



July 29, 2022
CA20-149

Hazelview Investments (Hazelview)
1133 Yonge Street, 4th Floor,
Toronto, ON
M4T 2Y7

Attention: Mr. Derek Wei - Associate, Development

**Re: Supplementary Geotechnical Investigation
 Blocks A and C
 1590-1650 Dundas Street East, Mississauga**

Dear Mr. Wei:

Terrapex Environmental Ltd. (**Terrapex**) has carried out a supplementary geotechnical investigation for the proposed development at Blocks A and C of the above captioned site.

Terrapex conducted a geotechnical subsurface investigation in December 2020 for a larger site area. The general subsurface condition at the site consists of surficial fill underlain by very stiff to hard clayey silt (till) and dense to very dense sandy silt (till), followed by hard shale/till complex which extends to bedrock. Grey shale bedrock of the Georgian Bay Formation was encountered at approximate depths ranging from 3.0 to 7.5 m below ground surface (mbgs), corresponding to approximate elevations ranging from 109.5 to 116.0 m. The bedrock was cored in three of the boreholes (Boreholes BH105, MW107, and MW112) from approximate depths of 3.5 to 8.0 mbgs to depths of 11.1 to 12.5 mbgs.

Our scope for the previous investigation was limited to the proposed development being constructed over two underground parking garage levels. We now understand that the number of underground levels proposed for Blocks A and C has been increased to three. Blocks E, F, and G will be constructed over one and two underground parking garage levels.

The lowest floor slab of one, two, and three level underground parking garage would be situated at about 3, 6, and 9 m below grade respectively (at approximate elevations ranging from 115 to 108 m), with the foundations extending to about 5, 8, and 11 m below grade (to approximate elevations ranging from 113 to 106 m).

The previous boreholes within Blocks A and C (BH105 and BH106) were extended to approximate elevations 106.5 and 112.0 m, respectively. Accordingly, **Terrapex** recommended a

supplementary investigation to determine the continuity and strength of the bedrock below the proposed foundation level to approximate elevation 100 m.

The fieldwork for this geotechnical investigation was conducted in conjunction with the fieldwork for hydrogeological review. The hydrogeological condition of the Site is reported under separate cover.

This letter serves to present the scope of the supplementary field work completed at the Site, summarize the findings of this investigation, and provide geotechnical engineering recommendations for the proposed development.

Field Work

The fieldwork for the supplementary investigation was carried out during the period between August 31 and September 2, 2021. It consisted of three (3) boreholes advanced within Blocks A and C. The locations of the boreholes are shown on Figure 1: Borehole Location Plan, attached to this letter.

The boreholes were advanced to the top of the shale bedrock at approximate depths ranging from 4.0 to 7.0 mbgs. The bedrock was subsequently cored using HQ coring equipment to an approximate depth of 17 m, corresponding to approximate elevation 100.0 m.

Standard penetration tests were carried out within the overburden soils to take representative soil samples and to measure penetration index values (N-values) to characterize the condition of the various soil materials. The number of blows of the striking hammer required to drive the split spoon sampler to 300 mm depth was recorded and these are presented on the logs as penetration index values. Results of SPT are shown on the borehole log sheets in Attachment II of this letter.

Monitoring wells were installed in all three boreholes with the bottom of screen set at an approximate depth of 14 mbgs. Groundwater measurements were made in the monitoring wells on October 1, 2021. The results are discussed in this letter.

The ground surface elevations at the locations of the boreholes were extrapolated from the survey plan titled "Topographic Sketch of Dunnwyn Centre, 1590-1650 Dundas Street East, City of Mississauga" dated March 23, 2019, prepared by R. Avis Surveying Inc., and provided for our use by Hazelview.

The fieldwork for this project was carried out under the supervision of experienced technicians from this office who laid out the positions of the boreholes in the field; arranged locates of buried services; effected the drilling, sampling and in situ testing; observed groundwater conditions; and prepared field borehole log sheets.

Laboratory Tests

The soil samples retained from the split spoon sampler and the rock cores were properly sealed, labelled and brought to our laboratory. They were visually classified. The results of the classification

and Standard Penetration Tests are presented on the borehole log sheets attached in Attachment II of this report.

Five (5) rock core samples were subjected to uniaxial compression testing, as well as dry unit weight determinations. The test results are discussed in this report.

