

Appendix L - Part 2

Hydrogeological Existing Conditions Review Report



Appendix A

Borehole Logs

RECORD OF BOREHOLE: C1

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862071.08; E 632899.94

BORING DATE: January 13, 2021

<u>"</u>	유	SOIL PROFILE		:	SAMP	LES	DYNAMIC PENETRATION \ RESISTANCE, BLOWS/0.3m	HYDRAULIC CONDUCTIVITY, k, cm/s	로 PIEZOMETER
METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	TYPE	BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + Q - ● Cu, kPa rem V. ⊕ U - O 20 40 60 80	10 ⁸ 10 ⁸ 10 ⁴ 10 ³ 1 WATER CONTENT PERCENT Wp W W W W W W W W W	PIEZOMETER OR OR STANDPIPE INSTALLATION
0		GROUND SURFACE ASPHALT (210 mm thick)		213.50					
		FILL - (SP) SAND, some gravel, trace fines; brown; moist		1	ı As	s			
1		FILL - (CI) sandy SILTY CLAY, some gravel, dark brown and grey; cohesive, w>PL, firm to soft		212.67 — 0.83	2 SS	8 8		0	
2				211.37	3 88	3			
		(CL) SILTY CLAY, brown to grey; cohesive, w>PL, stiff to very stiff		2.13	\$ SS	5 10		0	
3	ugers	- Becoming grey at a depth of 2.9 m			5 88	6 16			
5	Truck Mount B57 150 mm O.D. Hollow Stem Augers	cohesive, w <pl, hard<="" th=""><th></th><th>209.46</th><th>5 85</th><th>50/ 0.13</th><th></th><th></th><th></th></pl,>		209.46	5 85	50/ 0.13			
6					7 88	50/ 0.13			
7		END OF BOREHOLE		205.65	3 SS	50/		0	
9		NOTES: 1. Water was encountered at a depth of 3.1 m during drilling. 2. Water measured in open borehole at a depth of 4.3 m (El. 209.2m) upon completion of drilling.							
10									
DE	PTH S	SCALE					GOLDER	<u> </u>	LOGGED: YS

RECORD OF BOREHOLE: C2

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862076.92; E 632892.20

BORING DATE: January 12, 2021

4	ç		SOIL PROFILE		,	SAN	/IPLE	S	DYNAMIC PEN RESISTANCE,	BLOW	6/0.3m)	HIDK	k, cm/	CONDUC S	·IIVIII,	,	وَدِ	PIEZOMETER
METRES	BORING METHOD		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STREN Cu, kPa	I IGTH	nat V. + rem V. €	U- O	W	ATER C	ONTEN	T PERC	H WI	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
	<u> </u>	+	GROUND SURFACE	Ω.	213.50	\dashv	+	ا ت	20 4	10	60	80	1	0	20	30	40	+	
0			ASPHALT (315 mm thick)		0.00 213.18														
		f	Crushed granular; brown		0.32	1	AS	_											
		-	FILL - (CI) sandy SILTY CLAY, some	$\stackrel{\text{\tilde{M}}}{\Longrightarrow}$	212.76 0.74														
1		- 1	gravel, dark brown and grey; cohesive, w>PL, stiff to firm	\bowtie		2	ss	13						F	 		1	мн	
•						3	SS	4											
2		ŀ	(CL) SILTY CLAY, brown; cohesive,	綴	211.37 2.13														
			w>PL, very stiff to stiff			4	ss -	16							0				
3																			
		rgers				5	ss	14											
	Truck Mount B57	Stem At																	
4	< Mount	Hollow			209.46														
7	Truck	000	(CL-ML) SILTY CLAY-CLAYEY SILT and SAND, some gravel; grey (TILL); cohesive, w <pl, hard<="" td=""><td></td><td>4.04</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>		4.04														
		150 mr	cohesive, w <pl, hard<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>																
						6	ss :	70					0						
5																			
6																			
						7	ss o	50/											
7																			
					205.68	8	ss o	50/					O						
8	Г	1	END OF BOREHOLE	ST XX	7.82			.00											
			NOTES:																
			Water was encountered at a depth of 6.1 m during drilling.																
			2. Water measured in open borehole at a depth of 4.3 m (El. 209.2m) upon																
9			completion of drilling.																
10																			
DE	птι							4	GO										GGED: YS

1:50

RECORD OF BOREHOLE: P1

SHEET 1 OF 1

LOCATION: N 4861296.93; E 633061.47

BORING DATE: January 20, 2021

DATUM: Geodetic

CHECKED: TO

HAMMER TYPE: AUTOMATIC SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 10⁻⁵ BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) GROUND SURFACE 213.50 ASPHALT (340 mm thick) 213.16 0.34 Crushed granular; brown 1A AS FILL - (SP) SAND, some gravel; trace 1B fines; brown; moist (CL) SILTY CLAY and SAND, some gravel; brown (TILL); cohesive, w<PL, 2 SS 22 very stiff to hard 150 mm 3 SS 97 0 МН END OF BOREHOLE NOTE: 1. Borehole open and dry upon completion of drilling. S:(CLIENTS)REGION OF YORKIMAJOR MACKENZIE DRIVE()2 DATA(GINT)MARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 3/23/21 9 10 GTA-BHS 001 DEPTH SCALE LOGGED: YS GOLDER

RECORD OF BOREHOLE: P2

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4861450.81; E 633030.53

BORING DATE: January 6, 2021

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 10⁻⁵ BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) GROUND SURFACE 217.60 0.00 217.40 0.20 ASPHALT (200 mm thick) Crushed granular; brown AS 216.85 FILL - (SP) SAND, trace fines; brown; non-cohesive, moist, compact 2 SS 17 0 216.23 1.37 (ML) SILT and SAND, trace gravel; brown; non-cohesive, moist, compact 200 mm 3 ss 15 MH NP END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. NP= Non-plastic S:CLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVE/02 DATA/GINT\MARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 3/23/21 9 10 GTA-BHS 001 DEPTH SCALE LOGGED: YS

GOLDER

RECORD OF BOREHOLE: P3

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4861664.23; E 632982.24

BORING DATE: January 6, 2021

H	HOD.	SOIL PROFILE	1.	1	SAM	PLES	DYNAMIO RESISTA	C PENE ANCE, E	ETRAT I (BLOWS	ON /0.3m	1	ULIC CO k, cm/s			T	₽ _R	PIEZOMETER
METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	BLOWS/0.3m	20 SHEAR S Cu, kPa		GTH r	ı nat V. + em V. ⊕	30	ATER CO	ONTENT OW	PERCE		ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
0		GROUND SURFACE		219.80													
		ASPHALT (230 mm thick)	××××	0.00 219.57													
	Aligore	FILL - (SP) SAND, some gravel, trace fines; brown; moist	\bowtie	0.23 219.30	1 /	s -											
	357 form A	FILL - (CI) sandy SILTY CLAY, some gravel; brown and dark grey; cohesive,		0.50													
1	k Mount B57	w>PL, stiff			2 8	S 11											
	Truck Mount B57																
	200				3 8	S 10						0					
2		END OF BODELIOLE	XX	217.82								Ŭ					
-		END OF BOREHOLE NOTE:		1,98													
		Borehole was open and dry upon completion of drilling.															
3																	
-																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
						_	> 0										

RECORD OF BOREHOLE: P4

BORING DATE: January 6, 2021

SHEET 1 OF 1

DATUM: Geodetic

LOCATION: N 4861851.29; E 632945.93

HAMMER TYPE: AUTOMATIC

		CPT HAMMER: MASS, 64kg; DROP, 760mm								
, FE	QOH.	SOIL PROFILE			SAN			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	HYDRAULIC CONDUCTIVITY, k, cm/s	₽S PIEZOMETER
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + Q - ● Cu, kPa rem V. ⊕ U - ○		PIEZOMETER OR STANDPIPE INSTALLATION
\dashv		GROUND SURFACE	S		+	\dashv	_	20 40 60 80	10 20 30 40	
0	\neg	ASPHALT (60 mm thick)	/XXXX	216.50 8.86	\pm	\dashv	-			
	Socie	Crushed ganular; brown		215.98	1 .	AS	-			
1	Truck Mount B57	FILL - (CI) sandy SILTY CLAY, some sand, some gravel; dark grey, organic inclusions; cohesive, w>PL, stiff		0,52	2	ss	8		0	
	T. 150 mm 0.71	(SM) SILTY SAND, some gravel; brown; non-cohesive, moist, compact	***	1 1	3	ss	19		•	мн
2		END OF BOREHOLE	24.16	214.52 1.98						
		NOTE:								
		Borehole was open and dry upon completion of drilling.								
3										
4										
5										
6										
7										
8										
9										
10										
DE	PTH	SCALE						GOLDER		LOGGED: YS

RECORD OF BOREHOLE: P5

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862041.54; E 632903.86

BORING DATE: January 6, 2021

H		HOD	SOIL PROFILE	1_		SAM	MPLE		DYNAMIC PE RESISTANCE			1		AULIC Co k, cm/s			T	NG NG	PIEZOMETER
METRES		BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRE Cu, kPa	NGTH	nat V. + rem V. €	80	l vvb	ATER C	TNATAC	PERCE		ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
			GROUND SURFACE		213.50			T		Ť							Ĭ		
0		П	ASPHALT (220 mm thick)		0.00 213.28														
		Augers	Crushed granular; brown		0,22	1	AS	-											
	ount B57	ow Stem,	FILL - (SP) SAND, some gravel, trace fines; brown; moist		212.84 0.66 212.65 0.85	2A	ss	12											
1	Truck Mo	150 mm O.D. Hollow Stem	FILL - (CI) sandy SILTY CLAY, some gravel; black and grey, organic inclusions; cohesive, w>PL, stiff to firm			2B													
					211.52	3	ss	4							0				
2			END OF BOREHOLE		1,98														
			NOTE:																
			Borehole was open and dry upon completion of drilling																
			completion of aniling								1								
3											1								
4																			
5																			
- 6																			
- 7																			
											1								
8																			
											1								
9																			
											1								
											1								
10											1								
DE	:Р1	TH S	CALE						GC		. – .	_						10	GGED: YS
1:	• '							, (L (((<i>)</i>) 	_							

RECORD OF BOREHOLE: **P6**

SHEET 1 OF 1

DATUM: Geodetic

LOCATION: N 4862147.36; E 632884.51

BORING DATE: January 6, 2021

<u>"</u> [Q	SOIL PROFILE		.	SAM	MPLE	ES	RESIST	IC PEN ANCE,	IETRATI BLOWS	ON /0.3m		HYDR.	AULIC C k, cm/s	ONDUCT	ΓΙVΙΤΥ,	T	ی_	PIEZOMETER
RES	METH		LOT		<u>بر</u>		.3m	20				80	1	0 ⁻⁶ 1	0 ⁻⁵ 1	0 ⁻⁴ 1	10-₃ T	- ONA SSTINA	OR
METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH	NUMBER	TYPE	BLOWS/0.3m	SHEAR Cu, kPa	STRE	NGTH	nat V. + rem V. €	Q - • U - O			ONTENT		NT WI	ADDITIONAL LAB. TESTING	STANDPIPE INSTALLATION
ר	8		STR	(m)	2		BE	20)4	40 (30	80					40		
. ,		GROUND SURFACE		214.10														$oxed{\Box}$	
Ĭ		ASPHALT (150 mm thick) Crushed granular; brown	***	0.00															
	SIS	Crusiled grandlar, brown		213.62	1A														
	Auge	FILL - (SP) SAND, some gravel; trace	₩	213.02 0.48 213.44	1B	AS	-												
	t B57 Stem	fines; brown; moist		0.66															
1	Truck Mount B57 O.D. Hollow Stem	FILL - (CI) SILTY CLAY, some sand, some gravel; dark brown, organic inclusions; cohesive, w~PL to w>PL, stiff			2	ss	9							0					
	D H	inclusions; conesive, w~PL to w>PL, stiff																	
	Truck Mount B57 150 mm O.D. Hollow Stem Augers																		
	150 r																		
					3	ss	9												
2		END OF BOREHOLE	XXX	212.12 1.98		\dashv	_												
				""															
		NOTE:																	
		Borehole was open and dry upon completion of drilling																	
		4 · · · · · · · · · · · · · · · · · · ·																	
3																			
4																			
5																			
- 6																			
. 7																			
. 8																			
9																			
10																			
	DEPTH SCALE 1: 50 CHECKED: TO																		

RECORD OF BOREHOLE: P7

BORING DATE: January 6, 2021 DATUM: Geodetic

LOCATION: N 4862351.03; E 632840.88

HAMMER TYPE: AUTOMATIC

SHEET 1 OF 1

SP	T/DC	CPT HAMMER: MASS, 64kg; DROP, 760r	nm							HAMI	MER TYF	PE: AUTOMATIC
» ALE	면 면	SOIL PROFILE	1.		SAM	PLES	DYNAMIC PENETRA RESISTANCE, BLOW	TION \ /S/0.3m	HYDRAULIC CON k, cm/s		AR NG	PIEZOMETER
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	BLOWS/0.3m	20 40 SHEAR STRENGTH Cu, kPa	60 80	10° 10° WATER COM	NTENT PERCENT	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
\neg		GROUND SURFACE	- 1 "	219.20	+	\top	20 40		1 7			
0		ASPHALT (230 mm thick)		0.00								
	Ι,	Crushed granular; brown	***	218.97 0.23	1A							
	100	FILL - (SP) SAND, some gravel; trace fines; brown; moist		0.39	1B	S -						
	57	fines; brown; moist	-	218.54 0.66	_							
	Int B	FILL - (CI) sandy SILTY CLAY, some gravel; brown and dark grey, organic inclusions; cohesive, w>PL, very stiff										
1	Truck Mount B57	inclusions; cohesive, w>PL, very stiff			2 8	S 19						
		(ML) sandy SILT, some gravel; brown	- XX	217.83								
	150	(TILL); non-cohesive, moist, compact		·								
			4 4 4	1	3 8	S 22			0			
2		END OF BODELIOLE	[]A	217.22	\perp	\perp						
-		END OF BOREHOLE		1,98								
		NOTE:										
		Borehole was open and dry upon General tion of drilling										
		completion of drilling										
. 3												
-												
. 4												
4												
. 5												
6												
. 7												
8												
9												
- 10												
DE	PTH	SCALE					GOL	DER			LOG	GED: YS
	50					~		` `			CHEC	CKED: TO

1:50

RECORD OF BOREHOLE: **S1**

SHEET 1 OF 2 DATUM: Geodetic

LOCATION: N 4861359.73; E 633031.43

BORING DATE: January 15, 2021

CHECKED: TO

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD DEPTH SCALE METRES ADDITIONAL LAB. TESTING PIEZOMETER STRATA PLOT BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) GROUND SURFACE 215.10 ASPHALT (125 mm thick) Crushed granular; brown 0.13 50 mm Dia. PVC Monitoring Well AS 214.68 FILL - (SP) SAND, brown, trace fines; non-cohesive, moist, dense SS 39 d ss 3 37 212.97 (SM) SILTY SAND, some gravel; brown (TILL); non-cohesive, moist, very dense 2.13 SS 64 SICLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVEIOZ DATAIGINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 3/23/21 ss 71 January 29, 2021 211.06 (SM) SILTY SAND, some gravel; brown to grey; non-cohesive, wet, very dense 6 SS 79 - Becoming grey at a depth of 5.6 m SS 83 208.01 7.09 (CL-ML) SILTY CLAY-CLAYEY SILT and SAND, some gravel; grey (TILL); cohesive, w<PL, hard Sand SS 50/ 0.08 8 0 Sand and Screen 9 SS 50/ 0.13 9 205.68 END OF BOREHOLE NOTES: CONTINUED NEXT PAGE GTA-BHS 001 DEPTH SCALE GOLDER LOGGED: YS

RECORD OF BOREHOLE: \$1

SHEET 2 OF 2 DATUM: Geodetic

LOCATION: N 4861359.73; E 633031.43

BORING DATE: January 15, 2021

<u>ш</u>	무	SOIL PROFILE			SA	MPL	ES	DYNAMIC F RESISTANO	ENETRATIONS E, BLOWS	ON /0.3m		HYDRAU	LIC CONE , cm/s	DOCTIVITY	. Т	و ِ	PIEZOMETER
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 SHEAR STF Cu, kPa	40 6 ENGTH r	80 80	Q - • U - O			10 ⁻⁴ ENT PERO OW 30	10 ⁻³	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
- 10 -		CONTINUED FROM PREVIOUS PAGE 1. Water was encountered at a depth of 4.6 m during drilling. 2. Groundwater level was measured at a depth of 4.4 mbgs (El. 210.7m) after well installation.															
11		3. Groundwater level was measured in monitoring well at a depth of 3.7 mbgs (El. 211.4m) on January 29, 2021.															
12																	
13																	
14																	
15																	
16																	
17																	
18																	
19																	
20																	
DEI	PTH S	CALE						\$ G								100	GGED: YS

GTA-BHS 001 S./CLIENTSIREGION_OF_YORKIMAJOR_MACKENZIE_DRIVE/02_DATA/GINTIMARKHAM_WARDEN&KENNEDY_RD.GPJ GAL-MIS.GDT 3/23/21

RECORD OF BOREHOLE: \$2

BORING DATE: January 15, 2021

SHEET 1 OF 1

DATUM: Geodetic

LOCATION: N 4861546.26; E 633002.39

	SPT	/DCF	PT HAMMER: MASS, 64kg; DROP, 760mm													HAMI	MER T	YPE: AUTOMATIC
щ		1OD	SOIL PROFILE			SA	MPL	ES.	DYNAMIC PENETRATI RESISTANCE, BLOWS	ON /0.3m	/	HYDRA	ULIC Co k, cm/s	ONDUCT	IVITY,	Т	L IG	DIEZOMETER
DEPTH SCALE	מבו	BORING METHOD		STRATA PLOT		<u>بر</u>		3m	20 40 (50 8 I	10	10)-6 1	0 ⁻⁵ 10)-4 10	_{о-з} Т	ADDITIONAL LAB. TESTING	PIEZOMETER OR
PTH	⊒ ⊒	NG	DESCRIPTION	TAP	DEPTH	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa	nat V. +	Q - •	W	ATER C	ONTENT	PERCE		B. TE	STANDPIPE INSTALLATION
핌		BOR		STR.	(m)	N	_	BLO						OW.			Α₹	
	1		GROUND SURFACE	0,	219.80				20 40 (80 8	0	1	<u> </u>	0 3	0 4	10		
F	٥		ASPHALT (120 mm thick)	***	0.00													-
Ė			FILL - (SM) gravelly SILTY SAND, brown; non-cohesive, moist	\bowtie	0.12													1
F			, , , , , , , , , , , , , , , , , , , ,	\bowtie		1	AS	-				0					М	- 1
E			FILL (CI) cond. CII TV CI AV come	\bowtie	219.05 0.75													3
L	1		FILL - (CI) sandy SILTY CLAY, some gravel; brown and black, organic	\bowtie	0.73	2	SS	11)			
-			inclusions; cohesive, w>PL, stiff	\bowtie														1
-				\bowtie														=
Ė																		1
F				\bowtie		3	SS	9										1
_	2			\bowtie	217.67													-]
E			(SM) SILTY SAND, trace to some	ĬĬ.	2.13													3
F			gravel; brown; non-cohesive, moist to wet, dense to very dense	11	1	4	SS	35]
ŧ				11.	1		55	33										1
Ė				肼]													1
F	3																	1
Ē		gers]	5	ss	54										1
E		57 em Au			1													Ε
_		Truck Mount B57 150 mm O.D. Hollow Stem Augers			1													=
L	4	% Mo Holk			1													
Ė		JO D																1
Ė		50 mn																=
Ė		1	- Becoming wet at a depth of 4.6 m		:													1
Ē]	6	ss	48					0]
F	5				1													
-					1													=
-					1													1
ŀ					}													1
F																		1
F	6					7	SS	50/ 0.1										3
Ŀ								0.1										=
-					1													1
Ė					1													‡
F	7				212.71													4
E			(GP) sandy GRAVEL, trace fines; grey; non-cohesive, wet, very dense	•	7.09													1
Ł			1222.12,, 1017 401100															3
Ė					212.05	8	ss	50/				0						1
þ			END OF BOREHOLE		7.75													‡
F	8		NOTE:															1
E			Water was encountered at a depth of															1
E			4.6 m during drilling.															3
Ŀ																		
L	9																	
ŧ																		‡
Ė																		1
Ē																		1
E																		3
H	10																	-
\vdash																		
	DEF	TH S	SCALE							\ - -	,						LC	DGGED: YS
	1:5		· - · ·						GOLE	ノヒト	≺							ECKED: TO
Щ	٠.٠	-						`	•								511	

1:50

RECORD OF BOREHOLE: **S**3

SHEET 1 OF 2

CHECKED: TO

LOCATION: N 4861732.90; E 632961.79

BORING DATE: January 13, 2021

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -OW Wp I -I WI (m) GROUND SURFACE 218.90 0.00 218.70 0.20 ASPHALT (200 mm thick) FILL - (SP) SAND, some gravel, trace 50 mm Dia. PVC Monitoring Well fines; brown; moist AS FILL - (CI) sandy SILTY CLAY, trace gravel, brown and black; organic inclusions; cohesive, w>PL, firm to stiff SS МН ss 13 (CL) SILTY CLAY and SAND, some gravel; brown (TILL); cohesive, w~PL, stiff 2.13 SS 13 216.00 2.90 (SM) SILTY SAND, some gravel; brown (TILL); non-cohesive, moist, dense SICLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVEIOZ DATAIGINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 3/23/21 ss 44 <u>∑</u> January 29, 2021 214.86 (CL-ML) SILTY CLAY-CLAYEY SILT and SAND, some gravel; grey (TILL); cohesive, w<PL, hard Truck Mount B57 SS 50/ 0.15 0 200 r Bentonite SS 77 Sand SS 65 0 Sand and Screen 9 90/ 0.13 9 SS 209.32 9.58 END OF BOREHOLE CONTINUED NEXT PAGE GTA-BHS 001 DEPTH SCALE GOLDER LOGGED: YS

1:50

RECORD OF BOREHOLE: S3

SHEET 2 OF 2 DATUM: Geodetic

CHECKED: TO

LOCATION: N 4861732.90; E 632961.79

BORING DATE: January 13, 2021

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD DEPTH SCALE METRES ADDITIONAL LAB. TESTING PIEZOMETER STRATA PLOT 80 10⁻⁵ BLOWS/0.3m NUMBER STANDPIPE TYPE ELEV. SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W - W Wp **⊢** (m) --- CONTINUED FROM PREVIOUS PAGE ---10 Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 3.5 mbgs (El. 215.4m) on January 29, 2021 11 12 S:CLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVE/02 DATA/GINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 3/23/21 14 15 16 17 18 19 20 GTA-BHS 001 GOLDER DEPTH SCALE LOGGED: YS

