

DATE July 16, 2010**PROJECT No.** 08-1122-0078/9600**TO** Sue Murphy
Mattamy Homes**FROM** Brian Byerley**EMAIL** bbyerley@golder.com**HYDROGEOLOGICAL INVESTIGATION
PROPOSED MATTAMY HOMES DEVELOPMENT
RICHMOND (OTTAWA), ONTARIO**

This memo presents the results of a hydrogeological investigation carried out for the assessment of shallow groundwater conditions in regard to the building foundations of the proposed Mattamy Homes (Mattamy) development in the Village of Richmond (in the City of Ottawa), Ontario.

The reader is referred to the "Important Information and Limitations of This Report" which follows the text but forms an integral part of this document.

SITE DESCRIPTION

Mattamy is planning to develop a residential subdivision on approximately 132 hectares (325 acres) along the western edge of the Village of Richmond (see Key Plan: Figure 1). The site is legally described as Lot 22, Concession II, III and IV, Geographic Township of Goulbourn (Village of Richmond). The site boundary is shown on Figure 2. The northern half of the site is actively farmed (corn, wheat and beans), and the southern half of the site consists of fallow fields. The site is currently zoned for future residential development. The surrounding lands to the north, south and west of the site are beyond the Village boundary, and are primarily used for agricultural purposes. The lands to the east of the site are within the Village boundary and consist primarily of low density residential developments.

PROCEDURE

The drilling program was carried out from April 28 to 30, 2010. At that time, a total of eight (8) boreholes (numbered 10-1 to 10-8, inclusive) were advanced at the locations shown on Figure 2. The boreholes were advanced using a track mounted hollow-stem auger drill supplied and operated by Marathon Drilling Company Ltd. of Ottawa, Ontario. The boreholes were advanced to depths varying from about 4 to 6 metres below present ground surface. Boreholes 10-3, 10-6 and 10-8 were extended first through overburden soil to bedrock surface, (which was encountered at depths of about 3.7, 3.1 and 0.6 metres, respectively,) and then into bedrock for depths of about 6.0, 5.2, 4.1 metres, respectively. Bedrock was cored using rotary core drilling in NQ size. Boreholes 10-1, 10-2, 10-4, 10-5 and 10-7 were terminated with the overburden.

Within the boreholes, standard penetration tests (ASTM D698) were carried out at regular intervals of depth, and samples of the soils encountered were recovered using drive-open sampling equipment. The bedrock cores were obtained using core barrels.



Both single level and multilevel monitoring wells were installed in the boreholes. At locations where uniform soil conditions were encountered, such as boreholes 10-2, 10-7, and 10-8, single level monitoring wells were installed. At the remaining five boreholes, more than one formation was encountered and hence multilevel monitoring wells were installed at these boreholes.

Monitoring wells were installed and constructed by Marathon Drilling Inc. The monitoring wells were constructed using 32 millimetre diameter, schedule 40, and flush threaded polyvinyl chloride (PVC) pipes. The bottom 1.5 to 3 metres of each monitor consists of 0.25 mm (#10) slotted screen, and silica sand filter pack to about 0.3 metres above the sell screen. The top of the screen was extended above the ground surface using solid riser pipe. The tops of each riser pipe was sealed with a slip-cap and covered with above grade metal protective casings. The details of the monitoring well construction are provided on the attached Borehole Records.

Rising head response tests were conducted at each of the monitoring wells. During each test, the water level in a well was drawn down by quickly removing a volume of water from the well. The rate at which the water level recovered was measured and recorded until the water level had recovered to at least 90 percent of the pre-test water level. The rising head testing was carried out on May 3, 2010.

The field work was supervised by technicians from our staff who located the boreholes in the field, directed the drilling operations, visually examined and logged the subsurface conditions encountered, directed the in-situ testing, and took custody of the samples for further examination and laboratory testing.

On completion of the drilling operations, samples of the soils encountered in the boreholes were transported to our laboratory for examination by the project engineer and for laboratory testing. Laboratory sieve and hydrometer testing was carried out on selected granular samples.

The borehole locations were selected by Golder Associates and picketed at the site in relation to existing site features. J. D. Burnes Limited subsequently surveyed the borehole elevations and locations using a Trimble R8 Global Positioning System (GPS). The elevations are reference to Geodetic datum.

The groundwater levels in the monitoring wells were measured on April 29-30, May 14, 2010, June 15, 2010, and July 15, 2010.

RESULTS

Subsurface Conditions

The subsurface conditions encountered in the boreholes are shown on the attached Record of Borehole sheets. The results of the grain size distribution testing on the selected soil samples are given on Figures 3 and 4.

The following provides a summary of the subsurface conditions encountered within the boreholes.

A layer of topsoil, about 0.1 to 0.25 metres thick, was encountered at ground surface at all borehole locations with exception of borehole 10-8, where a fill layer of about 0.6 metres thick was encountered. The fill layer at this location consists of sandy silt with some gravel.

In northern half of the site, the topsoil is underlain by silty clay layer at boreholes 10-1, 10-3 and 10-4. The silty clay layer extends to depths of about 4.4 metres (borehole depth) at borehole 10-1 and about 2.1 metres at boreholes 10-3 and 10-4. The upper 2.1 metres of the silty clay has been weathered to a grey brown crust. Standard penetration tests carried out within the weathered crust gave 'N' values ranging from 3 to 12 blows per 0.3 metres of penetration, indicating stiff to very stiff consistency.

In borehole 10-1, only, the silty clay below the depth of weathering is grey in colour. Note that the grey silty clay layer was not encountered in boreholes 10-3 and 10-4. The grey silty clay extends to at least the boring depth, which is about 4.4 metres. Standard penetration tests carried out within the weathered crust gave 'N' values ranging from weight of the hammer to 3 blows per 0.3 metres of penetration, indicating firm to stiff consistency.