Subsurface Conditions

Asphaltic Concrete

All boreholes were advanced through the asphaltic concrete pavement and revealed that thickness of the asphaltic concrete ranges from 50 to 125 mm.

Granular Base Course

At the location of the boreholes, the base course supporting the asphaltic concrete consists of pit run sand and gravel. The thickness of the granular base ranges from approximately 225 to 400 mm.

Fill Material

Fill material is present below the granular base course in all boreholes. At the borehole locations, the fill material extends to approximate depths ranging from 1.0 to 3.5 mbgs. The fill material consists of silty clay with traces of sand and gravel.

SPT carried out in the fill provided N-values ranging from 44 to 100, indicating hard consistency. The fill material is generally brown to dark brown in color and damp to moist in appearance.

Sandy Silt (TILL) AND Clayey Silt (TILL)

Sandy silt (till) and clayey silt (till) units are present below the fill material in all boreholes. The sandy silt (till) and clayey silt (till) units are glacial deposits and consist of a random mixture of soil particles ranging from clay to gravel, with the silt and sand/clay being the predominant fractions. Cobbles and boulders are probably present but would not be representatively sampled with the equipment used in this investigation.

SPT in the sandy silt (till) provided N-values ranging from 44 to 50/40 mm penetration, indicating dense to very dense compactness condition; generally being very dense. SPT in the clayey silt (till) provided N-values ranging from 26 to 50/115 mm penetration, indicating very stiff to hard consistency.

The sandy silt (till) and clayey silt (till) units are generally brown to greyish brown in color and damp in appearance at shallow depths; becoming grey and moist below approximate depths of 4 to 4.5 mbgs.

Shale Bedrock

Shale bedrock of the Georgian Bay formation was encountered in all boreholes below the till;

positioned below approximate depths ranging from 4.0 to 7.0 mbgs; corresponding to approximate elevations ranging from 111.5 to 112.5 m.

The bedrock was cored in all boreholes using HQ coring equipment to an approximate depth of 17 mbgs; corresponding to approximate elevation 100 m.

The shale bedrock is grey and fine grained. Based on our examination of the rock core samples, the top section is generally intensely fractured and thin bedded, becoming medium bedded and moderately fractured with increasing depth. The shale has occasional very thin to thin limestone beds (50 to 150 mm in thickness) and occasional very thin clay seams.

Rock Quality Designation (RQD) values of the bedrock are shown on the borehole log sheets. The RQD values of the recovered cores range from 0 to 40% at shallow depths and 68 to 100% with increasing depth. Based on Table 3.10 of the Canadian Foundation Engineering Manual (CFEM) 4th Edition, the bedrock is classified as “very poor to excellent quality”; generally being **“fair to excellent”**.

The strength of the shale bedrock was assessed by peeling the rock specimens with a pocket knife. Using a geological hammer, most of the rock specimens required a single blow for their fracturing. Using Table 3.5 of the CFEM (4th Edition), and based on the above strength index tests, the strength of shale bedrock at the Site is termed **“medium strong”**.

Uniaxial compressive strength (UCS) tests and bulk unit weight (γ_w) determinations were carried out on five (5) rock core samples. The UCS and γ_w values of the tested rock samples are given below.

Borehole No.	Ground Elevation (m)	Sample Depth (mbgs) / Elevation (m)	UCS (MPa)	γ_w (kN/m ³)
MW201	116.0	12.0 / 104	17.5	26.4
		14.3 / 101.7	14.1	26.2
MW202	116.8	14.3 / 102.5	20.2	26.0
MW203	119.4	13.4 / 106	11.3	25.8
		14.8 / 104.6	13.5	26.3

Based on the UCS test results, the bedrock is **“weak”** and its hardness grade is R2 according to Table 3.5 of the CFEM (4th Edition).

Combining the strength index tests, the UCS tests and our observations of the bedrock quality, our assessment is that the bedrock at the site is **“weak to medium strong”**.

Photographic record of the extracted rock cores from Boreholes MW202 through MW203 is enclosed in Attachment IV.

Groundwater

Groundwater measurements were made in the monitoring wells on October 1, 2021. The groundwater monitoring results are shown in the following table.

Borehole No.	Ground Elevation (m)	Approx. Depth of Well Bottom (m)	Groundwater Depth (mbgs)	Groundwater Elevation (m)
MW201	116.0	14.0	1.24	114.77
MW202	116.8	14.0	2.55	114.25
MW203	119.4	14.0	5.27	114.13

It should be noted that groundwater levels are subject to seasonal fluctuations. A higher groundwater level condition will likely develop in the spring and following significant rainfall events.