RECORD OF BOREHOLE: S4

DATUM: Geodetic BORING DATE: January 13, 2021

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

LOCATION: N 4861956.56; E 632915.36

HAMMER TYPE: AUTOMATIC

SHEET 1 OF 1

√ (O			T .		\neg	\neg	7		DWS/0.	JIII	\ .		k, cm/	3			145	PIEZOMETER
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH	NUMBER	TYPE	20 SHEAR : Cu, kPa	STRENGT	60 H nat	V. +	0-0 0-0	w	ATER (IT PERC	10 ⁻³ L ENT	ADDITIONAL LAB TESTING	OR STANDPIPE INSTALLATION
دّ	BO		STR,	(m)	ž	ā	20	40	60	8	0				30	40	4.7	
. ,		GROUND SURFACE		213.80														
		ASPHALT (215 mm thick)	***	0.00 213.58														50 mm Dia. PVC
		Curshed granular; brown	\bowtie	0,22 213.34	1A	AS .						0					М	Monitoring Well
		FILL - (SP) SAND, some gravel, trace fines; brown, moist	₩	0.46 0.63	1B ′													
		FILL - (CI) sandy SILTY CLAY, some gravel; brown and black, organic		5.55														
1		inclusions; cohesive, w>PL, stiff	\bowtie		2 8	SS 1							С	'				
			\bowtie															
					3 8	ss !												
2				211.67														
		(SM) gravelly SILTY SAND, brown		2.13														
		(TILL); non-cohesive, moist, compact		211.29	4 5	SS 1							6				МН	<u> </u>
		(SM) SILTY SAND, some gravel; grey; non-cohesive, moist, loose		2.51		Ĩ ["""	
3																		Bentonite
	2000	s.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a			5 8	SS												
	B57	K																
[Truck Mount B57	0																
4	uck №	CL-ML) SILTY CLAY-CLAYEY SILT and	ALR	209.76 4.04														
[F 5	(CL-ML) SILTY CLAY-CLAYEY SILT and SAND, some gravel; grey (TILL); cohesive, w <pl, hard<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>																
	150 1	200																
					6 8	SS 8						0						
5																		
6																		Sand Z
					7 8	SS 8	1											
7																		Sand and Screen
		END OF BODELIOUS		205.95	8 8	SS 0.	8					0						
8		END OF BOREHOLE		7.85														
		NOTES:																
		Water was encountered at a depth of 2.3 m during drilling.																
		Groundwater level was measured at a																
9		depth of 5.3 mbgs (El. 208.5m) after well installation.																
		Groundwater level was measured in																
		monitoring well at 2.4 mbgs (El. 211.5m) on January 29, 2021.																
10																		
10																		
		1	1								<u> </u>		I	1			1	l
DEL	РΤН	SCALE							\Box	— F	•						L	OGGED: YS

RECORD OF BOREHOLE: S5

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862226.60; E 632859.96

BORING DATE: January 12, 2021

County Superact County Sup	S	ТНОВ	SOIL PROFILE	1 - 1		SAM				ETRAT I BLOWS		,		AULIC CO k, cm/s			. I	ING ING	PIEZOMETER
Canada Silitary CLAY CLAY Silitary Si	METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	BLOWS/0.3m	SHEAR Cu, kPa	R STREN	IGTH I	nat V. + rem V. ⊕	Q - • U - O	W	ATER CO	ONTEN	F PERCE	ENT I WI	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
SAPHALT (200 mm stack)			GROUND SURFACE		215.70														
CLAND, SELTY CLAYCLAYEY SILT and Self of 5.5 m CLAYCLAY SILT AND SELTY CLAYCLAYEY SILT and Self of 5.5 m CLAYCLAY SILT AND SELTY CLAYCLAYEY SILT and Self of 5.5 m CLAYCLAY SILT AND SELTY CLAYCLAYEY SILT and Self of 5.5 m CLAYCLAY SILT AND SELTY CLAYCLAYEY SILT and Self of 5.5 m CLAYCLAY SILT AND SELTY CLAYCLAYEY SILT and Self of 5.5 m CLAYCLAY SILT AND SELTY CLAYCLAYEY SILT AND SELTY CLA	۱۰		ASPHALT (200 mm thick)																
Filt - CSP SAMD, some gravet, loads Filt - CSP SAMD, some gravet, loads Filt - CSP SAMD, some gravet brown, colors Filt - CSP samp's ETY CLAY-come gravet brown, colors Filt - CSP samp's ETY CLAY-come gravet brown, colors Filt - CSP samp's ETY CLAY-come gravet brown, colors Filt - CSP samp's ETY CLAY-come gravet brown Filt - CSP samp's ETY CLAY-CLAYEY SET and Filt - CSP samp's ETY CLAYET SET and Filt - CSP samp's ET			Crushed granular; brown		0.20	1A													50 mm Dia. PVC
Tell_Colorer_Collections_col			FILL (CD) CAND some ground trace		215.23	<u> </u>	s -												ivioriitoring vveii
Fill - (Chi sardy SLTY CLAY, some greet brown of cleave, w-PL, stiff to very stiff 2			fines; brown; moist		215.02	1B													
Very selff			FILL - (CI) sandy SILTY CLAY, some		0.68														
2 (CA4) SELTY CLAY-CLAYEY SILT and SAND, some gravet brown to grey (Tit.), cohesive, w-d**, hard 2 (SA4) Selty CLAY-CLAYEY SILT and SAND, some gravet brown to grey (Tit.), cohesive, w-d**, hard 5 (SA4) Selty CLAY-CLAYEY SILT and SAND, some gravet brown to grey (Tit.), cohesive, w-d**, hard 5 (SA4) Selty CLAY-CLAYEY SILT and SAND, some gravet brown to grey (Tit.), cohesive, w-d**, hard 5 (SA4) Selty CLAY-CLAYEY SILT and SAND, some gravet brown to grey (Tit.), cohesive, w-d**, hard 5 (SA4) Selty CLAY-CLAYEY SILT and SAND, some gravet brown to grey (Tit.), cohesive, w-d**, hard 5 (SA4) Selty CLAY-CLAYEY SILT and Selty Clay-Clay-Clay-Clay-Clay-Clay-Clay-Clay-	1					2 S	S 14												
2 2 2 2 2 3 3 3 3 3																			
2 2 2 2 2 3 3 3 3 3																			
2 2 2 2 2 3 3 3 3 3																			
CLAM_SILTY CLAY-CLAYEX SILT and SAND, some gravelit troot to gray (TILL); cohesive, wk-PL, hard orgy 2.25						3 S	S 16							0					
Cit-ML, SiLTY CLAY-CLAYEY SILT and SAPU, some gravel brown to grey (TILL); cohesive, w-PL, hard 2.13 4 56 602 1 1 1 1 1 1 1 1 1	2				242.57														
CTILL), cohesive, w-PL, hard 4 50 50 50 10 10 10 10 10			(CL-ML) SILTY CLAY-CLAYEY SILT and																
Second S			SAND, some gravel; brown to grey (TILL): cohesive, w <pl, hard<="" td=""><td></td><td></td><td></td><td>86/</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>				86/												
Send			(122), 22112112			4 8	0.23												
Send																			
Becoming grey at a depth of 5.5 m 5 Sand - Becoming grey at a depth of 5.5 m 7 So So - Becoming grey at a depth of 5.5 m 7 So So - Becoming grey at a depth of 5.5 m 7 So So - Becoming grey at a depth of 5.5 m - To So So - To So	3																		Bentonite
Becoming grey at a depth of 5.5 m 5 Sand - Becoming grey at a depth of 5.5 m 7 So So - Becoming grey at a depth of 5.5 m 7 So So - Becoming grey at a depth of 5.5 m 7 So So - Becoming grey at a depth of 5.5 m - To So So - To So						5 S	s 50/						0						
Sand		saest			ŀ	\dashv													
Sand		57 em At																	
Becoming grey at a depth of 5.5 m		w Ste																	
Becoming grey at a depth of 5.5 m	4	K Mo																	
Becoming grey at a depth of 5.5 m The standard		O.D.																	
- Becoming grey at a depth of 5.5 m - Becoming grey at a depth of 5.5 m - Becoming grey at a depth of 5.5 m - T SS SO 0.15		1 =																	
- Becoming grey at a depth of 5.5 m - Becoming grey at a depth of 5.5 m - Becoming grey at a depth of 5.5 m - Boundary 29,2021 Sand and Screen END OF BOREHOLE NOTES: 1. Borehote was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.		200																	
- Becoming grey at a depth of 5.5 m 7 ss 50 7						6 S	S 0.15												
- Becoming grey at a depth of 5.5 m 7 ss 50 7	5																		
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (EI.208.9m) on January 29, 2021.																			
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (EI.208.9m) on January 29, 2021.																			
7 SS SO O.1 9 LND OF BOREHOLE 7.85 1. Borehde was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.			- Becoming grey at a depth of 5.5 m																
7 SS SO O.1 9 LND OF BOREHOLE 7.85 1. Borehde was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.																			194
7 ss 50/ 0.1 Total Control of Ambara Control	6																		Sand Z
Tanuary 29,2021 Sand and Screen END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.						7 8	50/												
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.						_	0.1												
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.																			
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.																			<u> </u>
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.	7																		January 29,2021
END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.																			Sand and Screen
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.																			
8 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.																			
NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.		\perp				8 S	S 50/ 0.08												
NOTES: 1. Borehole was open and dry upon completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.	8		END OF BOREHOLE		7.85														
completion of drilling. 2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (EI.208.9m) on January 29, 2021.			NOTES:																
2. Groundwater level was measured in monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.			Borehole was open and dry upon																
monitoring well at a depth of 6.8 mbgs (El.208.9m) on January 29, 2021.			completion of drilling.																
9 (El.208.9m) on January 29, 2021.			2. Groundwater level was measured in																
10	9		(El.208.9m) on January 29, 2021.																
10																			
10																			
	10																		
DEPTH SCALE LOGGED: YS ALSO OUTSIDED: TO	DEI	PTH S	SCALE						~ ~		\ _ -							10	DGGED: YS

GTA-BHS 001

1:50

RECORD OF BOREHOLE: **S6**

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862442.27; E 632817.44

BORING DATE: January 12, 2021

CHECKED: TO

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) GROUND SURFACE 221.40 ASPHALT (255 mm thick) 0.00 221.14 FILL - (SP) SAND, some gravel, trace fines; brown; moist 0,26 AS 220,65 FILL - (CI) sandy SILTY CLAY, some gravel; dark brown; cohesive, w~PL, stiff SS 10 220.03 1.37 (ML) SILT and SAND, brown; non-cohesive, moist to wet, compact to ss 18 МН SS 32 ss 49 217.36 4.04 (CL-ML) SILTY CLAY-CLAYEY SILT and SAND, some gravel; grey (TILL); cohesive, w<PL, hard 6 SS 57 Auger grinding between depths of 5.5 m and 5.8 m SS 96 0 ss 50/ 8 213.53 7.87 END OF BOREHOLE NOTES: 1. Water measured in open borehole at a depth of 2.7 m upon completion of drilling. 9 10 DEPTH SCALE GOLDER LOGGED: YS

LOG OF DRILLING OPERATIONS

BURNSIDE

R.J. Burnside & Associates Limited 282 Speedvale Avenue West, Guelph, Ontario N1H 1C4 telephone (519) 823-4995 fax (519) 836-5477 BG-MW1

Page_1_ of _1_

	Client:	Berczy Glen Landown	ers Group	Project Name:	Berczy Glen I	_ands		Logged by	<u>.</u> (C. Dir	nules	scu		
	Project N	lo.: 300033248		•	kham, ON			Ground (m	ams	il): :	220.2	2		
	Drilling C	o.: Lantech Drilling S	ervices Inc.	Date Started:	9/18/2013			Static Wat	er Le	vel C	Depth	(m):		
	Drilling M	fethod: Hollow Stem	Auger	Date Completed	9/18/2013			Sand Paci					3.86	
ĺ		*****		•					-		PLE			
	Depth Scale	Stratig	raphic Descrip	tion	Strat Depth				Num.	Туре	Int.	N.Val.	De _l Sca	
	(ft) (m)	Surface Elevation (m		220.20	(m)	33333 N			-				(ft)	(m)
	-	TOPSOIL - dark b SILTY CLAY - with gravel, pockets of t	sand, trace f							58	X	24		-
	- 1.0	sand, damp, weakliron staining			×				1	88	X	21	-	1.0
	5.0 - 2.0	SANDY SILT - trac brown, weakly plas			X X 1.57 X X X		·		2	SE	X	24	5.0	-20
		SAND - very fine to occasional gravel,			221		bentonit	e seal	3	S85	X	82/10'	-	-
	10.0 - 3,0	to wet, loose.				:			4	S6		56/6"	10.0	-3.0
	-4.0					Ā							-	− 4 ,0
	15.0	SANDY GRAVEL -	traca alau t	raca cilt wall	0 0 4.70							\vdash	15.0 —	-
DT 1/28/14	- 5.0	graded, wet to satu					silica sa	nd pack	5	88		105	_	- 5,0
TEMPLATEG	— 6,0 20.0—	SAND - medium to fine gravel, trace s \loose, saturated, w	ilt, uniform, li		5.64 O O 6.25				6	88	\geq	TI	20.0 -	-6.0
OLEN.GPJ		SANDY GRAVEL - subangular to subr cobbles, saturated	ounded, trace		6.86	6.96			8	es ss				-
03328 BERCZY		SAND - fine to coa gravel, uniform, lig and boulders												
GLENBOC		Stone refusal at 6.	86 m											
PROINTIPROJECT SISCO JOBSISCO SER BERCZY GLENISCO 3328 BERCZY GLENIGRIJ TEMPLATE GDT 1/28/14														
ECTS\300 J								*******						
Ő.	Prepare	ed By: S. Charity		Checked By:	C. Dinules	SCU .		Date P	repa	red:	1	0/7/20)13	
	suitable	ehole log was prepared for a geotechnical ass tes Limited personnel b	essment of the	subsurface conditi	onmental purp ions. Borehol	oses and e data requ	does not uires inte	necessaril rpretation l	y cor by R.	ntain J. B	infoi urns	matio ide &	ın	
GUELPH	LEGEND		MONITORING	WELL DATA	SAMPLE 1	TYPE AC	A	ager Cutting	SS	s 🔼	<	Split S	Spoo	n
XG GL		r found @ time of drilling	Pîpe: 51 n	nm dīa. PVC		cs [ontinuous	A	3 💹		Air Ro		
BHLOG	∑ Static	Water Level -	Screen: 51 n	nm dia. PVC #10 slot		RC	AAA R	ock Core	W	c 🖸		Wash	Cut	tings

LOG OF DRILLING OPERATIONS

AG-MW12

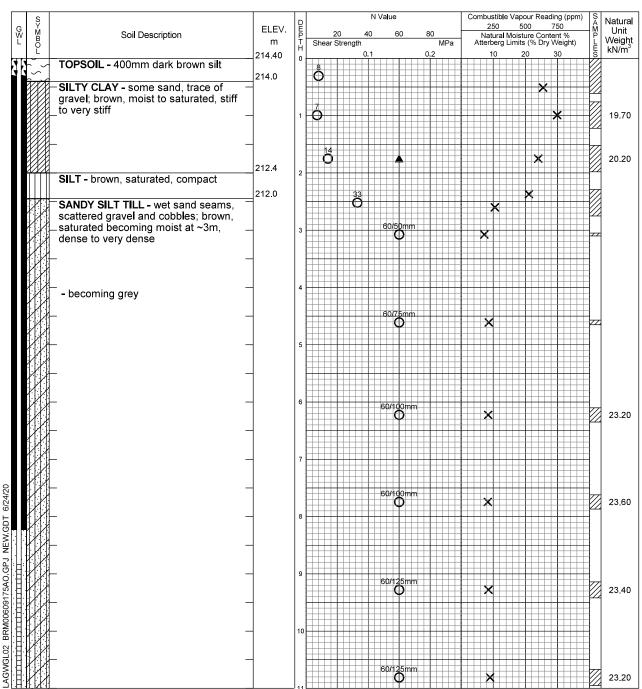


R.J. Burnside & Associates Limited

D :	nt:	Angus Glen Developments Inc.	Project Name:	Angus		IESF	•		Logged b	-	C. D.		20		
		No.: 300034937		kham, (Ground (r						_
		Co.: Lantech Drilling Services Inc. Method: Hollow Stem Auger	Date Started: Date Completed	2/25/20	715 5/2015				Static Wa						
ווווכ	ing iv	Heiriod. Hollow Stelli Auger	Date Completed	1. 2/23	72013				Janu Pau			11) . 3 1PLE	0	7.02	_
De _l Sca		Stratigraphic Descripti	on	Strat. Plot	Elev. Depth		/			Num.	Type	nt.	N.Val.	De Sc	
(ft)	(m)		17.20		(m)					Z	1		z	(ft)	<u>(n</u>
_	_	TOPSOIL Dark brown sandy silt, weathered of rocks, dry	d small pieces		_					1	ss	X	frozen		_
	- 1.0	or reality			215.76 1.44					2	SS	X	29	-	1.0
5.0	- - 2.0	FILL Gravel and Sand, fragments of ro compact, dry, trace silt	ocks, loose to		1.44					3	SS	X	>100	5.0 -	2.0
-	_							Holeplu	g	4	SS	X	>50/3"	_	-
0.0	- 3.0 -				213.47	$ \nabla$				5	SS	X	>50/4"	10.0 -	- 3.0
-	- 4.0	Sandy Silt TILL Grey, stiff, dry, some clay, trace (diameter) subangular to subroun	gravel (<2 cm		213,47 3.73					6	SS	X	>50/2"	=	4.0
5.0	- - 5.0	occasional pockets with medium			_					7	SS	X	>50/4"	15.0 -	-5.0
_	-	becomes harder with depth												-	_
20.0	- 6.0 -				_			Sandpa	ck	8	SS	X	>50/5"	20.0 -	6.0
_	- 7.0							Well Sc						-	- 7.
25.0	-			<i>687,12</i>	209.58 7.62		7.62			9	ss	X	>50/4"	25.0 -	}
Pre	pare	ed By: C. D.	Checked By	J.S.	I pure		and a	door not	Date F	Prepa	red:		26/2		
This suit	s bore able	ed By: C.D. ehole log was prepared for hydrogeologion of the second dependence of the second d	gical and/or enviro ubsurface condition	onmenta	l purpo	ses data	and o	does not i	necessarily	/ conta	ain ir	nform	ation		
This suita Ass	s bore able	ehole log was prepared for hydrogeolog for a geotechnical assessment of the s	gical and/or enviroubsurface condition	onmenta ons. Boi	l purpo	data	requ	ires inter	necessarily	y conta y R. J	ain ir . Bur	nform	ation		

Log of Borehole 113

BRM-00609175-AO Project No. Drawing No. Geotechnical Investigation - Berczy Warden Subdivision Sheet No. 1 of 2 Project: 10206 and 10348 Warden Avenue, Markham, Ontario Location: Combustible Vapour Reading \boxtimes Auger Sample May 19 and 22, 2020 X Date Drilled: Natural Moisture 0 🛭 SPT (N) Value Plastic and Liquid Limit Dietrich 120 Dynamic Cone Test Drill Type: Undrained Triaxial at \oplus Shelby Tube % Strain at Failure Geodetic Datum: Field Vane Test Penetrometer N Value Combustible Vapour Reading (ppm) 750 250 500 ELEV. 20 Shear Strength Natural Moisture Content % Atterberg Limits (% Dry Weight) Soil Description



Continued Next Page



Time	Water Level (m)	Depth to Cave (m)
On completion	3.96	Borehole
After 4 hours	0.61	Well
After 5 days	0.58	Well

Log of Borehole 113

BRM-00609175-AO Project No. Drawing No. Geotechnical Investigation - Berczy Warden Subdivision 2 of 2 Project: Sheet No. N Value Combustible Vapour Reading (ppm) Natural 250 500 750 Natural Moisture Content % Atterberg Limits (% Dry Weight) ELEV. Unit Weight kN/m³ Soil Description Shear Strength 10 203.40 50/150mr 23.30 201.9 END OF BOREHOLE Groundwater monitoring well installed to 11.89m; sealed with bentonite from 0.3 to 8.23m. LAGWGL02 BRM00609175AO.GPJ NEW.GDT 6/24/20



Time	Water Level (m)	Depth to Cave (m)
On completion	3.96	Borehole
After 4 hours	0.61	Well
After 5 days	0.58	Well

Log of Borehole 113A

Proje	ct No.	BRM-00609175-AO										Dr	awing	No.		17	
Proje	ct:	Geotechnical Investigation	ı - Bercz	zy '	Wa	arden	Su	bdivi	ision			;	Sheet	No.	1	of 1	
Locat	ion:	10206 and 10348 Warden										•					_
							,										_
Date	Drilled:	May 22, 2020		_	Aug	er Sample				\boxtimes		ustible V al Moistu		Reading	>		
		Dietrich 120				(N) Va l ue amic Cone	Toc		0	2	Plastic	c and Liq	juid Limi	t 		Ð	
	Гуре:			_	-	lby Tube	165		ı			iined Tria ain at Fa			\oplus		
Datui	n:	Geodetic		-	Field	d Vane Tes	t		١	S	Penet	rometer			•		
s	:			Тп			1	l Va l ue						ading (ppr	m) S	Natura	П
G&L		Soil Description	ELEV. m	DEPT	Sł	20 near Strengt	40 h	6	0	80 MPa	Na Atter	250 itural Mois bera Limi	500 sture Co its (% Dr	750 ntent % y Weight)	m) SAMPLES	Unit Weight	t
		SOIL - 400mm dark brown silt	214.40	0	, 	THE PROPERTY OF THE PROPERTY O	0.1			0.2		10	20	30	S	kN/m³	4
\ 			214.0														
		Y CLAY - some sand, trace of el; brown, moist to saturated, stiff	7				Ħ										
		ery stiff	_	1													
							Ħ										
	SILT	- brown, saturated, compact	212.4	2													
Ш		•	212.0				Ħ										
		DY SILT TILL - wet sand seams, ered gravel and cobbles; brown,	7														
	satu	rated becoming moist at ~3m, se to very dense	-	3													
	dens	e to very derise					Ħ										
	- be	coming grey	\dashv	4			H					##					
		3 3,															
			-	5			Ħ										
							Ħ										
			\dashv	6													
							Ħ										
			207.2	7													
	NOT	END OF BOREHOLE ES:															
	1. G	roundwater monitoring well stalled to 7.19m; sealed with															
	be	entonite from 0.3 to 3.53m.															
							Ħ										
					Ħ		+					##					
					Ħ		Ħ										
					Ш										Ш		



LAGWGL02 BRM00609175AO.GPJ NEW.GDT 6/24/20

Time	Water Level (m)	Depth to Cave (m)
On completion	Dry	Borehole
After 4 hours	1.14	Well
After 5 days	1.09	Well
-		

Log of Borehole 116

BRM-00609175-AO 20 Project No. Drawing No. Geotechnical Investigation - Berczy Warden Subdivision Sheet No. 1 of 1 Project: 10206 and 10348 Warden Avenue, Markham, Ontario Location: Combustible Vapour Reading \boxtimes Auger Sample May 13, 2020 X Date Drilled: Natural Moisture 0 🛭 SPT (N) Value Plastic and Liquid Limit Dietrich 120 Dynamic Cone Test Drill Type: Undrained Triaxial at \oplus Shelby Tube % Strain at Failure Geodetic Datum: Field Vane Test Penetrometer N Value Combustible Vapour Reading (ppm) SYMBO-250 750 500 G W L ELEV. Unit Weight kN/m³ 20 Shear Strength Natural Moisture Content % Atterberg Limits (% Dry Weight) Soil Description m 213.76 TOPSOIL - 300mm dark brown sandy ő 213.5 SANDY SILT - brown, saturated, 213.1 loose SILTY CLAY - brown, moist, very stiff Ö becoming grey Ö 210.9 SANDY SILT TILL - scattered gravel and cobbles; grey, moist with wet sand seams, very dense 207.5 **END OF BOREHOLE** NOTES: 1. Groundwater monitoring well installed to 5.84m; sealed with bentonite from 0.3 to 2.18m.