The topsoil and silty clay are underlain by granular soil consisting of silt sand to sandy silt with occasional trace clay as observed in boreholes 10-2, 10-3, 10-4, 10-5, 10-6, and 10-7. This layer extends to depths of about 3.5, 2.0, 1.8 metres at boreholes 10-3, 10-5 and 10-6, respectively, and to minimum of 4.0 metres boring depth. Standard penetration tests carried out within the granular soil gave 'N' values ranging from 12 to 47 blows per 0.3 metres of penetration, indicating compact to dense state of packing.

The granular soil at boreholes 10-3, 10-5 and 10-6 is underlain by a glacial till layer. This layer extends to bedrock surface at boreholes 10-3 and 10-6 (bedrock surface depths at about 3.7 and 3.1, respectively) and to boring depth of 4.0 metres at borehole 10-5. The glacial till consists of gravel, cobbles and boulders in a matrix of sand silt with a trace of clay. Standard penetration tests carried out within the granular soil gave 'N' values ranging from 15 to greater than 100 blows per 0.3 metres of penetration, indicating compact to very dense state of packing.

In boreholes 10-3 and 10-6, the glacial till is underlain by bedrock; while in borehole 10-8, the fill layer is underlain by bedrock. The bedrock surface is located at depths of 3.7, 3.1 and 0.6 metres below existing ground surface at boreholes 10-3, 10-6, and 10-8 respectively. The bedrock consists of thinly to medium bedded light grey sandstone with interbeds of dolostone. The RQD values measured on recovered bedrock core samples generally ranged from 70 to 90, indicating a good to excellent quality bedrock. However, the RQD values measured on recovered bedrock core samples from borehole 10-8 ranged from 0 to 40 percent in the upper 2.5 metres zone, indicating very poor to poor quality, and 80 percent in the lower 1.5 metres zone. Further details on total core recovery (TCR) and solid core recovery (SCR) are shown on the attached Borehole Records.

Groundwater Levels and Hydraulic Conductivities

The summary of the rising head testing carried out on May 3, 2010 and within each monitoring well is provided in the following table.

Well ID	Hydraulic Conductivity (m/s)	Stratigraphy at Well Screen
MW10-1A	5.0E-06	Grey silty Clay
MW10-1B	7.5E-06	Grey Brown silty Clay (Weathered Crust)
MW10-2	1.3E-06	Grey Brown silty fine Sand
MW10-3A	2.0E-05	fresh Grey Dolomite
MW10-3B	4.3E-06	Grey Brown silty Clay (Weathered Crust)
MW10-4A	3.4E-06	Grey Brown fine sandy Silt
MW10-4B	1.0E-05	Grey Brown silty Clay (Weathered Crust)
MW10-5A	5.4E-06	Grey sandy silt some gravel trace clay (Glacial Till)
MW10-5B	1.5E-06	Grey Brown silty fine Sand
MW10-6A	3.6E-06	fresh Grey Dolomite
MW10-6B	6.9E-06	Grey Brown silty Sand trace Clay
MW10-7	2.7E-06	Grey Brown silty fine Sand
MW10-8	N/A: Recovery too fast to Measure	Weathered to fresh Grey Dolomite

The range of hydraulic conductivity values for various formation are given as follow: grey brown silty clay (weathered crust) varies from 1.0×10^{-5} to 4.3×10^{-6} m/sec, grey silty clay 5×10^{-6} m/sec, silty sand 1.5 to 6.9×10^{-6} m/sec and bedrock 2×10^{-5} to 3.6×10^{-6} m/sec.

The groundwater levels within each monitoring well were measured on several occasions as given in the following table.

Well ID	Ground Surface Elevation (geodetic)	Screen depth (middle of screen) (mbgs)	Soil/rock at depth of well screen	Groundwater Level (mbgs)			
				April 29 & 30, 2010	May 14, 2010	June 16, 2010	July 15, 2010
MW10-1A	94.55	1.11	Grey silty Clay	0.73	0.78	1.47	1.48
MW10-1B	94.55	1.21	Grey Brown silty Clay (Weathered Crust)	0.74	0.77	1.48	1.48
MW10-2	94.90	2.12	Grey Brown silty fine Sand	0.73	0.67	1.61	1.41
MW10-3A	94.0	4.55	fresh Grey Dolomite	0.22	0.26	1.55	1.25
MW10-3B	94.0	2.12	Grey Brown silty Clay (Weathered Crust)/Grey Brown fine sandy Silt	0.82	0.81	1.86	1.78
MW10-4A	94.34	3.03	Grey Brown fine sandy Silt	0.48	0.47	1.40	1.33
MW10-4B	94.34	1.21	Grey Brown silty Clay (Weathered Crust)	0.47	0.49	1.47	1.40
MW10-5A	95.65	3.03	Glacial Till	0.82	0.79	NA ¹	NA ¹
MW10-5B	95.65	1.21	Grey Brown silty fine Sand	0.89	0.88	2.04	NA ¹
MW10-6A	95.67	4.24	fresh Grey Dolomite	1.38	1.38	2.90	2.26
MW10-6B	95.67	1.52	Grey Brown silty Sand trace Clay	1.29	1.28	2.79	2.54
MW10-7	95.36	2.42	Grey Brown silty fine Sand	0.51	0.49	1.98	1.87
MW10-8	93.32	2.42	Weathered to fresh Grey Dolomite	1.02	1.15	2.49	2.36

Note 1: Monitoring well MW 10-5 A and B vandalized and groundwater levels not available.

The groundwater levels generally vary from 0.2 to 1.4 metres below ground surface.

If you have any questions regarding the content of this memo, please contact the undersigned.

Yours truly,

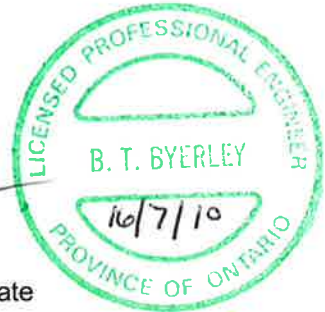
GOLDER ASSOCIATES LTD.