Discussion and Recommendations

The following discussions and recommendations are based on the factual data obtained from the boreholes advanced at the Site and are intended for use by the client and design architects and engineers only.

We understand that the proposed development for Blocks A and C will be constructed over three underground parking garage levels and Blocks E, F, and G on one and two underground parking garage levels. Accordingly, the basement floors will be situated at about 3, 6, and 9 m below grade respectively (at approximate elevations ranging from 115 to 108 m), with the foundations extending to about 5, 8, and 11 m below grade (to approximate elevations ranging from 113 to 106 m).

The subgrade below the proposed basement floor slabs will generally consist of shale bedrock or shale/till complex. ***Our original Geotechnical Investigation report can be referred to for recommendations on excavation, concrete slab-on-grade, and shoring design. The hydrogeological report should be referred to regarding the groundwater control.***

Foundation Design

Based on the borehole findings, the foundation bearing stratum for all blocks will consist of shale bedrock which is suitable for support of conventional strip and spread footing foundations. The foundations for Blocks E, F, and G may be designed for bearing resistance at Ultimate Limit States (ULS) of 3.0 MPa and the foundations for Blocks A and C can be designed for bearing resistance at ULS of 4.0 MPa, for vertical and centric loads.

Settlement of building foundations resting on bedrock is small; accordingly the design of the foundations are based on ULS. The total and differential settlements of foundations founded in the shale are expected to be negligible.

All footing subgrade must be evaluated by the Geotechnical Engineer prior to placing formwork and foundation concrete to ensure that the surface exposed at the excavation base is consistent with the design geotechnical bearing resistance.

Where necessary, the stepping of the footings at different elevations should be carried out at an angle no steeper than 1.4 horizontal (clear horizontal distance between footings) to 1 vertical (difference in elevation).

Rainwater or groundwater seepage entering the foundation excavation must be pumped away (not allowed to pond). The foundation subgrade should be protected from freezing, inundation and equipment traffic at all times.

The bedrock tends to weather and deteriorate rapidly on exposure to atmosphere or surface water. **Terrapex** recommends that footings placed on the exposed soil should be poured on the same day as they are excavated, after removal of all unsuitable founding materials and approval of the bearing surface. Alternatively, a concrete mud slab may be used to protect a bearing surface where footing construction is to be delayed.

Closure

The conclusion and recommendations in this report are based on information determined at the inspection locations. Soil and groundwater conditions between and beyond the test holes may differ from those encountered at the test hole locations, and conditions may become apparent during construction which could not be detected or anticipated at the time of the soil investigation.

The design recommendations given in this report are applicable only to the project described in the text, and then only if constructed substantially in accordance with details of alignment and elevations stated in the report. Since all details of the design may not be known to us, in our analysis certain assumptions had to be made as set out in this report. The actual conditions may, however, vary from those assumed, in which case changes and modifications may be required to our recommendations.

This report was prepared for Hazelview Investments by Terrapex Environmental Ltd. The material in it reflects Terrapex Environmental Ltd. judgement in light of the information available to it at the time of preparation. Any use which a Third Party makes of this report, or any reliance on decisions which the Third Party may make based on it, are the sole responsibility of such Third Parties.

We recommend, therefore, that we be retained during the final design stage to review the design drawings and to verify that they are consistent with our recommendations or the assumptions made in our analysis. We recommend also that we be retained during construction to confirm that the subsurface conditions throughout the site do not deviate materially from those encountered in the test holes. In cases when these recommendations are not followed, the company's responsibility is limited to accurately interpreting the conditions encountered at the test holes, only.

The comments given in this report on potential construction problems and possible methods are intended for the guidance of the design engineer, only. The number of inspection locations may not be sufficient to determine all the factors that may affect construction methods and costs. The contractors bidding on this project or undertaking the construction should, therefore, make their own interpretation of the factual information presented and draw their own conclusions as to how the subsurface conditions may affect their work.

Should you have any questions regarding this letter, or require additional information please do not hesitate to contact our office.

Sincerely,

TERRAPEX ENVIRONMENTAL LTD.