LAGWGL02 BRM00609175AO.GPJ NEW.GDT 6/24/20

Time	Water Level (m)	Depth to Cave (m)
On completion	Dry	Borehole
After 9 days	0.97	Well
After 14 days	0.99	Well

PROJECT: 14-1186-0012 LOCATION: See Figure 2

RECORD OF BOREHOLE: 14-16

SHEET 1 OF 2

BORING DATE: May 8, 2014

DATUM: Geodetic

11	00	SOIL PROFILE			SA	MPL	ES	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	HYDRAU	LIC CONDUCTIV	ATY.	.0	
METRES	BORING METHOD		101		DY.	1	3m	20 40 60 80	10*		10"	ADDITIONAL LAB. TESTING	PIEZOMETER OR
MET	ING N	DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH nat V + Q - ● rem V. ⊕ U - ○	WAT	ER CONTENT P	ERCENT	3 TE	STANDPIPE INSTALLATION
	BOR	1100000000	TRA	DEPTH (m)	N	F	NOTE		Wp I		-I WI	LAE	
-	w	GROUND SURFACE	(X)	1000			ui.	20 40 60 80	10	20 30	40		
0	1	FILL - (ML) CLAYEY SILT, some sand,	XXX	214.70	-	H			-				F.0
		organic inclusions; dark brown; cohesive, W <pl firm<="" td="" to="" w-pl,=""><td></td><td></td><td>1</td><td>SS</td><td>5</td><td></td><td></td><td>a</td><td>1</td><td>1</td><td>Concrete</td></pl>			1	SS	5			a	1	1	Concrete
		72 20 11 1 2 2 2 11 2 2 11 11											
		(ML) sandy CLAYEY SILT; pale brown,	XX	214,01 0.69									
7		with oxidation staining, cohesive, W <pl, stiff<="" td=""><td>X</td><td></td><td>2</td><td>SS</td><td>ġ</td><td></td><td></td><td>0</td><td></td><td></td><td></td></pl,>	X		2	SS	ġ			0			
						200			1				
		(CI) SILTY CLAY, some sand; grey, with		213.33 1.37									
		oxidation staining; cohesive, W>PL, firm to stiff									72-11-0-		
		io sint			3	SS	7			1	0-1	PI.	
2		Marchan Commence											
		Very thinly bedded with fine sand below a depth of approximately 2.1 m below											
		existing ground surface			4	SS	12			Ö.			
				244.04	-								
.3		(ML) sandy SILT, some clay to clayey,		211.80									
		trace gravel, with pockets of medium sand; grey (TILL); non-cohesive, moist,	7 6		5	SS	83		CI.				
		very dense	9		-	1	33		-				
											ė s		
4			4 4										Ž
sof il			9										
1	0	12	4 4				Ш						
1	Hollow Stem Augers		4		6.	SS	50/		a				
	ACK MOUNTED CIN		100				.ub						
5	v Sten		Fa 4									1	Bentonite Seal
1	Hollov		D. C.										
1	-		4										
			4										
6			9,14						11000				
			9 6		7	SS	50/		-23				
			9 98										
1			12						Ì				
70													
	1		1						}				
		11	4 4			P.O.	50/		73				
			4 4		8	55	.08		Ü				
8			40.0										
			9										
		1	4	ĺ									
9			+	1			201						
					9	SS	.13		1.7				
			4										
	Ш		9										
10		CONTINUED NEXT PAGE				-	-						
	TI 1 -	CALE	1		_	1				1			ocorn io
	THS 0	CALE						Golder Associates					OGGED: JG ECKED: AM

PROJECT: 14-1186-0012 LOCATION: See Figure 2

RECORD OF BOREHOLE: 14-16

BORING DATE: May 8, 2014

SHEET 2 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

4	8	SOIL PROFILE			SA	MPL	ES	DYNAMIC PI	ENETRA E. BLOW	TION S/0.3m	1	HYDRAUL 8. c	IC CONE	UCTIVE	TY.	ى ا	pursua a series
METRES	BORING METHOD		LOT	-	œ		300	20	40	60	80	10*	105	10+	10-5	ADDITIONAL LAB. TESTING	PIEZOMETER OR
MET	SING	DESCRIPTION	STRATA PLOT	DEPTH	NUMBER	TYPE	BLOWS/0.3m	SHEAR STR Cu, kPa	ENGTH	nat V rem V.	+ Q- ♦ ⊕ U- O		R CONT			DDOTT	STANDPIPE INSTALLATION
ă	BOR		STR	(m)	Z		BLO	20	40	60	80	Wp 1-	20	30 30	40	44	
10		— CONTINUED FROM PREVIOUS PAGE —															
10		(ML) sandy SILT, some clay to clayey, trace gravel, with pockets of medium	4														
	Ш	trace gravel, with pockets of medium sand; grey (TILL); non-cohesive, moist, very dense	113														
		13.7 23.112	100				50)	/i II I		Î							
				ł	10	SS	13									1112	Bentonite Seal
-11		1	40		Н		Н			1		1				1	
			70														
			4														E.
																	l l
12			Fat.														Ę.
	ME 56		Fa		11	SS	50/					0					[3]
	Stem Auge	h	1														(A)
40	TRACK MOUNTED CME 55 Hollow Stern Aupers		100														5
13	RACK MC Hollow	Becoming more moist below a depth of approximately 13.1 m below ground	40														
	Е	approximately 13.1 m below ground surface	38														178
																	l de la constant de l
14.			4		12	SS	99/					O					Silica Sand Filter
			400		-							100					Silica Sal N Fixer
			400														
			4														(2)
15		Augers grinding below a depth of	A 4														
		Augers grinding below a depth of approximately 14.9 m below ground surface. Inferred cobble/boulder	4				SAL										
	L	a to the second second	191	199.16	3	SS	50/					TY)					
		AUGER REFUSAL ON INFERRED COBBLE/BOULDER END OF BOREHOLE		15.54													Water level measured at a depth
00		END OF BUREFIOLE										-				1113	3.87 m below ground surface, June 20/14
																	-
17																	
18																9	
46																	
19																	
20																	
0.1		0.53%	1	-				117	3							-1-	130.00 - 0
DE	PTH:	SCALE						(Gol	der ciates						OGGED: JG IECKED: AM

PROJECT: 19119989 (2000) LOCATION: See Figure 1

RECORD OF BOREHOLE: 20-12

BORING DATE: July 10, 2020

SHEET 1 OF 2

8		SOIL PROFILE			SAF	MPLE	ES	DYNAMIC PE RESISTANCE	NETRA	FION /8/0,3m	1	HYD	RAULIC k, con	CONDUC Vs	CTIVITY.	Ŧ	βF	PIEZOMETER
BORING METHOD			to _T		a.		Ę	20	40	60	60		10-6	10 5		10-3	ADDITIONAL LAB. TESTING	OR STANDPIPE
2		DESCRIPTION	STRATA PLOT	ELEV. DEPTH	NUMBER	T.P.E.	BLOWS/0.3m	SHEAR STRE	NGTH	nat V. rem V	+ q - €			CONTEN			100 B	INSTALLATIO
8			E A	(m)	₹		910					1	Vp ├	20 Y	30	1 WI 40	\ S	
╀┈	4	GROUND SURFACE	ψ,		Н	7	-	20	40	60	80		Ť	Ť	Ť	1		
H	7	FILL - (CL) SILTY CLAY, some sand,	***	220 20		\dashv	-			+	\top	1		1				
		trace rootlets, trace gravel; brown; cohesive, w <pl, stiff<="" td=""><td>\otimes</td><td></td><td>1</td><td>SS</td><td>12</td><td></td><td></td><td></td><td></td><td></td><td>0</td><td></td><td></td><td></td><td></td><td></td></pl,>	\otimes		1	SS	12						0					
	1	CORESPONDE, WATE, SAID	\bowtie			~											1 1	
	ŀ	FILL - (CL) SILTY CLAY, trace gravel,	₩	219.59 0.61		П	Н								- [
	П	some sand; brown; oxidation staining; cohesive, w <pl, firm<="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>																
	1	CORRESPE, WYFL, IIIII	\bowtie		2	55	7							9			1 1	
	1			218.83	Н													
	Ì	(ML) sandy SILT, trace gravel; brown;		1,37									1					
		oxidation staining; non-cohesive, moist to wet, compact to very dense				ss	24						1					
	1				3	22	-						Ĭ					
11	1								1									
			14		Н			9										
					4	ss	69						0					
					H													
					s	ss	73						0				МН	
	spers																	
	₹				Ш	-1	N											
1	y St				П		М										1 1	
	220 mm O.D. Hollow Stem Augers						H										1 1	
	0.0																1 1	
	E						П		1									
	22						57	8						0			1 1	
Mobile B-45	1		111		6	55	31							1			1 1	
Aobie																	1 1	
	-								4								1 1	
	ļ			214.64 5.56														
		(SP) SAND, some gravel; brown; non-cohesive, well, dense to very dense	7.	3.50													11	
	-																1 1	
11	.				Н													
	Ц		5		7	ss	40						ф					
			12.		4													
			1															
			134															
			3.5															
			4									1						
			25		Ш													
			1		8	ss	50/ 0.05						0					
			N. A.		\vdash							1						
11	1		1															
			3															
	3	(OAD III. OR THE OAD	170	211.60 8.50														
	ş	(SM) gravelly SILTY SAND; grey (TILL), contains cobbles and boulders;		8.50														
	*	non-cohesive, moist, very dense																
	١٤		1		Н													
	110 mm Tricone with Mud		H		0	SS	50/ 0.08						9					
1 3	=		H		Н		700											
$\parallel \parallel$			1															
, <u> </u> L	_			210 24			-	+		+-	-	+	-	+		+		
		CONTINUED NEXT PAGE																
	S	CONTINUED NEXT PAGE						♠ G	OLI	DEF	\ ?						LOC	GGED: M



RECORD OF BOREHOLE: 20-12

SHEET 2 OF 2

DATUM: Geodetic

LOCATION: See Figure 1

BORING DATE: July 10, 2020

3	Ş	SOIL PROFILE			SAM	PLES	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3ml	HYDRAULIC CONDUCTIVITY, K, cm/s	10
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	BLOWS/0.3m	1	10 ⁶ 10 ⁵ 10 ⁴ 10 ³ WATER CONTENT PERCENT WP	PIEZOMETER OR STANDPIPE INSTALLATION
- 10		— CONTINUED FROM PREVIOUS PAGE — (CL-ML) CLAYEY SILT and SAND, some gravel; grey (TILL), contains cobbles and boulders; cohesive, w≺PL, hard		9,96	10 8	SS 507 0.10	¥ 0	0	
12	th Mud				11 5	50/ 0.05	v 5	0	
- 14	Mobile B-45 110 mm Tricone with Mud			-	2 8	50 0.08	6 6	0	
15					3 8	S 50/0	,	•	
17		END OF BOREHOLE NOTE: 1. Borehole open upon completion of drilling.		203.31 1 16.59	4 8	-\$ 50v 0.13	á.	0	
- 18		Heaving sand encountered at a depth of 7.6 m, drilling method changed to 110 mm tricone with mud.							
20									
DE8		CALE					GOLDER NEMBER OF WEF		LOGGED: MJB/BD CHECKED: KN



RECORD OF BOREHOLE: 20-13

SHEET 1 OF 2

LOCATION: See Figure 1

T	8	SOIL PROFILE			SA	MPLE	s	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	HYDRAULIC CONDUCTIVITY, K, citi/s	₹	2 2222
METHES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0,3m	20 40 50 80 SHEAR STRENGTH nal V + Q ⋅ ● rem V ⊕ U ⋅ ○ 20 40 60 60	10° 10° 10° WATER CONTENT PERC	10° 1	PIEZOMETE OR STANDPIPE INSTALLATIO
		GROUND SURFACE		218.30							
0		TOPSOIL (690 mm)		0.00 217.61	1	SS	6		0		
1		(CL) SILTY CLAY, trace sand to sandy, trace gravel, brown, organic staining, oxidation staining; cohesive, w>PL, stiff		0.69	2	ss	10		ю		
					3	ss	12		0		
2	m Augers	(SM) SILTY SAND, some gravel; brown to grey (TILL), contains cobbles and boulders; non-cohesive, moist, dense to very dense		216.17 2.13	4	S S	31		0		
3	220 mm O.D. Hollow Stern Augers	- Becoming grey at a depth of 3.4 m			5	SS	73		0		
5	Mobile B-45	- Auger grinding between depths of			6	ss	93/ 0.2		0		
6		5.5 m and 6.1 m			7	53	50v 0.1		D	М	4
8	110 mm Tricona with Mud				ā	ss	507 3.13		0		
9					. 9	ss (50/		0		
10		CONTINUED NEXT PAGE		T							41 H - 2411
10		CONTINUED NEXT PAGE	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4					GOLDER MEMBER OF WAP		4	

PROJECT: 19119969 (2000) LOCATION: See Figure 1

RECORD OF BOREHOLE: 20-13

SHEET 2 OF 2

BORING DATE: July 20, 2020

DATUM: Geodetic

4	8	SOIL PROFILE			SA	MPLE	s	DYNAMIC PENETRATION \ RESISTANCE, BLOWS/0.3m	HYDRAULIC CONDUCTIVITY, k, cm/s	1,0
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV DEPTH (m)	NUMBER	TYPE	BLOWS/0,3m	20 40 50 80 SHEAR STRENGTH nat V. + Q - 4 Cu, kPa rem V. ⊕ U - C	104 105 104 103	PIEZOMETER OR STANDPIPE INSTALLATION
- 10 - 11		CONTINUED FROM PREVIOUS PAGE (SM) SILTY SAND, some gravel; brown to grey (TILL), contains cubbles and boulders, non-cohesive, moist, dense to very dense			10	ss (50/ 0.08		0	
- 12	Mud	- Auger grinding between depths of 12.2 m and 13.1 m			11	ss (50/ 5.08		0	
14	Mobine B-45 110 mm Tricone with Mud				12	8S (507).13		0	
- 15					13	39 8	50/ 0.13		С	
- 17		END OF BOREHOLE NOTE: 1. Borehole open upon completion of drilling.		201.28 17.04	14	ss d	50y):13			
17 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19										
- 20										
DEF		SCALE					(GOLDER MEMBER OF WEP		LOGGED: BD CHECKED: KN



PROJECT: 19119969 (2000) LOCATION: N 4861885,83; E 632932,01

RECORD OF BOREHOLE: 21-1

BORING DATE: May 10, 2021

SHEET 1 OF 2

	go	SOIL PROFILE			SA	MPLE	S	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3ml	HYDRAULIC CONDUCTIVITY, k, cm/s	무일	PIEZOMETER
METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH	NUMBER	TYPE	BLOWS/0,3m	20 40 50 60 N SHEAR STRENGTH nat V. + Q. ● rem V. ⊕ U. ○	19° 19° 191 193 2 WATER CONTENT PERCENT WP 1	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
_	8	GROUND SURFACE	S	(m)		+	<u></u>	20 40 60 80	10 20 30 40		
0	Т	ASPHALT (150 mm)		216.45							50 mm Diameter IPVC Monitornig Well (Flush mount)
		FILL- (SP) gravelty SAND; brown; non-cohesive, moist, dense		0.15 215.68	1	95	30				Well (Flush mount) ∑ May 20, 2021
1		FILL - (CL) sandy SILTY CLAY; brown; cohesive, w-PL, firm		0.76	2	9 \$	a		0		
					3	ss	6		0		
2	957 Augens			214-32							
	Track Mount Mobile B57 mm 0.D. Hollow Stem Au	(CL) sandy SILTY CLAY to SILTY CLAY and SAND, some gravel; brown to grey at 8.1 m (TILL), contains cobbles and boulders; cohesive, w <pl, hard<="" stiff="" td="" to="" very=""><td></td><td>2.13</td><td>4</td><td>ss</td><td>17</td><td></td><td>p </td><td></td><td></td></pl,>		2.13	4	ss	17		p		
3	Track h										
	290				5	33	20		p		
4											
					6	ss	50/ 0.13		0		
5											Bertionite
6											
٥					7	\$S	93/ 0.23		p		
7	,										
	Track Mount Mobile 857									1	
	Mount Me										
đ	Track 130 mm				·	33	53			MH	
9							SOV				
					9	55	0.13		0		
10		CONTINUED NEXT PAGE									
DE	оты	SCALE						GOLDER MEMBER OF WEP		L	OGGED: YS

LOCATION: N 4861885.83; E 632932.01

RECORD OF BOREHOLE: 21-1

BORING DATE: May 10, 2021

SHEET 2 OF 2

ALE 3	74OD	SOIL PROFILE	T		SA	MPLE		DYNAMIC PENETRATION RESISTANCE, BLOWS/0,3m	HYDRAULIC CONDUCTIVITY, k, crivs	وبر [PIEZOMETER
METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 40 60 60 CU, KPa nat V. + Q - (nam V. + D	10 ⁴ 10 ⁵ 10 ⁴ 10 ³ WATER CONTENT PERCENT Wo W W W W W W W W W W W W W W W W W W	ADOITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
- 10		— CONTINUED FROM PREVIOUS PAGE — (CL) sandy SILTY CLAY to SILTY CLAY and SAND, some gravet; brown to grey at 6.1 m (TILL), contains cobbles and boulders; cohesive, w≺PL, very stiff to hard			10	SS (50/		0		
12					11	S3 (50/ 0.07		0		Bertonite
13	Track Mount Mobile 857 130 mm Tricone Mud Robiny				12	SS	50/		0		iz.
- 14	Track Mour 130 mm Trico				13	ss å	00/		O	МН	Sand R
15					14	\$5	50/		0		n ser ser ser ser se
16					15	SS	5 2		0		Screen
- 17		END OF BOREHOLE NOTES: 1. Water encountered at a depth of 4.6 m during drilling.		199,41 17,04	16	5S 0	50/		0		Sand S
18		Water level measured in monitoring well as follows: Date Depth (m) Elev. (m) 20-May-21 0.6 215.9									
20											
DEF		CALE					(GOLDER MEMBER OF WOR			DGGED: YS ECKED: YS

LOCATION: N 4861617,47; E 632979,74

RECORD OF BOREHOLE: 21-2

BORING DATE: May 7, 2021

SHEET 1 OF 2

	9	SOIL PROFILE		S	AMP	_	DYNAMIC PENETRATION \ RESISTANCE, BLOWS/0,3m	HYDRAULIC CONDUCTI	vii, . ∐ <u>₹</u>	PIEZOMETE
	BORING METHOD	DESCRIPTION	STRATA PLOT	ᆔᅙ	TYPE	BLOWS/0.3m	20 40 50 80 SHEAR STRENGTH nat V. + Q Cu, kPa rem V. ⊕ U	10° 10° 10° 10° 10° 10° 10° 10° 10° 10°	PERCENT 5	OR STANDPIPE
	8	GROUND SURFACE	+	-	H	븁	20 40 60 80	10 20 30		
1	Track Mount Mobile B57 200 mm 0.0. Hollow Stem Augers	TOPSOIL (100 mm) FILL - (CL) sandy SILTY CLAY; brown, rootlets, organic inclusions; cohesive, w-Pf, firm	220	2	ss			o o	0	50 mm Diameter PVC Monitorilg Well (Flush mount)
2		(SM) SILTY SAND; brown; non-cohesive, moist, very dense	218	4		65		0		Bentonite
4		(SP) gravelly SAND, some fines; brown; non-cohesive, wet, very derise	216		ss	. 61		0		₩ay 20, 2021 Sand
6	Track Mount Mobile 857 130 mm Tricone Mud Rotary	(CL) sandy SILTY CLAY, some gravel;	213	7	ss -	63/ 0.25	3	Φ	м	Screen
Б		grey (TiLL), contains cobbles and boulders; cohesive, w <pl, hard<="" td=""><td></td><td>8</td><td>ss</td><td>50V 0.10</td><td></td><td>0</td><td></td><td></td></pl,>		8	ss	50V 0.10		0		
9					_ \$8	50/ 0.10		d		
		CONTINUED NEXT PAGE								

RECORD OF BOREHOLE: 21-2

BORING DATE: May 7, 2021

SHEET 2 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

LOCATION: N 4861617,47; E 632979,74

HAMMER TYPE: AUTOMATIC

CONTINUED FROM PREVIOUS PAG L) sandy SILTY CLAY, some grave ey (TILL), contains cobbles and ulders; cohesive, w <pl, hard<="" th=""><th>STRATA</th><th></th><th></th><th>S 50' 50' 50' 50' 50' 50' 50' 50' 50' 50'</th><th>SHEAR STRENGTH mat V cem V. 6</th><th>90 10° 10° 10° H Q - • • • • • • • • • • • • • • • • • •</th><th>30 40</th><th>PIEZOMETER OR STANDPIPE INSTALLATION</th></pl,>	STRATA			S 50' 50' 50' 50' 50' 50' 50' 50' 50' 50'	SHEAR STRENGTH mat V cem V. 6	90 10° 10° 10° H Q - • • • • • • • • • • • • • • • • • •	30 40	PIEZOMETER OR STANDPIPE INSTALLATION
L) sandy SILTY CLAY, some grave	GE —		111 5:	500 0.15 50/0.05	20 40 60	60 10 20 C	30 40	
L) sandy SILTY CLAY, some grave	7 7 7 7 7		111 55	50/ 0.10		c	M	H-I
ey (TILL), contains cobbles and ulders; cohesive, w≺PL, hard			111 55	50/ 0.10		c	M	R-1
			12 SS	50/ 0.08			M	* -1
							M	Ri .
			13 85	50/ 0.08				
			Œ. 35	50/ 0.04		0		
		5	[<u>5</u>] ss	50V 0.10		0		
		3	16 SS	50V ,010)		c		
D OF BOREHOLF		202.42 T	7 95	50/ 0:10		0		
OTES: Water encountered at a depth of im during drilling. Water level measured in monitoring ill as follows: te Depth (m) Elev. (m) May-21 4.7 216,1	ng							
Va Wa Wa	ter encountered at a depth of during drilling, ter level measured in monitoring s follows:	ter encountered at a depth of during drilling, ter level measured in monitoring s follows:	OF BOREHOLE 19.38 S: ther encountered at a depth of during drilling, ter level measured in monitoring s follows:	OF BOREHOLE SS: ther encountered at a depth of during drilling, ter level measured in monitoring s follows:	OF BOREHOLE 19.38 Ster encountered at a depth of during drilling, iter level measured in monitoring s follows:	OF BOREHOLE SS: ther encountered at a depth of during drilling, ter level measured in monitoring s follows:	OF BOREHOLE 19.38 202.42 177 SS 50V (0.19) 19.38 SS: ther encountered at a depth of during drilling, ter level measured in monitoring s follows:	OF BOREHOLE 19.38 202.42 17 S.S 507 19.38 St. 19.39 St. 19.39