Sajjad Khan, P.Eng.
Geotechnical Engineer



Brian Byerley M.Sc., P.Eng.
Senior Hydrogeologist/Associate



SK/BTB/AM/wr

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Attachments: Important Information and Limitations of This Memorandum
Figure 1 – Key Plan
Figure 2 – Site Plan
Figures 3 and 4 – Grain Size Distribution Results
Record of Borehole Sheets – Boreholes 10-1 to 10-8

IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Standard of Care: Golder Associates Ltd. (Golder) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the engineering and science professions currently practising under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

Basis and Use of the Report: This report has been prepared for the specific site, design objective, development and purpose described to Golder by the Client, Mattamy Homes. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location. Any change of site conditions, purpose, development plans or if the project is not initiated within eighteen months of the date of the report may alter the validity of the report. Golder can not be responsible for use of this report, or portions thereof, unless Golder is requested to review and, if necessary, revise the report.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then the client may authorize the use of this report for such purpose by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process, provided this report is not noted to be a draft or preliminary report, and is specifically relevant to the project for which the application is being made. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client can not rely upon the electronic media versions of Golder's report or other work products.

The report is of a summary nature and is not intended to stand alone without reference to the instructions given to Golder by the Client, communications between Golder and the Client, and to any other reports prepared by Golder for the Client relative to the specific site described in the report. In order to properly understand the suggestions, recommendations and opinions expressed in this report, reference must be made to the whole of the report. Golder can not be responsible for use of portions of the report without reference to the entire report.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project. The extent and detail of investigations, including the number of test holes, necessary to determine all of the relevant conditions which may affect construction costs would normally be greater than has been carried out for design purposes. Contractors bidding on, or undertaking the work, should rely on their own investigations, as well as their own interpretations of the factual data presented in the report, as to how subsurface conditions may affect their work, including but not limited to proposed construction techniques, schedule, safety and equipment capabilities.

Soil, Rock and Groundwater Conditions: Classification and identification of soils, rocks, and geologic units have been based on commonly accepted methods employed in the practice of geotechnical engineering and related disciplines. Classification and identification of the type and condition of these materials or units involves judgment, and boundaries between different soil, rock or geologic types or units may be transitional rather than abrupt. Accordingly, Golder does not warrant or guarantee the exactness of the descriptions.

IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT (cont'd)

Special risks occur whenever engineering or related disciplines are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain subsurface conditions. The environmental, geologic, geotechnical, geochemical and hydrogeologic conditions that Golder interprets to exist between and beyond sampling points may differ from those that actually exist. In addition to soil variability, fill of variable physical and chemical composition can be present over portions of the site or on adjacent properties. **The professional services retained for this project include only the geotechnical aspects of the subsurface conditions at the site, unless otherwise specifically stated and identified in the report.** The presence or implication(s) of possible surface and/or subsurface contamination resulting from previous activities or uses of the site and/or resulting from the introduction onto the site of materials from off-site sources are outside the terms of reference for this project and have not been investigated or addressed.

Soil and groundwater conditions shown in the factual data and described in the report are the observed conditions at the time of their determination or measurement. Unless otherwise noted, those conditions form the basis of the recommendations in the report. Groundwater conditions may vary between and beyond reported locations and can be affected by annual, seasonal and meteorological conditions. The condition of the soil, rock and groundwater may be significantly altered by construction activities (traffic, excavation, groundwater level lowering, pile driving, blasting, etc.) on the site or on adjacent sites. Excavation may expose the soils to changes due to wetting, drying or frost. Unless otherwise indicated the soil must be protected from these changes during construction.

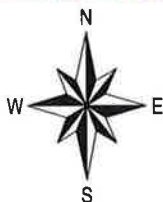
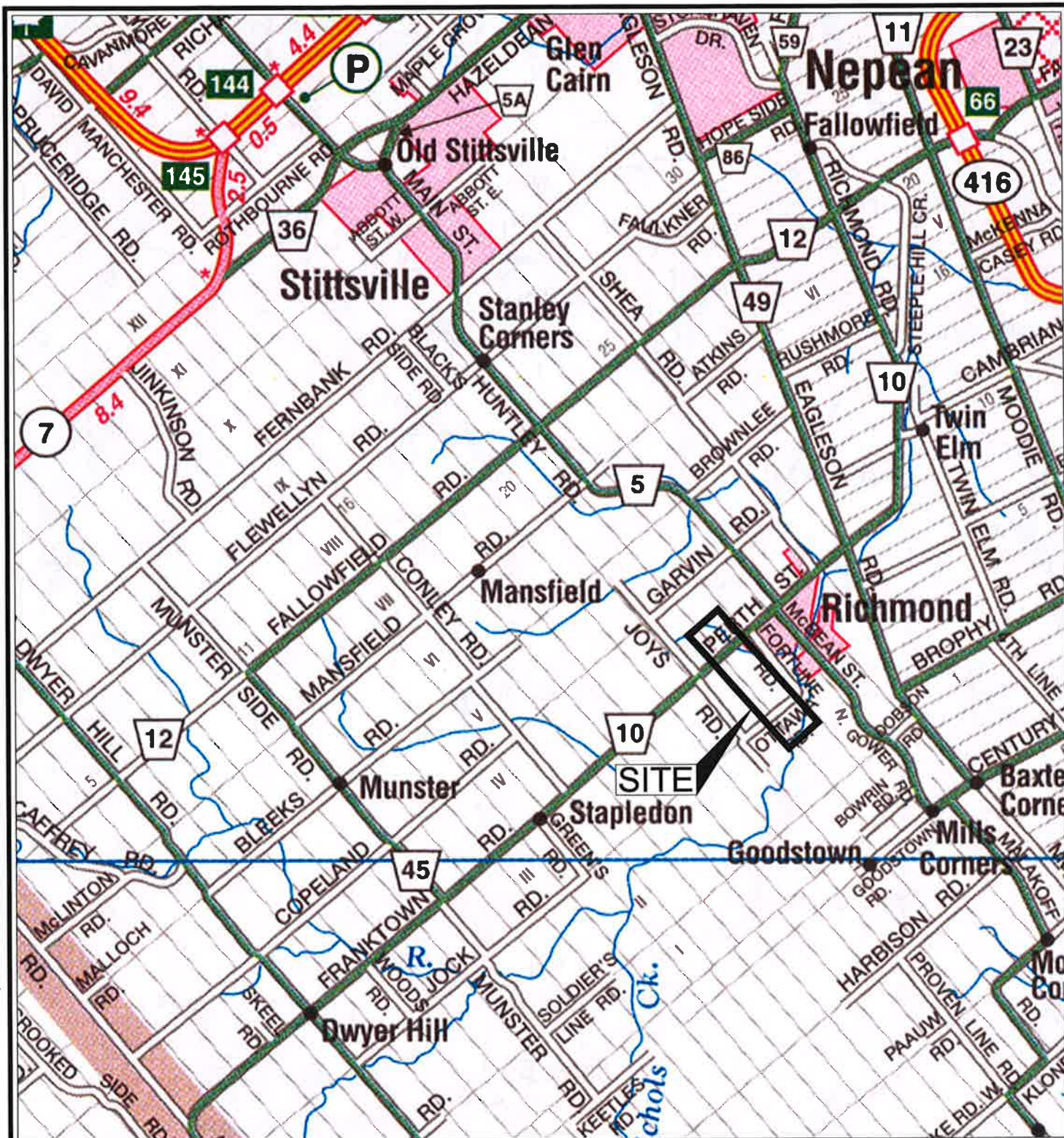
Sample Disposal: Golder will dispose of all uncontaminated soil and/or rock samples 90 days following issue of this report or, upon written request of the Client, will store uncontaminated samples and materials at the Client's expense. In the event that actual contaminated soils, fills or groundwater are encountered or are inferred to be present, all contaminated samples shall remain the property and responsibility of the Client for proper disposal.

