



Geotechnical Investigation Report – Proposed Residential Development – 35 Barker Street, Picton, Ontario

June 8, 2026

Prepared for:

Homes First Queen Elizabeth Residences Inc.

Cambium Reference: 23284-001

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1.0 Introduction

Cambium Inc. (Cambium) was retained by Homes First Queen Elizabeth Residences Inc. (Client) to complete a geotechnical investigation in support of the design of the proposed redevelopment of 35 Barker Street, in Picton, Ontario (Site) as shown on the Site Location Map, Figure 1 attached. The terms of reference for the geotechnical consulting services were included in Cambium's Proposal No. 23284-P, dated September 2, 2025.

The purpose of the field work and testing was to obtain information on the general subsurface soil and groundwater conditions at the site by means of a series of boreholes across the site. Based on an interpretation of the data, this report provides engineering comments, recommendations, and parameters for geotechnical design aspects of the project, including selected construction considerations which could influence design decisions. It should be noted that this report addresses only the geotechnical (physical) aspects of the subsurface conditions at the site. The geo-environmental (chemical) aspects, including the consequences of possible surface and/or subsurface contamination are not addressed herein.

Cambium is preparing a report outlining the chemical characterization of the site for excess soils. The report is provided separately.

This report provides the results of the geotechnical exploration and testing and should be read in conjunction with the "*Standard Limitations*" in Section 8.0 which forms an integral part of this document. The reader's attention is specifically drawn to this information, as it is essential for the proper use and interpretation of this report. The data, interpretations and recommendations contained in this report pertain to a specific project as described in the report and are not applicable to any other project or site location. If the project is modified in concept, location or elevation, or if the project is not initiated within eighteen months of the date of the report, Cambium should be given an opportunity to confirm that the recommendations in this report are still valid.



1.1 Standards and Guidelines

Applicable standards, guidelines and other normative documents utilized in preparing geotechnical engineering recommendations for this report are provided below.

1. Canadian Foundation Engineering Manual – 5th Edition; Canadian Geotechnical Society; 2023.
2. Ontario Provincial Standard Drawing (Nov 2010, Rev 1): OPSD 3090.101- Foundation Frost Penetration Depths for Southern Ontario



2.0 Site and Project Description

2.1 Site Description

The Site is located at 35 Barker Street, Picton, Ontario. The Site is currently developed with a school building and playground that is no longer in use. The property is bounded to the north by Centre Street, to the south and east by Barker Street, and to the west by Elm Street and undeveloped lands.

The grade along the property adjacent to the roads are relatively flat and consistent. The elevation of the property increased further into the property, where the area behind the existing school building is significantly higher than the road (approx. 2 m). The west side of the site is also significantly higher than the rest of the site: about 5 m higher than the road elevation.

Publicly available geological maps show that the Site is underlain by coarse-textured glaciolacustrine deposits of sand and gravel, minor silt and clay. The bedrock geology is mapped as Shadow Lake Formation of Limestone, dolostone, shale, arkose, or sandstone

2.2 Project Description

It is understood the existing structures and playground will be demolished as part of the proposed development.

It is Cambium's understanding that the proposed development will consist of 4 new multi-unit residential buildings. Table 1 presents the preliminary details for the proposed buildings. Additionally, the redevelopment will include at grade parking and access driveway. The site will be municipally serviced.

It is unknown if basement levels are proposed. It is assumed that the buildings will be constructed with, at most, 1 underground level. Grading plans have not been completed at the time of this investigation. Significant grade raises are not anticipated.



Table 1 Proposed Buildings – Preliminary Details

Building	Number of Units	Number of Storeys
A	34	2-storey building above a 1-storey HUB building
B	50	3-storey building
C	47	3-storey building
D	67	4-storey building
HUB	-	1-storey building connected to Building A



3.0 Methodology

3.1 Borehole Investigation

The geotechnical field investigation was conducted on October 20th to 21st, 2025, during which time nine (9) boreholes, designated as BH101-25 to BH109-25, were advanced across the Site. Table 2 provides a summary of the boreholes. The boreholes for the investigation were terminated at depths ranging from 2.1 to 6.9 metres below ground surface (mbgs). The approximate borehole locations relative to existing conditions are shown on the Borehole Location Plan – Existing Conditions, Figure 2, and relative to the proposed conditions on the Borehole Location Plan – Proposed Conditions, Figure 3.

Table 2 Borehole Summary

Borehole ID	Surface Elevation (mREL)	Depth (mbgs)/Elevation (mREL)	Termination Reason	Location
BH101-25	205.2	6.6/198.7	Auger refusal	Building D
BH102-25	201.9	5.0/196.9	Auger refusal	Parking Area
BH103-25	200.2	6.3/193.9	Auger refusal	Building C
BH104-25	201.5	6.9/194.6	Auger refusal	Building C
BH105-25	200.7	3.5/197.2	Auger refusal	Building A/HUB Building
BH106-25	200.8	3.4/197.4	Auger refusal	Building B
BH107-25	203.1	5.9/197.2	Auger refusal	Building A
BH108-25	201.0	4.0/197.0	Auger refusal	Building B
BH109-25	205.1	2.1/203.0	Target depth	Parking Area

Drilling and sampling were completed using a track-mounted drill rig operating under the supervision of a Cambium technician. The boreholes were advanced to the sampling depths by means of continuous flight solid stem augers. Samples from the boreholes were collected with 50 mm O.D. split spoon samplers. Standard Penetration Test (SPT) N values were recorded for the sampled intervals as the number of blows required to drive a split spoon sampler 305 mm into the soil, using a 63.5 kg drop hammer falling 750 mm, as per ASTM



D1586 procedures. The SPT N values were used in this report to estimate the relative density/consistency of the non-cohesive/cohesive soils.

The encountered soil units were logged in the field using visual and tactile methods, and the obtained samples were placed in labelled plastic bags for transport, future reference, laboratory testing and storage.

Upon completion of drilling, the open boreholes were checked for groundwater and general stability prior to backfilling. All boreholes were backfilled with the soil cuttings and efforts were made to reinstate the property to pre-existing conditions.

Borehole logs are provided in Appendix A. Site soil and groundwater conditions are described, and geotechnical recommendations are discussed in the following sections of this report.

3.2 Site Survey

The elevation and coordinates of each borehole were measured with RTK Topo surveying unit by a Cambium technician on site. The UTM coordinates and relative elevations (mREL) are included on the borehole logs provided in Appendix A. The top of an existing fire hydrant located on the south side of Barker Street about 15 m west of Elizabeth Street was used as a benchmark for this survey. An elevation of 200 m was assigned to the benchmark.

3.3 Laboratory Testing

Laboratory soil testing included Particle Size Distribution Analyses (LS-702, 705), Atterberg Limit Analysis (LS-703) and Natural Moisture Content Analyses (LS-701). Results are presented in Appendix B and are summarized on the borehole logs and described in the subsequent sections of this report.



4.0 Subsurface Conditions

The stratigraphy encountered in the borehole logs is indicated on the attached borehole logs in Appendix A. It is noted that the conditions indicated on the borehole logs are for specific locations only and can vary between and beyond the borehole locations. The soil boundaries indicated on the borehole logs are inferred from observations during drilling. These boundaries are intended to reflect approximate transition zones and should not be interpreted as exact planes of geological change. In addition, the descriptions provided in the borehole logs are inferred from a variety of factors, including visual observations of the soil samples retrieved, laboratory testing, measurements prior to and after drilling, and the drilling process itself (drilling speed, shaking/grinding of the augers, etc.).

The subsurface conditions encountered in the boreholes advanced generally surficial fill deposits overlying native cohesive deposits and/or glacial till. The soil stratigraphy encountered is described in detail below as well as on the borehole logs included in Appendix A.

4.1 Pavement Structure

4.1.1 Asphaltic Concrete

Surficial asphaltic concrete was encountered from the surface of boreholes BH102-25, BH103-25, and BH108-25, and ranged in thickness from approximately 50 to 150 mm.

4.1.2 Granular Materials

Granular pavement material was encountered underlying the asphaltic concrete at borehole locations BH102-25, BH103-25, and BH108-25. The base and subbase material was distinguishable in borehole BH108-25.

The granular pavement material extended to depths ranging approximately between 0.2 and 0.3 mbgs. The thickness of the base material ranges from 100 to 250 mm and in borehole BH108-25, the subbase thickness measures 75 mm.

The granular fill material is composed of sand and gravel with trace or some silt.



4.2 Topsoil

Surficial topsoil was encountered in all borehole locations except boreholes BH102-25, BH103-25, BH104-25, and BH108-25. The thickness of the topsoil ranges approximately between 75 mm and 250 mm. The topsoil composition is generally composed of sandy clayey silt but containing significant organic material and rootlets.

Assessments of organic matter content or other topsoil quality tests were beyond the scope of this study.

4.3 Fill Material

Fill materials were encountered underlying the surficial deposits at most borehole locations (all except boreholes BH103-25) and from the surface of borehole BH104-25. The composition of the fill material varied between locations from non cohesive silty sand to sand to cohesive clayey silt to sandy clayey silt. The deposits are likely composed of reworked native materials. Brick debris was noted in borehole BH101-25, and organics were noted within the fill material in boreholes BH105-25, BH106-25, BH108-25, and BH109-25.

The thickness of the fill material ranges from 0.2 to 2.2 m and extends to depths ranging from 0.2 to 2.3 mbgs.

The non-cohesive fill deposits were encountered in BH101-25, BH104-25, BH105-25, BH107-25, and BH109-25. The SPT N- values within these non-cohesive fill deposits ranged from 5 to 22 blow counts, indicating a loose to compact relative density.

The cohesive fill deposits were encountered in BH102-25, lower portions of BH105-25, BH106-25, and BH108-25. The SPT N- values within the cohesive fill deposit ranges from 7 to 8 blow counts, indicating a firm consistency.

4.4 Native Cohesive Deposits

Native cohesive deposits were encountered underlying the fill deposits in 7 of the borehole locations (boreholes BH101-25, BH102-25, and BH105-25 through BH109-25). The cohesive deposits were encountered from depths ranging from 0.8 to 2.3 mbgs. Where penetrated, in



boreholes BH101-25 and BH106-25, the cohesive native deposits extend to depths ranging from 1.9 to 3.1 mbgs. Where encountered in the remaining boreholes, the boreholes terminated within the cohesive native deposits at depths ranging from 3.5 to 5.9 mbgs due to practical refusal. Borehole BH109-25 terminated within the cohesive deposit at depth of 2.1 mbgs due to reaching target depths. The deposit extends deeper at this location.

The cohesive native deposits varied slightly in composition between borehole locations but were generally composed of brown clayey silt from sandy to trace sand, and gravelly to trace gravel.

The SPT N- values within the cohesive native deposits ranged from 3 to 22 blow counts, indicating a soft to stiff consistency.

Laboratory particle size distribution analyses were completed for select samples of the cohesive clayey silt deposits taken from the boreholes and depths indicated below. The analysis results, based on a modified Unified Soil Classification System (USCS) scale, are summarized below, with full results provided in Appendix B.

Table 3 Grain Size Distribution – Native Cohesive Deposits

Sample Location	Depth (mbgs)	Soil	% Gravel	% Sand	% Silt	% Clay
BH101-25 SS3	1.5 to 2.1	Clayey silt, trace gravel, trace sand	2	1	71	26
BH105-25 SS4	2.3 to 2.9	Sandy clayey silt, gravelly	18	17	52	13

Atterberg Limits testing was completed on one of the clayey silt samples taken from the boreholes and depths indicated below. The analysis results are summarized below, with full results provided in Appendix B.

Table 4 Atterberg Limits Testing

Sample Location	Depth (mbgs)	Description	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Moisture Content (%)
BH101-25 SS3	1.5 to 2.1	CL-ML	21.9	17.1	4.8	19.1



4.5 Native Cohesionless Deposits

Native cohesionless deposits were encountered underlying the clayey silt deposits in boreholes BH101-25 and BH106-25 and underlying the pavement structure and fill deposits in boreholes BH103-25 and BH104-25, respectively. These deposits were encountered from depths ranging from 0.1 to 3.1 mbgs. Where encountered, all boreholes terminated within the native cohesionless deposits at depths ranging from 3.7 to 6.9 mbgs.