RECORD OF BOREHOLE: 21-3 SHEET 1 OF 3 PROJECT: 19119989 (2000) LOCATION: N 4861620;43; E 633018.12 DATUM: Geodetic BORING DATE: May 4, 2021 HAMMER TYPE: AUTOMATIC SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm DYNAMIC PENETRATION RESISTANCE, BLOWS/0,3m HYDRAULIC CONDUCTIVITY, k, cm/s SAMPLES SOIL PROFILE ADDITIONAL LAB. TESTING BORING METHOD DEPTH SCALE METRES PIEZOMETER 10⁴ 10⁵ 104 STRATA PLOT 60 40 STANDPIPE NUMBER TYPE ELEV. BLOWS/0 WATER CONTENT PERCENT SHEAR STRENGTH nat V + Q · ●
Cu, kPa rem V ⊕ U - O INSTALLATION DESCRIPTION -ow -DEPTH (m) GROUND SURFACE 220.62 50 mm Clameter PVC Monitornig Well (Flush mount) TOPSOIL (680 mm) 0 58 (CL) SILTY CLAY and SAND, some gravel; brown; cohesive, w<PL, stiff 55 (SM) SILTY SAND, trace gravel; brown (TILL); very dense SS 50 Bentonile 218.69 (ML) SILT and SAND; brown; non-cohesive, moist to wet, dense to very dense 58 SS 61 May 20. 2021 DATAIGINTBERCZYGLEN MARKHAM GPJ GAL-MIS GDT 6/25/21 Track Mount Mobile BS7 0 55 32 215.26 5.56 (SP) gravelly SAND, trace fines; brown; non-cohesive, wet, very dense 8 SS S.ICLIENTSISCS CONSULTINGIBERCZYGLEN MARKHAMIOZ 0 93

GOLDER

9 SS 50/

DEPTH SCALE

GTA-BHS 001

CONTINUED NEXT PAGE

PROJECT: 19119989 (2000)

RECORD OF BOREHOLE: 21-3

SHEET 2 OF 3

	ć	J	SOIL BROCKE		_	0.4	MPL	E0 1	DYNAMIC PENI	TRATION		HYDRAULIC A	CONDUCTIVIT			PE: AUTOMATIC
<u>.</u>	D. T. T.		SOIL PROFILE	5	Γ	\vdash	MPL		RESISTANCE,	LOWS/0,3m	80	k, cm	10 ⁵ 10 ⁴	' ₁₀ ,]	¥¥ SV EV EV EV EV EV EV EV EV EV EV EV EV EV	PIEZOMETER OR
METRES	ROBING METHOD	SAING N	DESCRIPTION	STRATA PLOT	ELEV, DEPTH (m)	NUMBER	TYPE	BLOWS/0,3m	SHEAR STREN	GTH nart V.		WATER	CONTENT PER		ADDITIONAL LAB. TESTING	STANDPIPE INSTALLATION
\exists	-	-	— CONTINUED FROM PREVIOUS PAGE —	S	(,	-	_	0	20 4	60	80	10	20 30	40	++	
	Track Mount Mobile 857	200 mm O.D. Hollow Stem Augers	(CL) sandy SILTY CLAY, some gravel; grey (TiLL), contains cobbles and boulders; cohesive, w <pl hard<="" td="" to="" w~pl,=""><td></td><td>210.59</td><td>10</td><td></td><td>50/ 0.08 60/ 0.10</td><td></td><td></td><td></td><td>0</td><td></td><td></td><td></td><td></td></pl>		210.59	10		50/ 0.08 60/ 0.10				0				
13							3S SS					0			мн	
16	Track Mount Mobile BS7	mm Tricone Mud Rotary				14	\$3 \$8					0				
17	E	130				16	SS	50/ 0.15				¢				
119			END OF BOREHOLE NOTES: 1, NP = Non-Plastic 2, Water encountered at a depth of 4.6 m during drilling.		202.40 16.42	17	SS	50/ 6.13				Ġ				
20	2		CONTINUED NEXT PAGE					-								

PROJECT: 19119989 (2000)

23

J GAL-MIS GDT 6/25/21

RECORD OF BOREHOLE: 21-3

SHEET 3 OF 3

LOCATION: N 4861620,43; E 633018,12

BORING DATE: May 4, 2021

DATUM: Geodetic

HAMMER TYPE: AUTOMATIC SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HYDRAULIC CONDUCTIVITY, k, cm/s DYNAMIC PENETRATION RESISTANCE, BLOWS/0,3m SOIL PROFILE SAMPLES BORING METHOD DEPTH SCALE METRES 10⁶ 10⁵ 10⁴ 10³ 20 40 60 OR STANDPIPE NUMBER TYPE SHEAR STRENGTH nat V + Q · • Cu, kPa rem V ⊕ U - O ELEV. WATER CONTENT PERCENT INSTALLATION DESCRIPTION DEPTH (m) -- CONTINUED FROM PREVIOUS PAGE -20 3. Water level measured in monitoring well as follows: Date Depth (m) Elev. (m) 20-May-21 4,5 216,3 21 22

DEPTH SCALE
1:50



LOGGED: SC

CHECKED: YS

LOG OF DRILLING OPERATIONS

AG-MW1

BURNSIDE

R.J. Burnside & Associates Limited 292 Speedvale Avenue West, Guelph, Ontario N1H 1C4 telephone (519) 823-4995 fax (519) 836-5477

Page 1 of 1

Client:	Angus Glen Developments Inc.	1	Angus Glen MESP		Logged by		C. D.				
	No.: 300036802	Location: Mar			Ground (m						_
	Co.: Lantech Drilling Services Inc.		3/2/2015		Static Wat						
Orilling N	Method: Hollow Stem Auger	Date Completed	: 3/2/2015		Sand Pacl					7.62	_
Depth			Elev.				SAM	1PLE		De	'n
Scale	Stratigraphic Descripti	on	Strat. Plot Debth			Ë	Type	يہا	N.Val.	Sc	•
		25.80	(m)			Num.	Ţ	<u>i</u>	ź		
ft) (m) 	TOPSOIL	23.00	("")					/		(ft)	Т
	Dark brown clayey silt, rootlets					1	SS	$ \vee $	8		
-			225.30 0.50					$/ \setminus$			ŀ
-	CLAY Silty Brown, soft, wet, grey clay mottlir	na low								_	-
- 1.0	plasticity, trace fine sand, iron sta	ining,					00	$ \bigvee$	40		ŀ
	occasional gravel (<1 cm diamete	er), subangular				2	SS	$ \bigwedge $	18		
	to subrounded, occasional pocke	ts with fine to	224.35								
5.0	medium sand									5.0 —	1
	Sandy Silt TILL Brown, stiff, medium plasticity, dr	v trace to				3	SS	X	15		
- 2.0	some clay, trace gravel (<2 cm d							\bigvee			t
-	subangular to subrounded, iron s							/	\vdash	_	1
-	occasional cobble	-				4	SS		59		+
				Holeplu	ıg			//			
3.0	sandier and harder with depth									10.0 —	ł
	Sandia nation with doptin					_		$\backslash /$			
F						5	SS		91		-
								<u> </u>			
4.0								/		_	1
7.0						6	SS	X	63		
								\bigvee			
5.0								/		15.0 —	f
						7	SS	X	>50/3"		
- 5.0								\mathbb{Z}^{\setminus}			t
4										_	1
-											+
6.0								<u> </u>	-	20.0 —	ŀ
						8	ss	$ \bigvee$	>50/6"	20.0 -	
-					. ale			$ / \setminus$	-3.0		-
				Sandpa	ICK			<u> </u>			
7.0				Well So	reen					-	1
5.0]	I			7.62				\		25.0 —]
						9	SS	\setminus	>50/4"		
			217.57					\angle			
			8.23								
renare	ed By: C. D.	Checked By:	J. S.		Date P	rena	red.	3.	/3/20	15	=
his bor	ehole log was prepared for hydrogeolog	gical and/or enviro	nmental purposes a	and does not	necessarily	cont	ain ir	nform	natior		_
uitable	for a geotechnical assessment of the s tes Limited personnel before use by oth	ubsurface condition	ons. Borehole data	requires inter	pretation by	R. J	. Bur	nside	e &		
EGEND	MONITORING W	/ELL DATA	SAMPLE TYPE	AC 🔼 A	uger Cutting	SS	$_{\rm s} lacksquare$		Split	Spoo	יכ
		n dia. PVC			Continuous	AF			Air R		
					OHUHUUUS					ulaiv	•

LOG OF DRILLING OPERATIONS

BURNSIDE

R.J. Burnside & Associates Limited 282 Speedvale Avenue West, Guelph, Ontario N1H 1C4 telephone (519) 823-4995 fax (519) 836-5477 BG-MW1

Page_1_ of _1_

	Client:	Berczy Glen Landown	ers Group	Project Name:	Berczy Glen I	_ands		Logged by	<u>.</u> (C. Dir	nules	scu		
	Project N	lo.: 300033248		•	kham, ON			Ground (m	ams	il): :	220.2	2		
	Drilling C	o.: Lantech Drilling S	ervices Inc.	Date Started:	9/18/2013			Static Wat	er Le	vel C	Depth	(m):		
	Drilling M	fethod: Hollow Stem	Auger	Date Completed	9/18/2013			Sand Paci					3.86	
ĺ		*****		•					-		PLE			
	Depth Scale	Stratig	raphic Descrip	tion	Strat Depth				Num.	Туре	Int.	N.Val.	De _l Sca	
	(ft) (m)	Surface Elevation (m		220.20	(m)	33333 N			-				(ft)	(m)
	-	TOPSOIL - dark b SILTY CLAY - with gravel, pockets of t	sand, trace f							58	X	24		-
	- 1.0	sand, damp, weakl iron staining			×				1	88	X	21	-	1.0
	5.0 - 2.0	SANDY SILT - trac brown, weakly plas			X X 1.57 X X X		·		2	SE	X	24	5.0	-20
		SAND - very fine to occasional gravel,			221		bentonit	e seal	3	S85	X	82/10'	-	-
	10.0 - 3,0	to wet, loose.				:			4	S6		56/6"	10.0	-3.0
	-4.0					Ā							-	− 4 ,0
	15.0	SANDY GRAVEL -	traca alau t	raca cilt wall	0 0 4.70							\vdash	15.0 —	-
DT 1/28/14	- 5.0	graded, wet to satu					silica sa	nd pack	5	88		105	_	- 5,0
TEMPLATEG	— 6,0 20.0—	SAND - medium to fine gravel, trace s \loose, saturated, w	ilt, uniform, li		5.64 O O 6.25				6	88	\geq	TI	20.0 -	-6.0
OLEN.GPJ		SANDY GRAVEL - subangular to subr cobbles, saturated	ounded, trace		6.86	6.96			8	es ss				-
03328 BERCZY		SAND - fine to coa gravel, uniform, lig and boulders												
GLENBOC		Stone refusal at 6.	86 m											
PROINTIPROJECT SISCO JOBSISCO SER BERCZY GLENISCO 3328 BERCZY GLENIGRIJ TEMPLATE GDT 1/28/14														
ECTS\300 J								*******						
Ő.	Prepare	ed By: S. Charity		Checked By:	C. Dinules	SCU .		Date P	repa	red:	1	0/7/20)13	
	suitable	ehole log was prepared for a geotechnical ass tes Limited personnel b	essment of the	subsurface conditi	onmental purp ions. Borehol	oses and e data requ	does not uires inte	necessaril rpretation l	y cor by R.	ntain J. B	infoi urns	matio ide &	ın	
GUELPH	LEGEND		MONITORING	WELL DATA	SAMPLE	TYPE AC	A	ager Cutting	SS	s 🔼	<	Split S	Spoo	n
XG GL		r found @ time of drilling	Pîpe: 51 n	nm dīa. PVC		cs [ontinuous	A	3 💹		Air Ro		
BHLOG	∑ Static	Water Level -	Screen: 51 n	nm dia. PVC #10 slot		RC	AAA R	ock Core	W	c 🖸		Wash	Cut	tings

Log of Borehole 116

BRM-00609175-AO 20 Project No. Drawing No. Geotechnical Investigation - Berczy Warden Subdivision Sheet No. 1 of 1 Project: 10206 and 10348 Warden Avenue, Markham, Ontario Location: Combustible Vapour Reading \boxtimes Auger Sample May 13, 2020 X Date Drilled: Natural Moisture 0 🛭 SPT (N) Value Plastic and Liquid Limit Dietrich 120 Dynamic Cone Test Drill Type: Undrained Triaxial at \oplus Shelby Tube % Strain at Failure Geodetic Datum: Field Vane Test Penetrometer N Value Combustible Vapour Reading (ppm) SYMBO-250 750 500 G W L ELEV. Unit Weight kN/m³ 20 Shear Strength Natural Moisture Content % Atterberg Limits (% Dry Weight) Soil Description m 213.76 TOPSOIL - 300mm dark brown sandy ő 213.5 SANDY SILT - brown, saturated, 213.1 loose SILTY CLAY - brown, moist, very stiff Ö becoming grey Ö 210.9 SANDY SILT TILL - scattered gravel and cobbles; grey, moist with wet sand seams, very dense 207.5 **END OF BOREHOLE** NOTES: 1. Groundwater monitoring well installed to 5.84m; sealed with bentonite from 0.3 to 2.18m.

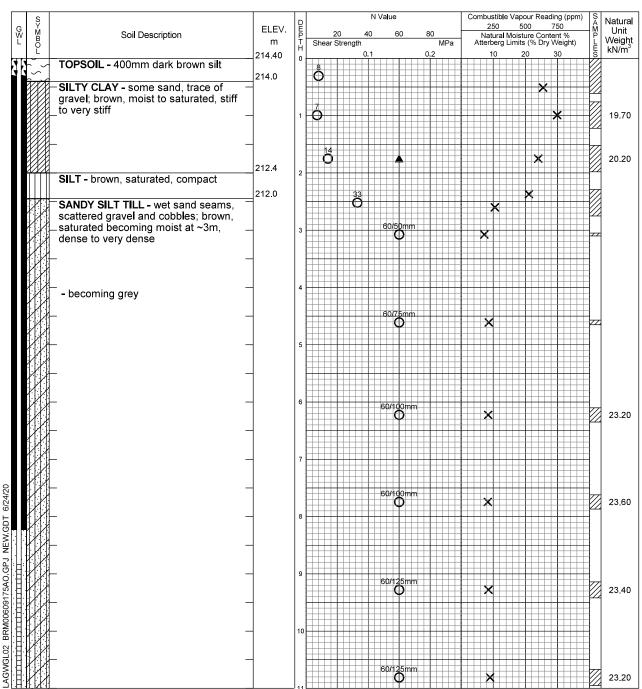


LAGWGL02 BRM00609175AO.GPJ NEW.GDT 6/24/20

Time	Water Level (m)	Depth to Cave (m)
On completion	Dry	Borehole
After 9 days	0.97	Well
After 14 days	0.99	Well

Log of Borehole 113

BRM-00609175-AO Project No. Drawing No. Geotechnical Investigation - Berczy Warden Subdivision Sheet No. 1 of 2 Project: 10206 and 10348 Warden Avenue, Markham, Ontario Location: Combustible Vapour Reading \boxtimes Auger Sample May 19 and 22, 2020 X Date Drilled: Natural Moisture 0 🛭 SPT (N) Value Plastic and Liquid Limit Dietrich 120 Dynamic Cone Test Drill Type: Undrained Triaxial at \oplus Shelby Tube % Strain at Failure Geodetic Datum: Field Vane Test Penetrometer N Value Combustible Vapour Reading (ppm) 750 250 500 ELEV. 20 Shear Strength Natural Moisture Content % Atterberg Limits (% Dry Weight) Soil Description



Continued Next Page



Time	Water Level (m)	Depth to Cave (m)
On completion	3.96	Borehole
After 4 hours	0.61	Well
After 5 days	0.58	Well

Log of Borehole 113

BRM-00609175-AO Project No. Drawing No. Geotechnical Investigation - Berczy Warden Subdivision 2 of 2 Project: Sheet No. N Value Combustible Vapour Reading (ppm) Natural 250 500 750 Natural Moisture Content % Atterberg Limits (% Dry Weight) ELEV. Unit Weight kN/m³ Soil Description Shear Strength 10 203.40 50/150mr 23.30 201.9 END OF BOREHOLE Groundwater monitoring well installed to 11.89m; sealed with bentonite from 0.3 to 8.23m. LAGWGL02 BRM00609175AO.GPJ NEW.GDT 6/24/20



Time	Water Level (m)	Depth to Cave (m)
On completion	3.96	Borehole
After 4 hours	0.61	Well
After 5 days	0.58	Well

Log of Borehole 113A

Proje	ct No.	BRM-00609175-AO										Dr	awing	No.		17	
Proje	ct:	Geotechnical Investigation	ı - Bercz	zy '	Wa	arden	Su	bdivi	ision			;	Sheet	No.	1	of 1	
Locat	ion:	10206 and 10348 Warden										•					_
							,										_
Date	Drilled:	May 22, 2020		_	Aug	er Sample				\boxtimes		ustible V al Moistu		Reading	>		
		Dietrich 120				(N) Va l ue amic Cone	Toc		0	2	Plastic	c and Liq	juid Limi	t 		Ð	
	Гуре:			_	-	lby Tube	165		ı			iined Tria ain at Fa			\oplus		
Datui	n:	Geodetic		-	Field	d Vane Tes	t		١	S	Penet	rometer			•		
s	:			Тп			1	l Va l ue						ading (ppr	m) S	Natura	П
G&L		Soil Description	ELEV. m	DEPT	Sł	20 near Strengt	40 h	6	0	80 MPa	Na Atter	250 itural Mois bera Limi	500 sture Co its (% Dr	750 ntent % y Weight)	m) SAMPLES	Unit Weight	t
		SOIL - 400mm dark brown silt	214.40	0	, 	THE PROPERTY OF THE PROPERTY O	0.1			0.2		10	20	30	S	kN/m³	4
\ 			214.0														
		Y CLAY - some sand, trace of el; brown, moist to saturated, stiff					Ħ										
		ery stiff	_	1													
							Ħ										
	SILT	- brown, saturated, compact	212.4	2													
Ш		•	212.0				Ħ										
		DY SILT TILL - wet sand seams, ered gravel and cobbles; brown,	7														
	satu	rated becoming moist at ~3m, se to very dense	-	3													
	dens	e to very derise					Ħ										
	- be	coming grey	-	4			H					##					
		3 3,															
			-	5			Ħ										
							Ħ										
			\dashv	6													
							Ħ										
			207.2	7													
	NOT	END OF BOREHOLE ES:															
	1. G	roundwater monitoring well stalled to 7.19m; sealed with															
	be	entonite from 0.3 to 3.53m.															
							Ħ										
					Ħ		+					##					
					Ħ		Ħ										
					Ш										Ш		



LAGWGL02 BRM00609175AO.GPJ NEW.GDT 6/24/20

Time	Water Level (m)	Depth to Cave (m)
On completion	Dry	Borehole
After 4 hours	1.14	Well
After 5 days	1.09	Well
-		

LOG OF DRILLING OPERATIONS

AG-MW12



R.J. Burnside & Associates Limited

ch Drilling Services Inc. ollow Stem Auger Stratigraphic Descrip Elevation (m): IL Dwn sandy silt, weathere, dry and Sand, fragments of t, dry, trace silt	Date Started: Date Completed otion 217.20 ed small pieces	rkham, ON 2/25/2015 d: 2/25/2015 d: below. Depth (m) 2/15,76 1.44		Ground (n Static Wat Sand Pac	ter Le k Dep	vel De	pth (m : 5.46	- 7.62 De Sc (ft)
Stratigraphic Descrip Elevation (m): IL Dwn sandy silt, weathere, dry	Date Completed otion 217.20 ed small pieces	z z/25/2015 traction of the control			k Dep	The man of the second s	: 5.46 LE	- 7.62 De Sc (ft)
Stratigraphic Descrip Elevation (m): IL own sandy silt, weathere , dry	otion 217.20 ed small pieces	S Depth (m)		Sand Pac	n n n	SAMP ed L	LE STORY	De Sc (ft)
Elevation (m): IL Dwn sandy silt, weathere , dry and Sand, fragments of	217.20 ed small pieces	Jag Depth (m)			1 2	es Type	Lucial N. V.	So (ft)
Elevation (m): IL Dwn sandy silt, weathere , dry and Sand, fragments of	217.20 ed small pieces	Jag Depth (m)			2	ss	froze	So (ft)
IL own sandy silt, weathere , dry and Sand, fragments of	ed small pieces	(m)			2	ss	froze	(ft)
IL own sandy silt, weathere , dry and Sand, fragments of	ed small pieces		-					n -
, dry and Sand, fragments of		215.76	-					-
and Sand, fragments of	rocks, loose to	215.76				ss	29	50.
	rocks, loose to	215.76	-			ss	29	50.
	rocks, loose to	1.44						J 50.
	rocks, loose to				1 , 1	1 \	/ I	5.0
t, dry, trace slit					3	ss /	>10	
		IXXXXI						Ϊ.
			Holep	dua.	4	ss	>50/	3"
			Појер	лug				10.0
			\Box		5	ss	>50/	ı-
NIL TIL I		213,47	-			-		┪.
	e gravel (<2 cm				6	ss	>50/	2"
r) subangular to subrou	ınded,					-V	+	15.0
nal pockets with mediun	n sand				7	ss	>50/	
s harder with depth						/		
- · · · · · · · · · · · · · · · · · · ·								'
								20.0
			Sandı	pack	8	ss /	>50/	5"
			Well 9	Screen				-
		209.58 7.62	7.62			$\overline{}$	\rightarrow	∟ _{25.0} .
					9	ss	>50/	r.
								_
r	r) subangular to subrou	iff, dry, some clay, trace gravel (<2 cm er) subangular to subrounded, nal pockets with medium sand	ciff, dry, some clay, trace gravel (<2 cm er) subangular to subrounded, nal pockets with medium sand es harder with depth	siff, dry, some clay, trace gravel (<2 cm er) subangular to subrounded, nal pockets with medium sand es harder with depth Sand Well S	Siff, dry, some clay, trace gravel (<2 cm er) subangular to subrounded, nal pockets with medium sand es harder with depth Sandpack Well Screen	solit TILL ciff, dry, some clay, trace gravel (<2 cm er) subangular to subrounded, nal pockets with medium sand es harder with depth Sandpack Well Screen 8	siff, dry, some clay, trace gravel (<2 cm str) subangular to subrounded, nall pockets with medium sand res harder with depth Sandpack Well Screen Sandpack Well Screen	solit file Liff, dry, some clay, trace gravel (<2 cm ser) subangular to subrounded, nall pockets with medium sand ses harder with depth Sandpack Well Screen Sandpack Well Screen