Follow-Up and Construction Services: All details of the design were not known at the time of submission of Golder's report. Golder should be retained to review the final design, project plans and documents prior to construction, to confirm that they are consistent with the intent of Golder's report.

During construction, Golder should be retained to perform sufficient and timely observations of encountered conditions to confirm and document that the subsurface conditions do not materially differ from those interpreted conditions considered in the preparation of Golder's report and to confirm and document that construction activities do not adversely affect the suggestions, recommendations and opinions contained in Golder's report. Adequate field review, observation and testing during construction are necessary for Golder to be able to provide letters of assurance, in accordance with the requirements of many regulatory authorities. In cases where this recommendation is not followed, Golder's responsibility is limited to interpreting accurately the information encountered at the borehole locations, at the time of their initial determination or measurement during the preparation of the Report.

Changed Conditions and Drainage: Where conditions encountered at the site differ significantly from those anticipated in this report, either due to natural variability of subsurface conditions or construction activities, it is a condition of this report that Golder be notified of any changes and be provided with an opportunity to review or revise the recommendations within this report. Recognition of changed soil and rock conditions requires experience and it is recommended that Golder be employed to visit the site with sufficient frequency to detect if conditions have changed significantly.

Drainage of subsurface water is commonly required either for temporary or permanent installations for the project. Improper design or construction of drainage or dewatering can have serious consequences. Golder takes no responsibility for the effects of drainage unless specifically involved in the detailed design and construction monitoring of the system.



NOTE

THIS FIGURE IS TO BE READ IN CONJUNCTION WITH
 ACCOMPANYING GOLDER ASSOCIATES LTD.
 REPORT No. 08-1122-0078-9500



SCALE	1:100,000
DATE	19 MAY 10
DESIGN	
CAD	J.M.

TITLE

KEY PLAN

FILE No. 0811220078-9501-01.dwg

PROJECT No. 08-1122-0078

REV.

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REVIEW

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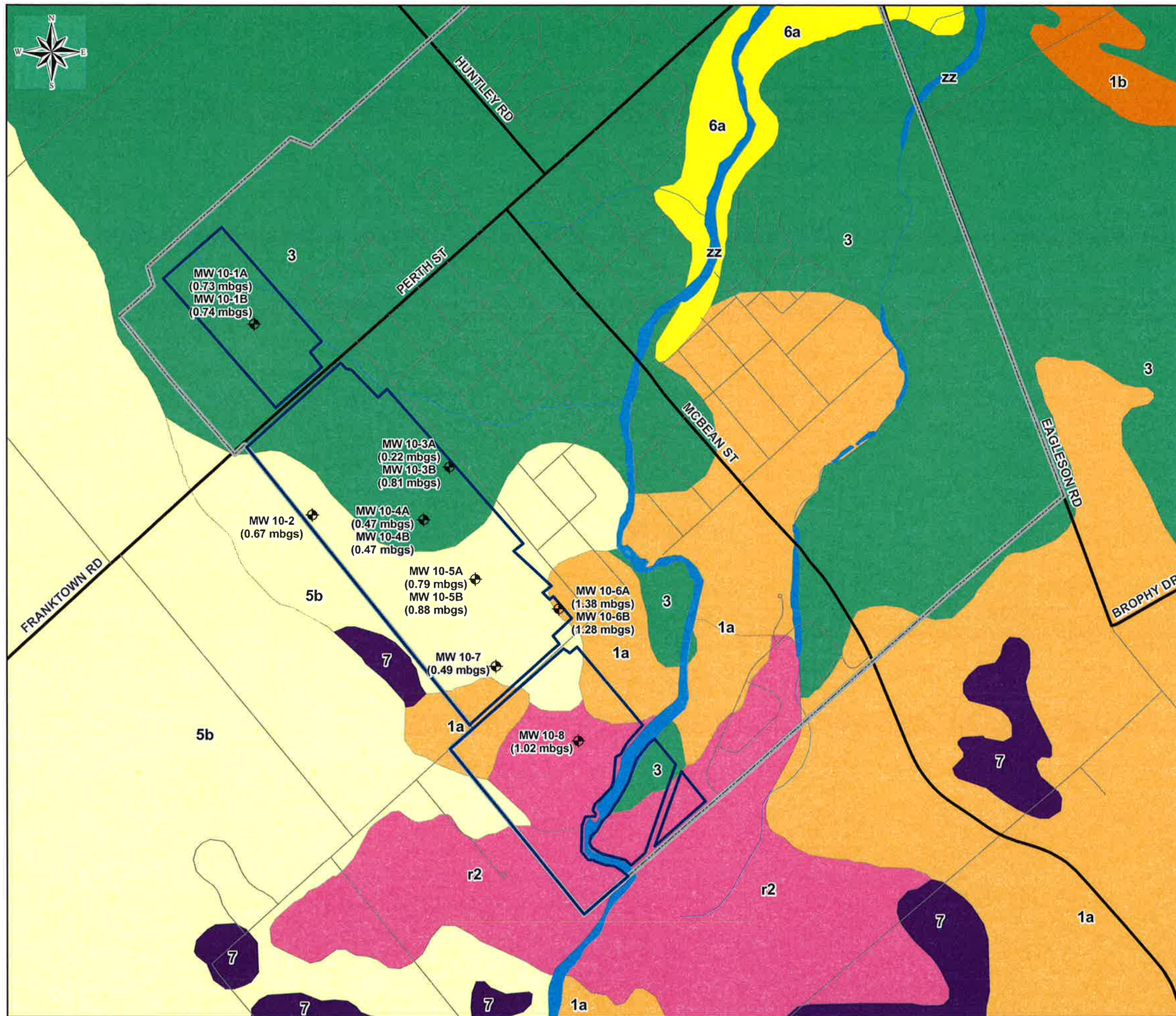
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MATTAMY HOMES
 RICHMOND LANDS