Vic Nersesian, P.Eng.
Senior Geotechnical Engineer

Attachments: Attachment I: Drawing 1: Borehole Location Plan
Attachment II: Borehole Log Sheets
Attachment III: Previous Borehole Log Sheets (Blocks A and C)
Attachment IV: Photographic Record of Rock Cores

ATTACHMENT I – BOREHOLE LOCATION PLAN

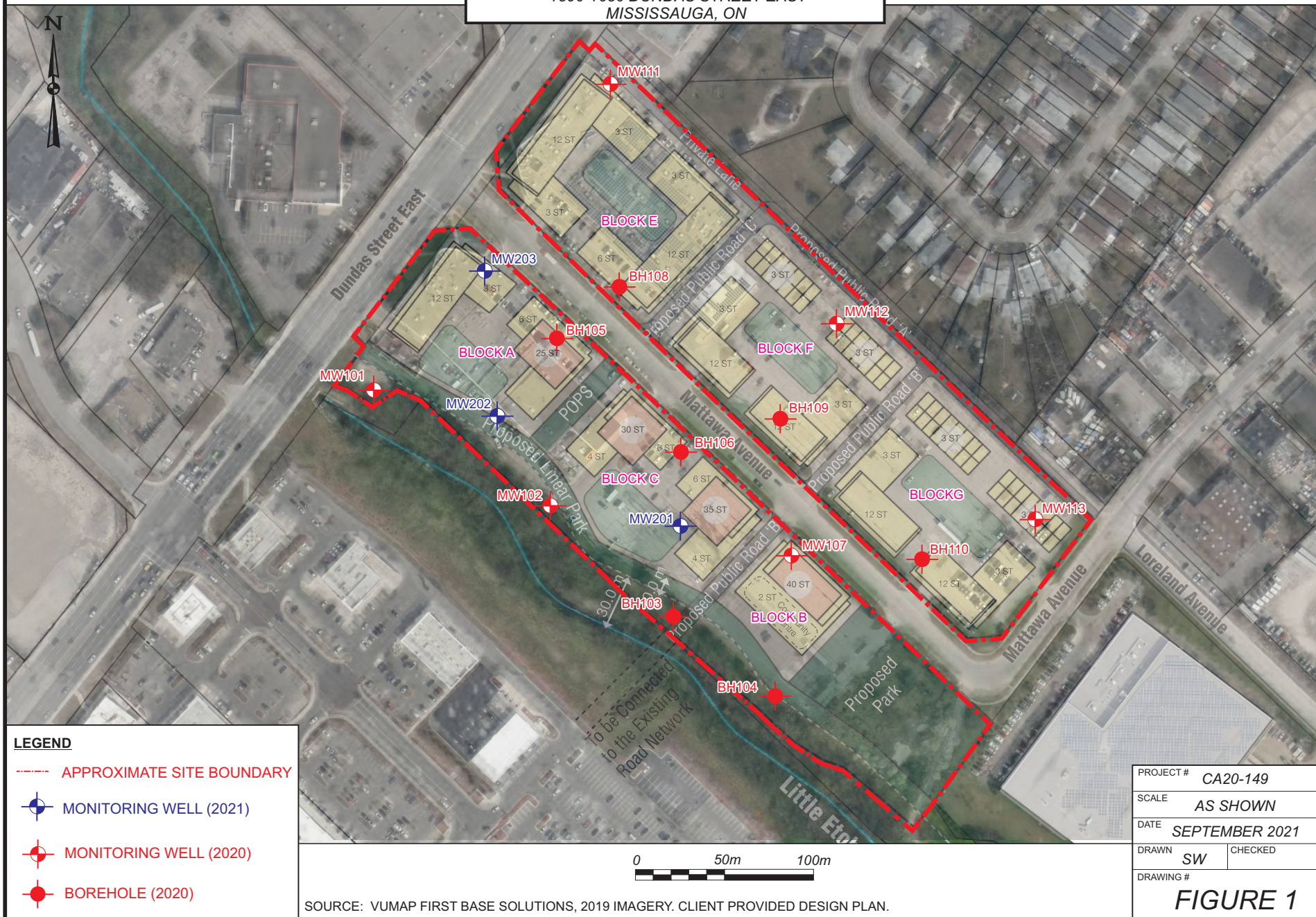


BOREHOLE LOCATION PLAN

1590-1650 DUNDAS STREET EAST
MISSISSAUGA, ON

CLIENT

HAZELVIEW INVESTMENTS



ATTACHMENT II – BOREHOLE LOG SHEETS

CLIENT: Hazlevue Investments				PROJECT NO.: CA20-149				RECORD OF: MW201											
ADDRESS: 1590 & 1650 Dundas Street East																			
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.0											
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		AUGER		DRIVEN		CORING		DYNAMIC CONE		SHELBY		SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
		Asphaltic Concrete (125 mm)	0	116	9								1A		75				
		Granular Base (275 mm)											1B						
		stiff, moist, black to dark brown silty clay trace gravel, trace sand trace organics (FILL)	0.5	115.5															
			1	115															
		very stiff, moist, brown CLAYEY SILT trace gravel, trace sand (TILL)	1.5	114.5	26								2A		78				
			2	114									2B						
		dense, moist, brown SANDY SILT trace gravel, trace clay (TILL)	2.5	113.5															
			3	113															
			3.5	112.5	44								3		100				
			4	112															
		Georgian Bay Formation: grey Weak to Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings	4.5	111.5	50/25								4		100				
		TCR= 98% RQD= 68%	5	111															
			5.5	110.5															
			6	110															
		TCR= 98% RQD= 91%	6.5	109.5															
			7	109															
			7.5	108.5															
		TCR= 98% RQD= 89%	8	108															
			8.5	107.5															
			9	107															
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CLIENT: Hazleview Investments				PROJECT NO.: CA20-149				RECORD OF: MW201												
ADDRESS: 1590 & 1650 Dundas Street East																				
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.0												
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling																
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug												
SAMPLE TYPE		<input type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON								
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					N-VALUE (Blows/300mm)				PL W.C. LL											
					40	80	120	160	20	40	60	80								
		TCR= 98% RQD= 94%	9.5	106.5																
		Georgian Bay Formation: grey Medium strong SHALE moderately weathered moderately fractured occasional thin limestone beddings	10	106																
		TCR= 97% RQD= 79%	10.5	105.5																
			11	105																Sand
			11.5	104.5																Sand + Screen
		TCR= 100% RQD= 97%	12	104																
			12.5	103.5																
			13	103																
		TCR= 97% RQD= 87%	13.5	102.5																