PROJECT: 14-1186-0012 LOCATION: See Figure 2

RECORD OF BOREHOLE: 14-16

SHEET 1 OF 2

BORING DATE: May 8, 2014

DATUM: Geodetic

11	00	SOIL PROFILE			SA	MPL	ES	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	HYDRAU	LIC CONDUCTIV	ATY.	.0	
METRES	BORING METHOD		101		DY.	1	3m	20 40 60 80	10*		10"	ADDITIONAL LAB. TESTING	PIEZOMETER OR
MET	ING N	DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH nat V + Q - ● rem V. ⊕ U - ○	WAT	ER CONTENT P	ERCENT	3 TE	STANDPIPE INSTALLATION
	BOR	1100000000	TRA	DEPTH (m)	N	F	NOTE		Wp I		-I WI	LAE	
-	w	GROUND SURFACE	(X)	1000			ui.	20 40 60 80	10	20 30	40		
0	1	FILL - (ML) CLAYEY SILT, some sand,	XXX	214.70	-	H			-				F.0
		organic inclusions; dark brown; cohesive, W <pl firm<="" td="" to="" w-pl,=""><td></td><td></td><td>1</td><td>SS</td><td>5</td><td></td><td></td><td>a</td><td>1</td><td>1</td><td>Concrete</td></pl>			1	SS	5			a	1	1	Concrete
		72 20 11 1 2 2 2 11 2 2 11 11											
		(ML) sandy CLAYEY SILT; pale brown,	XX	214,01 0.69									
7		with oxidation staining, cohesive, W <pl, stiff<="" td=""><td>X</td><td></td><td>2</td><td>SS</td><td>ġ</td><td></td><td></td><td>0</td><td></td><td></td><td></td></pl,>	X		2	SS	ġ			0			
						200			1				
		(CI) SILTY CLAY, some sand; grey, with		213.33 1.37									
		oxidation staining; cohesive, W>PL, firm to stiff									72-11-0-		
		io sint			3	SS	7			1	0-1	PI.	
2		Marchan College Comp											
		Very thinly bedded with fine sand below a depth of approximately 2.1 m below											
		existing ground surface			4	SS	12			Ö.			
				244.04	-								
.3		(ML) sandy SILT, some clay to clayey,		211.80									
		trace gravel, with pockets of medium sand; grey (TILL); non-cohesive, moist,	7 6		5	SS	83		CI.				
		very dense	9		-	1	33		-				
											ė s		V-
4			4 4										Ž
sof il			9										
1	0	12	4 4				Ш						
1	Hollow Stem Augers		4		6.	SS	50/		a				
	ACK MOUNTED CIN		100				.ub						
5	v Sten		Fa 4									1	Bentonite Seal
1	Hollov		D. C.										
1	-		4										
			4										
6			9,14						7.5				
			9 6		7	SS	50/		-23				
			9 98										
1			12						Ì				
70													
	1		1						}				
		11	4 4			P.O.	50/		73				
			4 4		8	55	.08		Ü				
8			40.0										
			9										
		1	4	ĺ									
9			+	1			201						
					9	SS	.13		1.7				
			4										
	Ш		9										
10		CONTINUED NEXT PAGE				-	-						
	TI 1 -	CALE	1		_	1				1			ocorn io
	THS 0	CALE						Golder Associates					OGGED: JG ECKED: AM

PROJECT: 14-1186-0012 LOCATION: See Figure 2

RECORD OF BOREHOLE: 14-16

BORING DATE: May 8, 2014

SHEET 2 OF 2

DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

HAMMER TYPE: AUTOMATIC

4	8	SOIL PROFILE			SA	MPL	ES	DYNAMIC PI	ENETRA E. BLOW	TION S/0.3m	1	HYDRAUL 8. c	IC CONE	UCTIVE	TY.	ى ا	pursua a series
METRES	BORING METHOD		LOT	-	œ		3m	20	40	60	80	10*	105	10+	10-5	ADDITIONAL LAB. TESTING	PIEZOMETER OR
MET	SING	DESCRIPTION	STRATA PLOT	DEPTH	NUMBER	TYPE	BLOWS/0.3m	SHEAR STR Cu, kPa	ENGTH	nat V rem V.	+ Q- ♦ ⊕ U- O		R CONT			DDOTT	STANDPIPE INSTALLATION
ă	BOR		STR	(m)	Z		BLO	20	40	60	80	Wp 1-	20	30 30	40	44	
10		— CONTINUED FROM PREVIOUS PAGE —															
10		(ML) sandy SILT, some clay to clayey, trace gravel, with pockets of medium	4														
	Ш	trace gravel, with pockets of medium sand; grey (TILL); non-cohesive, moist, very dense	113														
		1.00	100				50)	/i II I		Î							
				ł	10	SS	13									1112	Bentonite Seal
-11		1	40		Н		Н			1		1				1	
			70														
			4														E.
																	l l
12			Fat.														Ę.
	ME 56		Fa		11	SS	50/					0					[3]
	Stem Auge	h	1														(A)
40	TRACK MOUNTED CME 55 Hollow Stern Aupers		100														5
13	RACK MC Hollow	Becoming more moist below a depth of approximately 13.1 m below ground	40														
	Е	approximately 13.1 m below ground surface	38														178
																	l de la constant de l
14.			4		12	SS	99/					O					Silica Sand Filter
			400		-							100					Silica Sal N Fixer
			400														
			4														(2)
15		Augers grinding below a depth of	88														
		Augers grinding below a depth of approximately 14.9 m below ground surface. Inferred cobble/boulder	4				SAL										
	L	a to the second second	1913	199.16	3	SS	50/					TY)					
		AUGER REFUSAL ON INFERRED COBBLE/BOULDER END OF BOREHOLE		15.54													Water level measured at a depth
00		END OF BUREFIOLE										-				1113	3.87 m below ground surface, June 20/14
																	-
17																	
18																9	
46																	
19																	
20																	
0.1		0.53%	1	-				117	3							-1-	130.00 - 0
DE	PTH:	SCALE						(Gol	der ciates						OGGED: JG IECKED: AM

RECORD OF BOREHOLE: KP1

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4861996.50; E 634983.99

BORING DATE: January 21, 2021

HAMMER TYPE: AUTOMATIC SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 10⁻⁵ BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -OW Wp I -I WI (m) GROUND SURFACE 204.50 ASPHALT (140 mm thick) Crushed granular; brown 0.14 204.05 0.45 AS FILL - (SP-SM) SAND, trace gravel, some fines; brown; non-cohesive, moist (Cl) SILTY CLAY, some sand; brown, 1B 203.80 B57 Truck Mount m O.D. Hollow Stem oxidation staining; cohesive, w<PL, very 2 SS 15 0 МН 150 mm 3 ss 15 END OF BOREHOLE NOTES: 1. Borehole caved to a depth of 1.3 m upon completion of drilling. 2. Borehole was dry upon completion of drilling. S:ICLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVEI02 DATAIGINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 4/5/21 9 10 GTA-BHS 001 DEPTH SCALE LOGGED: JL

RECORD OF BOREHOLE: KP2

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862126.14; E 634957.69

BORING DATE: January 21, 2021

	ŏ		SOIL PROFILE			SAME	PLES	DYNAMIC PEN	IETRATIO	V /	HY	DRAULIC CO	ONDUCTIV	/ITY,	\top	
DEPIH SCALE METRES	BORING METHOD		DESCRIPTION	STRATA PLOT	1	NUMBER	3m	RESISTANCE, 20 L SHEAR STREI Cu, kPa	40 60	80	, 8	k, cm/s 10 ⁻⁶ 1 WATER CO	D ⁵ 10 ⁻ ONTENT F	PERCENT	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
<u>ن</u>	BÖ			STR,	(m)	Ž	BLC		40 60				0 30		~ 1	
			GROUND SURFACE		207.80											
0			ASPHALT (160 mm thick)	~~~	0.00											
		.	Crushed granular with RAP; brown	\bowtie	0.16 207.37	1A										
		Auger	FILL- (SP-SM) SAND, trace gravel,		0.43	A:	3 -									
	anut	画	some fines; brown; non-cohesive, moist	\bowtie	207.04	1B										
	B57 Truck Mount	ã F	FILL - (CL-ML) gravelly SILTY CLAY-CLAYEY SILT and SAND, brown;	\bowtie	0.76	2 S						⊢⊖ι			мн	
'	7 In	ĔΙc	cohesive, w>PL, stiff to very stiff	\bowtie		2 3] ''								IVID	
	B2	mm c.D.		\bowtie												
		150 E		\bowtie		-										
				\bowtie		3 S	3 18									
2	Ш	1_		\bowtie	205.82											
-		- 1	END OF BOREHOLE		1,98											
			NOTES:													
		1	Borehole caved to a depth of 1.5 m pon completion of drilling.													
		- 1														
3			2. Borehole was dry upon completion of drilling.													
		3	3. RAP = Recycled asphalt pavement													
			, ,													
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9																
10																
DE	DTL	100	۸۱ ۵					GC							1.0	ACCED: "
υE	riH	SCA	ALE.				ľ		טוו	ΕD					LC)GGED: JL

RECORD OF BOREHOLE: KP3

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862283.37; E 634927.65

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

BORING DATE: January 21, 2021

HAMMER TYPE: AUTOMATIC

		_	T HAMMER: MASS, 64kg; DROP, 760mm SOIL PROFILE			SAN	MPLE	S	DYNAMIC RESISTAI	PENE	TRATIO	ON	`	HYDRA	ULIC C	ONDUC	TIVITY,	Т		YPE: AUTOMATIC
DEPTH SCALE METRES	E	BORING METHOD		Б					RESISTAI 20	NCE, E 40			30	10	k, cm/s		0-4	10-3	ADDITIONAL LAB. TESTING	PIEZOMETER OR
ETR		<u>s</u>	DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	BLOWS/0.3m								Ĭ <u></u> ONTENT		1	- ESE	STANDPIPE
ıΣ	4	<u> </u>	DESCRIPTION	RAT,	DEPTH	N N	_	NO-	SHEAR S Cu, kPa		r	rem V. €	υ - O	Wp		O ^W			ADE LAB.	INSTALLATION
	à	<u> </u>		STI	(m)			В	20	40) (30	30	10				40		
0		\sqcup	GROUND SURFACE		212.00	Ш														
-			Crushed granular; brown	\bowtie	0.00	1A														
		e e		\bowtie	211.60		AS													
		Stem Auger	FILL - (SM) SILTY SAND, trace gravel: brown; non-cohesive, moist	\bowtie	0.40	1B														
	lount	0 mm O.D. Hollow Stem.		₩	211.24 0.76															
1	uck N	Mollo	FILL - (CL) SILTY CLAY, some sand; dark grey and black, organic inclusions;		30	2	ss	11												
	57 Tr	ᆲ	cohesive, w~PL, stiff																	
	ä	اق ا	(CL) SILTY CLAY and SAND, some	\gg	210.63 1.37															
		150 r	gravel; brown; cohesive, w <pl, stiff<="" td="" very=""><td></td><td>1.37</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>		1.37															
						3	ss	20												
2		Ц	END OF BOREHOLE		210.02 1.98	\sqcup	\dashv													
					1,36															
			NOTES:																	
			Borehole caved to a depth of 1.2 m upon completion of drilling.																	
3			2. Borehole was dry upon completion of drilling.																	
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			0.11.5					_												
			CALE						G	0		ΕI	R							OGGED: JL
1 : :	50																		CH	ECKED: TO

RECORD OF BOREHOLE: KP4

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862501.24; E 634887.30

BORING DATE: January 21, 2021

	٦	\Box	SOIL PROFILE			SAI	MPLI	=8	DYNAMIC PEI	NETRATI	NC	\	HYDR	AULIC CO	ONDUCT	IVITY,	_		
DEPIN SCALE METRES	BODING METHOD	<u> </u>	SOIL PROFILE	_		JAI			DYNAMIC PEI RESISTANCE			ζ,		k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER
RES		<u> </u>		STRATA PLOT		ايم		BLOWS/0.3m			50 8	0 '		0 ⁻⁶ 10	O ⁻⁵ 10) ⁻⁴ 1	^{0-₃} ⊤	NO E	OR
	2	בַּ ב	DESCRIPTION	Α	ELEV.	퉬	TYPE	S/0	SHEAR STRE Cu, kPa		nat V. +	Q - •	w	ATER CO	ONTENT	PERCE	NT	1등쁜	STANDPIPE INSTALLATION
75		[BEGGINE HOIL	₹	DEPTH	NUMBER	7	VO.	Cu, kPa	1	rem V. ⊕	U- O	l w	· 	-OW	—	W	PB	INSTALLATION
_	ă	ř		STI	(m)	_		В	20	40 (50 8	0			0 3		10		
			GROUND SURFACE		217.50														
0		П	ASPHALT (120 mm thick)		0.00														
			Crushed granular with RAP; brown	\bowtie	0.12 217.15	1A													
		la l	FILL - (SM) SILTY SAND, trace gravel:	₩	0.35		AS	-											
		Ā	brown; non-cohesive, moist	\bowtie		1B													
	ount	O.D. Hollow Stem Auger	FILL (CLML) grouply SILTY	₩	216.75 0.75														
	ck M	»o	FILL - (CL-ML) gravelly SILTY CLAY-CLAYEY SILT and SAND, brown;	\bowtie	0.75	2	ss	13						0					
' '	Tru	[울]	cohesive, w>PL, stiff	\bowtie		_	33	13											
	B57	힣		\bowtie	216.13														
		튑	(SM) SILTY SAND, some gravel; brown;	ΥΫ́	1.37														
		120	non-cohesive, moist, compact		1 [
						3	ss	16											
2		Ц	END OF DODE! 101 5	11.	215.52		_												
-			END OF BOREHOLE		1,98														
			NOTES:																
			1. Borehole caved to a depth of 1.5 m																
			upon completion of drilling.																
			Borehole was dry upon completion of																
3			drilling.																
			•																
			3. RAP = Recycled asphalt pavement																
4																			
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9																			
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RECORD OF BOREHOLE: KP5

DATUM: Geodetic BORING DATE: January 21, 2021

LOCATION: N 4862688.03; E 634846.61

SHEET 1 OF 1

					- 1					LINGS ALULIO CONSTRUCTO	
<u> </u>	2	ᄝᆝ	SOIL PROFILE			SAI	MPLI	ES	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	HYDRAULIC CONDUCTIVITY, k, cm/s	PIEZOMETER
METRES	CALCO	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + Q - ● Cu, kPa rem V. ⊕ U - ○	10 ⁻⁵ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³ WATER CONTENT PERCENT WP W W W W 100 20 30 40	PIEZOMETER OR STANDPIPE INSTALLATION
_			GROUND SURFACE		219.80						
. 0			Crushed granular; brown		0.00						
- 1	57 Truck Mount	3 mm O.D. Hollow Stem Auger	FILL - (SP) SAND, some gravel, trace fines: brown; non-cohesive, moist Recycled asphalt pavement FILL - (CL) SILTY CLAY, some sand; dark brown; cohesive, w>PL, stiff		219.41 0.39 0.55 219.02 0.78	1B	AS SS	9			
		150 mm ((CL) SILTY CLAY and SAND, some gravel; brown; cohesive, w <pl, stiff<="" td=""><td></td><td>218.43</td><td>3</td><td>ss</td><td>8</td><td></td><td>0</td><td></td></pl,>		218.43	3	ss	8		0	
2		Н	END OF BOREHOLE		217.82 1.98						
			NOTES:								
			Borehole caved to a depth of 1.2 m upon completion of drilling.								
. 3			2. Borehole was dry upon completion of drilling								
,											
4											
5											
6											
7											
. 8											
9											
10											
DE	PT	ГHS	CALE						GOLDER		LOGGED: JL

RECORD OF BOREHOLE: KP6

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4862905.53; E 634805.64

BORING DATE: January 21, 2021

HAMMER TYPE: AUTOMATIC SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 10⁻⁵ BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH OW. Wp I -I WI (m) GROUND SURFACE 221.80 0.00 221.60 0.20 221.40 ASPHALT (200 mm thick) Crushed granular; brown AS FILL - (SP) SAND, some gravel, trace fines; brown; non-cohesive, moist B57 Truck Mount 220<u>.</u>98 0.82 FILL - (CL) SILTY CLAY, some sand; dark brown; cohesive, w>PL, stiff 2B SS 8 0 220.43 1.37 150 mm (SM) gravelly SILTY SAND; brown (TILL); non-cohesive, moist, compact SS 28 3 END OF BOREHOLE NOTES: 1. Borehole caved to a depth of 1.3 m upon completion of drilling. 2. Borehole was dry upon completion of drilling. S:ICLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVEI02 DATAIGINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 4/5/21 9 10 GTA-BHS 001 DEPTH SCALE LOGGED: JL

GOLDER

RECORD OF BOREHOLE: KP7

SHEET 1 OF 1 DATUM: Geodetic BORING DATE: January 21, 2021

LOCATION: N 4863105.31; E 634761.62

	Ö	SOIL PROFILE			SAM	PLES	DYNAMIC PEN	IETRATION	Ŋ	HYDRAU	LIC CONDUC	TIVITY, -	-	
DEPTH SCALE METRES	BORING METHOD		<u> </u>			1	RESISTANCE.		``	10 ⁻⁶	, cm/s	10 ⁻⁴ 10 ⁻³	ADDITIONAL LAB. TESTING	PIEZOMETER
뛢	3 ME		STRATA PLOT	ELEV.	NUMBER	BLOWS/0.3m	20 SHEAR STRE	40 60 JGTH nat V	80 ·		10 ⁵ TER CONTEN			OR STANDP I PE
Ĭ Ħ	<u>Ā</u>	DESCRIPTION	*ATA	DEPTH	M	OWS/0.	Cu, kPa	rem V	# U O		OW OW		ABB	INSTALLATION
۱	8		STR	(m)	_	P.	20	40 60	80	10		30 40	`-'	
		GROUND SURFACE		222.80										
0		Crushed granular; brown		0.00										
	_			1	1A									
	Auger	FILL - (SP) SAND, some gravel, trace	₩	222 <u>.</u> 25 0.55	1B A	s -								
	Sterr	fines: brown; non-cohesive, moist	/ ₩	0,65										
1	uck N	FILL - (SM) SILTY SAND and GRAVEL with RAP; brown; non-cohesive, moist,	\bowtie	221.83 0.97	2A S	S 18								
	B57 Truck Mount O.D. Hollow Sten	\compact /	/‱	§ "."	2B								М	
	B5 mm O.			221.43 1.37										
	150	(CI) SILTY CLAY, trace sand; brown; cohesive, w>PL, very stiff		1										
		conceive, with E, very cum			3 8	S 15					0			
2		END OF BOREHOLE		220.82 1.98										
		NOTES:												
		Borehole caved to a depth of 1.3 m												
		upon completion of drilling.												
3		Borehole was dry upon completion of drilling.												
		RAP = Recycled asphalt pavement												
4														
5														
6														
7														
8														
9														
10														
			•				<u> </u>		•					
DE	PTH S	SCALE					GC		D				LOC	GGED: JL

RECORD OF BOREHOLE: KP8

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4863330.56; E 634715.76

BORING DATE: January 21, 2021

Щ _		무	SOIL PROFILE			SAI	MPLES	DY RE	/NAMIO	C PENI ANCE,	ETRATI BLOWS	ON /0.3m		HYDRA	AULIC C k, cm/s	ONDUC.	TIVITY,	T	وَدِ	PIEZOMETER
RES		MET		PLOT		æ	8	5	20	4	0 (30 L	80	10	0 ⁻⁶ 1	0 ⁻⁵ 1	0 ⁻⁴ 1	^{0-₃} ⊤	ONA	OR
METRES		BORING METHOD	DESCRIPTION	STRATA P	ELEV. DEPTH	NUMBER	TYPE	SH	HEAR S	STREN	IGTH	nat V. H	- Q - • 9 U - O				PERCE		ADDITIONAL LAB. TESTING	STANDPIPE INSTALLAT I ON
5		8 8		STRA	(m)	Z	_ [3 "		4					0 <u>-</u>				₹\$	
	t	\dashv	GROUND SURFACE		223,40		+		20	4	. <u>, </u>	30 	80			20 :	30 4	40		
0		П	ASPHALT (120 mm thick)		0.00														1 1	
			Crushed granular; brown	₩	0.12 223.02	1A														
		nger	FILL - (SP) SAND, some gravel, trace fines: brown; non-cohesive, moist	₩	0.38	1B	AS .	•												
	ŧ	en A	ASPHALT (260 mm)	***	222.78 0.62															
	k Mot	ow St	FILL - (CL) gravelly SILTY CLAY and	××××	222,52		ss 6	9/												
1	Truc	O.D. Hollow Stem Auger	SAND, grey; cohesive, w>PL, hard to	₩	0.88	2B	0.	١							0					
	B57		stiff	₩																
		150 mm	A constraint and a death of disc	₩																
		=	- Auger grinding at a depth of 1.1 m	\bowtie		3	SS 1													
				\bowtie	221.42	3	35 1	'												
2			END OF BOREHOLE		1.98															
			NOTES:																	
			1. Borehole caved to a depth of 1.4 m																	
			upon completion of drilling. 2. Borehole was dry upon completion of																	
3			drilling. 3. *N value may not be representative of																	
			the soil's consistency due to obstructions																	
			encountered.																	
4																				
5																				
6																				
7																				
_																				
8																				
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J																				
10																				
											1	1	1		I	-	<u> </u>	-		
DE	PΤ	TH S	CALE				1	\$. ~			_						10	GGED: JL

RECORD OF BOREHOLE: KP9

SHEET 1 OF 1

DATUM: Geodetic

LOCATION: N 4863498.29; E 634672.80

BORING DATE: January 21, 2021

	_		T HAMMER: MASS, 64kg; DROP, 760mm						DVALANIC DEVICED (TIC)		LIVED ALUIS COL			YPE: AUTOMATIC
¥		임	SOIL PROFILE	1.		SA	MPL	ES	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m		HYDRAULIC CONE k, cm/s		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	PIEZOMETER
METRES		BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + Cu, kPa rem V. ⊕		10° 10° 10° WATER CONT	10 ⁻⁴ 10 ⁻³ L TENT PERCENT	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
	\vdash	В	GROUND SURFACE	S.				ш	20 40 60 80)	10 20	30 40		
0	H	П	Crushed granular; brown		223,20 0.00									
			-		222.80	1A								
		Auger	FILL - (SP) SAND, some gravel, trace	₩	0.40		AS	-						
	tunc	Stem /	fines: brown; non-cohesive, moist	\bowtie		1B								
1	ick Mc	mm O.D. Hollow Stem Auger	FILL - (CL) gravelly SILTY CLAY and	₩	222,30 0.90		ss	14						
	57 Tru	D. H	SAND, dark brown; cohesive, w <pl, stiff="" stiff<="" td="" to="" very=""><td>\bowtie</td><td></td><td>2B</td><td></td><td></td><td></td><td></td><td> </td><td></td><td></td><td></td></pl,>	\bowtie		2B								
	8	l m	,											
		150		\bowtie										
				\otimes		3	SS	15						
2	H		END OF BOREHOLE		221.22 1.98									
			NOTES:											
			1. Borehole caved to a depth of 1.2 m											
			upon completion of drilling.											
3			Borehole was dry upon completion of drilling.											
			-											
4														
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7														
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DE	P	TH S	CALE						GOLDER)			LC	OGGED: JL
1:	50)								•			СН	ECKED: TO

1:50

RECORD OF BOREHOLE: KP10

SHEET 1 OF 1

LOCATION: N 4863698.71; E 634626.76

BORING DATE: January 21, 2021

DATUM: Geodetic

CHECKED: TO

HAMMER TYPE: AUTOMATIC SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m $\begin{array}{c} \text{HYDRAULIC CONDUCTIVITY,} \\ \text{k, cm/s} \end{array}$ SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 10⁻⁵ BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) GROUND SURFACE 223,50 ASPHALT (180 mm thick) 223.32 Crushed granular; brown 223.18 AS FILL - (SP-SM) gravelly SAND, some 0.36 0 fines: brown; non-cohesive, moist B57 Truck Mount n O.D. Hollow Stem FILL - (CL) gravelly SILTY CLAY and SAND, dark brown, organic inclusions; cohesive, w>PL, stiff SS 12 150 mm SS 12 3 0 END OF BOREHOLE NOTES: 1. Borehole caved to a depth of 1.3 m upon completion of drilling. 2. Borehole was dry upon completion of drilling. S:ICLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVEI02 DATAIGINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 4/5/21 9 10 GTA-BHS 001 DEPTH SCALE GOLDER LOGGED: JL