FIGURE

1

N:\Active\2008\1122 - Environmental\08-1122-0078 Mattamy Richmond\GIS\mxd\0811220078_RevisedSurficialGeology.mxd



LEGEND

MONITORING WELL (CURRENT INVESTIGATION)
(0.62 mbgs) - SPRING 2010 GROUNDWATER LEVEL,
metres below ground surface

ROADWAY

RIVER OR STREAM

SITE BOUNDARY

RICHMOND VILLAGE BOUNDARY

SURFICIAL GEOLOGY

1a TILL, PLAIN WITH LOCAL RELIEF <5m

1b TILL, DRUMLINIZED

3 OFFSHORE MARINE DEPOSITS: CLAY, SILTY CLAY & SILT

5a NEARSHORE SEDIMENTS: GRAVEL, SAND & BOULDERS

5b NEARSHORE SEDIMENTS: FINE TO MEDIUM GRAINED SAND

6a ALLUVIAL DEPOSITS: SILTY SAND, SILT, SAND & CLAY

7 ORGANIC DEPOSITS: MUCK & PEAT

r2 BEDROCK: LIMESTONE, DOLOMITE, SANDSTONE & LOCAL SHALE

zz WATER


NOTE

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GOLDER ASSOCIATES LTD., REPORT No. 08-1122-0078

REFERENCE

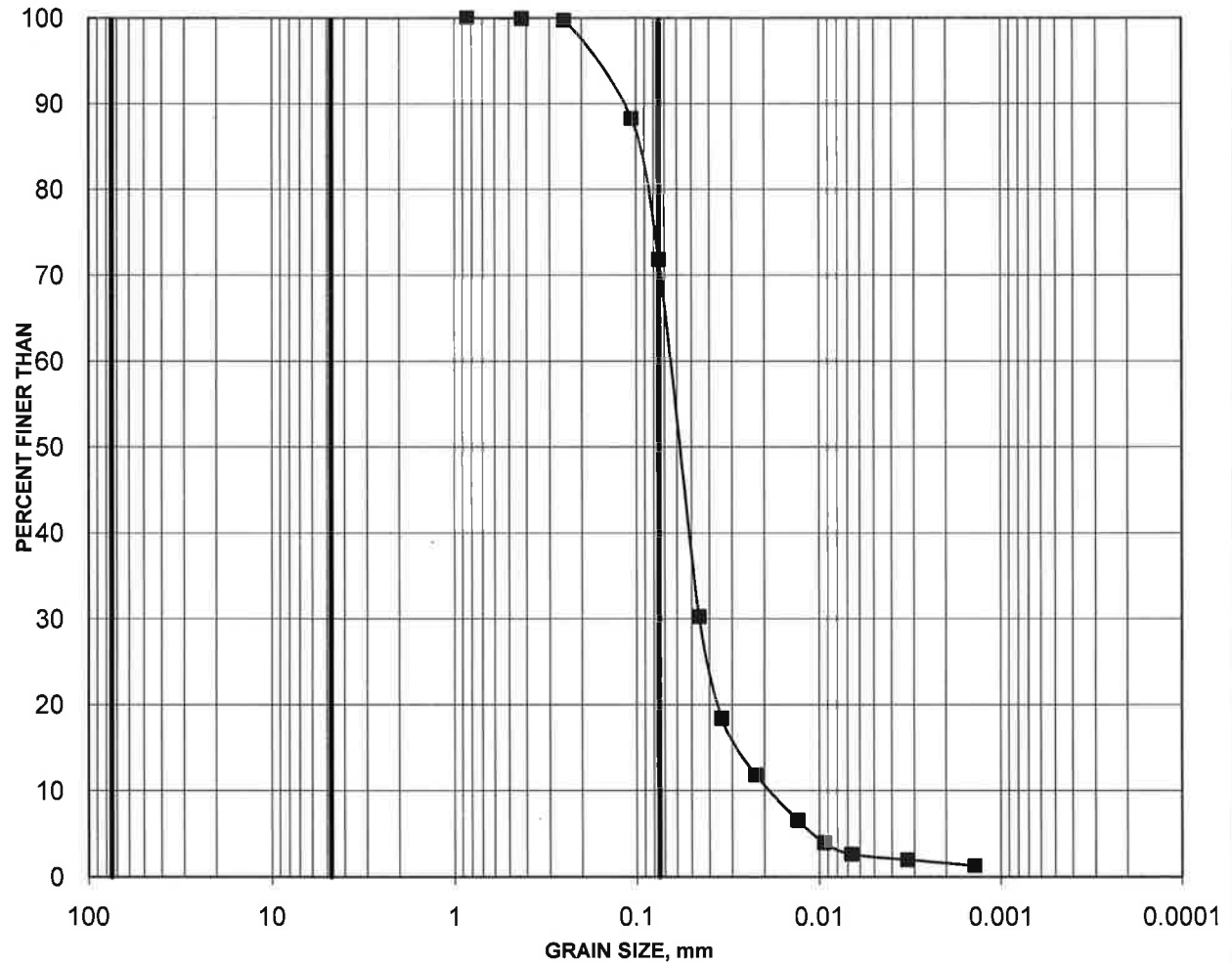
MODIFIED FROM BÉLANGER, J. R., URBAN GEOLOGY OF THE NATIONAL
CAPITAL AREA, GEOLOGICAL SURVEY OF CANADA, OPEN FILE D3256, 2001
Projection: Transverse Mercator Datum: NAD 83 Coordinate System: UTM Zone 18