The cohesionless native deposits varied slightly in composition between borehole locations but was generally composed of brown or grey silty sand, gravelly to trace gravel. The upper 1.5 m of the silty sand in borehole BH104-25 have been disturbed, likely from weathering.

The SPT N- values within the silty sand deposits ranged from 18 to over 50 blow counts, indicating a compact to very dense relative density.

Laboratory particle size distribution analyses were completed for select samples of the native cohesionless deposits taken from the boreholes and depths indicated below. The analysis results, based on a modified Unified Soil Classification System (USCS) scale, are summarized below, with full results provided in Appendix B.

Table 5 Grain Size Distribution – Native Cohesionless Deposits

Sample Location	Depth (mbgs)	Soil	% Gravel	% Sand	% Silt	% Clay
BH101-25 SS6	4.6 to 5.2	Silty sand, some clay, trace gravel	1	63	28	8
BH103-25 SS5	2.3 to 2.9	Silty sand, trace gravel	2	66	32	

4.6 Probable Bedrock/Practical Refusal

Practical refusal was encountered in boreholes BH101-25 through BH108-25. A summary of the refusal depths is provided in the table below.



Table 6 Depth to Practical Refusal

Borehole	Surface Elevation (mREL)	Practical Refusal Depth / Elevation (mbgs / mREL)
BH101-25	205.2	6.6 / 198.7
BH102-25	201.9	4.9 / 197.0
BH103-25	200.2	6.3 / 193.9
BH104-25	201.5	6.9 / 194.6
BH105-25	200.7	3.5 / 197.2
BH106-25	200.8	3.7 / 197.1
BH107-25	203.1	5.9 / 197.2
BH108-25	201.0	4.0 / 197.0

Based on the consistency of bedrock refusal across the site, it is likely that refusal depths correlate with bedrock depths. Bedrock elevations appear generally consistent with a drop off along the southern portion of the site.

Bedrock was not cored as part of this investigation and therefore the encountered practical refusal may have occurred on boulders within the overburden deposits.

4.7 Groundwater

Groundwater level observations and measurements were carried out at the time of drilling. Borehole side wall instability (caving) depth, groundwater depth, and standing water depth were recorded in the open boreholes, if observed. Stabilized groundwater conditions were measured approximately one month following drilling. The groundwater observations are summarized in Table 7.



Table 7 Groundwater and Borehole Caving Observations

Borehole	Ground Surface Elevation (mREL)	Borehole Depth (mbgs/mREL)	Groundwater in Borehole upon Completion (mbgs)	Standing Water in Borehole upon Completion (mbgs)	Caving Depth (mbgs / mREL)	Monitoring Well Water Level Nov. 25, 2025 (mbgs/mREL)
BH101-25	205.2	6.6 / 198.7	6.4	6.4	n/a	3.9 / 201.3
BH102-25	201.9	4.9 / 197.0	4.5	4.0	Open	n/a
BH103-25	200.2	6.3 / 193.9	Dry	Dry	n/a	3.3 / 196.9
BH104-25	201.5	6.9 / 194.6	6.6	6.6	Open	n/a
BH105-25	200.7	3.5 / 197.2	Dry	Dry	n/a	Dry
BH106-25	200.8	3.7 / 197.1	Dry	Dry	3.5 / 197.3	n/a
BH107-25	203.1	5.9 / 197.2	Dry	Dry	Open	n/a
BH108-25	201.0	4.0 / 197.0	Dry	Dry	Open	n/a
BH109-25	205.1	2.1 / 203.0	Dry	Dry	1.6 / 203.5	n/a

Groundwater levels can fluctuate based on seasons and following precipitation events. It is recommended that additional groundwater measurements are taken during the Spring.

4.8 Corrosivity Analysis

One sample of the overburden soils was submitted to a qualified third-party laboratory for chemical corrosivity analysis. The laboratory results and certificate of analysis are presented in Appendix C. The sample was analysed for chloride, sulphate, pH, resistivity, redox potential, and sulphide concentrations. The submitted sample was taken from 1.5 to 2.1 mbgs from BH102-25.

To determine the potential for corrosion, the laboratory results were compared to the ANSI/AWWA corrosivity rating system, as shown in Table 8. Based on the total points scored, the soil is determined to be not corrosive.



Table 8 Corrosivity Testing Results

Parameter	BH102-25	
	Test Results	ANSI/AWWA Point Rating
pH	7.73	0
Resistivity ($\Omega \cdot \text{cm}$)	7,730	0
Redox Potential (mV)	346	0
Sulphide	<0.01	0
Moisture Content	Fair	0
Total Points		0

Please note that there may be other overriding factors in the assessment of corrosion potential, such as the application of de-icing salts on any access roads and subsequent leaching into the subsoils and stray currents.

The laboratory test results also indicate that the soluble sulphates concentration of the tested sample measure <10 ppm. Based on this concentration, there is a negligible potential for sulphate attack on concrete. Accordingly, normal Type 10 Portland cement can be used for buried concrete elements.



5.0 Geotechnical Design Considerations

This section of the report provides engineering information and recommendations for the geotechnical design aspects of the project based on our interpretation of the borehole information, the laboratory test data and on our understanding of the project requirements. The following recommendations are provided to assist designers. It is possible that subsurface conditions beyond the borehole locations may vary from those observed. Recommendations should not be construed as providing instructions to contractors, who should form their own opinions about site conditions. Contractors bidding on or undertaking any work at the Site should examine the factual results of the investigation, satisfy themselves as to the adequacy of the information for construction and make their own interpretation of the factual data as it affects their proposed construction techniques, schedule, equipment capabilities, costs, sequencing, and the like. If significant variations are found before or during construction, Cambium should be contacted so that we can reassess our findings, if necessary.

Cambium will not assume any responsibility for construction-related decisions made by contractors on the basis of this report.

5.1 Project Understanding

The existing structures and playground will be demolished as part of the proposed development. It is understood that the proposed development will consist of 4 new multi-unit residential buildings. Additionally, the redevelopment will include at grade parking and access driveway. The site will be municipally serviced.

It is unknown if basement levels are proposed. It is assumed that the buildings will be constructed with, at most, 1 underground level. Grading plans have not been completed at the time of this investigation. Significant grade raises are not anticipated.

5.2 Frost Penetration

Based on Foundation Frost Penetration Depths for Southern Ontario [3], the maximum frost penetration depth at the site is estimated at 1.4 m. Foundation footings should be situated at or



below this depth for frost protection. If foundations cannot extend to the required depth, equivalent insulation should be provided.

5.3 Temporary Excavations and Support

All excavations must be carried out in accordance with the latest edition of the Occupational Health and Safety Act (OHSA). The existing fill material and native soils at the site may be classified as Type 3 soils in accordance with OHSA.

Type 3 soils may be excavated with side slopes no steeper than 1H:1V.

The soils at this site are susceptible to instability if saturated. Soils below the groundwater or following significant precipitation events should be classified as Type 4 soils.

Type 4 soils may be excavated with side slopes no steeper than 3H:1V.

Excavation side slopes should be protected from exposure to precipitation and associated ground surface runoff and should be inspected regularly for signs of instability. If excavations cannot be sized to accommodate safe slopes, the excavations should be appropriately shored.

5.4 Temporary Groundwater Control

Groundwater observations were made during the drilling fieldwork and stabilized conditions were measured on November 25, 2025. Groundwater was measured deeper than 3.0 mbgs within the deeper monitoring wells. Groundwater from perched groundwater within the upper 3.0 m of the overburden may be allowed to drain into the excavation and controlled using sumps and pumps.

If excavations progress deeper than 3 mbgs, positive dewatering may be required in advance of excavation. It is recommended that additional groundwater readings are taken during the wet season (March-April) to confirm high groundwater levels. If excavations progress within 0.6 m above the high groundwater level, positive dewatering will be required. Dewatering must maintain groundwater levels at least 1.0 m below the base of the excavations during construction.



Water takings in excess of 50 m³/day are regulated by the (Ministry of the Environment, Conservation and Parks (MECP)). Certain takings of groundwater and storm water for construction site dewatering purposes qualify for self-registration on the MECP's Environmental Activity and Sector Registry ("EASR").

5.5 Excavations in Proximity to Nearby Structures

For excavations, depending on the foundations of nearby structures and the depth of the services, excavations may intersect the zone of influence of the supporting soils of existing structures and/or services. The zone of influence can be taken from the edge of the foundations or supporting base, down and outward at an angle of 1H:1V. If the proposed excavations proceed through this line extending from the existing foundations or services, excavation shoring or underpinning work may be required.

Preconditions surveys of nearby properties are recommended to determine the existing conditions prior to excavation. It is recommended that as-built foundation and service plans are reviewed.

5.6 Foundation Design

The proposed depth of structures is not yet confirmed. It is assumed that the proposed buildings will have, at most, one basement level. The finished floor depth of the basement levels is assumed to be about 3 mbgs.

5.6.1 For the support of Buildings C and D:

The structures will be supported on the underlying compact to very dense silty sand deposits at a depth of at least 3 mbgs. The compact to very dense silty sands are suitable to support the proposed structures on conventional spread footings. Shallow spread footings or strip footings on these soils may be sized using a net reaction at **SLS** of **250 kPa** and a factored geotechnical resistance at **ULS** of **425 kPa**.



The minimum width of continuous strip footings supported must be 1.0 m and the minimum size of isolated footings must be 1.8 m X 1.8 m. These minimum dimensions apply regardless of loads in conjunction with the above recommended geotechnical resistance.

5.6.2 For the support of Buildings A, the HUB, and B:

These structures will be supported, in part, on the underlying clayey deposits at a presumed depth of at least 3 mbgs. These soils, in particular, those encountered in boreholes BH107-25 and BH108-25, will have a limited capacity to support the building loads. For structures supported on the underlying soft to stiff clayey silt deposits: Conventional spread footings or strip footings may be sized using a net reaction at **SLS** of **100 kPa** and a factored geotechnical resistance at **ULS** of **185 kPa**.

The minimum width of continuous strip footings supported must be 1.2 m and the minimum size of isolated footings must be 2.4 m X 2.4 m. These minimum dimensions apply regardless of loads in conjunction with the above recommended geotechnical resistance.

It is recommended that additional boreholes are completed to delineate the areas of soft clayey soils and complete additional in-situ testing on the clayey deposits.

Alternatively, the building may be supported on deeper foundations such as helical piers. (screw piles) end bearing on the probable bedrock surface encountered between approximately 3.5 and 5.9 mbgs.

The number and size of helical piles are determined based on the building loads and configuration. Since helical piles are a proprietary system, it is recommended that the piles be designed by an experienced design build contractor. A bulk unit weight of 19 kN/m³, a friction angle of 29°, and a cohesion value of 2 kPa can be utilized as soil strength characteristics for the pile design.



5.6.3 General Foundation Recommendations

The bearing capacities provided in the preceding sections assume that the buildings will be situated at about 3 mbgs. If the finished floor elevation is set higher than assumed, the provided bearing capacities will have to be re-confirmed.

The quality of the subgrade should be inspected by Cambium during construction, prior to constructing the footings, to confirm bearing capacity estimates. All native soils below foundations should be undisturbed and free of organics or vegetation.

Settlement potential at the SLS loadings is less than 25 mm and differential settlement should be less than 10 mm. Settlement of the foundations placed directly on bedrock (deep foundations) is anticipated to be negligible.

Foundations supported across different subgrades will experience differential settlement. It is recommended that additional reinforcement is placed where the subgrades transition. To avoid differential settlement across the foundations, it is recommended that the foundations for the structures are all supported on similar subgrades.

5.7 Seismic Site Classification

The Ontario Building Code (2024) stipulates the methodology for earthquake design analysis, as set out in Subsection 4.1.8. The determination of the type of analysis is predicated on the importance of the structure, the spectral response acceleration, and the site classification.