			14	102																
			14.5	101.5																
		TCR= 100% RQD= 100%	15	101																
			15.5	100.5																
			16	100																
			16.5	99.5																
			17	99																
		END OF BOREHOLE																		
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CLIENT: Hazlevie Investments				PROJECT NO.: CA20-149				RECORD OF: MW202											
ADDRESS: 1590 & 1650 Dundas Street East																			
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.8											
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		<input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input checked="" type="checkbox"/> DYNAMIC CONE		<input checked="" type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
		Asphaltic Concrete (100 mm) Granular Base (400 mm)	0	116.5	47								1	75					
		stiff, moist, black to dark brown silty clay trace gravel, trace sand (FILL)	0.5	116															
		Limestone Slab	1	115.5															
		hard, moist SANDY CLAYEY SILT trace gravel (TILL)	3	114									3						
		greyish brown	3.5	113.5															
			4	113	50/115								3	86					
			4.5	112.5															
		grey	5	112	50								4	94					
		Georgian Bay Formation: grey Weak to Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings	5.5	111.5															
		TCR= 40% RQD= 0% TCR= 100% RQD= 24%	6	111															
			6.5	110.5									RC1						
			7	110															
			7.5	109.5															
			8	109															
		TCR= 91% RQD= 44%	8.5	108.5															
			9	108															
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CLIENT: Hazlevue Investments				PROJECT NO.: CA20-149				RECORD OF: MW202											
ADDRESS: 1590 & 1650 Dundas Street East																			
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 116.8											
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		<input type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE				PL W.C. LL										
					(Blows/300mm)														
					20	40	60	80	20	40	60	80							
		TCR= 98% RQD= 39%	9.5	107.5															
		Georgian Bay Formation: grey Medium strong SHALE moderately weathered moderately fractured occasional thin limestone beddings	10	107															
		TCR= 99% RQD= 40%	10.5	106.5															
			11	106															Sand
			11.5	105.5															Sand + Screen
		TCR= 99% RQD= 89%	12	105															
			12.5	104.5															
			13	104															
		TCR= 100% RQD= 87%	13.5	103.5															
			14	103															
			14.5	102.5															
		TCR= 99% RQD= 84%	15	102															
			15.5	101.5															
			16	101															
			16.5	100.5															
			17	100															
		END OF BOREHOLE																	
					LOGGED BY: AD				DRILLING DATE: 01-Sept-2021										
					INPUT BY: EM				MONITORING DATE:										
					REVIEWED BY: SA				PAGE 2 OF 2										