PROJECT	MATTAMY HOMES VILLAGE OF RICHMOND		
TITLE	BOREHOLE LOCATIONS AND REVISED SURFICIAL GEOLOGY		
	PROJECT No.	08-1122-0078	SCALE AS SHOWN
	DESIGN	BTB 12 MAY 2010	REV. 0
	GIS	BT 12 MAY 2010	
	CHECK	SK	
	REVIEW	08/16/10	
FIGURE: 2			

GRAIN SIZE DISTRIBUTION

FIGURE 3



Cobble	coarse	fine	coarse	medium	fine	SILT AND CLAY
Size	GRAVEL SIZE		SAND SIZE			

Borehole	Sample	Depth (m)
10-7	3	2.29-2.90

[illegible]

MIS-BHS 001 0811220078-9500 GPJ GAL-MIS GDT 6/3/10 JM

DEPTH SCALE

1 : 50

LOGGED: J.D.

CHECKED:

PROJECT: 08-1122-0078

RECORD OF BOREHOLE: 10-2

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: Apr. 28, 2010

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB TESTING	PIEZOMETER OR STANDPIPE INSTALLATION									
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT													
								20		40		60		80			10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³		
								SHEAR STRENGTH Cu, kPa		nat V. rem V.		+ ⊕		Q - U -			● ○		Wp		W		Wl		
								20	40	60	80			20	40	60	80								
0	Power Auger 200mm Diam. (Hollow Stem)	GROUND SURFACE		94.00																					
		TOPSOIL		0.00																					
		Compact grey brown SILTY fine SAND		0.08																					
1					1	50 DO	13																		
2				2	50 DO	17																			
3				3	50 DO	12																			
		Compact grey SILTY SAND		91.85 3.05																					
					4	50 DO	22																		
				91.09 3.81																					
4		End of Borehole																							
5																									
6																									
7																									
8																									
9																									
10																									

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen

W.L. in screen at
Elev. 93.17m on
Apr. 30, 2010

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot ScreenW.L. in screen at
Elev. 93.17m on
Apr. 30, 2010

DEPTH SCALE

1 : 50



LOGGED: JM

CHECKED: [Signature]

MIS-BHS 001 0811220078-9500 GPJ GAL-MIS GDT 6/3/10 JM

PROJECT: 08-1122-0078

RECORD OF BOREHOLE: 10-3

SHEET 1 OF 2

LOCATION: See Site Plan

BORING DATE: Apr. 28-29, 2010

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION				
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT							
								Cu, kPa		nat V. rem V.		+ Q - U -							
								20	40	60	80	20	40			60	80		
0	Power Auger 200mm Diam. (Hollow Stem)	GROUND SURFACE		93.99															
		TOPSOIL		0.00															
		Very stiff to stiff grey brown SILTY CLAY, some sand (Weathered Crust)		0.06															
1					1	50 DO	9												
2					2	50 DO	3												
		Compact to dense grey brown fine SANDY SILT		91.66															
				2.13		3	50 DO	28											
3					4	50 DO	47												
	Rotary Drill NQ Core	Dense grey brown SANDY SILT, some gravel (GLACIAL TILL)		90.48															
		Very thinly to medium bedded light grey interbedded SANDSTONE and DOLOSTONE BEDROCK		3.51															
4				3.66		C1	NQ RC	DD											
						C2	NQ RC	DD											
6		End of Borehole		87.99															
				6.00															
7																			
8																			
9																			
10																			

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'B'

Silica Sand

Bentonite Seal

32mm Diam. PVC
#10 Slot Screen 'A'W.L. in screen 'A'
at Elev. 93.77m on
Apr. 30, 2010W.L. in screen 'B'
at Elev. 93.17m on
Apr. 30, 2010

MIS-BHS 001 0811220078-9500 GPJ GAL-MIS GGT 6/3/10 JM

DEPTH SCALE

1 : 50



LOGGED: J.P.

CHECKED: J.P.

PROJECT: 08-1122-0078

RECORD OF DRILLHOLE: 10-3

SHEET 2 OF 2

LOCATION: See Site Plan

DRILLING DATE: Apr. 28-29, 2010

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME 55

DRILLING CONTRACTOR: Marathon Drilling

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE (mm/min)	FLUSH % RETURN	COLOUR % RETURN	FR/FX-FRACTURE F-FAULT				SM-SMOOTH				FL-FLEXURED				BC-BROKEN CORE				DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION				
									CL-CLEAVAGE				J-JOINT				R-ROUGH				UE-UNEVEN						MB-MECH. BREAK			
									SH-SHEAR				P-POLISHED				ST-STEPPED				W-WAVY						B-BEDDING			
									VN-VEIN				S-SLICKENSIDED PL-PLANAR				C-CURVED													
				RECOVERY				R.Q.D. %				DISCONTINUITY DATA				HYDRAULIC CONDUCTIVITY														
				TOTAL CORE %				SOLID CORE %				FRACT INDEX PER 0.3				DIP w.r.t CORE AXIS				TYPE AND SURFACE DESCRIPTION				K _s cm/sec						
				50 50 50 50				50 50 50 50				50 50 50 50				50 50 50 50				50 50 50 50				10 ⁻⁶ 10 ⁻⁵ 10 ⁻⁴ 10 ⁻³						
4		Rotary Drill NQ Core	BEDROCK SURFACE	90.33																										
			Very thinly to medium bedded light grey interbedded SANDSTONE and DOLOSTONE BEDROCK	3.66	1																									
5					2																									
6			End of Borehole	87.99																										
				6.00																										
7																														
8																														
9																														
10																														
11																														
12																														
13																														