RECORD OF BOREHOLE: KP11

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4863918.31; E 634575.98

BORING DATE: January 21, 2021

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) GROUND SURFACE 221.20 ASPHALT (180 mm thick) 221.02 Crushed granular; brown 0.18 AS FILL - (SP-SM) gravelly SAND, some fines: brown; non-cohesive, moist 0.34 1B 220.62 FILL - (CL) gravelly SILTY CLAY and B57 Truck Mount SAND; dark brown, organic inclusions; cohesive, w<PL, very stiff to hard SS 18 МН 150 mm SS 61* 3 - Auger resistance between a depth of 1.8 m and 1.9 m END OF BOREHOLE NOTES: 1. Borehole caved to a depth of 1.2 m upon completion of drilling. 2. Borehole was dry upon completion of drilling. S:ICLIENTSIREGION OF YORKIMAJOR MACKENZIE DRIVEI02 DATAIGINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 4/5/21 3. *N value may not be representative of the soil's consistency due to obstructions encountered 9 10 GTA-BHS 001 DEPTH SCALE LOGGED: JL

RECORD OF BOREHOLE: KP12

SHEET 1 OF 1 DATUM: Geodetic

LOCATION: N 4864147.22; E 634531.61

BORING DATE: January 21, 2021

4	Ç	3	SOIL PROFILE			SAI	MPLE	S	DYNAMI RESIST	ANCE,	BLOWS	5/0.3m	\	IIIDINA	k, cm/s	ONDUCT	IIVIII,	T	ا ي ٍ ا	PIEZOMETER
METRES	MFT			²LOT	 	굒		.3m	20		1		80 '	10			0 ⁻⁴ 10		TONA SSTINA	OR STANDPIPE
MET	BORING METHOD		DESCRIPTION	STRATA PLOT	ELEV. DEPTH	NUMBER	TYPE	BLOWS/0.3m	SHEAR Cu, kPa	STRE	NGTH	nat V rem V. 6	+ Q - ● Ð U - O			ONTENT OW	PERCE		ADDITIONAL LAB. TESTING	INSTALLATION
ם	[2	3		STR	(m)	ž	_	BLC	20		10	60	80	Wp 10				WI 0		
0	Ĺ,	J	GROUND SURFACE		220,10															
			Crushed granular; brown		0.00	1A														
		uger	FILL - (SP-SM) gravelly SAND, some	₩	219.65 0.45	1B	AS	-												
	nut	stem A	fines: brown; non-cohesive, moist		219,28															
1	B57 Truck Mount	ollow 8	(CI) SILTY CLAY, some sand, some gravel; brown; cohesive, w>PL, stiff		0.82	2	ss	8												
	357 Tr	H OC	graver, brown, concerts, w. r. E., can																	
	$ \overline{} $	um o	(ML) sandy SILT; brown; non-cohesive,		218.73 1.37															
		150	wet, compact			3	ss	22								0			мн	
2	Ш	Ц	END OF BODELIOLE		218.12 1.98		_	_												
-			END OF BOREHOLE NOTES:		1,98															
			Borehole caved to a depth of 1.3 m																	
			upon completion of drilling.																	
. 3			2. Borehole was dry upon completion of drilling.																	
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9																				
10																				
DE									>											GGED: JL

RECORD OF BOREHOLE: KP13

SHEET 1 OF 1

LOCATION: N 4864251.68; E 634519.69

BORING DATE: January 21, 2021

DATUM: Geodetic

Щ	ç	3	SOIL PROFILE		,	SAN	IPLES	DYNA RESIS	MIC PEI STANCE	NETRATI BLOWS	ON 5/0.3m	1	HYDR	AULIC C k, cm/s	ONDUC	TIVITY,	T	ا ي	PIEZOMETER
RES	MET			PLOT	E1 E) /	낊	 3m	2		1	1	80					^{0-₃} ⊤	ESTIN	OR STANDPIPE
METRES	BOBING METHOD		DESCRIPTION	STRATA PLOT	DEPTH	NUMBER	TYPE BLOWS/0.3m	SHEA Cu, kF	R STRE Pa	NGTH	nat V. 1 rem V. €	Q - • U - O			ONTEN	F PERCE	NT WI	ADDITIONAL LAB. TESTING	INSTALLATION
	S C	3		STR	(m)	z	BLC	:	20	40	60	80					40	\	
0	L,		GROUND SURFACE		222.80														
			ASPHALT (240 mm thick)		0.00 222.56														
		ger	Crushed granular; brown FILL - (SP-SM) gravelly SAND, some		0,24 0,40	1A	AS -												
	ᇦ	m Au	fines; brown; non-cohesive, moist,	\bowtie	5,10	1B													
	Mou	w Ste	compact			2A													
1	B57 Truck Mount	影	FILL - (SM) SILTY SAND and GRAVEL;	\longrightarrow	221.75 1.05		SS 15						0						
	B57	0.D	brown; non-cohesive, moist, compact		221.43	2B													
		150 mm	(ML) sandy SILT, some gravel, brown; non-cohesive, moist, compact	\mathcal{M}	1.37														
		4	non-conesive, moist, compact			3	SS 19												
_					220.82		30 10												
2		Ţ	END OF BOREHOLE		1,98	T					1								
			NOTE:																
			Borehole open and dry upon completion of drilling.																
			completion of unling.																
3											1								
											1								
4																			
5																			
6																			
7											1								
7											1								
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8											1								
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DE	PTI	H S	CALE				N		~ ~	\ I F	\ F	n						LO	GGED: JL

RECORD OF BOREHOLE: KS1

SHEET 2 OF 2 DATUM: Geodetic

LOCATION: N 4861907.72; E 635019.68

BORING DATE: January 20, 2021

ш	阜	SOIL PROFILE			SAI	MPLE	ES	RESIST	TANCE,	ETRAT I O BLOWS	/0.3m		HIDKA	k, cm/s	ONDUCT	IVIII,	Ţ	ا ي ٍ ٍ ا	PIEZOMETER
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	BLOWS/0.3m	20 SHEAR		1	1	30 ° • • • • • • • • • • • • • • • • • •	10 ⁻ WA		D ⁵ 10		0 ⁻³	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
	BORIN	3233.W. 11314	STRAT	DEPTH (m)	NON	<u> </u>	BLOW	Cu, kPa				0 - O 30		<u> </u>	 OW		W I 40	LAB	INSTALLATION
- 10		CONTINUED FROM PREVIOUS PAGE NOTES:				4							Ĭ						
		Water encountered at a depth of 9.0 m during drilling.																	
		Groundwater level was measured in monitoring well at a depth of 2.0 mbgs (El. 202m) on January 29, 2021.																	
11																			
12																			
13																			
4.																			
14																			
15																			
16																			
17																			
"																			
18																			
19																			
20																			
	DTU	SCALE						>											GGED: YS

1:50

RECORD OF BOREHOLE: KS2

SHEET 1 OF 2

DATUM: Geodetic

LOCATION: N 4862189.80; E 634962.05

BORING DATE: January 4, 2021

CHECKED: TO

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD DEPTH SCALE METRES PIEZOMETER STRATA PLOT BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) GROUND SURFACE 209.30 Crushed granular; brown 0.00 AS FILL - (SM) SILTY SAND, trace gravel: brown; non-cohesive, moist 0.35 1B FILL - (CL-ML) gravelly SILTY CLAY-CLAYEY SILT and SAND; brown; cohesive, w<PL, stiff 0.7 SS 8 0 207.93 1.37 FILL - (ML) sandy SILT; brown; non-cohesive, wet, compact ss 14 January 29, 2021 207.17 (ML) SILT and SAND, trace gravel; brown (TILL); non-cohesive, moist, very 0 SS 65 МН Bentonite YORKIMAJOR_MACKENZIE_DRIVE\02_DATA\GINT\MARKHAM_WARDEN&KENNEDY_RD\GPJ GAL-MIS\GDT 4/5/21 5 SS 85 205.26 4.04 (CL) SILTY CLAY and SAND, some gravel; grey (TILL); cohesive, w<PL, hard B57 Truck Mount 6 SS 54 0 Sand SS 91 SS 92 0 S:\CLIENTS\REGION_OF 9 SS Sand 200.03 END OF BOREHOLE NOTES: 1. Borehole was open and dry upon completion of drilling. CONTINUED NEXT PAGE DEPTH SCALE GOLDER LOGGED: YS

RECORD OF BOREHOLE: KS2

SHEET 2 OF 2 DATUM: Geodetic

LOCATION: N 4862189.80; E 634962.05

BORING DATE: January 4, 2021

ш	무	SOIL PROFILE			SA	MPL	ES	DYNAMIC RESISTAN	PENETRAT I ICE, BLOWS	ON 5/0.3m)	HYDRAI	JLIC COI k, cm/s	NDUCTI	VITY,	TI.	ا و ٍ	PIEZOMETER
METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 SHEAR ST Cu, kPa 20	RENGTH	nat V. + rem V. ⊕	Q - ● U - O		TER CO	NTENT I	PERCENT		ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
- 10		CONTINUED FROM PREVIOUS PAGE																
- 11		Groundwater level was measured in monitoring well at a depth of 1.7 mbgs (El. 207.6m) on January 29, 2021.																
12																		
13																		
14																		
15																		
16																		
- 17																		
- 18																		
- 19																		
20																		
DEI	PTH S	CALE						G	~ F	\ F I	•						LOG	GED: YS

RECORD OF BOREHOLE: KS3

SHEET 1 OF 1 DATUM: Geodetic BORING DATE: January 4, 2021

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

LOCATION: N 4862378.69; E 634920.57

HAMMER TYPE: AUTOMATIC

<u> </u>	阜	SOIL PROFILE	-1		SA	MPL	ES	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3	3m \	HYDI	RAULIC k, cm	CONDL /s	JCTIVIT	Υ,	۵ آ آ	PIEZOMETER
DEPIN SCALE METRES	BORING METHOD	DECODIOTION	STRATA PLOT	ELEV.	9ER)E	BLOWS/0.3m	20 40 60 SHEAR STRENGTH nat	80 V + O - •		10 ⁻⁶ VATER	10 ⁻⁵	10 ⁻⁴ NT PFF	10 ⁻³	ADDITIONAL LAB. TESTING	OR STANDPIPE
R	ORIN	DESCRIPTION	-RATA	DEPTH (m)	NUMBER	TYPE	LOWS	Cu, kPa rem	v + u - o	1	VATER Vp I —	CONTE		- WI	ADD	INSTALLATION
_	ā	CPOLIND SLIPEACE	ST				B.	20 40 60	80		10	20	30	40		
0	\neg	GROUND SURFACE Crushed granular; brown		214.70								-	+	+	+	
				214.29	1A											
		FILL - (SM) SILTY SAND, trace gravel;		0.41	1B	AS	-								М	
		brown; non-cohesive, moist FILL - (CL) SILTY CLAY and SAND,		214,00 0.70											"	
1		some gravel; dark brown; cohesive, w>PL, firm			2	ss	7									
		,														
		(CL) SILTY CLAY and SAND, some		213.33 1.37												
		gravel; grey (TILL); cohesive, w <pl, hard<="" stiff="" td="" to="" very=""><td></td><td></td><td>3</td><td>ss</td><td>27</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>			3	ss	27									
_					3	55	21			'						
2																
					4	SS	60									
				211.80		1										Bentonite
3		(SM) SILTY SAND, some gravel; brown (TILL); non-cohesive, moist, very dense	4 4	2.90	\vdash											
			4]	5	ss	50/ 0.13			0						
	lount]	\vdash											
	Moun			1												
4	B57 Truck Mount	(CL) CLTV CLAV and CAND		210,66												
	B57	(CL) SILTY CLAY and SAND, some gravel; grey (TILL); cohesive, w <pl,< td=""><td></td><td>4.04</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></pl,<>		4.04												
	2	hard and a second secon														
	ľ	N .			6	SS	96/ 0.25									
5																
ŭ																
																Sand S
6																
					7	ss	50/ 0.13			0						
					\vdash											
				1												Screen S
7																
				206.80	8	ss	50/ 0.13									Sandnuary 29, 2021
8		END OF BOREHOLE	7.2.4	7,90												
		NOTES:														
		Borehole was open and dry upon completion of drilling.														
		2 Groundwater level was measured in														
9		monitoring well at a depth of 7.7 mbgs (El. 206.9m) on January 29, 2021.														
		(Li. 200.511) 311 January 28, 2021.														
10																
10																
		1		-						1						ı
		SCALE					X	GOLD	ΕR							OGGED: YS
1 : :	50						7								CH	IECKED: TO

RECORD OF BOREHOLE: KS4

DATUM: Geodetic BORING DATE: January 18, 2021

LOCATION: N 4862601.12; E 634875.39

SHEET 1 OF 2

S	L C		SOIL PROFILE	 -		SA	MPLE		RESISTANCE, BLOWS/0.3m),		k, cm/s				<u>.</u> <u>.</u>	PIEZOMETER
METRES	BOPING METHOD	ם מואס ואם	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + rem V. ⊕ 20 40 60 80	Q - • U - O	W	ATER C	DNTENT OW	D ⁴ 10 ⁻³ PERCENT — I WI 0 40		ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
0			GROUND SURFACE		218.70									Ĭ			
U		$ \top$	Crushed granular; brown		0.00	1	AS	-									
			FILL (OM) OH TV OMNID to a constant	\bowtie	218.28												
			FILL - (SM) SILTY SAND, trace gravel; brown; non-cohesive, moist, loose	\bowtie	0.42												
1						2	SS	6									
				\bowtie	217.33												
			FILL - (CI) SILTY CLAY, some sand; brown; cohesive, w>PL, firm		1.37												
						3	ss	7						0			
2					216,57												
			FILL - (SM) SILTY SAND, tarce gravel; brown; non-cohesive, moist, loose		2.13												
			stown, non concerve, molec, leave			4	ss	6									
3			(SM) SILTY SAND, fine; brown;	\mathbb{R}^{∞}	215.80 2.90												
			non-cohesive, moist to wet, very dense			5	ss	.,			0					мн	
					; [5	55	ы								IVIH	
					;												
					<u> </u>												
4]												
		e]												
	Ļ	m Aug]			E0/									
	Moun	w Stei]	6	SS	50/ 0.15									
5	B57 Truck Mount	₽]												Bentonite
	B57	u O n]												
		200 mr]												
		``]												
6					<u> </u>												
] [7	SS	72				0					
					} [′	55	/3				0					∇
					-												<u>∑</u> January 29, 2021
7																	
					;												
					;												
			- 0.3m thick sand blowout was observed														
			at 7.6 m			8	ss	50									
8																	
]												
]												
]												
9]												
			 - 0.9m thick sand blowout was observed at 9.1 m 			9	ss	50/ 0.13					}				
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					<u> </u>												
10	Ļ١	L		11	↓	_		_	+		L		L		-		
			CONTINUED NEXT PAGE														
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DE	PTI	нS	CALE						GOLDER)						LC	OGGED: YS

RECORD OF BOREHOLE: KS4

SHEET 2 OF 2 DATUM: Geodetic

LOCATION: N 4862601.12; E 634875.39

BORING DATE: January 18, 2021

4	무	SOIL PROFILE			SA	MPLES	DYNAMIC PENE RESISTANCE, E	TRATION BLOWS/0.3m	1	HYDRAULIC C	ONDUCTIVI	TY, T	أَدَّ	PIEZOMETER
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE BLOWS/0.3m	20 40 SHEAR STRENG Cu, kPa	GTH nat V. + rem V. ⊕	U- O	WATER C	0 ⁻⁵ 10 ⁻⁴ ONTENT PE → W 20 30	10 ⁻³	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
10		CONTINUED FROM PREVIOUS PAGE (SM) SILTY SAND, fine; brown;	নাৰ							,				
. 11		non-cohesive, moist to wet, very dense - 1.5m thick sand blowout was observed at 10.7 m			10	SS 5								
12					11	SS 6				0				Bentonite
13	B57 Truck Mount 200 mm O.D. Hollow Stem Auger					50								
14	2001				12	ss 500.								
15					13	SS 9					0			Sand Screen
17		END OF BOREHOLE NOTES: 1. Water was encountered at a depth of 4.6 m during drillling.		201.94 16.76										
18		Sand blowout was cleaned out using water prior to advancing augers. Groundwater level was measured in monitoring well at a depth of 6.6 mbgs (El. 211.6m) on January 29, 2021. SPT N-value could not be carried out at 16.7mbgs due to a 1.5m sand												
. 19		blowout. The sand could not be completely cleaned out during drilling.												
20 DEI	этн с	SCALE					S GO							OGGED: YS

RECORD OF BOREHOLE: KS5

BORING DATE: January 15, 2021

SHEET 1 OF 1 DATUM: Geodetic

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

LOCATION: N 4862815.63; E 634829.53

HAMMER TYPE: AUTOMATIC

				٦	Т	Υ,	TIVIT	NDUCT	CO	AULIC (HYDR.	`)N 0.3m	ETRAT	IIC PEN	DYNAN	ES	MPL	SA			SOIL PROFILE		٦	T	
CROUND SUPFACE 221.25	EZOMETER OR	PIEZ	ig	L ₹	_3]	10	0-4	5 1			1	,									5			Ĭ I	ဂူ	į
CROUND SUPFACE 221.25	TANDPIPE		TES	<u> </u> [3/0.3r	۳	3ER	ELEV.	, PLC		_	G ME	보	ا ز -
CROUND SUPFACE 221.25	STALLAT I ON	INST	l B	100					_			ŭ-O	aiv. + em V. ⊕	GIH	SIKEN	Cu, kPa	SWC	TYF	Ŭ₩	DEPTH	ATA	SCRIPTION	DES	<u>X</u>	Ĭ	į
Conclude Substack 27.56 22.00			. 7	1					20			n	n s	1	n 4	2	BLC		Z	(m)	STR			8		ì
ASPHALT (28) multiprotects Contrained granular brows Country Contrained granular brows Country Contrained granular brows Country Contrained granular brows Country Contrained granular brows Contrained granu			+	+	,	4			7			<u> </u>	<u>. (</u>	<u>. </u>	- 4					224 20	m	DE	GROUND SURFAC		+	-
Crushed granular; brown Crushed granular			+	+		\dashv	1		+															П	٥	
FILL - (SP) SAND, some gravel, trace 20																					VVV					
1																	-	AS	1A		\bowtie					
(CJ) SELTY CLAY, some sand; trown; chhesive, wePL, stiff to very stiff 0.76 2 55 0 3 55 24 (SP) SAND, trace fines; brown; most to wel, very dense 2.13 4 55 55 4 55 55 56 5 55 55 50 7 65 50 50 8 END OF BOREHOLE NOTE: 1, Borehole was open and dry upon completion of drilling.																					\bowtie	-cohesive, moist	fines; brown; non-			
SP) SAND, trace fines, brown, non-cohesive, most to wet, very dense 213.73 2.213 4																						, some sand; brown;	(CI) SILTY CLAY,			
2 SP) SAND, trace fines: brown:								0									9	ss	2			stiff to very stiff	cohesive, w>PL, s		1	
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2 SP) SAND, trace fines: brown:																										
2 SP) SAND, trace fines: brown:																										
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completion of drilling.																						open and dry upon	1. Borehole was o			
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DEPTH SCALE LOGGED: Y	YS	iGGED: \	10																				CALE	TH S	DED.	
I GOLDER												₹	Εl	L [G O	> (OALL			
1:50 CHECKED: 1	10	:CKED: 1	CHÉ														_							U	1:50	,

RECORD OF BOREHOLE: KS6

DATUM: Geodetic BORING DATE: January 22, 2021

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm

LOCATION: N 4863022.33; E 634786.84

HAMMER TYPE: AUTOMATIC

SHEET 1 OF 1

	Ŏ	T	SOIL PROFILE			SA	MPL	ES	DYNAMIC PENETRA RESISTANCE, BLOV	TION)	HYDR.	AULIC (CONDUC	TIVITY	′ ,	_	
METRES	BORING METHOD	+		Ĕ				-			~ \	l .	k, cm/		40-4	40-3	∐⋠	PIEZOMETER OR STANDPIPE INSTALLATION
耀	, ME			STRATA PLOT	ELEV.	NUMBER	ا سا	BLOWS/0.3m	20 40		80		1		10-4	10 ⁻³	 ੬	OR STANDPIPE
M	SN S		DESCRIPTION	ΤA	DEPTH	MB	TYPE	/S/	SHEAR STRENGTH Cu, kPa	nat V. + rem V. fl	- Q - •			CONTEN			lä	m INSTALLATION
	BOR			TR/	(m)	ž	-	BLO					p ├ ─			⊢l WI	₹	ے
	_	+	GROUND SURFACE	+ s		\vdash		H	20 40	60	80	1	10	20	30	40	-	
0	_		ASPHALT (140 mm thick)		222,30 0.00	\vdash		Н						+	+	+	_	
		ŀ	Crushed granular with RAP; brown	***	0.14													
l		- 1		\mathbb{X}	221.88													
			FILL - (SP) SAND, some gravel, trace fines: brown; non-cohesive, moist	\otimes	0,42	l	AS	-										
			lines. brown, non-conesive, moist	\bowtie	3 45	1B												
		ŀ	FILL - (CL) SILTY CLAY, some sand:	₩	221.45 0.85	2A	ss	13										
1			FILL - (CL) SILTY CLAY, some sand; brown; cohesive, w>PL, stiff	\otimes	3	2B												
				\bowtie	30000													
		ŀ	(ML) SILT and SAND, some gravel;		220.93 1.37	ł												
		- 1	brown (TILL); non-cohesive, moist.		:													
			compact to dense		1	3	ss	19					0					
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		ger]	5	SS	37				0					"	IH
	B57 Truck Mount	۱Au		101	}													
	Jog	Ster		4,4]													
	호	<u></u>]													
4	길:	黃ㅏ	(SM) SILTY SAND, some gravel; brown:	1919	218,26 4.04	1												
	88	ة أ	(SM) SILTY SAND, some gravel; brown; non-cohesive, moist, very dense		:													
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8		\top	END OF BOREHOLE	115	7.90			Н										
1			NOTE:															
		- 1																
			Borehole was open and dry upon completion fo drilling.															
		- 1																
			RAP = Recycled asphalt pavement															
9																		
10																		
			2015															LOGGED: JL
חבי	DTL	101																
DEI		S	JALE						GOL	DE	R							CHECKED: TO

1:50

RECORD OF BOREHOLE: KS7

SHEET 1 OF 1

LOCATION: N 4863216.48; E 634749.77

BORING DATE: January 19, 2021

DATUM: Geodetic

CHECKED: TO

SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm HAMMER TYPE: AUTOMATIC DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD DEPTH SCALE METRES ADDITIONAL LAB. TESTING PIEZOMETER STRATA PLOT 80 BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - ○ WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH OW. Wp I -I WI (m) GROUND SURFACE 223.00 Crushed granular; brown AS 222.43 FILL - (SP) SAND, some gravel, trace fines: brown; non-cohesive, moist, dense SS 32 0 221.63 1.37 FILL - (CL) gravelly SILTY CLAY and SAND; dark grey and brown, organic inclusions; cohesive, w>PL, stiff ss 11 220.87 2.13 <u>∑</u> January 29, 2021 (CL) SILTY CLAY and SAND, some gravel; brown; cohesive, w>PL, stiff SS 10 Bentonite YORKIMAJOR MACKENZIE DRIVE\02 DATA\GINT\MARKHAM_WARDEN&KENNEDY_RD.GPJ_GAL-MIS.GDT_4/5/21 5 ss 11 B57 Truck Mount 218,98 (SM) SILTY SAND; brown; non-cohesive, wet, very dense 18 ss 58 0 Sand SS 89 SS 50/ 0.13 0 Sand 215.10 7.90 END OF BOREHOLE NOTES: 1. Water was encountered at a depth of 4.6 m during drilling. 2. Groundwater level was measured in monitoring well at a depth of 2.2 mbgs (El. 220.8m) on January 29, 2021. S:\CLIENTS\REGION_OF 9 10 GTA-BHS 001 DEPTH SCALE GOLDER LOGGED: JL