Average shear wave velocity has not been measured for the site. The site designation can therefore be determined using the average standard penetration resistance (N-values) and rational analysis of the upper 30 m. The underlying bedrock formation has not been cored as part of this investigation and is not known from local experience. Therefore, the designation of the seismic analysis can be taken as **Site Class Xc**.

It may be possible to improve the site designation with Multi-channel Analysis of Surface Waves (MASW) testing.



5.8 Backfill For Foundation Elements

It is not recommended that the existing native soils across the site to be used as backfill against foundation elements. If the material is intended for reuse, only the cohesionless soils may be used, provided that the material is free of organics or deleterious materials. The material intended for reuse will have to stockpiled and approved by Cambium. A bond break against foundations will be required to mitigate frost adhesion.

It is recommended that structures are backfilled with non-frost susceptible granular material such as imported material meeting OPSS Granular B Type I or II.

Backfill adjacent to the structural elements should be placed evenly in lifts not exceeding 200 mm loose thickness and should be compacted to at least 95% of SPMDD taking care not to damage the adjacent structures. Light compaction equipment such as small vibratory or hand operated ram equipment should be used immediately adjacent to the wall; otherwise, compaction stresses on the wall may be greater than that imposed by the backfill material.

5.9 Lateral Earth Pressure

The appropriate values for use in the design of structures subject to unbalanced earth pressures at this site are tabulated as follows in Table 9.

Table 9 Lateral Earth Pressure Coefficients

Material	γ	ϕ	K_a	K_o	K_p
Granular Backfill	21	30	0.33	0.50	3.00
Native Soils	20	30	0.33	0.50	3.00

Where:

- γ = bulk unit weight of soil (kN/m³)
- ϕ = internal angle of friction (degrees)
- K_a = Rankine active earth pressure coefficient (dimensionless)
- K_o = Rankine at-rest earth pressure coefficient (dimensionless)
- K_p = Rankine passive earth pressure coefficient (dimensionless)



The above earth pressure parameters pertain to a horizontal grade condition behind a retaining structure. Values of earth pressure parameters for an inclined retained grade condition will vary.

Walls subject to unbalanced earth pressures must be designed to resist a pressure that can be calculated based on the following equation:

$$P = K[\gamma(h - h_w) + \gamma' h_w + q] + \gamma_w h_w$$

Where:

P	=	the horizontal pressure at depth, h (m)
K	=	the earth pressure coefficient
h	=	the height of the wall (m)
h_w	=	the depth below the ground water level (m)
γ	=	the bulk unit weight of soil, (kN/m ³)
γ'	=	the submerged unit weight of the exterior soil, ($\gamma_{\text{sat}} - 10$ kN/m ³)
q	=	the complete surcharge loading (kPa)

Where the wall backfill can be drained effectively to eliminate hydrostatic pressures that would act in conjunction with earth pressures, the above equation can be simplified to:

$$P = K[\gamma(h) + q]$$

5.10 Slab Design

Slab on grades at the site may be supported on compacted engineered fill such as material meeting OPSS.MUNI 1010 Granular A placed directly on the underlying native deposits.

The exposed subgrade should be inspected by Cambium. Remedial work should be carried out on any softened, disturbed, wet or poorly performing zones as directed by Cambium. Any low areas may then be brought up to within at least 200 mm of the underside of the floor slabs, as required, using OPSS Granular B, Type I material or other approved material, placed in maximum 200 mm loose lifts and uniformly compacted to at least 98% of SPMDD.



The slabs should be supported on a pad of granular fill consisting of a minimum thickness of 200 mm of OPSS Granular A material, uniformly compacted, acting as a moisture barrier.

Any filling operations should be inspected and tested by Cambium.

The floor slabs should be structurally separate from the foundation walls and columns. Sawcut control joints should be provided at regular intervals and along column lines to minimize shrinkage cracking and to allow for any differential settlement of the floor slabs.

For initial analyses, the moduli of subgrade reaction appropriate for slab design on the soils at the site can be taken as 25 MPa/m.

5.11 Basement Drainage

Groundwater was measured at two borehole locations between 3.3 and 3.9 mbgs. High groundwater levels in the spring may raise above the basement foundation levels, if basements are set 3 mbgs. It is recommended that additional groundwater measurements and a Hydrogeological investigation is completed at the site to confirm groundwater expectations.

To assist in maintaining dry basements, it is recommended that exterior grades around the building are sloped away at a 2 % gradient or more. A subfloor drainage system is required in conjunction with perimeter drainage of the structure throughout below grade areas.

The subfloor drainage systems could consist of minimum 100 mm diameter perforated pipes wrapped in geotextile and spaced a maximum distance of 6 m on centre. The pipes must be surrounded by a minimum of 100 mm of 19 mm clear stone, with pipe inverts set at least 300 mm below the base of the slab.

A perimeter foundation drainage system should consist of geotextile wrapped perforated 100 mm diameter pipes surrounded by a trench of 19 mm clear stone around the foundations and connected to the underfloor drainage layer.

Any drainage system should outlet to a suitable discharge point under gravity flow away from the structures, or to a sump pit and pumped out. The design of the system must conform to applicable plumbing code requirements. The subfloor drainage system is a critical structural



element, since it keeps water pressure from acting on the basement slab. As such, the sump pumps used in the sump pit must have a duplexed pump arrangement for 100 % pumping redundancy and these pumps must have access to emergency power. The size of the pumps should be enough to accommodate the anticipate groundwater flows during high season.

5.12 Slab on Grade Drainage

Perimeter drainage is not required for slab on grade structures, provided that floor slabs are set at least 300 mm above exterior grades.

5.13 Proposed Underground Services

5.13.1 Trench Excavation and Dewatering

Section 5.3 and 5.4 provide the trench excavation and dewatering requirements for any underground services installed on site.

5.13.2 Pipe Bedding and Cover Materials

Bedding and cover material for any services should conform to Ontario Provincial Standard Drawings (OPSD) 802.010 and 802.013 (flexible pipes) and OPSD 802.031 to 802.033 (rigid pipes). The bedding and cover material shall be placed in maximum 200 mm thick lifts and should be compacted to at least 98% SPMDD. The cover material shall extend a minimum of 300 mm above the top of the pipe and be compacted to a minimum of 98% of SPMDD, taking care not to damage the utility pipes during compaction.

5.13.3 Pipe Backfill

Above the pipe cover material, the pipe can be backfilled by using imported granular fill material such as OPSS.MUNI 1010 Granular B, Type I. The native material may be re-used provided that the material is free of organics. Any re-used material should be inspected and approved by Cambium. The soils should be placed in maximum 300 mm thick lifts compacted to 95% SPMDD.



5.13.4 Frost Protection for Underground Services

It is recommended to place water services at a minimum depth of 300 mm below the frost penetration depth with the top of the pipe located at 1.4 mbgs or lower as dictated by municipal service requirements.

5.14 Pavement Design

5.14.1 Subgrade Preparation

The performance of the pavement is dependent upon proper subgrade preparation. All topsoil and organic materials are to be removed from the subgrade. The subgrade should be inspected by Cambium personnel, and a proof roll should be conducted using a smooth drum roller without vibration. Any soft areas where rutting or appreciable deflection is noted should be sub-excavated and replaced with suitable earth fill. The fill should be compacted to at least 95% of SPMDD.

The most severe loading conditions on pavement subgrades may occur during construction, and subgrades may become disturbed due to construction operations. Therefore, the recommended pavement structure provided may not be adequate due to the presence of localized disturbed areas and it may be necessary to increase the thickness of the Granular B Type II subbase and/or incorporate a woven geotextile separator and/or a geogrid between the subgrade surface and the granular base. The requirement for an increase in the pavement structure and/or incorporating geotextile and/or geogrid will be evaluated by Cambium personnel during proof roll inspections.

5.14.2 Flexible Pavement Structures

The recommended minimum pavement structures are developed based on assumption that the proposed development will be frequented exclusively by residents, and the occasional service vehicle. The following material thickness recommendations are provided based on anticipated loading conditions. It is recommended that the provided pavement structure is



reviewed once further details of the proposed development are provided. Table 10 below presents the recommended minimum pavement structure.

Table 10 Recommended Minimum Pavement Structure

Pavement Layer	Light Duty	Heavy Duty
Surface Course Asphalt	50 mm HL3 or SP12.5	40 mm HL3 or SP12.5
Binder Course Asphalt	-	60 mm HL8 or SP19
Granular Base	150 mm OPSS 1010 Granular A	150 mm OPSS 1010 Granular A
Granular Subbase	300 mm OPSS 1010 Granular B Type I or II	350 mm OPSS 1010 Granular B Type I or II

Material and thickness substitutions must be approved by the Design Engineer. The thickness of the subbase layer could be increased at the discretion of the Engineer, to accommodate site conditions at the time of construction, including soft or weak subgrade soil replacement.

Compaction of the subgrade should be verified by the Engineer prior to placing the granular fill. Granular layers should be placed in 150 mm maximum loose lifts and compacted to at least 98% of SPMDD standard. The granular materials specified should conform to OPSS standards, as confirmed by appropriate materials testing.

5.15 Winter Construction Recommendations

To carry out the work during freezing temperatures and maintain adequate performance of the subgrades, open excavations should be opened for as short a time as practicable. Backfill material should be excavated, stored and replaced without being disturbed by frost or contaminated by snow or ice. For excavations, the overburden soils that will be founding structural elements and buried services should be protected immediately from frozen conditions using heaters, insulated tarps, straw, or other appropriate methods. The overburden soils within the deeper excavation for the pump station should also be protected from freezing until shoring has been installed. Frozen soil may result in damages to existing adjacent structures or services depending on distance from open excavations.



Ice buildup within open excavation may create unsafe conditions for workers. Ice on the sides of excavations should be monitored on a daily basis prior to any workers entering open excavations.

Concrete placement in below freezing conditions must be appropriately protected while curing using straw, insulated tarps, heaters, or any other approved methods.



6.0 Limitations and Use of Report

This investigation has been carried out using investigation techniques and engineering analysis methods consistent with those ordinarily exercised by engineering practitioners. The discussion and recommendations that have been presented are based on factual data obtained from this investigation.

6.1 Design Review and Inspections

Cambium should be provided the opportunity to review the design drawings, prior to next stage tendering and construction, to ensure that all pertinent geotechnical-related factors have been addressed.

During construction, a sufficient degree of foundation inspections, subgrade inspections, and an adequate number of in situ density tests and materials testing should be carried out to confirm that the conditions exposed are consistent with those encountered in the boreholes, and to monitor conformance to the pertinent project specifications. Concrete testing should be carried out on both the plastic material in the field and of set cylinder samples in a CSA certified laboratory.

Cambium should also be retained to complete testing and inspections during construction operations to examine and approve subgrade conditions, placement and compaction of fill materials.



7.0 Closing

Please note that this work program and report are governed by the attached Qualifications and Limitations. If you have questions or comments regarding this document, please do not hesitate to contact the undersigned at (705) 742-7900.

Respectfully submitted,

Cambium Inc.

DocuSigned by:

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Stuart Baird, P.Eng., M.Eng.
Director of Technical Operations, Services
Corporate

DS

DocuSigned by:

6439A79ECBB1496...

Blasco Vijayabaskaran, P.Eng.
Project Manager



2026-06-08

bv/SB

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8.0 Standard Limitations

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In performing work on behalf of a client, Cambium relies on its client to provide instructions on the scope of its retainer and, on that basis, Cambium determines the precise nature of the work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards. Unless required under local laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

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A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work or report considers any locations or times other than those from which information, sample results and data was specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those extrapolations.

Only conditions at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested by the client. Any physical or other aspects of the site chosen for study by the client, or any other matter not specifically addressed in a report prepared by Cambium, are beyond the scope of the work performed by Cambium and such matters have not been investigated or addressed.