CLIENT: Hazlevue Investments				PROJECT NO.: CA20-149				RECORD OF: MW203			
ADDRESS: 1590 & 1650 Dundas Street East											
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.4			
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling							
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug			
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON	

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)	WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					40 80 120 160	PL	W.C.	LL								
		Asphgaltic Concrete (50 mm)	0													
		Granular Base (225 mm)														
		very dense, moist, brown silty clay	0.5	119	50/100				1		70					
		trace gravel, trace sand (FILL)	1	118.5												
		hard, moist, brown CLAYEY SILT	1.5	118												
		trace gravel, trace sand (TILL)	2	117.5	65				2		100					
			2.5	117												
			3	116.5												
			3.5	116	55				3		100					
			4	115.5												
		very dense, moist, grey SANDY SILT	4.5	115												
		trace gravel, trace clay (TILL)	5	114.5	94/140				4		100					
			5.5	114												
		trace shale fragments	6	113.5	50/40				5		100					
			6.5	113												
			7	112.5												
		Georgian Bay Formation: grey Weak to Medium strong SHALE	7.5	112	50/90				6		100					
		moderately weathered fractured occasional thin limestone beddings	8	111.5												
		TCR= 98% RQD= 98%	8.5	111												
			9	110.5												


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CLIENT: Hazlevue Investments				PROJECT NO.: CA20-149				RECORD OF: MW203											
ADDRESS: 1590 & 1650 Dundas Street East																			
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 119.4											
CONTRACTOR: Pontil Drilling Inc.				METHOD: Hollow Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm): 5		SCREEN SLOT #: 10		SAND TYPE: 2		SEALANT TYPE: Holeplug											
SAMPLE TYPE		<input type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input type="checkbox"/> DYNAMIC CONE		<input type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON							
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %EL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
					40	80	120	160	20	40	60	80							
		TCR= 100% RQD= 91% Georgian Bay Formation: grey Medium strong SHALES moderately weathered moderately fractured occasional thin limestone beddings	9.5	110															
			10	109.5															
			10.5	109															
		TCR= 100% RQD= 100%	11	108.5															Sand
			11.5	108															Sand + Screen
			12	107.5															
		TCR= 95% RQD= 94%	12.5	107															
			13	106.5															
			13.5	106															
		TCR= 100% RQD= 100%	14	105.5															
			14.5	105															
			15	104.5															
		TCR= 98% RQD= 97%	15.5	104															
			16	103.5															
			16.5	103															
			17	102.5															
		END OF BOREHOLE																	
LOGGED BY: JC									DRILLING DATE: 02-Sept-2021										
INPUT BY: EM									MONITORING DATE:										
REVIEWED BY: SA									PAGE 2 OF 2										


**ATTACHMENT III: PREVIOUS BOREHOLE LOG SHEETS
(Block A and C)**

CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH105			
ADDRESS: 1590 & 1650 Dundas Street East				STATION:							
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 118.99			
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling							
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug			
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input checked="" type="checkbox"/> DYNAMIC CONE		<input checked="" type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON	

GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)			SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS	
					N-VALUE (Blows/300mm)				PL	W.C.	LL								
					20	40	60	80											
		Asphaltic Concrete (80 mm)	0										1A		50				
		Granular Base (150 mm)											1B						
		very stiff damp to moist greyish brown clayey silt (FILL)	0.5	118.5															
		very stiff damp CLAYEY SILT trace gravel, trace sand (TILL) occasional sand layers brown	1	118									2		67				
			1.5	117.5									3		83				
			2	117															
			2.5	116.5									4		67				
			3	116															
			3.5	115.5									5		100				
		grey	4	115									6		100				
		very dense, damp, grey SANDY SILT trace gravel, trace clay (TLL)	4.5	114.5									7		100				
			5	114															
			5.5	113.5															
		hard, damp, grey SHALE/TILL complex	6	113									8		100				
			6.5	112.5															
			7	112															
		Georgian Bay Formation: grey Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings	7.5	111.5									9		100				
		TCR= 98% RQD= 32%	8	111															
		UCS= 20.2 MPa	8.5	110.5															
			9	110															

