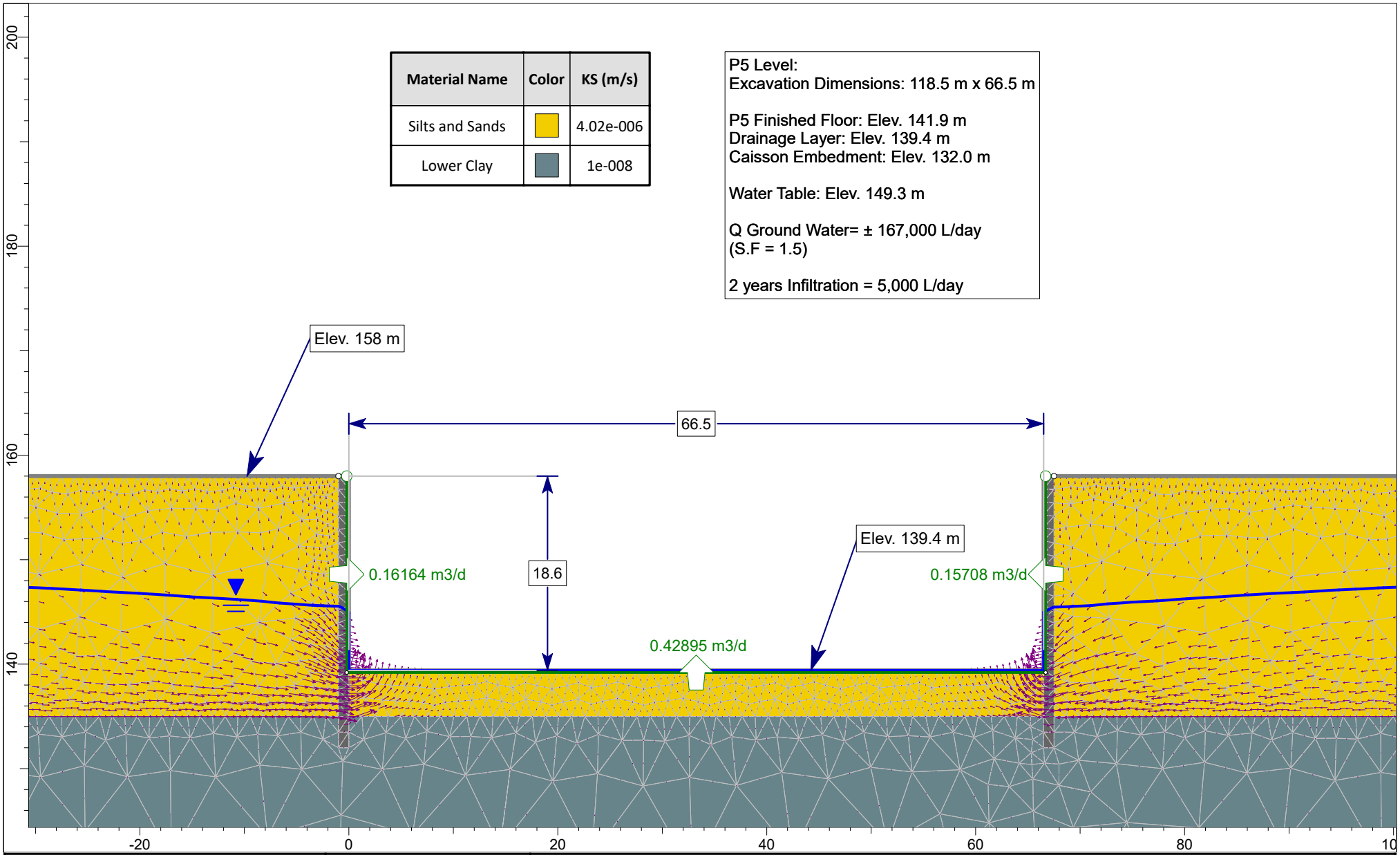
P5 Level:
Excavation Dimensions: 118.5 m x 66.5 m

P5 Finished Floor: Elev. 141.9 m
Drainage Layer: Elev. 139.4 m
Caisson Embedment: Elev. 132.0 m

Water Table: Elev. 149.3 m

Q Ground Water= ± 167,000 L/day
(S.F = 1.5)

2 years Infiltration = 5,000 L/day



Terraprobe
Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

SLIDEINTERPRET 7.036

Notes
Refer to Hydrogeological Report for factual information supporting this analysis.