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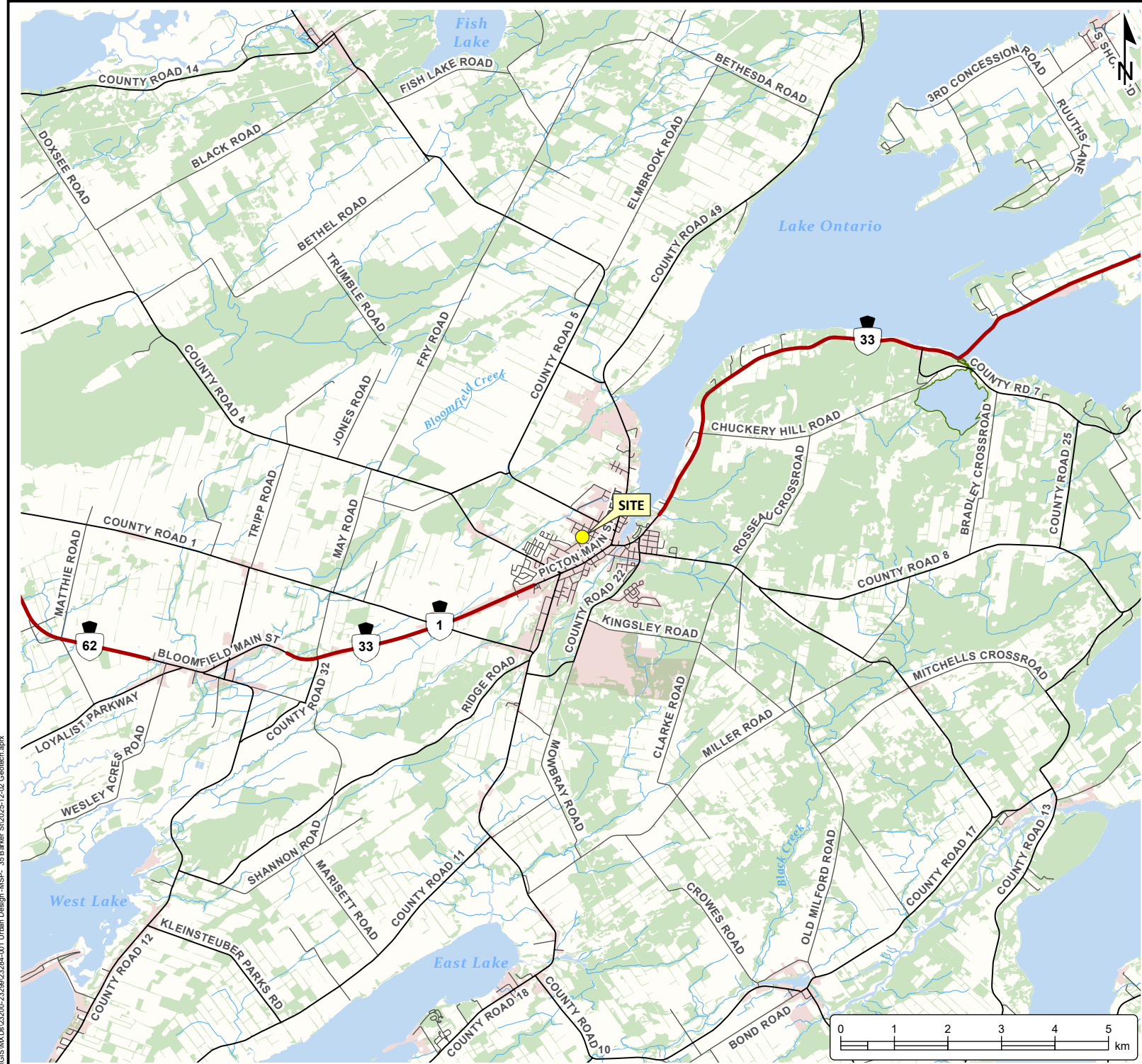
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Appended Figures



**GEOTECHNICAL
INVESTIGATION**
HOMES FIRST QUEEN ELIZABETH
RESIDENCES INC.
35 Barker Street
Picton, Ontario

LEGEND

- Highway
- Major Road
- Minor Road
- Watercourse
- Provincial Park
- Water Area
- Wooded Area
- Built Up Area

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SITE LOCATION PLAN

Project No.:	23284-001	Date:	December 2025
Scale:	1:100,000	Projection:	NAD 1983 UTM Zone 18N
Created by:	CC	Checked by:	BV
Figure:	1		



**GEOTECHNICAL
INVESTIGATION**
HOMES FIRST QUEEN ELIZABETH
RESIDENCES INC.
35 Barker Street
Picton, Ontario

LEGEND

- Borehole
- Site (approximate)

Notes:
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**BOREHOLE LOCATION PLAN
EXISTING CONDITIONS**

Project No.:	23284-001	Date:	December 2025
Scale:	1:1,500	Projection:	NAD 1983 UTM Zone 18N
Created by:	CC	Checked by:	BV
Figure:			2



GEOTECHNICAL INVESTIGATION

HOMES FIRST QUEEN ELIZABETH RESIDENCES INC.
35 Barker Street
Picton, Ontario

LEGEND

- Borehole
- Site (approximate)

Notes:
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BOREHOLE LOCATION PLAN PROPOSED CONDITIONS

Project No.:	23284-001	Date:	December 2025
Scale:	1:1,500	Projection:	NAD 1983 UTM Zone 18N
Created by:	CC	Checked by:	BV
			Figure: 3



Geotechnical Investigation Report - Proposed Residential Development – 35 Barker Street, Picton, Ontario
Homes First Queen Elizabeth Residences Inc.
Cambium Reference: 23284-001
June 8, 2026

Appendix A

Borehole Logs



Homes First Queen
Elizabeth Residences

Client: Inc.

Contractor: Canadian Environmental Drilling

Project No.: 23284-001

Location: 35 Barker Street, Picton
ON

Project Name: 35 Barker Street, Picton

Method: Track Mounted Solid Stem Auger

Elevation: 205.23 mREL

UTM: 18 T **N:** 4875199.00 **E:** 327866.30

Log of Borehole: BH101-25

Page: 1 of 1

Date Completed: October 20, 2025

SUBSURFACE PROFILE					SAMPLE												
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes
									25	50	75	20	40	60	80		
									% Moisture			SPT (N)					
									25	50	75	20	40	60	80		
205.2	0		TOPSOIL: 150 mm	205.08	1A	SS										Cap	ENV: BH101-25_0.75-1.4; PHC, BTEX, SAR, pH, ICP metals
			FILL: (SM) SILTY SAND, trace gravel; brown; with bricks, rootlets, moist, compact	0.15	1B	SS	79	22									
204.7	0.5		-loose														
204.2	1																ENV: BH102-25_2.3-2.9; PHC, BTEX, SAR, pH, ICP metals
																Bentonite Plug	
203.7	1.5				2	SS	92	10									
203.2	2		(ML) CLAYEY SILT: trace gravel, trace sand; brown; w>PL, stiff	203.71													ENV: BH102-25_2.3-2.9; PHC, BTEX, SAR, pH, ICP metals
					3	SS	100	10								Riser	
202.7	2.5																
202.2	3																Water level measured at 3.91 mbgs on Nov 25, 2025.
201.7	3.5		(SM) SILTY SAND: some clay, trace gravel; brown; moist, compact	202.18	4	SS	100	22									
201.2	4																Borehole was open and standing water was encountered at 6.4 mbgs upon drilling completion.
200.7	4.5		-very dense														
200.2	5				5	SS	79	27									Borehole was open and standing water was encountered at 6.4 mbgs upon drilling completion.
199.7	5.5																
199.2	6																Borehole was open and standing water was encountered at 6.4 mbgs upon drilling completion.
198.7	6.5				6	SS	100	75									
198.2	7																Borehole was open and standing water was encountered at 6.4 mbgs upon drilling completion.
197.7																	
GRAINSIZE DISTRIBUTION																	
SAMPLE GRAVEL SAND SILT CLAY																	
SS 3 2 1 71 26																	
SS 6 1 63 28 8																	



Homes First Queen
Elizabeth Residences

Client: Inc.

Project Name: 35 Barker Street, Picton

Log of Borehole: BH102-25

Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger

Page: 1 of 1

Project No.: 23284-001

Elevation: 201.91 mREL

Date Completed: October 20, 2025

Location: 35 Barker Street, Picton
ON

UTM: 18 T **N:** 4875211.00 **E:** 327932.90

SUBSURFACE PROFILE				SAMPLE													
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes
									LL	PL	PI	nat V _c	rem V _c	σ _v			
															25		
									% Moisture			SPT (N)					
									25	50	75	20	40	60	80		
201.9	0		ASPHALT: 150 mm	201.76												ENV: BH102-25_0.25-1.0; PHC, BTEX, SAR, pH, ICP metals	
			(SP) SAND and GRAVEL: some silt; dark brown; moist [BASE MATERIAL]	0.15	1	GB											
201.4	0.5			FILL: (ML) CLAYEY SILT, some sand; brown; w~PL	201.66	2	GB				19.5%						
					0.25												
200.9	1					3	SS	79	8		21.9%			8			
200.4	1.5					4	SS	92	8		20.1%			8			
199.9	2																
				199.62												Corrosivity: BH102-25_1.5-2.1; Redox, Sulphate, Chlorides, Sulphides, pH, resistivity	
199.4	2.5		(ML) sandy CLAYEY SILT: brown, w< PL, stiff	2.29	5	SS	100	7		24.1%			7				
198.9	3															ENV: BH102-25_2.3-2.9; PHC, BTEX, SAR, pH, ICP metals	
					6	SS	100	7		22.3%			7				
198.4	3.5																
197.9	4															Borehole was open, first groundwater encountered at 4.5 mbgs and standing water was encountered at 4.0 mbgs upon drilling completion.	
197.4	4.5		-some gravel, non-cohesive, very dense														
196.9	5		Borehole terminated @ 4.9 mbgs due to practical auger refusal encountered.	4.90	7	SS	100	50 / 25mm		13.9%			50				
196.4	5.5																
195.9	6																
195.4	6.5																
194.9	7																
194.4																	
GRAINSIZE [SAMPLE] GRAVEL SAND SILT CLAY DISTRIBUTION																	

Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Client: Homes First Queen
Elizabeth Residences Inc.