Bentonite Seal

32mm Diam. PVC
#10 Slot Screen 'A'W.L. in screen 'A'
at Elev. 93.77m on
Apr. 30, 2010W.L. in screen 'B'
at Elev. 93.17m on
Apr. 30, 2010

MIS-RCK 001 0811220078-9500 (ROCK) GPJ GAL-MISS GDT 6/3/10 JM

DEPTH SCALE

1 : 50



LOGGED: J.D.

CHECKED: *MB*

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE				SAMPLES				DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV.	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT							
				DEPTH (m)				Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		Wp ——— GW ——— WI					
									20	40	60	80	20	40	60	80			
0	Power Auger 200mm Diam. (Hollow Stem)	GROUND SURFACE		94.34															
		TOPSOIL		0.00															
		Very stiff to stiff grey brown SILTY CLAY, some sand (Weathered Crust)		0.10															
1					1	50 DO	4												
2					2	50 DO	12												
			Compact grey fine SANDY SILT		92.21														
					2.13														
						3	50 DO	17											
3																			
					4	50 DO	28												
4																			
		End of Borehole		90.38															
				3.90															
5																			
6																			
7																			
8																			
9																			
10																			

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'B'

Silica Sand

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'A'

W.L. in screen 'A'
at Elev. 93.86m on
Apr. 30, 2010

W.L. in screen 'B'
at Elev. 93.87m on
Apr. 30, 2010

DEPTH SCALE

1 : 50

LOGGED: JD

CHECKED: 12/17

PROJECT: 08-1122-0078

RECORD OF BOREHOLE: 10-5

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: Apr. 30, 2010

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB TESTING	PIEZOMETER OR STANDPIPE INSTALLATION									
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT													
								20		40		60		80			10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³		
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q = ● U = ○		Wp				W				Wi			
								20	40	60	80	20	40	60	80										
0	Power Auger 200mm Diam. (Hollow Stem)	GROUND SURFACE		94.82																					
		TOPSOIL		0.00																					
		Compact grey brown SILTY fine SAND		0.10																					
1					1	50 DO	15																		
2					2	50 DO	5																		
		Compact to very dense grey SANDY SILT, some gravel, trace clay (GLACIAL TILL)		92.84 1.98																					
3					3	50 DO	15																		
4				4	50 DO	>100																			
4		End of Borehole		90.86 3.98																					
5																									
6																									
7																									
8																									
9																									
10																									

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'B'

Silica Sand

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'A'

W.L. in screen 'A'
at Elev. 94.83m on
Apr. 30, 2010

W.L. in screen 'B'
at Elev. 94.76m on
Apr. 30, 2010

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'B'

Silica Sand

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'A'W.L. in screen 'A'
at Elev. 94.83m on
Apr. 30, 2010W.L. in screen 'B'
at Elev. 94.76m on
Apr. 30, 2010

MIS-BHS 001 0811220078-9500.GPJ GAL-MIS GDT 6/3/10 JM

DEPTH SCALE

1 : 50



LOGGED: J.P.

CHECKED: *[Signature]*

PROJECT: 08-1122-0078

RECORD OF BOREHOLE: 10-6

SHEET 1 OF 2

LOCATION: See Site Plan

BORING DATE: Apr. 30, 2010

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION							
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT											
								20		40		60		80			10 ⁻⁵		10 ⁻⁴		10 ⁻³		
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		Wp ——— W ——— Wl									
0	Power Auger 200mm Diam. (Hollow Stem)	GROUND SURFACE		95.67																			
TOPSOIL			0.00																				
Loose to compact grey brown SANDY SILT to SILTY SAND, trace clay			95.42																				
			0.25																				
1					1	50 DO	6																
2		Dense to very dense grey brown SANDY SILT, some gravel, cobbles and boulders (GLACIAL TILL)		93.84 1.83	2	50 DO	27																
					3	50 DO	68																
3				92.60 3.07	4	50 DO	>100																
4	Rotary Drill NQ Core	Thinly to medium bedded light grey interbedded SANDSTONE and DOLOSTONE BEDROCK			C1	NQ RC	DD																
5					C2	NQ RC	DD																
		End of Borehole		90.49 5.18																			
6																							
7																							
8																							
9																							
10																							

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'B'

Silica Sand

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot Screen 'A'W.L. in screen 'A'
at Elev. 94.29m on
Apr. 30, 2010W.L. in screen 'B'
at Elev. 93.38m on
Apr. 30, 2010

MIS-BHS 001 08-11220078-9500 GPFJ GAL-MIS GDT 6/3/10 JM

DEPTH SCALE

1 : 50



LOGGED: J.D.