LOCATION: N 4863405.94; E 634706.26

RECORD OF BOREHOLE: KS8

DATUM: Geodetic BORING DATE: January 22, 2021

SHEET 1 OF 2

ا _گ ڇ	욷	SOIL PROFILE	 -		SAMI	_	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	k, cm/s	48 ₹	PIEZOMETER
METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + Q - ● CU, kPa rem V. ⊕ U - ○	10° 10° 10° 10° 10° 10° WATER CONTENT PERCENT Wp	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
0		GROUND SURFACE	××××	223.50 0.00						121
		Crushed granular; brown		223.02	1A A					Sand S
		FILL - (SP) SAND, some gravel, trace fines; brown; non-cohesive, moist FILL - (CI) SILTY CLAY, some sand,		1 1	1B					
1		trace gravel; dark grey and brown, organic inclusions; cohesive, w>PL, stiff to firm			2B S	S 13				
2				_	3 S	S 9		Φ		
				-	4 S	S 7				Bentonite
3		(CL) SILTY CLAY and SAND, trace gravel; brown; cohesive, w>PL, firm		220.60 2.90						
					5 S	S 7			МН	
4		(CL) SILTY CLAY and SAND, some gravel; brown to grey (TILL); cohesive,		219 <u>.46</u> 4.04						<u>∑</u> January 29, 2021
5	B57 Truck Mount mm O.D. Hollow Stem Auger	w <pl, hard<="" td=""><td></td><td>-</td><td>6 S</td><td>S 40</td><td></td><td></td><td></td><td></td></pl,>		-	6 S	S 40				
6	200 mm C	- Becoming grey at a depth of 5.6 m		-	7 S	S 80		0		
8				_	8 S	S 48				Grout
9					9 S	S 31		0		
		CONTINUED NEXT PAGE					GOLDER			

GTA-BHS 001

1:50

RECORD OF BOREHOLE: KS8

SHEET 2 OF 2

LOCATION: N 4863405.94; E 634706.26

BORING DATE: January 22, 2021

DATUM: Geodetic

CHECKED: TO

HAMMER TYPE: AUTOMATIC SPT/DCPT HAMMER: MASS, 64kg; DROP, 760mm DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m HYDRAULIC CONDUCTIVITY, k, cm/s SOIL PROFILE SAMPLES BORING METHOD ADDITIONAL LAB. TESTING DEPTH SCALE METRES PIEZOMETER STRATA PLOT 80 BLOWS/0.3m NUMBER STANDPIPE ELEV. TYPE SHEAR STRENGTH nat V. + Q - ● rem V. ⊕ U - O WATER CONTENT PERCENT DESCRIPTION INSTALLATION DEPTH -0W Wp I -I WI (m) --- CONTINUED FROM PREVIOUS PAGE --10 (CL) SILTY CLAY and SAND, some gravel; brown to grey (TILL); cohesive, w<PL, hard 80/ 0.28 SS 10 Grout 12 ss 50/ 0.07 11 YORKIMAJOR MACKENZIE DRIVE\02 DATA\GINTIMARKHAM WARDEN&KENNEDY RD.GPJ GAL-MIS.GDT 4/5/21 B57 Truck Mount Bentonite SS 50/ 0.07 12 8 Sand 15 13 ss 75 16 Screen SS 0.18 14 Sand 206.41 17.09 END OF BOREHOLE NOTES: 1. Water was encountered at a depth of 7.0 m during drilling. 18 2. Groundwater level was measured in monitoring well at a depth of 4.1 mbgs (El. 219.4m) on January 29, 2021. S:\CLIENTS\REGION OF 19 20 DEPTH SCALE LOGGED: JL GOLDER

RECORD OF BOREHOLE: KS9

BORING DATE: January 28, 2021 DATUM: Geodetic

LOCATION: N 4863597.66; E 634660.05

HAMMER TYPE: AUTOMATIC

SHEET 1 OF 2

1	9	SOIL PROFILE		I	SAM	PLES	DYNAMIC PENE RESISTANCE, B	IRAIIO	V)	HIDRA	ULIC CC	DNDUCT	IVITY,	Т		
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT		~	I YPE		60	80		10		D ⁵ 10 ONTENT		D-3 NT	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE
ე ∑	BORIN	DESCRIPTION	STRAT/	DEPTH (m)	MON		SHEAR STRENC Cu, kPa					<u> </u>	- o W		WI	ADC LAB.	INSTALLATION
		GROUND SURFACE	107	222,90			20 40	60	80		10	, 2	0 3	<u>U 4</u>	0		
0		Crushed granular; brown		0.00													
			\bowtie	222.48	1A .												
		FILL - (SP) SAND, some gravel, trace fines; brown; non-cohesive, moist		0.42	1B	AS -											
		FILL - (CL) gravelly SILTY CLAY and	₩	222.17 0.73													
1		SAND; brown and black, organic inclusions; cohesive, w <pl, stiff="" stiff<="" td="" to="" very=""><td></td><td>3 I</td><td>2 8</td><td>SS 2</td><td></td><td></td><td></td><td></td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td></pl,>		3 I	2 8	SS 2					0						
					3 8	SS 1											
2		(SM) SILTY SAND; brown;	\bigotimes	220 <u>.77</u> 2.13													
		non-cohesive, moist to wet, compact to dense															
				1	4 8	SS 1						'					
3				1													
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	B57 Truck Mount] [6 S	SS 4					0						
5	uck M			}													Bentonite
	B57 Ti]													
	300 mm]													
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6				1													
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8				1	8 8	SS 3							0				
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			批	1													
		(CL) SILTY CLAY and SAND, some gravel; grey (TILL); cohesive, w>PL,		214.29 8.61													
9		gravel; grey (TILL); cohesive, w>PL, very stiff															
9				-	\dashv												
					9 8	SS 1											
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10		CONTINUED NEXT PAGE	1	TL	T	7											 _
			1				<u> </u>										
DEI	PTH	SCALE					GO	ID	FD)						LC	DGGED: YS

RECORD OF BOREHOLE: KS9

SHEET 2 OF 2 DATUM: Geodetic

LOCATION: N 4863597.66; E 634660.05

BORING DATE: January 28, 2021

DEPTH SCALE OF METRES BORING METHOD	DESCRIPTION	, PLOT		~	1	20	10 00	٠,	10-6	40-5 40-4	3 ⊥I	∌∈ I	PIEZOMETER
10		STRATA PLOT	DEPTH (m)	NUMBER	TYPE BIOWS/0 3m	SHEAR STREI Cu, kPa	40 60 NGTH nat V rem \	80 + Q - ● / ⊕ U - O	WATE	10 ⁻⁵ 10 ⁻⁴ R CONTENT PER → W 20 30	10 ⁻³ CENT - W 40	ADDITIONAL LAB. TESTING	OR STANDPIPE INSTALLATION
	CONTINUED FROM PREVIOUS PAGE (CL) SILTY CLAY and SAND, some gravel; grey (TILL); cohesive, w>PL, very stiff												
lount T2 Slem Auger		5 4 25 4 25 4 25 88 88 88 88 88 88 88 88 88 88 88 88 88	211.24 11.66		SS 1:				0				Bentonite
14 BS7 Truck Mount 200 mm O.D. Hollow Sterr	(SM) SILTY SAND and GRAVEL; grey; non-cohesive, wet, very dense	A A A A A A A A A A A A A A A A A A A	209.72 13.18	12	SS 5.				O				Sand
15	(CL) SILTY CLAY and SAND, some gravel; grey (TILL); cohesive, w <pl, hard<="" td=""><td>A STATE OF S</td><td>208.19 14.71 207.38 15.52</td><td>13</td><td>SS 0.</td><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td>Screen Sand</td></pl,>	A STATE OF S	208.19 14.71 207.38 15.52	13	SS 0.	3							Screen Sand
16	NOTES: 1. Water was encountered at a depth of 6.1 m during drilling 2. Groundwater level was measured in monitoring well at a depth of 7.0 mbgs (El. 215.9m) on January 29, 2021												
18													
20													

RECORD OF BOREHOLE: KS10

SHEET 1 OF 2

DATUM: Geodetic

LOCATION: N 4863803.25; E 634615.91

BORING DATE: January 20, 2021

ĻĒ	9		SOIL PROFILE	1.	,	SAM	IPLES	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	HYDRAULIC CONDUCTIVITY, k, cm/s	_	PIEZOMETER
METRES	GOLIFFIM CIVIDOR	BORING ME	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + Q - Q Cu, kPa rem V. ⊕ U - C	VVP	4 ADDITION	OR STANDPIPE INSTALLATION
_			GROUND SURFACE		223,20			20 40 60 80	10 20 30 40		
0			ASPHALT (265 mm thick)		0.00 222.94						
			Crushed granular; brown		0.26 222.75	1 /	AS -				
			FILL - (SP) SAND, some gravel, trace fines; brown; non-cohesive, moist,		0.45						
			compact								
1					221.94	2	SS 11				
			FILL - (CL) gravelly SILTY CLAY and SAND, brown; cohesive, w>PL, firm		1,26						
			OTALE, BIOTHI, CONCORVO, W-1 E, IIIII	\bowtie							
				\bowtie		3 :	SS 5				
2				\bowtie							
				\bowtie							
				\bowtie		4 :	SS 7				
3			(SM) SILTY SAND, fine; brown;	\bowtie	220.30 2.90]					
3			non-cohesive, moist to wet, compact to dense		; [SS 25				
					; [5	55 25				
											Bentonite
4											
		iger									
	Ħ	tem Au									
	ck Mo	llow Si			1 [6	SS 47			МН	1
5	57 Tru	O.D. Hollow Stem Auger			}						
	"	ᄩ			}						
		200]						
6											
]	7 :	SS 32				
]						
7]						
											[A
]						Sand
]	8	SS 26				
8					<u> </u>	=					
]						Screen
]						
9					<u> </u>	\dashv					
						9 :	SS 21				Sand
	\vdash	\dashv	END OF BOREHOLE		213.60 9.60	\dashv	+				
10	L	_	NOTES:		<u> </u>						
10	Ī	-[CONTINUED NEXT PAGE			T					
_	_			•							
DE	PT.	H S	CALE				ì	GOLDER			LOGGED: YS

RECORD OF BOREHOLE: K\$10

SHEET 2 OF 2

DATUM: Geodetic

LOCATION: N 4863803.25; E 634615.91

BORING DATE: January 20, 2021

	ОО	SOIL PROFILE			SA	MPL	.ES	DYNA RESIS	MIC PEN STANCE,	ETRAT I BLOWS	ON 5/0.3m)	HYDRA	ULIC Cok, cm/s	ONDUCT	IVITY,	T	ا ی _	DIE 304 : E 7 E -
	METH		LOT		œ							30 `	10				10⁻₃ ⊥	STIN	PIEZOMETER OR
	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m				nat V. + rem V. ⊕		Wp	<u> </u>	ONTENT OW		WI	ADDITIONAL LAB. TESTING	STANDPIPE INSTALLATION
۲	_	CONTINUED FROM PREVIOUS PAGE	S	1	\vdash		-		20 4	10	30 8	30	10	<u>) 2</u>	20 3	0	40	+	
)		Water was encountered at a depth of																	
		7.6 m during drilling.																	
		Groundwater level was measured in monitoring well at a depth of 7.8 mbgs (El. 215.4m) on January 29, 2021																	
		(El. 215.4m) on January 29, 2021																	
																	1		
																	1		
																	1		
																	1		
																	1		
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			1													1	1	1	

GTA-BHS 001 S.(CLIENTSIREGION_OF_YORKIMAJOR_MACKENZIE_DRIVE\02_DATA\GINT\MARKHAM_WARDEN&KENNEDY_RD.GPJ_GAL-MIS.GDT 4/5/21

RECORD OF BOREHOLE: **KS11**

SHEET 1 OF 1

LOCATION: N 4864045.36; E 634563.11

BORING DATE: January 20, 2021

DATUM: Geodetic

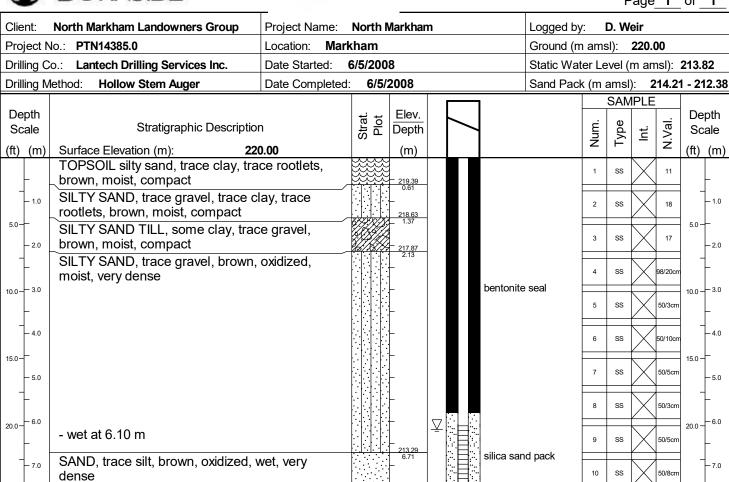
Щ	무	SOIL PROFILE			SAI	MPLE	S	DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m	HYDR	RAULIC CONDUCTIVITY, k, cm/s	ودًا⊺	PIEZOMETER
DEPTH SCALE METRES	BORING METHOD	DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	20 40 60 80 SHEAR STRENGTH nat V. + Q - ● Cu, kPa rem V. ⊕ U - ○ 20 40 60 80	v w	10° 10° 10° 10° 10° 10° 10° 10° 10° 10°	ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
0		GROUND SURFACE	XXX	218,70								-
		Crushed granular; brown FILL - (SP) SAND, some gravel, trace fines; brown; non-cohesive, moist ASPHALT (240 mm thick)		218.40	1A 1B	AS	-		0		М	
1		FILL - (CL) gravelly SILTY CLAY and SAND, black and brown, containing rootlets and organic inclusions; cohesive, w~PL to w>PL, stiff to soft		0.75	2	ss	12					
2				-	3	ss	13		C			
				-	4	SS	3					<u>∑</u> January 29, 2021
3	Auger				5	SS	4			0		Bentonite
- 4	B57 Truck Mount 200 mm O.D. Hollow Stem Auger	(CL) SILTY CLAY and SAND, some gravel; grey (TILL); cohesive, w <pl, hard<="" th=""><th>THE PRINCE OF THE PRINCE OF TH</th><th><u>214.66</u> 4.04</th><th>6</th><th>SS</th><th>39</th><th></th><th></th><th></th><th></th><th></th></pl,>	THE PRINCE OF TH	<u>214.66</u> 4.04	6	SS	39					
6				-	7	ss (50/).07		0			Sand Screen
. 8		END OF BOREHOLE NOTES: 1. Water was encountered at a depth of		210.98 7.72	8	ss (50/).10					Sand
. 9		Groundwater level was measured in monitoring well at a depth of 2.5mbgs (El. 216.2m) on January 29, 2021										
10 DE	PTH S	CCALE						GOLDER			L	OGGED: YS

RJB9

BURNSIDE

R.J. Barnsido & Assaulanus Luvered 15 Townias, Brangeville, Organo LSW 3R4 telephone (519) 981 5831 Apr (519) 981 8128

> Page 1 of **1**



/25/09	-	SILTY SAND, trace moist, very dense	e gravel, k	brown, oxidized	d,					4	SS	X	98/20cm		_
10.0-	3.0							bento	onite seal	5	SS	X	50/3cm	10.0	- 3.0 -
EMPLAT	- 4.0									6	SS	X	50/10cm	_	- 4.0
15.0-	_ - 5.0									7	SS		50/5cm	15.0	- - 5.0
- I COG	-									8	SS		50/3cm	_	_
20.0-	<u></u> 6.0	- wet at 6.10 m					∑			9	SS		50/5cm	20.0	- 6.0 -
ARKHAM	7.0	SAND, trace silt, br	own, oxic	dized, wet, ver	y	6.71		silica	sand pack	10	SS		50/8cm		- 7.0
M H Z5.0-	8.0					211.77	7.62	3		11	SS	X	50/5cm	25.0	— — 8.0
FJACKIEIPROJECTSIPTN14385 NORTH MARKHAM LANDSIBOREHOLE LOGSINORTH MARKHAM BOREHOLE LOGS.GPJ TEMPLATE.GDT 5/25/09															
∯ Pre	epare	d By: J.Shaw hole log was prepared	for bydrose	Chec	cked By:	J. Thompson	on	not no	Date P	repa	red:	1	1/5/2		
⊐l aec	techn	incle log was prepared inclead assessment of the see by others.	subsurface	eological and/or e conditions. Bo	rehole data r	ai pui poses a equires interp	pretation	by R.	J. Burnside & A	an inio Associ	iates	Limi	ted pe	ersor	nel
BHLOG ORANGEVILL	END		MONITOR	RING WELL DATA		SAMPLE TY	PE AC		Auger Cutting	SS	; <u>></u>	\leq	Split S	Spoor	1
% ∑	Water	found @ time of drilling	Pipe:	51 mm dia. PVC	;		CS		Continuous	AF	\ <u>\</u>	Z	Air Ro	tary	
對	Static	Water Level - 7/7/2008	Screen:	51 mm dia. PVC	#10 slot		RC	[^^^^]	Rock Core	W	<u>c ⊡</u>		Wash	Cutti	ings

JOB NO: 1308-S161

LOG OF BOREHOLE NO: 224

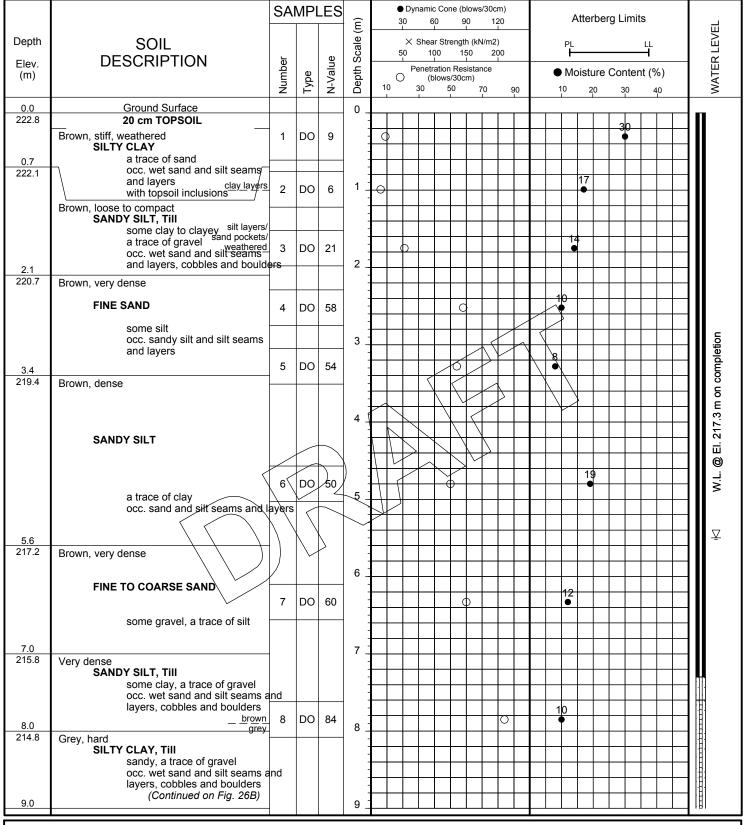
FIGURE NO: 26A

JOB DESCRIPTION: Proposed Residential Development

JOB LOCATION: Area Bounded by Major Mackenzie Drive East, Kennedy Road, METHOD OF BORING: Hollow-Stem

Elgin Mills Road East and McCowan Road

DATE: October 17, 2013 City of Markham





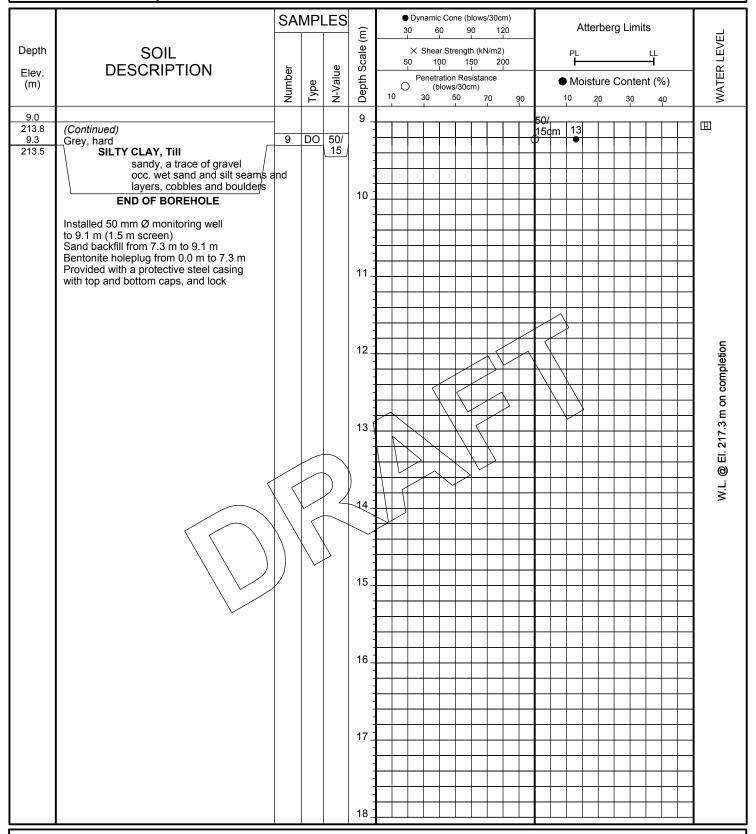
LOG OF BOREHOLE NO: 224 JOB NO: 1308-S161 FIGURE NO: 26B

JOB DESCRIPTION: Proposed Residential Development

JOB LOCATION: Area Bounded by Major Mackenzie Drive East, Kennedy Road, METHOD OF BORING: Hollow-Stem

Elgin Mills Road East and McCowan Road **DATE:** October 17, 2013

City of Markham





LOG OF BOREHOLE NO: 220 FIGURE NO: 20A **JOB NO:** 1308-S161

JOB DESCRIPTION: Proposed Residential Development

JOB LOCATION: Area Bounded by Major Mackenzie Drive East, Kennedy Road, METHOD OF BORING: Hollow-Stem/Wash-Bore Elgin Mills Road East and McCowan Road