Project Name: 35 Barker Street, Picton

Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger

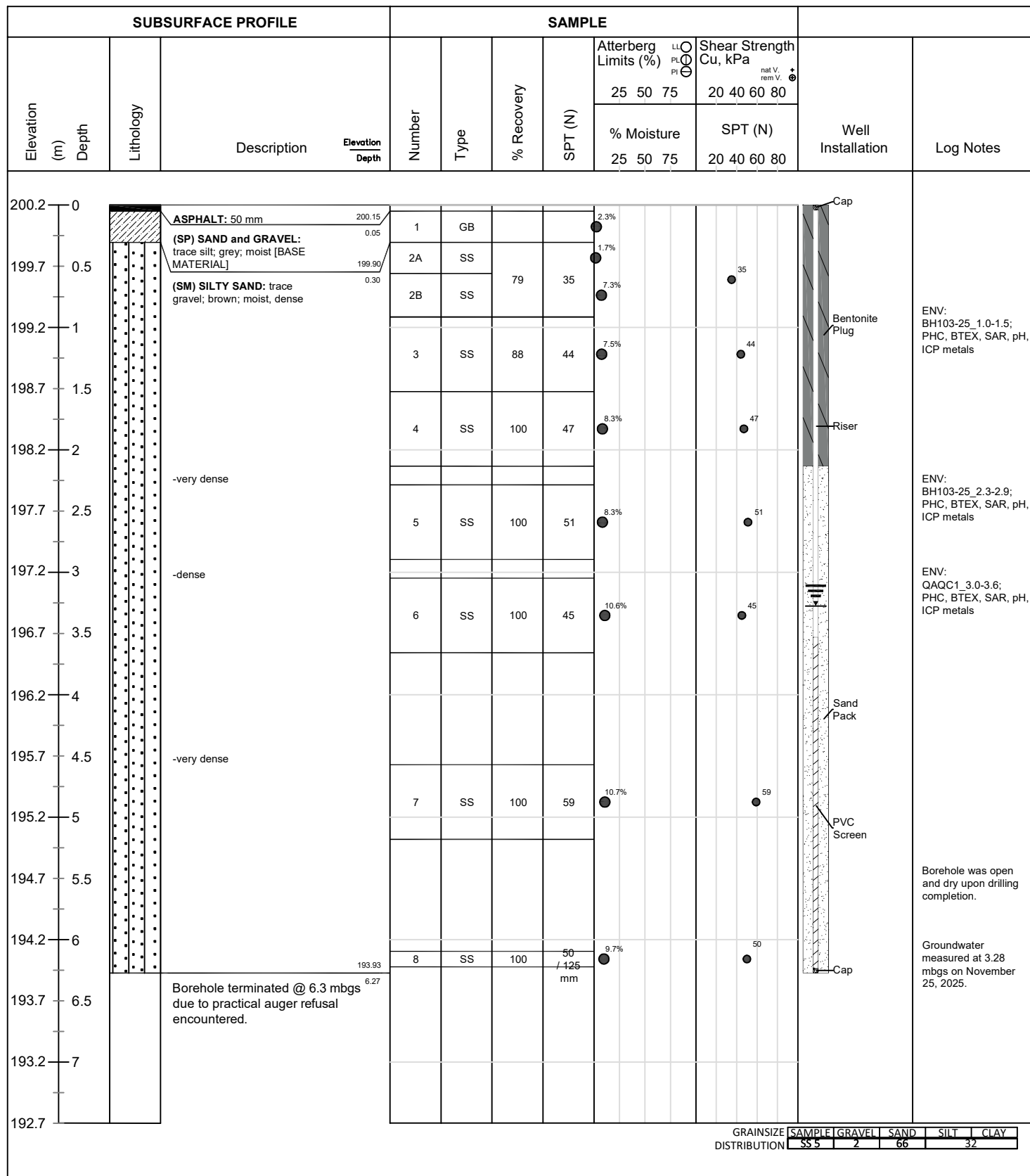
Project No.: 23284-001 **Elevation:** 200.20 mREL

Location: 35 Barker Street, Picton ON **UTM:** 18 T **N:** 4875183.44 **E:** 327997.73

Log of Borehole: BH103-25

Page: 1 of 1

Date Completed: October 20, 2025



Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Homes First Queen
Elizabeth Residences

Client: Inc.

Project Name: 35 Barker Street, Picton

Log of Borehole: BH104-25

Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger

Page: 1 of 1

Project No.: 23284-001

Elevation: 201.49 mREL

Date Completed: October 20, 2025

Location: 35 Barker Street, Picton
ON

UTM: 18 T **N:** 4875158.00 **E:** 327941.50

SUBSURFACE PROFILE				SAMPLE													
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes
									LL	PL	PI	nat V _c	rem V _c	63			
															25		
									% Moisture			SPT (N)					
									25	50	75	20	40	60	80		
201.5	0		FILL: (SP) SAND, trace silt; grey; moist, compact	201.31	1A	SS	54	10	10.6%							ENV: BH104-25_0.75-1.4; PHC, BTEX, SAR, pH, ICP metals	
			(SM) SILTY SAND: trace gravel; brown; moist, compact [DISTURBED/ WEATHERED]	0.18	1B	SS			8.9%					10			
201	0.5														33		
200.5	1				2	SS	83	33	12.4%							ENV: BH104-25_2.3-2.9; PHC, BTEX, SAR, pH, ICP metals	
200	1.5			199.97													
		(SM) SILTY SAND: trace gravel, brown; moist, dense	1.52	3	SS	96	41	9.6%					41				
199.5	2															ENV: QAQC2_3.0-3.6; PHC, BTEX, SAR, pH, ICP metals	
199	2.5				4	SS	100	31	11.2%					31			
198.5	3																
198	3.5				5	SS	96	33						33		Borehole was open and standing water encountered at 6.6 mbgs upon drilling completion.	
197.5	4																
197	4.5																
196.5	5				6	SS	100	45	12.3%					45			
196	5.5																
195.5	6		becomes very dense, increase in silt content														
195	6.5				7	SS	100	84							84		
194.5	7		Borehole terminated @ 6.9 mbgs due to practical auger refusal encountered.	194.63													
194				6.86													
GRAINSIZE DISTRIBUTION																	
SAMPLE GRAVEL SAND SILT CLAY																	

ENV:
BH104-25_0.75-1.4;
PHC, BTEX, SAR, pH,
ICP metals

ENV:
BH104-25_2.3-2.9;
PHC, BTEX, SAR, pH,
ICP metals

ENV:
QAQC2_3.0-3.6;
PHC, BTEX, SAR, pH,
ICP metals

Borehole was open
and standing water
encountered at 6.6
mbgs upon drilling
completion.

GRAINSIZE [SAMPLE] GRAVEL SAND SILT CLAY
DISTRIBUTION

Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Homes First Queen
Elizabeth Residences
Client: Inc.
Project Name: 35 Barker Street, Picton
Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger
Project No.: 23284-001 **Elevation:** 205.12 mREL
Location: 35 Barker Street, Picton ON **UTM:** 18 T **N:** 4875189.00 **E:** 327905.20

Log of Borehole: BH109-25
Page: 1 of 1
Date Completed: October 20, 2025

SUBSURFACE PROFILE				SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes	
									LL	PL	PI	nat V _r	rem V _r	e				
									25	50	75	20	40	60	80			
									% Moisture			SPT (N)						
									25	50	75	20	40	60	80			
205.1	0		TOPSOIL: 75 mm	205.04	1A	SS											ENV: BH109-25_0.75-1.4; PHC, BTEX, SAR, pH, ICP metals ENV: BH109-25_1.5-2.1; PHC, BTEX, SAR, pH, ICP metals Borehole was dry and borehole caving observed at 1.6 mbgs upon drilling completion.	
			FILL: (SM) SILTY SAND, some gravel; brown; with rootlets, moist, compact	0.08	1B	SS	58	15										
204.6	0.5			204.36														
204.1	1	(ML) CLAYEY SILT: some sand, trace gravel; grey-brown; w< PL, stiff	0.76	2	SS	100	11											
203.6	1.5	mottled																
203.1	2																	
			202.99															
202.6	2.5	Borehole terminated @ 2.1 mbgs due to target depth achieved.	2.13															
202.1	3																	
201.6	3.5																	
201.1	4																	
200.6	4.5																	
200.1	5																	
199.6	5.5																	
199.1	6																	
198.6	6.5																	
198.1	7																	
197.6																		
GRAINSIZE [SAMPLE] GRAVEL SAND SILT CLAY DISTRIBUTION																		

Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Homes First Queen
Elizabeth Residences

Client: Inc.

Project Name: 35 Barker Street, Picton

Log of Borehole: BH105-25

Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger

Page: 1 of 1

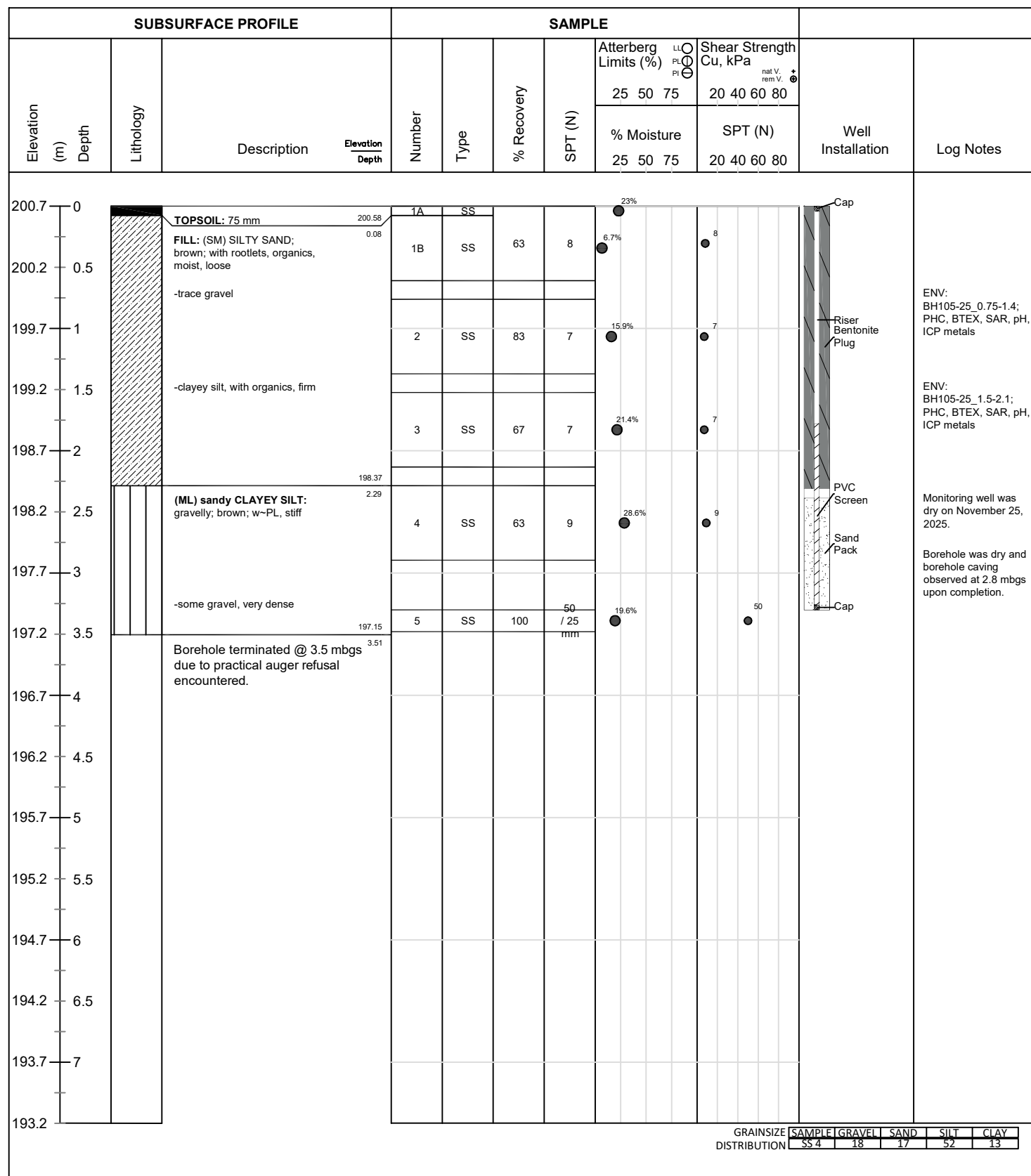
Project No.: 23284-001

Elevation: 200.66 mREL

Date Completed: October 21, 2025

Location: 35 Barker Street, Picton
ON

UTM: 18 T **N:** 4875242.00 **E:** 328045.80



Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Homes First Queen
Elizabeth Residences

Client: Inc.

Project Name: 35 Barker Street, Picton

Log of Borehole: BH106-25

Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger

Page: 1 of 1

Project No.: 23284-001

Elevation: 200.78 mREL

Date Completed: October 21, 2025

Location: 35 Barker Street, Picton
ON

UTM: 18 T **N:** 4875290.00 **E:** 327978.50

SUBSURFACE PROFILE				SAMPLE													
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes
									LL	PL	PI	nat V _r , rem V _r					
									25	50	75	20	40	60	80		
									% Moisture			SPT (N)					
									25	50	75	20	40	60	80		
200.8	0		TOPSOIL: 250 mm	200.53	1A	SS			9.1%								
				0.25	1B	SS	92	6	24.2%								
200.3	0.5		FILL: (ML) CLAYEY SILT, some sand; dark brown; mottled, with rootlets, organics, w~PL, firm	200.02													
				0.76													
199.8	1		(ML) CLAYEY SILT: trace sand; brown; w~PL, firm		2	SS	100	7	19.5%								
199.3	1.5				3A	SS	100	3	23.1%								
				198.88													
198.8	2		(SM) gravelly SILTY SAND: grey; moist, compact to very dense	1.91	3B	SS			2.1%								
198.3	2.5				4	SS	100	50 / 125 mm	5.8%								
197.8	3				5	SS	63	18	9.7%								
197.3	3.5				6	SS	63	51	5.7%								
				197.12													
196.8	4		Borehole terminated @ 3.7 mbgs due to practical auger refusal encountered.	3.66													
196.3	4.5																
195.8	5																
195.3	5.5																
194.8	6																
194.3	6.5																
193.8	7																
193.3																	

GRAINSIZE

SAMPLE

GRAVEL

SAND

SILT

CLAY

DISTRIBUTION

ENV:
BH106-25_0.75-1.4;
PHC, BTEX, SAR, pH,
ICP metals

ENV:
BH106-25_1.5-2.1;
PHC, BTEX, SAR, pH,
ICP metals

Borehole was dry and
borehole caving
observed at 3.5 mbgs
upon drilling
completion.