CHECKED: *h2*

PROJECT: 08-1122-0078

RECORD OF DRILLHOLE: 10-6

SHEET 2 OF 2

LOCATION: See Site Plan

DRILLING DATE: Apr. 30, 2010

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME 55

DRILLING CONTRACTOR: Marathon Drilling

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No.	PENETRATION RATE (m/min)	FLUSH	COLOUR % RETURN	FR/FX-FRACTURE	F-FAULT	SM-SMOOTH	FL-FLEXURED	BC-BROKEN CORE	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION
									CL-CLEAVAGE	J-JOINT	R-ROUGH	UE-UNEVEN	MB-MECH. BREAK		
									SH-SHEAR	P-POLISHED	ST-STEPPED	W-WAVY	B-BEDDING		
									VN-VEIN	S-SLICKENSIDED	PL-PLANAR	C-CURVED			
RECOVERY		R.Q.D. %		FRACT INDEX PER 0.3		DISCONTINUITY DATA		HYDRAULIC CONDUCTIVITY							
TOTAL CORE %	SOLID CORE %					DIP #1 CORE AXIS		TYPE AND SURFACE DESCRIPTION		K _s cm/sec					
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³			
10 ⁻⁶	10 ⁻⁵					10 ⁻⁶		10 ⁻⁵							

Bentonite Seal

Silica Sand

32mm Diam, PVC
#10 Slot Screen 'A'W.L. in screen 'A'
at Elev. 94.29m on
Apr. 30, 2010W.L. in screen 'B'
at Elev. 93.38m on
Apr. 30, 2010

DEPTH SCALE

1 : 50



LOGGED: J.P.

CHECKED: *[Signature]*

MIS-ROCK 001 08-11220078-9500 (ROCK) GPJ GAL-MISS GDT 6/3/10 JM

PROJECT: 08-1122-0078

RECORD OF BOREHOLE: 10-7

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: Apr. 29, 2010

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB TESTING	PIEZOMETER OR STANDPIPE INSTALLATION										
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT													
								20		40		60				80		10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³	
								Cu, kPa		nat V _r rem V _r		+ ⊕				Q - U -		⊖		⊖		⊖		⊖	
								20	40	60	80	20	40	60	80										
0	Power Auger 200mm Diam. (Hollow Stem)	GROUND SURFACE		95.36																					
		TOPSOIL		0.00																					
		Stiff grey to brown SANDY SILT, trace to some clay		0.08																					
1					1	50 DO	5																		
2					2	50 DO	9																		
			Loose grey brown SILTY fine SAND		93.07																				
					2.29																				
						3	50 DO	8																	
3																									
					4	50 DO	9																		
4		End of Borehole		91.40																					
				3.96																					
5																									
6																									
7																									
8																									
9																									
10																									

</

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot ScreenW.L. in screen at
Elev. 94.65m on
Apr. 30, 2010

DEPTH SCALE

1 : 50



LOGGED: J.D.

CHECKED: *[Signature]*

MIS-BHS 001 0811220078-9500.GPJ GAL-MIS GDT 7/14/10 JM

PROJECT: 08-1122-0078

RECORD OF BOREHOLE: 10-8

SHEET 1 OF 2


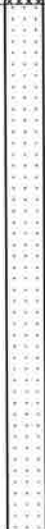
LOCATION: See Site Plan

BORING DATE: Apr. 29, 2010

DATUM: Geodetic

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH				WATER CONTENT PERCENT							
								Cu, kPa		nat V. + rem V.		Q - U		Wp			W		
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³	20	40
0	Power Auger (Hollow Stem)	GROUND SURFACE		96.32															
		Grey brown sandy silt, some gravel (FILL)		0.00	1	A.S.													
				95.76															
		Thinly to medium bedded light grey interbedded SANDSTONE and DOLOSTONE BEDROCK		0.56															
1					C1	NQ RC	DD												
2	Rotary Drill NQ Core				C2	NQ RC	DD												
3																			
4					C3	NQ RC	DD												
4		End of Borehole		92.26															
				4.06															
5																			
6																			
7																			
8																			
9																			
10																			

0.00

Bentonite Seal

Silica Sand

32mm Diam. PVC
#10 Slot ScreenW.L. in screen at
Elev. 92.30m on
Apr. 30, 2010

MIS-BHS 001 0811220078-9500.GPJ GAL-MIS.GDT 6/3/10 J.M.

DEPTH SCALE

1 : 50



LOGGED: J.D.

CHECKED: *[Signature]*

PROJECT: 08-1122-0078

RECORD OF DRILLHOLE: 10-8

SHEET 2 OF 2

LOCATION: See Site Plan

DRILLING DATE: Apr. 29, 2010

DATUM:

INCLINATION: -90° AZIMUTH: ---

DRILL RIG: CME 55

DRILLING CONTRACTOR: Marathon Drilling

DEPTH SCALE METRES	DRILLING RECORD	DESCRIPTION	SYMBOLIC LOG	ELEV. DEPTH (m)	RUN No	PENETRATION RATE (m/min)	FLUSH % RETURN	FR/FX-FRACTURE F-FAULT CL-CLEAVAGE J-JOINT SH-SHEAR P-POLISHED VN-VEIN S-SLICKENSIDED	SM-SMOOTH R-ROUGH ST-STEPPED PL-PLANAR C-CURVED	FL-FLEXURED UE-UNEVEN W-WAVY	BC-BROKEN CORE MB-MECH. BREAK B-BEDDING	DIAMETRAL POINT LOAD INDEX (MPa)	NOTES WATER LEVELS INSTRUMENTATION													
														RECOVERY	R.Q.D. %	FRACT INDEX PER 0.3	DISCONTINUITY DATA	HYDRAULIC CONDUCTIVITY K _f cm/sec								
																			TOTAL CORE %	SOLID CORE %	DIP w.r.t. CORE AXIS	TYPE AND SURFACE DESCRIPTION	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³
1	Rotary Drill NQ Core	BEDROCK SURFACE		95.76																						
		Thinly to medium bedded light grey interbedded SANDSTONE and DOLOSTONE BEDROCK		0.56										Bentonite Seal												
2														Silica Sand												
3																										
4		End of Borehole		92.26										32mm Diam. PVC #10 Slot Screen												
				4.06																						
5														W.L. in screen at Elev. 92.30m on Apr. 30, 2010												
6																										
7																										
8																										
9																										
10																										

MIS-RCK 001 0811220078-9500 (ROCK) GPJ GAL-MISS GDT 6/3/10 JM

DEPTH SCALE

1 : 50



LOGGED: J.D.

CHECKED: *[Signature]*