Project
1-17-0206-46 | 1467 Bathurst Street, Toronto, ON | St. Mike's College

Analysis
P5 Level | Dewatering, Long Term Scenario 2, Impermeable Shoring, Raft Foundation

Date	Scale	File
11/6/2019	1:500	1-17-0206-46.1 SMC Dewatering P5 Level.slmd
By SAA	Ref. 4	

Material Name	Color	KS (m/s)
Silts and Sands		4.02e-006
Lower Clay		1e-008

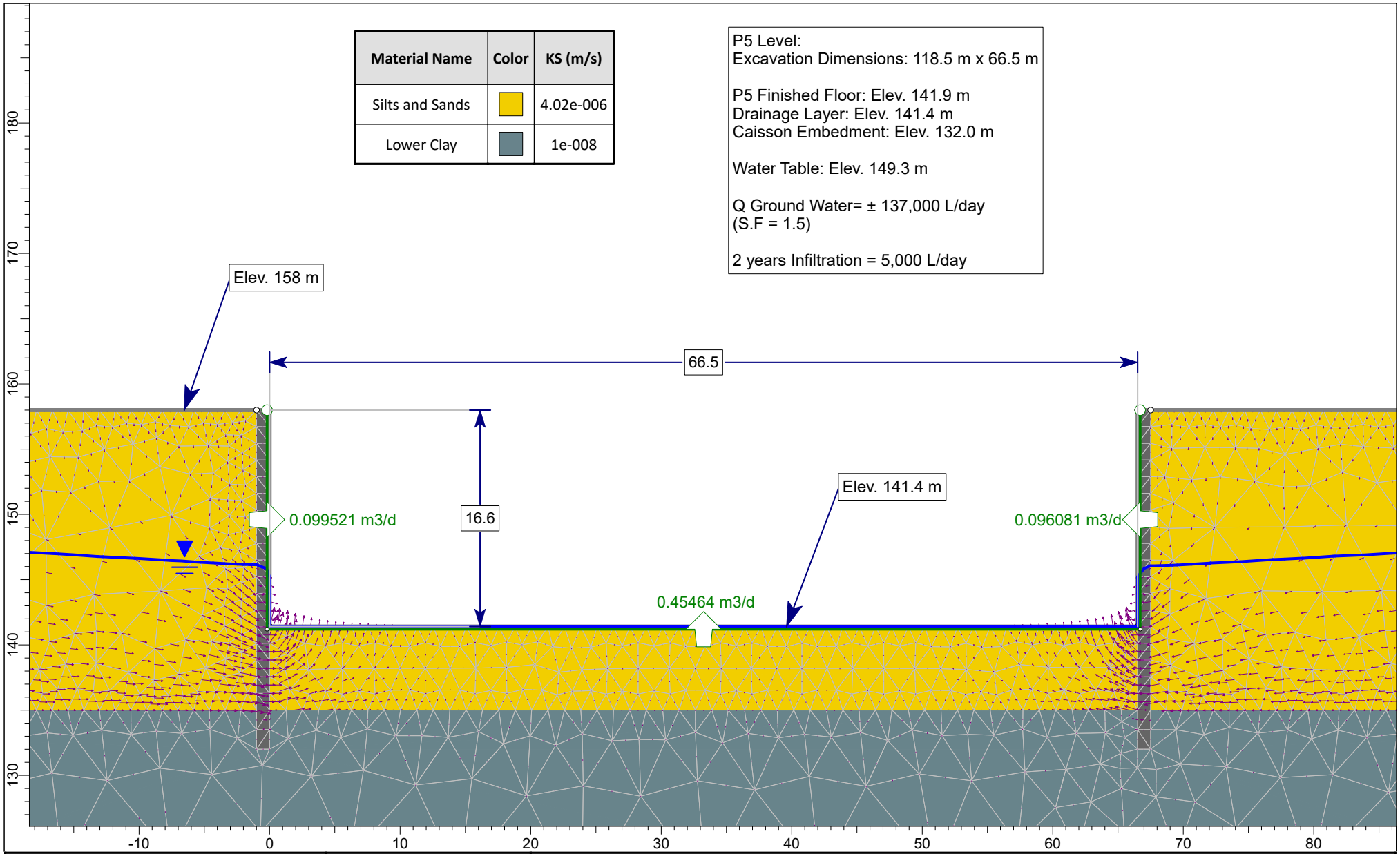
P5 Level:
Excavation Dimensions: 118.5 m x 66.5 m

P5 Finished Floor: Elev. 141.9 m
Drainage Layer: Elev. 141.4 m
Caisson Embedment: Elev. 132.0 m

Water Table: Elev. 149.3 m

Q Ground Water= ± 137,000 L/day
(S.F = 1.5)

2 years Infiltration = 5,000 L/day



Terraprobe
Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

SLIDEINTERPRET 7.036

Notes
Refer to Hydrogeological Report for factual information supporting this analysis.

Project
1-17-0206-46 | 1467 Bathurst Street, Toronto, ON | St. Mike's College

Analysis
P5 Level | Dewatering, Long Term Scenario 2, Impermeable Shoring - Drained Foundation

Date	Scale	File
11/6/2019	1:400	1-17-0206-46.1 SMC Dewatering P5 Level.slmd
By SAA	Ref. 5	