ENV:
BH106-25_0.75-1.4;
PHC, BTEX, SAR, pH,
ICP metals

ENV:
BH106-25_1.5-2.1;
PHC, BTEX, SAR, pH,
ICP metals

Borehole was dry and
borehole caving
observed at 3.5 mbgs
upon drilling
completion.

GRAINSIZE [SAMPLE] GRAVEL | SAND | SILT | CLAY
DISTRIBUTION

Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Homes First Queen
Elizabeth Residences

Client: Inc.

Project Name: 35 Barker Street, Picton

Log of Borehole: BH107-25

Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger

Page: 1 of 1

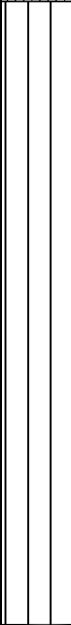
Project No.: 23284-001

Elevation: 203.09 mREL

Date Completed: October 21, 2025

Location: 35 Barker Street, Picton
ON

UTM: 18 T **N:** 4875229.00 **E:** 327996.70

SUBSURFACE PROFILE				SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes	
									LL	PL	PI	nat V, rem V						
									25	50	75	20	40	60	80			
									% Moisture			SPT (N)						
									25	50	75	20	40	60	80			
203.1	0		TOPSOIL: 100 mm	202.99	1A	SS											ENV: BH107-25_0.6-1.4; PHC, BTEX, SAR, pH, ICP metals	
			FILL: (SM) SILTY SAND, trace gravel; brown; with rootlets, moist, loose	0.10	1B	SS	83	5		20.8%								
202.6	0.5									11.3%						5		
202.1	1				2	SS	67	5		14.1%						5	ENV: BH107-25_3.0-3.6; PHC, BTEX, SAR, pH, ICP metals	
201.6	1.5																	
201.1	2				3	SS	83	8		11.5%						8		
200.6	2.5		(ML) sandy CLAYEY SILT: brown; w~PL, firm	2.29	4	SS	83	5		25.5%						5	ENV: BH107-25_3.0-3.6; PHC, BTEX, SAR, pH, ICP metals	
200.1	3		-some gravel, grey brown, stiff															
199.6	3.5					5	SS	92	13		19.1%							13
199.1	4																Borehole was open and dry upon drilling completion.	
198.6	4.5																	
198.1	5				6	SS	88	14		22.7%						14		
197.6	5.5																Borehole was open and dry upon drilling completion.	
197.1	6																	
196.6	6.5																	
196.1	7																Borehole was open and dry upon drilling completion.	
195.6																		
GRAINSIZE DISTRIBUTION																SAMPLE GRAVEL SAND SILT CLAY		

ENV:
BH107-25_0.6-1.4;
PHC, BTEX, SAR, pH,
ICP metals

ENV:
BH107-25_3.0-3.6;
PHC, BTEX, SAR, pH,
ICP metals

Borehole was open
and dry upon drilling
completion.

GRAINSIZE [SAMPLE] GRAVEL | SAND | SILT | CLAY
DISTRIBUTION

Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Homes First Queen
Elizabeth Residences

Client: Inc.

Project Name: 35 Barker Street, Picton

Log of Borehole: BH108-25

Contractor: Canadian Environmental Drilling **Method:** Track Mounted Solid Stem Auger

Page: 1 of 1

Project No.: 23284-001

Elevation: 201.04 mREL

Date Completed: October 21, 2025

Location: 35 Barker Street, Picton
ON

UTM: 18 T **N:** 4875246.00 **E:** 327945.00

SUBSURFACE PROFILE				SAMPLE															
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	% Recovery	SPT (N)	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes		
									LL	PL	PI	nat V rem V	+	20	40			60	80
201	0		ASPHALT: 100 mm	200.94	1	GB			4.3%							ENV: BH108-25_0.3-1.0; PHC, BTEX, SAR, pH, ICP metals			
			(SP) SAND and GRAVEL: trace silt; dark brown; moist [BASE MATERIAL]	0.10	2	GB			8.9%										
200.5	0.5		(SP) SAND and GRAVEL: trace silt; brown; moist [SUBBASE MATERIAL]	200.81	3	SS	79	6	18.5%					6		ENV: BH108-25_2.3-2.9; PHC, BTEX, SAR, pH, ICP metals			
			FILL: (ML) sandy CLAYEY SILT, trace gravel, with organics; brown; w>PL, firm with organics	200.74	4	SS	63	7	27.5%					7					
200	1			0.30												Borehole was open and dry upon drilling completion.			
199.5	1.5		(ML) sandy CLAYEY SILT: brown; w~PL, firm	199.52	5	SS	92	4	29.9%					4					
199	2		trace gravel, w>PL	1.52															
198.5	2.5				6	SS	100	4	40.9%					4					
198	3																		
197.5	3.5				7	SS	50	3	33.9%					3					
197	4		Borehole terminated @ 4 mbgs due to practical auger refusal encountered.	197.00															
196.5	4.5			4.04															
196	5																		
195.5	5.5																		
195	6																		
194.5	6.5																		
194	7																		
193.5																			

GRAINSIZE DISTRIBUTION

SAMPLEGRAVELSANDSILTCLAY

GRAINSIZE [SAMPLE] GRAVEL | SAND | SILT | CLAY
DISTRIBUTION

Logged By: SM

Input By: SM

Peterborough, Barrie, Whitby, Kingston, Ottawa



Geotechnical Investigation Report - Proposed Residential Development – 35 Barker Street, Picton, Ontario
Homes First Queen Elizabeth Residences Inc.
Cambium Reference: 23284-001
June 8, 2026

Appendix B

Soil Laboratory Results



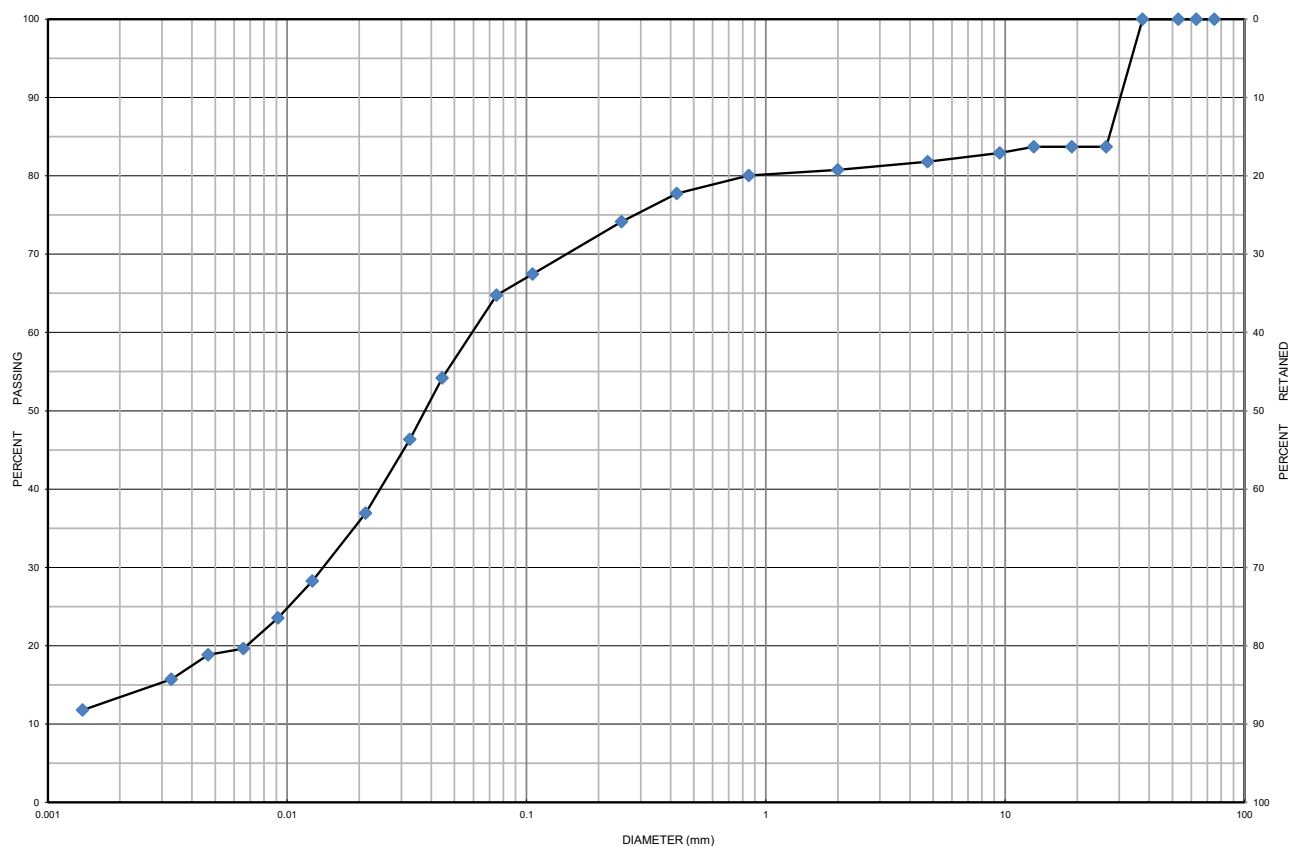
Form: L6V.2 - Grad.Hydo



Grain Size Distribution Chart

Project Number: 23284-001 **Client:** Urban Design and Development Inc.
Project Name: 35 Barker Street, Picton
Sample Date: October 20 & 21, 2025 **Sampled By:** Samuel Makinde - Cambium Inc.
Location: BH 105-25 SS 4 **Depth:** 2.3 m to 2.9 m **Lab Sample No:** S-25-1725

UNIFIED SOIL CLASSIFICATION SYSTEM					
CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDER
		SAND			GRAVEL			

Borehole No.	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
BH 105-25	SS 4	2.3 m to 2.9 m	18	17	52	13	21.0
Description		Classification	D ₆₀	D ₃₀	D ₁₀	C _u	C _c
Gravelly Sandy Clayey Silt		ML	0.060	0.014	-	-	-

Additional information available upon request

Issued By: 
 (Senior Project Manager)

Date Issued: November 19, 2025

Cambium Inc. (Laboratory)
 866.217.7900 | cambium-inc.com
 194 Sophia St. | Peterborough | ON | K9H 1E5

Form: L6V.2 - Grad.Hydo



Plasticity Chart

Project Number: 23284-001

Client: Urban Design and Development Inc.