	LOGGED BY: RG	DRILLING DATE: 22-Dec-2020
	INPUT BY: SA	MONITORING DATE:
	REVIEWED BY: VN	PAGE 1 OF 2

CLIENT: Hazleview Investment				PROJECT NO.: CA20-149				RECORD OF: BH105											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 118.99											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug											
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER		<input checked="" type="checkbox"/> DRIVEN		<input checked="" type="checkbox"/> CORING		<input checked="" type="checkbox"/> DYNAMIC CONE		<input checked="" type="checkbox"/> SHELBY		<input type="checkbox"/> SPLIT SPOON									
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
					40	80	120	160	20	40	60	80							
		TCR= 98% RQD= 41% Georgian Bay Formation: grey Medium strong SHALE moderately weathered intensely to moderately fractured occasional thin limestone beddings occasional thin clay seams	9.5	109.5															
			10	109															
			10.5	108.5															
			11	108															
			11.5	107.5															
			12	107															
			12.5	106.5															
		END OF BOREHOLE																	
										LOGGED BY: RG				DRILLING DATE: 22-Dec-2020					
										INPUT BY: SA				MONITORING DATE:					
										REVIEWED BY: VN				PAGE 2 OF 2					

CLIENT: Hazlevue Investment				PROJECT NO.: CA20-149				RECORD OF: BH106											
ADDRESS: 1590 & 1650 Dundas Street East				STATION:															
CITY/PROVINCE: Toronto, Ontario				NORTHING (m):		EASTING (m):		ELEV. (m) 117.09											
CONTRACTOR: Pontil Drilling Services Inc.				METHOD: Solid Stem Auger and Split Spoon Sampling															
BOREHOLE DIAMETER (cm): 15		WELL DIAMETER (cm):		SCREEN SLOT #:		SAND TYPE:		SEALANT TYPE: Holeplug											
SAMPLE TYPE <input checked="" type="checkbox"/> AUGER <input checked="" type="checkbox"/> DRIVEN <input checked="" type="checkbox"/> CORING <input type="checkbox"/> DYNAMIC CONE <input type="checkbox"/> SHELBY <input type="checkbox"/> SPLIT SPOON																			
GWL (m)	SOIL SYMBOL	SOIL DESCRIPTION	DEPTH (m)	ELEVATION (m)	SHEAR STRENGTH (kPa)				WATER CONTENT (%)				SAMPLE NO.	SAMPLE TYPE	RECOVERY (%)	SV/TOV (ppm or %LEL)	LABORATORY TESTING	WELL INSTALLATION	REMARKS
					N-VALUE (Blows/300mm)				PL W.C. LL										
		Asphaltic Concrete (75 mm) Granular Base (225 mm) stiff damp to moist greyish brown clayey silt (FILL)	0 0.5 1 1.5 2 2.5 3 3.5 4 4.5	117 116.5 116 115.5 115 114.5 114 113.5 113 112.5	10 31 89/275 90/200									1A 1B 2 3A 3B 4		67 61 94 57			
		hard damp, brown CLAYEY SILT trace gravel, trace sand (TILL)																	
		hard, damp, grey SHALE/TILL complex																	
		grey SHALE BEDROCK																	
		END OF BOREHOLE																	
					LOGGED BY: RG				DRILLING DATE: 23-Dec-2020										
					INPUT BY: SA				MONITORING DATE:										
					REVIEWED BY: VN				PAGE 1 OF 1										

ATTACHMENT IV – PHOTOGRAPHIC RECORDS OF ROCK CORES

Client: Hazelview Investments

Address: 1590-1650 Dundas Street East, Mississauga, Ontario

Project no: CA20-149



PHOTO LOG OF ROCK CORE SAMPLES

MW201

RUN 1

RUN 2

RUN 3

RUN 4

RUN 5

RUN 6

RUN 7

RUN 8



Client: Hazelview Investments
Address: 1590-1650 Dundas Street East, Mississauga, Ontario

Project no: CA20-149



MW202



RUN
1&2

RUN 3

RUN 4

RUN 5

RUN 6

RUN 7

RUN 8

Client: Hazelview Investments
Address: 1590-1650 Dundas Street East, Mississauga, Ontario

Project no: CA20-149



MW203