DATE: October 23 & 24, 2013

DATE: October 23 & 24, 2013

City of Markham

		SA	MPI	LES	(F		● E)ynami	c Con	e (blo		0cm) 120				Att	erber	rg Li	mits			
Depth	SOIL				cale (r		50	< Shea	ar Stre	ength		m2) 200			ı	PL ┣━			L	L •		LEVE
Elev. (m)	DESCRIPTION	Number	Туре	N-Value	Depth Scale (m)	1	0	Penet		Resis 30cm	stanc	e	90		10		sture	Con		(%) 40		WATER LEVEL
0.0	Ground Surface				0 _																	
208.9	41 cm TOPSOIL	1	DO	8				+		-	+		+	H		+	2/	┨	+	+		
	Brown, firm to stiff, weathered	Ľ				Ĭ																
	SILTY CLAY, Till					_				-				H			23			-		
	some sand to sandy	2	DO	9	1 _	\vdash											•					
	a trace of gravel occ. wet sand and silt seams a	nd				_					4					+		\vdash				
1.9	layers, cobbles and boulders	3	DO	8										H		14				+		
207.0	Brown, compact to very dense	<u> </u>			2 _	Ĕ		1			1					1		\square		1		41
	weathered					┨	\vdash	+	H	\dashv	+	+	+	\vdash	+	+	+	\forall	\dashv	+	H	11
	SANDY SILT, TIII	4	DO	15			0								<u></u>	1						
						1					+			$\int_{-\infty}^{\infty}$	4	+				+		D _D
	a trace to some clay				3 _						\downarrow				X							borin
	a trace of gravel occ. wet sand and silt seams a	5 and	DO	64		1		+			9/			ackslash	•\					+		ash-
	layers, cobbles and boulders							+	H	V	\neq	\Rightarrow		H	\forall	\forall				+		Not applicable due to wash-boring
4.0					4						1							П				due
204.9	Brown, very dense					1	H	\uparrow	igwedge	\forall	+	+		H		+		H		+		apple III
						lack				\int	7	7										g di
		6	DO	83	1	+		4	\vdash	4	+	0	_	H	7	+		\vdash		+		ğ
	SILTY SAND, TIII				5 -	$\downarrow \downarrow$	\mid							H						+		
		/ /	\backslash																			
						1				+				Н						+	H	
					6 _									50/	40							
	traces of clay and gravel occ. wet sand and silt seams a	7	DO	50/ 15		_							+ 1	150	m10	+		\vdash		+		
	layers, cobbles and boulders			13	1	t																11
7.						_	\vdash	+	\vdash	\dashv	\perp		-	\vdash		\perp	+	\dashv		+	\square	11
7.0 201.9	Brown, very dense	1			7 _	L					_											11
										\blacksquare	\blacksquare	\blacksquare		50/		T		\Box				41
	SILTY FINE SAND	8	DO	50/	1	╊	\dashv	+	\vdash	\dashv	+	+	+	50/ 15c	m	15		\forall	+	+	H	11
	a trace of clay			15	8 _			1			1					1		\square				11
	occ. silt seams and layers					╊	\dashv	+	\vdash	\dashv	+	+	+	\vdash	+	+	+	\dashv	+	+	H	11
8.6																\perp						11
200.3	Grey, very dense SANDY SILT, Till (Continued on Fig. 20B)					<u> </u>		\perp	igdash	\dashv	\perp		-	\Box	-	Ŧ		igsqcup	-		\square	11
9.0	,				9 _						<u> </u>							\sqsubseteq			Щ	



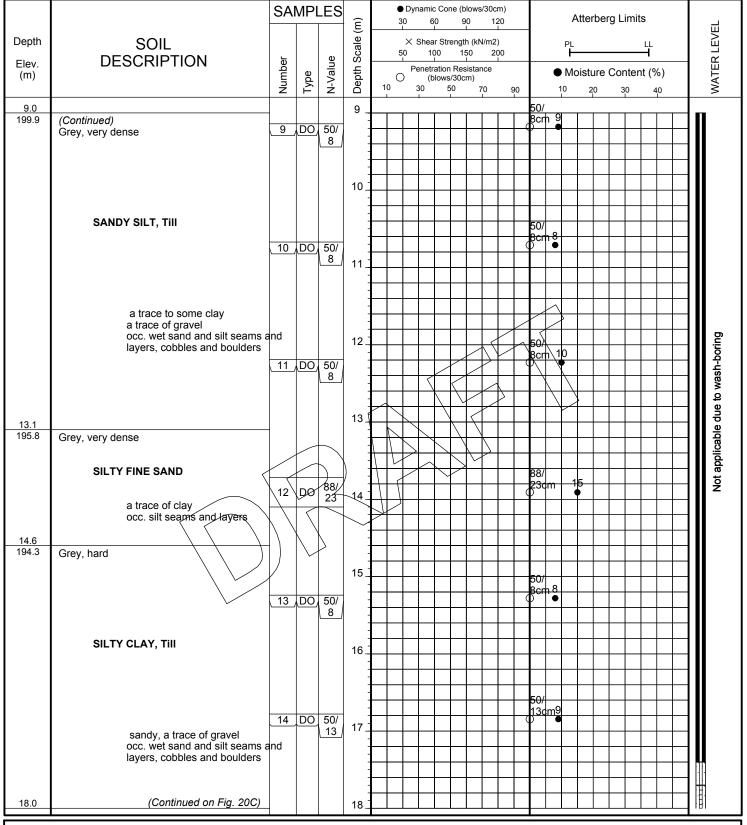
LOG OF BOREHOLE NO: 220 JOB NO: 1308-S161 FIGURE NO: 20B

JOB DESCRIPTION: Proposed Residential Development

JOB LOCATION: Area Bounded by Major Mackenzie Drive East, Kennedy Road, METHOD OF BORING: Hollow-Stem/Wash-Bore

Elgin Mills Road East and McCowan Road

DATE: October 23 & 24, 2013 City of Markham





JOB NO: 1308-S161 LOG OF BOREHOLE NO: 220 FIGURE NO: 20C

JOB DESCRIPTION: Proposed Residential Development

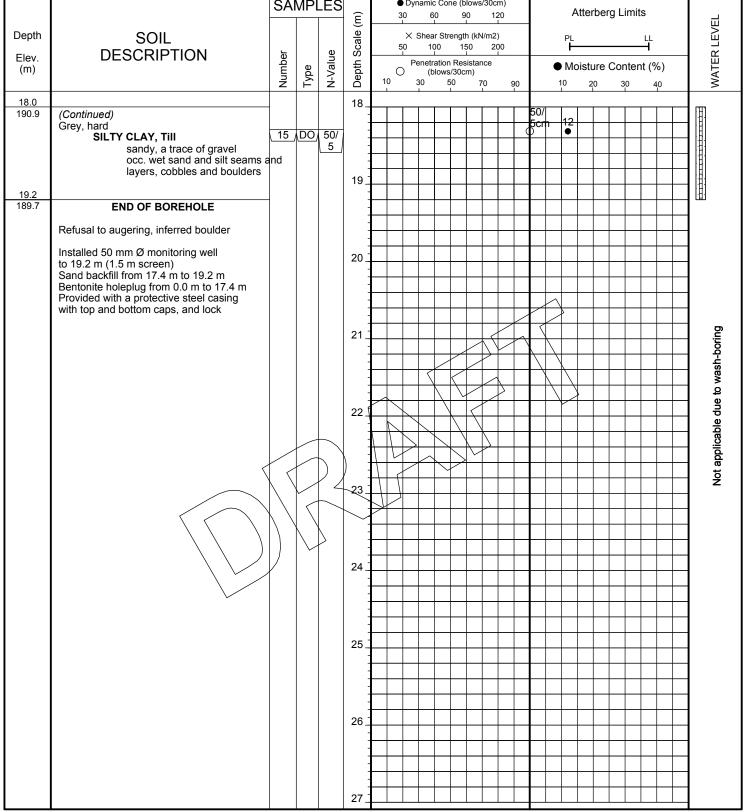
JOB LOCATION: Area Bounded by Major Mackenzie Drive East, Kennedy Road, METHOD OF BORING: Hollow-Stem/Wash-Bore

Elgin Mills Road East and McCowan Road
City of Markham

SAMPLES

DATE: October 23 & 24, 2013

DATE: October 23 & 24, 2013





JOB NO: 1308-S161

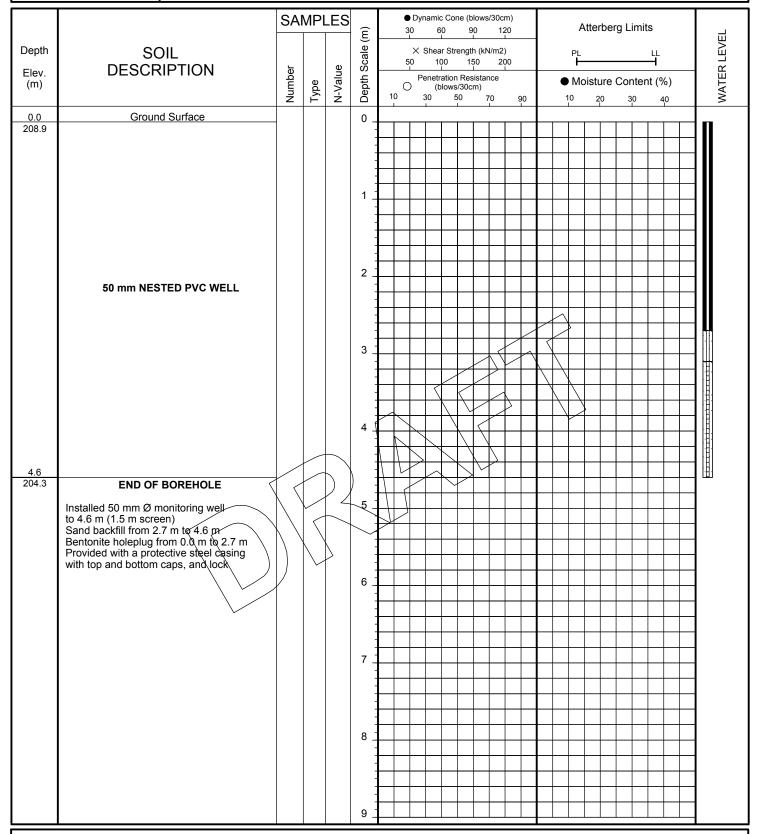
LOG OF BOREHOLE NO: 220N FIGURE NO: 21

JOB DESCRIPTION: Proposed Residential Development

JOB LOCATION: Area Bounded by Major Mackenzie Drive East, Kennedy Road, METHOD OF BORING: Hollow-Stem

Elgin Mills Road East and McCowan Road **DATE:** October 24, 2013

City of Markham





AG-MW6D



R.J. Burnside & Associates Limited 292 Speedvale Avenue West, Guelph, Ontario N1H 1C4

	Angus Glen Developments Inc.	Project Name:			MESP	Logged b	•	I. Mu		
Project N	lo.: 300034937		rkham,			Ground (m am	sl):	223.80)
Drilling C	Co.: Lantech Drilling Services Inc.	Date Started:	3/18/20	15		Static Wa				
Drilling M	Method: PQ Coring	Date Complete	d: 3/1 8	3/2015		Sand Pad	ck De	pth (r	n) : 14	.32 - 17.9
								SAM	IPLE	
Depth Scale	Stratigraphic Descrip	tion	Strat. Plot	Elev. Depth			;	l e	ایا	Dep Sca
	5		No III				Num.	Туре	<u>n</u>	
(ft) (m)	Surface Elevation (m): See MW6s-AG for stratigraphy	223.80		(m)						(ft)
	occ www. No for stratigraphy			-	bent	onite sea l				
-				L						
- 1.0										
5.0				_						5.0
				-						
- 2.0										
7 1					stee	l casing				17
				-						
3.0										10.0
-										
- 4.0				-						
1.0				_						
5.0										15.0
- 5.0				_						
				L						
-										
0.0 - 6.0										20.0
0.0				<u> </u>	grou	t				20.0
7.0										
				-						
5.0	SAND (SP)			216,18 7.62						25.0
- 8.0	With silt, fine to medium grained	l, poorly graded,								
-	brown, wet, dilatant			-				CORE		-
				-						
0.0 - 9.0										30.0
-	trace gravel, saturated, dilatant	at 0.8 m								
		at 9.0 m		213.89 9.91				CORE		
- 10.0	SILT (ML) With fine grained sand, low plas	ticity brown								
5.0	moist, some oxidation, tarce cla			213.13 10.67						35.0
11.0	(grey, dry)			10.67						33.0
	SILT (TILL)	o nobbles		-				005-		
7	Trace clay, trace fine sand, trace occasional cobble, non-plastic,							CORE		1
			W/XX	<u> </u>						
Prepare	ed By: C. D. ehole log was prepared for hydrogeol	Checked By	: J.S.	Lnurna	sees and does =	Date F	repa	red:	7/2	6/2015
suitable f	for a geotechnical assessment of the	subsurface conditi	oninenta ons. Bo	rehole	data requires in	terpretation b	y R. J	anı ır I. Bur	nside	นบา &
	es Limited personnel before use by o				· 	· 				
EGEND	MONITORING	WELL DATA	SA	MPLE T	YPE AC	Auger Cutting	j S	s 🔼	⊴ s	p l it Spoo
▼ Water	r found @ time of drilling Pipe: 51 n	nm dia. PVC			cs 🗀	Continuous	A	r 🏻	II A	ir Rotary
☑ Static	: Water Level - 6/16/2015 Screen: 51 n	nm dia. PVC #10 slo			RC 🕰	Rock Core		rc ⊡	_	/ash Cutt

AG-MW6D

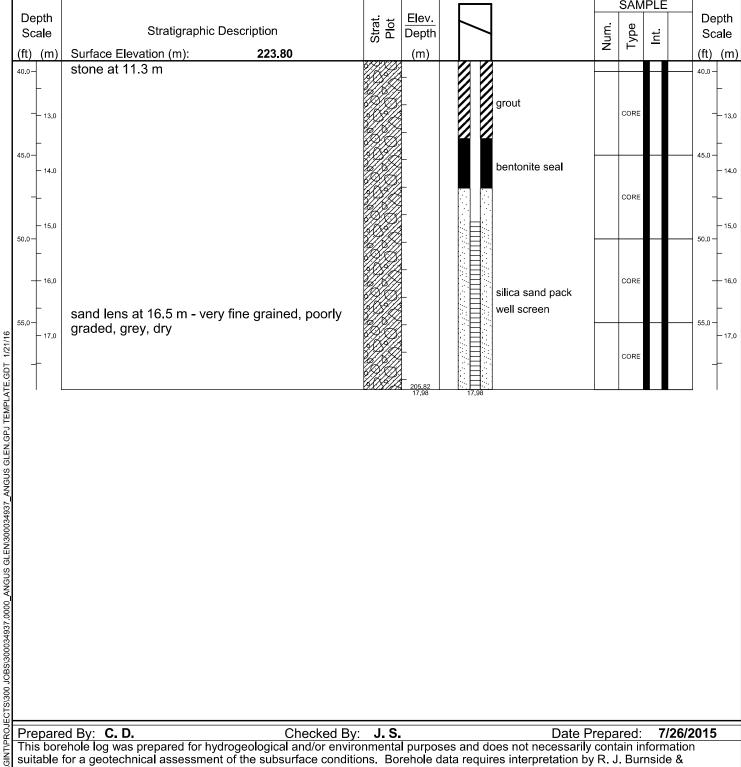


3HLOG GUEL

R.J. Burnside & Associates Limited 292 Speedvale Avenue West, Guelph, Ontario N1H 1C4 telephone (519) 823-4995 fax (519) 836-5477

Page 2 of 2

Client: Angus Glen Developments Inc.	Project Name: Angus Glen MESP	Logged by: I. Murphy
Project No.: 300034937	Location: Markham, ON	Ground (m amsl): 223.80
Drilling Co.: Lantech Drilling Services Inc.	Date Started: 3/18/2015	Static Water Level Depth (m): 6.78
Drilling Method: PQ Coring	Date Completed: 3/18/2015	Sand Pack Depth (m) : 14.32 - 17.98
		SAMPLE



Checked By: J. S. Prepared By: C. D. 7/26/2015 Date Prepared: This borehole log was prepared for hydrogeological and/or environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole data requires interpretation by R. J. Burnside & Associates Limited personnel before use by others. SAMPLE TYPE AC MONITORING WELL DATA **Auger Cutting** ss 🖂 Split Spoon LEGEND cs 立 ar ШШ ▼ Water found @ time of drilling 51 mm dia. PVC Continuous Air Rotary Static Water Level - 6/16/2015 Screen: 51 mm dia. PVC #10 slot RC MA wc [Rock Core Wash Cuttings

AG-MW6S



R.J. Burnside & Associates Limited 292 Speedvale Avenue West, Guelph, Ontario N1H 1C4

th (m): c 5.5 - 7.6; E E E V (f	vel Dep	/ater Levack Dept	Ground Static W Sand Pa		m, ON 7/2015 3/17/2015 Elev. Depth (m)	Date Started: 3 Date Completed: tion 223.80	TOPSOIL Dark brown, clayey, fine rootlets	g Co.: g Meth h e m) Si	rillin rillin ept Scal
5.5 - 7.6; E	th (m): SAMPL The second of t	ack Dept			3/17/2015	Date Completed:	Stratigraphic Descrip Surface Elevation (m): TOPSOIL Dark brown, clayey, fine rootlets	g Meth	rillin ept Scal
E	SAMPL Tybe	WnN 1	Sand Pa		Elev. Depth (m)	tion 223.80	Stratigraphic Descrip Surface Elevation (m): TOPSOIL Dark brown, clayey, fine rootlets	h e m) Si	ept Scal
E	ss Type	1 2			Depth (m)	223.80	Surface Elevation (m): TOPSOIL Dark brown, clayey, fine rootlets	e m) Si	cal
38 51 >50/4"	ss ss ss	1 2				;	TOPSOIL Dark brown, clayey, fine rootlets	T	<u>) (</u>
38 51 >50/4"	ss ss	2		I	- 222.95 0.85		Dark brown, clayey, fine rootlets		
51 51 >50/4"	ss			П	0.85			ا ا	$\frac{1}{2}$
>50/4"		3			<i>XXX</i> 1	e fine sand,	CLAY Silty Brown, firm, moist, trace to som medium plasticity.	В	- <i>-</i>
10	ss				222.16 		SAND Silty Fill like, brown, fine to medium,	.₀ Si	
/		4	bentonite seal			n diameter,	well graded, some gravel (<2 cn subangular to subrounded)	sı	
>50/5"	ss	5			220.07		2441		
>50/5"	ss	6					SAND Brown, fine to medium, compace moist, uniform, trace silt, occasion	.º B	
15						se, saturated	from 6.6 m - fine to coarse, dens	.o fro	
>50/3"	ss	7						i.0]]-
>50/3"	ss	8	silica sand pack						
25			well screen					.0	
>50/4"	ss	9	<u> </u>	7.62	7.62				, -
7 \ 7 \ 7 \ 7	ss	8	silica sand pack well screen	7.62	216.18	se, saturated	from 6.6 m - fine to coarse, dens	.0	

Continuous

Rock Core

Air Rotary

Wash Cuttings

wc 🖳

AG-MW7



▼ Water found @ time of drilling | Pipe:

∑ Static Water Level - 6/16/2015 Screen:

51 mm dia. PVC

51 mm dia. PVC #10 slot

R.J. Burnside & Associates Limited
292 Speedvale Avenue West, Guelph, Ontario N1H 1C4

•	DONNSIDE	telephone (519) 823-4995		104		F	Page_	1_0	of _	1_
Client:	Angus Glen Developments Inc.	Project Name:	Angus Glen N	MESP	Logged by:	C. D.	ı			
Project N	No.: 300034937	Location: Mar	kham, ON		Ground (m am	 າຣ I):	212.0)0		
Drilling (Co.: Lantech Drilling Services Inc.	Date Started:	2/24/2015		Static Water L	evel [Depth	 (m):	0.37	,
	Method: Hollow Stem Auger	Date Completed	: 2/24/2015		Sand Pack De					
							1PLE			_
Depth Scale	Stratigraphic Descript	ion	Strat. Depth		Num.	Type	<u>r.</u>	N.Val.	Dep Sca	
(ft) (m)		12.00	(m)						(ft)	(m)
- - - 1.0	TOPSOIL \Darl brown loam, rootlets SAND Brown, fine to coarse, loose, dry trace small gravel	, well graded,	211.66	<u>-</u>	2	SS	X	62	-	- 1.0
5.0 2.0	Becomes wet at 0.7 m and very gravel (<2 cm diameter) subroun rounded, occasional cobbles		210.52 1.48		3	SS	X	31	5.0	- 2.0
10.0 - 3.0	SAND Silty Brown, fine to medium, compact to wet, well graded, trace clay, tr	ace gravel (<2	209.00	Holeplug	5	SS		53	10.0	- 3.0
- 4.0	cm diameter) subrounded to roul occasional iron staining	nded,			6	ss		>50/5"	-	- 4.0
15.0	Becomes dense with depth SAND Silty Till like, brown, fine to medium, or	lense, moist,			7	ss			15.0	-
- 5.0 - -	well graded, some clay, trace gradiameter) subangular to rounded									- 5.0
20.0 - 6.0	from 3.8 m - inferred seams of si with coarse sand, wet	It and pockets			. 8	SS		>50/4"	20.0	- 6.0
- - 7.0	SAND Brown, fine to coarse, loose, sate	ırated well	205.14	Sandpad Well Scr		ss		>50/4"	-	- 7.0
25.0	graded, trace silt		204.38	7.62					25.0	-
Prepare	ed By: C.D.	Checked By:			Date Prepa			26/20)15	
This bor suitable	rehole log was prepared for hydrogeolo for a geotechnical assessment of the s tes Limited personnel before use by ot	subsurface condition								
LEGEND	MONITORING V	VELL DATA	SAMPLE	TYPE AC AL	uger Cutting S	s D		Split S	poor	1

AG-MW4



stone at 4.1 m

grey, dry at 4.6 m

grey, moist, hard at 4.4 m

IECTS\300 JOBS\300034937.0000_ANGUS GLEN\300034937_ANGUS GLEN.GPJ TEMPLATE.GDT 1/21/16

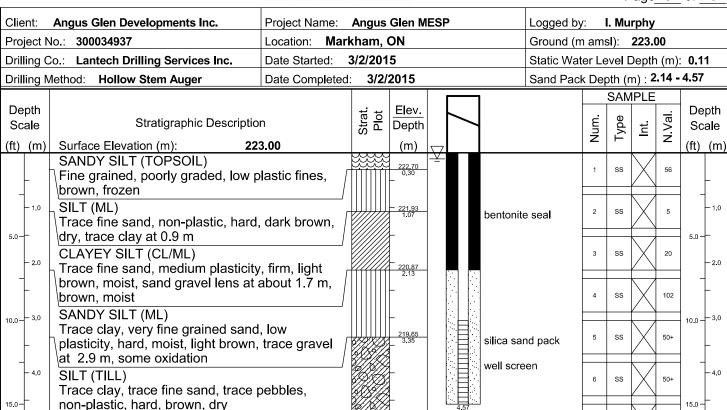
SHLOG GL

R.J. Burnside & Associates Limited 292 Speedvale Avenue West, Guelph, Ontario N1H 1C4 telephone (519) 823-4995 fax (519) 836-5477

Page 1 of 1

50+

5.0



Checked By: J. S. 7/26/2015 Prepared By: C. D. Date Prepared: This borehole log was prepared for hydrogeological and/or environmental purposes and does not necessarily contain information suitable for a geotechnical assessment of the subsurface conditions. Borehole data requires interpretation by R. J. Burnside & Associates Limited personnel before use by others. SAMPLE TYPE AC MONITORING WELL DATA Auger Cutting ss 🔀 Split Spoon LEGEND cs 🗀 ar 📖 Water found @ time of drilling Continuous Air Rotary 51 mm dia. PVC Static Water Level - 6/16/2015 Screen: 51 mm dia. PVC #10 slot RC LARA Rock Core WC Wash Cuttings