Project Name: 35 Barker Street, Picton

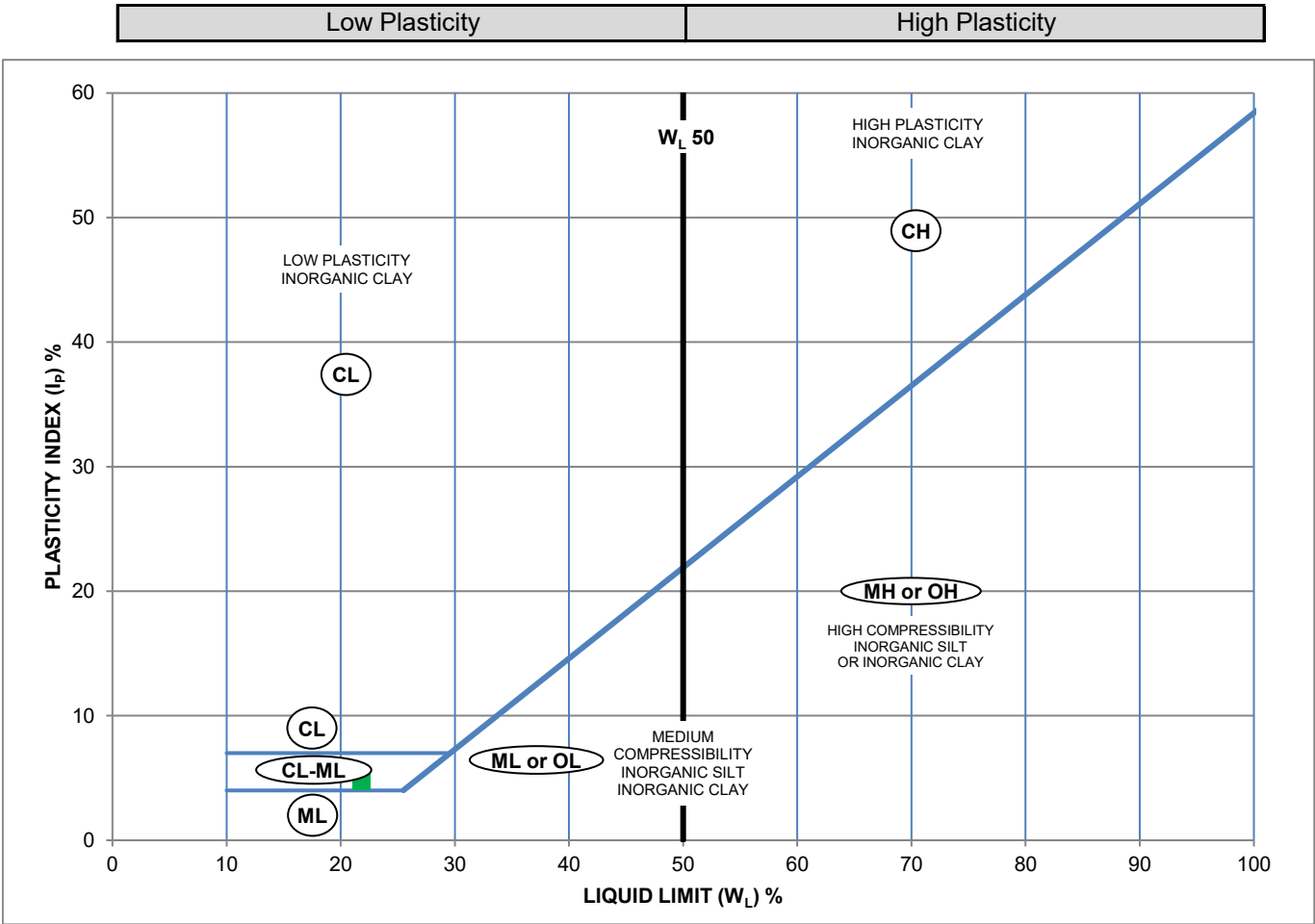
Sampled By: Samuel Makinde - Cambium Inc.

Sample Date: October 20 & 21, 2025

Hole No.: BH 101-25 SS 3

Depth: 1.5 m to 2.1 m

Lab Sample No: S-25-1722



Symbol	Borehole	Sample	Depth	Description
■	BH 101-25	SS 3	1.5 m to 2.1 m	CL-ML

Liquid Limit (%)	Plastic Limit	Plasticity Index (%)
21.9	17.1	4.8

Additional information available upon request

Issued By:

(Senior Project Manager)

Date Issued: November 19, 2025

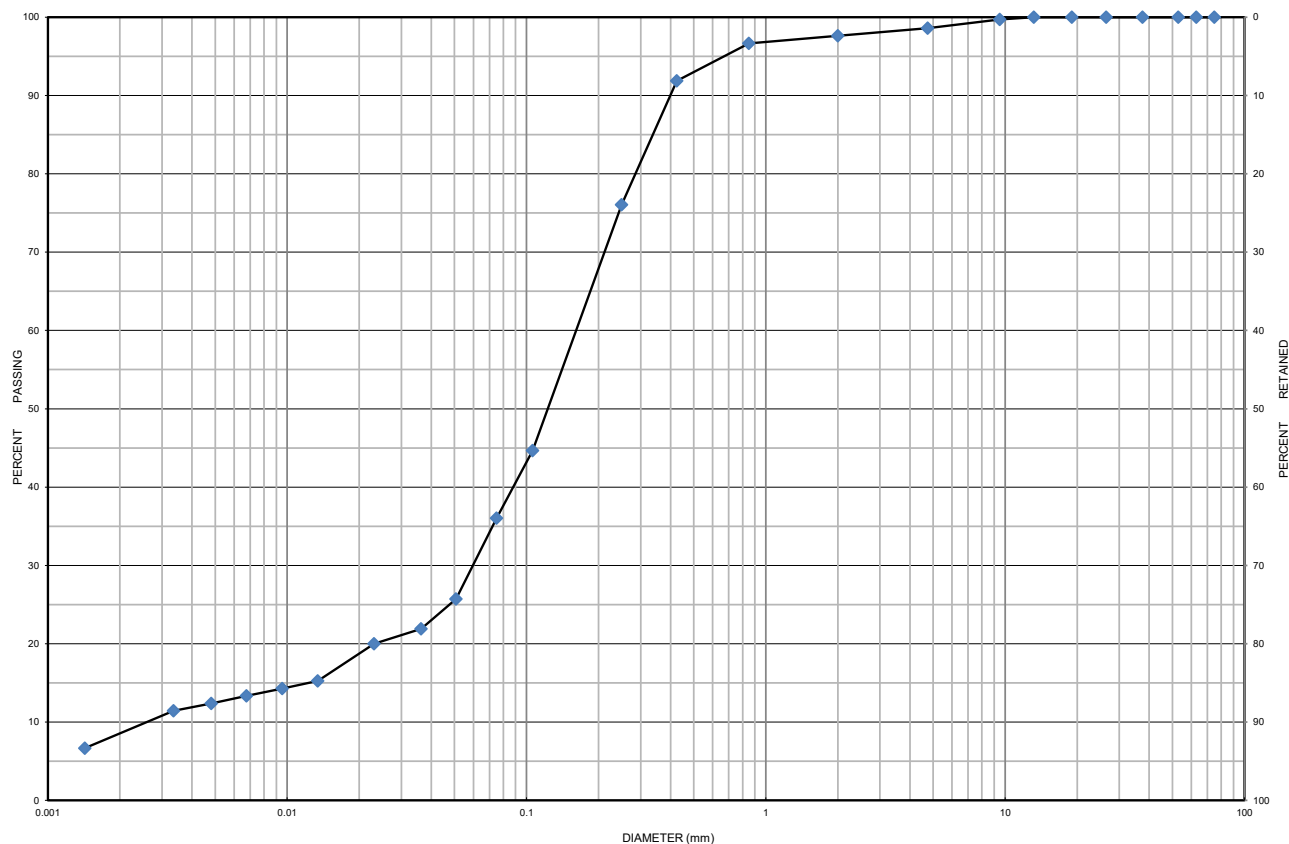


Grain Size Distribution Chart

Project Number: 23284-001 **Client:** Urban Design and Development Inc.
Project Name: 35 Barker Street, Picton
Sample Date: October 20 & 21, 2025 **Sampled By:** Samuel Makinde - Cambium Inc.
Location: BH 101-25 SS 6 **Depth:** 4.6 m to 5.2 m **Lab Sample No:** S-25-1723

UNIFIED SOIL CLASSIFICATION SYSTEM

CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM

MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDER
		SAND			GRAVEL			

Borehole No.	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
BH 101-25	SS 6	4.6 m to 5.2 m	1	63	28	8	9.1
Description		Classification	D ₆₀	D ₃₀	D ₁₀	C _u	C _c
Silty Sand some Clay trace Gravel		SM	0.1650	0.0600	0.0026	63.46	8.39

Additional information available upon request

Issued By: 
 (Senior Project Manager)

Date Issued: November 19, 2025

Cambium Inc. (Laboratory)
 866.217.7900 | cambium-inc.com
 194 Sophia St. | Peterborough | ON | K9H 1E5

Form: L6V.2 - Grad.Hydo



Grain Size Distribution Chart

Project Number: 23284-001

Client: Urban Design and Development Inc.

Project Name: 35 Barker Street, Picton

Sampled By: Samuel Makinde - Cambium Inc.

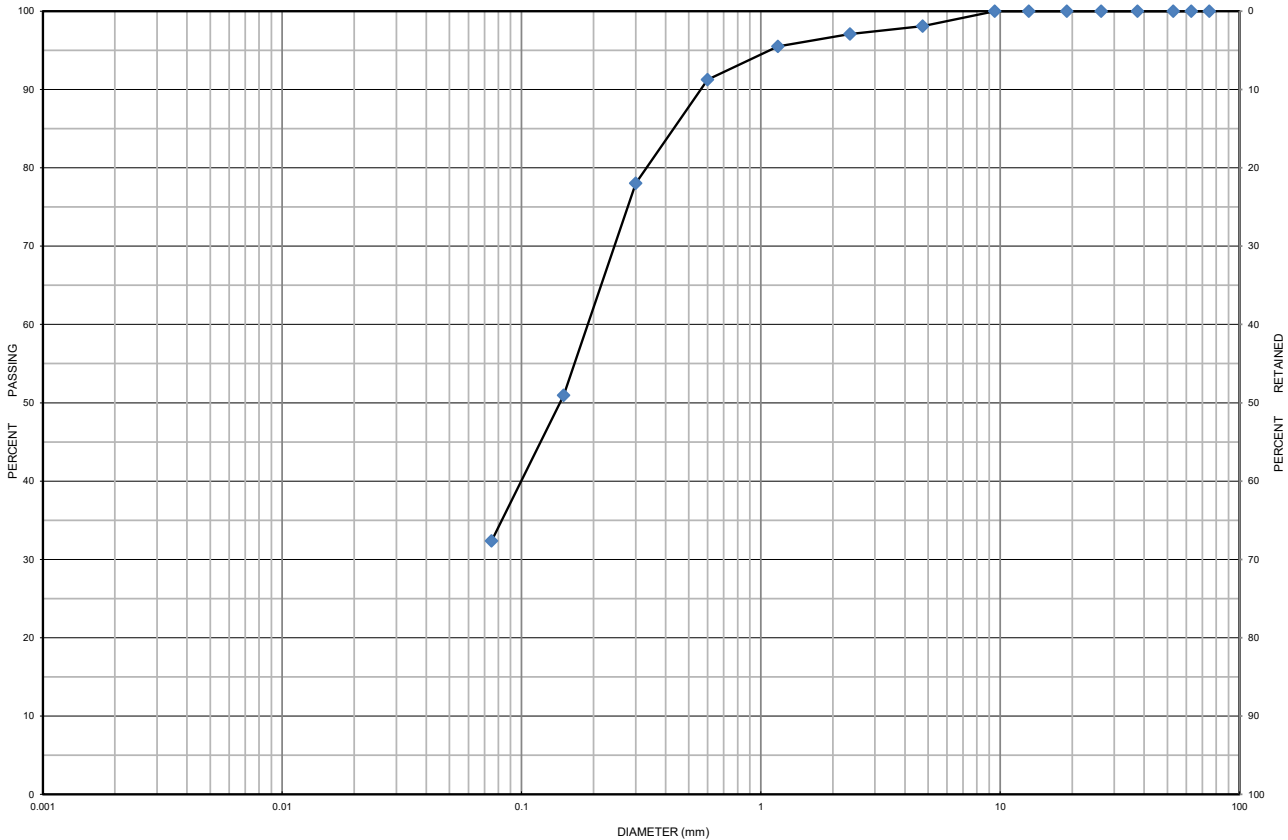
Sample Date: October 20 & 21, 2025

Depth: 2.3 m to 2.9 m

Lab Sample No: S-25-1724

Location: BH 103-25 SS 5

UNIFIED SOIL CLASSIFICATION SYSTEM					
CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDERS
		SAND			GRAVEL			

Borehole No.	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
BH 103-25	SS 5	2.3 m to 2.9 m	2	66	32		8.3
Description		Classification	D ₆₀	D ₃₀	D ₁₀	C _u	C _c
Silty Sand trace Gravel		SM	0.190	-	-	-	-

Additional information available upon request

Issued By:

Date Issued: November 19, 2025

(Senior Project Manager)



Appendix C

Laboratory Certificates of Analysis



300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Cambium Inc. (Kingston)

31 Hyperion Court, Suite 102
Kingston, ON K7K7G3
Attn: Blasco Vijayabaskaran

Client PO:
Project: 23284-001
Custody: 149040

Report Date: 27-Oct-2025
Order Date: 22-Oct-2025

Order #: 2543240

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2543240-01	BH102-25_1.5-2.1

Approved By: 

Mark Foto, M.Sc.
Laboratory Director



Order #: 2543240

Certificate of Analysis

Report Date: 27-Oct-2025

Client: Cambium Inc. (Kingston)

Order Date: 22-Oct-2025

Client PO:

Project Description: 23284-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Anions	EPA 300.1 - IC, water extraction	24-Oct-25	24-Oct-25
pH, soil	MOE E3137 - probe @25 °C, CaCl2 ext	27-Oct-25	27-Oct-25
Resistivity	EPA 120.1 - probe, water extraction	24-Oct-25	27-Oct-25
Solids, %	CWS Tier 1 - Gravimetric	24-Oct-25	27-Oct-25



Order #: 2543240

Certificate of Analysis

Report Date: 27-Oct-2025

Client: Cambium Inc. (Kingston)

Order Date: 22-Oct-2025

Client PO:

Project Description: 23284-001

Client ID:	BH102-25_1.5-2.1	-	-	-	
Sample Date:	20-Oct-25 14:30	-	-	-	- -
Sample ID:	2543240-01	-	-	-	
Matrix:	Soil	-	-	-	
MDL/Units					

Physical Characteristics

% Solids	0.1 % by Wt.	82.5	-	-	-	- -
----------	--------------	------	---	---	---	-----

General Inorganics

pH	0.05 pH Units	7.73	-	-	-	- -
Resistivity	0.1 Ohm.m	72.8	-	-	-	- -

Anions

Chloride	10 ug/g	<10	-	-	-	- -
Sulphate	10 ug/g	<10	-	-	-	- -



Order #: 2543240

Certificate of Analysis

Report Date: 27-Oct-2025

Client: Cambium Inc. (Kingston)

Order Date: 22-Oct-2025

Client PO:

Project Description: 23284-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions								
Chloride	ND	10	ug/g					
Sulphate	ND	10	ug/g					
General Inorganics								
Resistivity	ND	0.1	Ohm.m					



Order #: 2543240

Certificate of Analysis

Report Date: 27-Oct-2025

Client: Cambium Inc. (Kingston)

Order Date: 22-Oct-2025

Client PO:

Project Description: 23284-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	1030	10	ug/g	1060			2.6	35	
Sulphate	44.8	10	ug/g	43.8			2.3	35	
General Inorganics									
pH	7.69	0.05	pH Units	7.73			0.5	2.3	
Resistivity	46.2	0.1	Ohm.m	46.4			0.6	20	
Physical Characteristics									
% Solids	92.9	0.1	% by Wt.	92.8			0.1	25	



Order #: 2543240

Certificate of Analysis

Report Date: 27-Oct-2025

Client: Cambium Inc. (Kingston)

Order Date: 22-Oct-2025

Client PO:

Project Description: 23284-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	1150	10	ug/g	1060	95.3	82-118			
Sulphate	141	10	ug/g	43.8	97.1	80-120			



Order #: 2543240

Certificate of Analysis

Report Date: 27-Oct-2025

Client: Cambium Inc. (Kingston)

Order Date: 22-Oct-2025

Client PO:

Project Description: 23284-001

Qualifier Notes:

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unless otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

TR
RE
RE

Paracel ID: 2543240

Paracel Order Number
(Lab Use Only)

2543240

Chain Of Custody

(Lab Use Only)

No 149040

Client Name: CAMBIUM INC	Project Ref: 23284-001	Page 1 of 1
Contact Name: BLASCO VIJAYABASKARAN	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 31 HYPERION CRT, KINGSTON, ON	PO #:	
Telephone:	E-mail: Blasco.vijayabaskaran@cambium-inc.com	
Date Required:		

☐ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Agri/Other ☐ Med/Fine ☐ Table 2 ☐ Res/Park ☐ Coarse ☐ Table 3 ☐ Ind/Comm ☐ Table _____ For RSC: ☐ Yes ☐ No	Other Regulation ☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: CORROSIVITY TEST	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)	Required Analysis															
Sample ID/Location Name		Matrix S	Air Volume 	# of Containers 3	Field Filtered 	Sample Taken Date: Oct 20, 2025 Time: 2:30 PM		PHCs F1-F4+BTEX 	VOCs 	PAHs 	Metals by ICP 	% Chlorides X	CrVI 	B (HWE) Sulphides X	pH X	Resistivity X	Redox X	Sulphides X
1	BH102-25-1.5-2.1																	
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Comments:	Method of Delivery: Walkin
-----------	----------------------------

Unless otherwise negotiated by the parties, by signing Paracel's Chain of Custody form, you are agreeing to Paracel Laboratories Terms and Conditions and are subject to the terms and conditions thereof. Available at www.paracellabs.com

Relinquished By (Sign):	Received at Depot:	Received at Lab:	Verified By:
Relinquished By (Print): SAMUEL MAKINDE	Date/Time: Oct 22 9:53	Date/Time: Oct 23 11:20	Date/Time: Oct 22 14:16
Date/Time:	Temperature: 12.9 °C	Temperature: 5.8 °C	pH Verified: ☐ By:



637 Norris Court, Unit 1
Kingston, ON, K7P 2R9
1-800-749-1947
www.paracellabs.com

Subcontracted Analysis

Cambium Inc. (Kingston)

31 Hyperion Court, Suite 102
Kingston, ON K7K7G3
Attn: Blasco Vijayabaskaran

Paracel Report No. **2543240**
Client Project(s): **23284-001**
Client PO:
Reference: **SO Cambium - ENV**
CoC Number: **149040**

Order Date: 22-Oct-25
Report Date: 27-Oct-25

Sample(s) from this project were subcontracted for the listed parameters. A copy of the subcontractor’s report is attached

Paracel ID	Client ID	Analysis
2543240-01	BH102-25_1.5-2.1	Redox potential, soil Sulphide, solid

**SGS Canada Inc.**

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Paracel Laboratories

Attn : Dale Robertson

300-2319 St.Laurent Blvd.
Ottawa, ON
K1G 4K6, Canada

Phone: 613-731-9577
Fax:613-731-9064

30-October-2025

Date Rec. : 23 October 2025
LR Report: CA12772-OCT25
Reference: Project#: 2543240

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Sulphide (Na ₂ CO ₃) %
1: Analysis Start Date		29-Oct-25
2: Analysis Start Time		16:32
3: Analysis Completed Date		29-Oct-25
4: Analysis Completed Time		18:47
5: RL		0.01
6: BH102-25-1.5-2.1	20-Oct-25 14:30	< 0.01

RL - SGS Reporting Limit

Kimberley Didsbury
Project Specialist,
Environment, Health & Safety

SGS
SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

LR Report : CA12772-OCT25

Quality Control Report

Inorganic Analysis													
Parameter	Reporting Limit	Unit	Method Blank	Duplicate				LCS / Spike Blank			Matrix Spike / Reference Material		
				Result 1	Result 2	RPD	Acceptance Criteria	Spike Recovery (%)	Recovery Limits (%)		Spike Recovery (%)	Recovery Limits (%)	
									Low	High		Low	High
							%						
Carbon/Sulphur - QCBatchID: ECS0102-OCT25													
Sulphide (Na2CO3)	0.01	%	< 0.01										

**TESTMARK Laboratories Ltd.***Committed to Quality and Service***CERTIFICATE OF ANALYSIS**

Client: Dale Robertson
Company: Paracel Laboratories Ltd. - Ottawa
Address: 300-2319 St. Laurent Blvd.
Ottawa, ON, K1G 4J8
Phone/Fax: (613) 731-9577 / (613) 731-9064
Email: drobertson@paracellabs.com

Work Order Number: 601864
PO #:
Regulation: Information not provided
Project #: 2543240
DWS #:
Sampled By:

Date Order Received: 10/23/2025
Arrival Temperature: 19 C

Analysis Started: 10/28/2025
Analysis Completed: 10/28/2025

WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
BH102-25_1.5-2.1	2218062	Soil	None		10/20/2025	2:30 PM

METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
RedOx - Soil (T06)	Mississauga	Determination of RedOx Potential of Soil	Modified from APHA-2580B

REPORT COMMENTS

Redox potential past hold time proceed with analysis as per client N.P 10-23-25

This report has been approved by:

Aline de Chevigny
Production Coordinator CET



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Paracel Laboratories Ltd. - Ottawa

Work Order Number: 601864

WORK ORDER RESULTS

Sample Description	BH102 - 25 _ 1.5 - 2.1		
Sample Date	10/20/2025 2:30 PM		
Lab ID	2218062		
General Chemistry	Result	MDL	Units
RedOx (vs. S.H.E.)	346	N/A	mV

LEGEND

- Dates: Dates are formatted as mm/dd/year throughout this report.
- MDL: Method detection limit or minimum reporting limit.
- Quality Control: All associated Quality Control data is available on request.
- LCL: Lower Control Limit.
- UCL: Upper Control Limit.
- QAQCID: This is a unique reference to the quality control data set used to generate the reported value. Contact our lab for this information, as it is traceable through our LIMS.
- Field Data: Reports containing Field Parameters represent data that has been collected and provided by the client. Testmark is not responsible for the validity of this data which may be used in subsequent calculations.
- Sample Condition Deviations: A noted sample condition deviation may affect the validity of the result. Results apply to the sample(s) as received.
- Reproduction of Report: Report shall not be reproduced, except in full, without the approval of Testmark Laboratories Ltd.
- Regulation Comparisons: Disclaimer: Please note that regulation criteria are provided for comparative purposes, however the onus on ensuring the validity of this comparison rests with the client.



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Paracel Laboratories Ltd. - Ottawa

Work Order Number: 601864

QUALITY CONTROL DATA

THIS SECTION REPORTS QC RESULTS ASSOCIATED WITH THE TEST BATCH; THESE ARE NOT YOUR SAMPLE RESULTS.
QAQC details include only values where sufficient sample data allowed measurement.

General Chemistry

Sample Replicate: % RPD (9)

Parameter	MDL	Units	LCL	Result	UCL	QAQCID
RedOx (vs. S.H.E.)	N/A	%	0	0.3	10	20251028.TM-M.A6E

Positive Control: Lab Control - 200 (7)

Parameter	MDL	Units	LCL	Result	UCL	QAQCID
RedOx (vs. S.H.E.)	N/A	mV	175	203	225	20251028.TM-M.A6E

Positive Control: ORP - Soil Control 90 (8)

Parameter	MDL	Units	LCL	Result	UCL	QAQCID
RedOx (vs. S.H.E.)	N/A	mV	75	84.1	105	20251028.TM-M.A6E

THIS INDEX SHOWS HOW YOUR SAMPLES ARE ASSOCIATED TO THE CONTROLS INCLUDED IN THE IDENTIFIED BATCHES.

Sample Description	Lab ID	Method	QAQCID	Prep QAQCID
BH102 - 25 _ 1.5 - 2.1	2218062	RedOx - Soil (T06)	20251028.TM-M.A6E	

Chain of Custody (Env).xlsx - Revision 7.0