



Geotechnical & Environmental Associates

Tyttenhanger House
Coursers Road
St Albans
AL4 0PG

Site
Queenswood School, Shepherd's Way, Hatfield,
Hertfordshire

Probe Number
DP3

Method
Opendriver Percussive
Sampler (Terrier rig)

Cone Dimensions

Ground Level (mOD)

Client

Job Number
J09020a

Location

Dates

Engineer

Sheet
1/1

Depth (m)

Blows for Depth Increment

Field Records

Level (mOD)

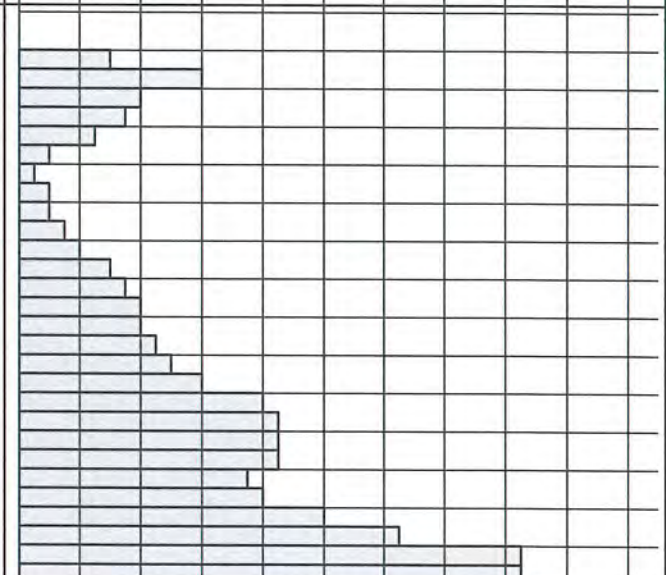
Depth (m)

Blows for Depth Increment
0 4 8 12 16 20 24 28 32 36 40

0.20-0.30
0.30-0.40
0.40-0.50
0.50-0.60
0.60-0.70
0.70-0.80
0.80-0.90
0.90-1.00
1.00-1.10
1.10-1.20
1.20-1.30
1.30-1.40
1.40-1.50
1.50-1.60
1.60-1.70
1.70-1.80
1.80-1.90
1.90-2.00
2.00-2.10
2.10-2.20
2.20-2.30
2.30-2.40
2.40-2.50
2.50-2.60
2.60-2.70
2.70-2.80
2.80-2.90
2.90-3.00

6
12
8
7
5
2
1
2
2
3
4
6
7
8
8
9
10
12
16
17
17
17
15
16
20
25
33
33

0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
6.50
7.00
7.50
8.00



Remarks

Scale (approx)	Logged By
1:40	ML
Figure No.	
J09020a.DP3	

PROJECT NAME
PROJECT NO:

QUEENSWOOD SCHOOL, HATFIELD, HERTFORDSHIRE
GEO / 14933

Date 29/09/2009
Approved J Sturges
Page 1 of 1

Sample details		Description	Classification Tests				Density Tests		Undrained Triaxial Compression Tests			Chemical Tests		Other tests and comments			
Borehole No.	Depth (m)		No.	Type	MC (%)	LL (%)	PL (%)	PI	<425 mic (%)	Bulk (Mg/m ³)	Dry (Mg/m ³)	Cell Pressure (kPa)	Deviator Stress (kPa)		Shear Stress (kPa)	pH	2:1 W/S SO4 (g/l)
1	0.80	-	D	Mottled light brown and grey silty sandy fine gravelly CLAY with rare rootlets	29												
1	1.10	-	D	Mottled orange brown light grey silty sandy slightly gravelly CLAY, gravel is fine grained	26	78	24	54	99								
1	1.30	-	D	Mottled orange brown and light grey silty sandy slightly gravelly CLAY, gravel is fine grained	24	68	22	46	99								
1	1.60	-	D	Orange and light grey slightly gravelly sandy CLAY, gravel is fine to medium grained	20									8.2	0.072		
1	1.90	-	D	Mottled orange brown and light grey silty sandy CLAY	22												
2	0.70	-	D	Mottled orange brown and light grey silty sandy slightly gravelly CLAY with rare rootlets, gravel is fine grained	31	72	23	49	99								
2	1.30	-	D	Mottled orange and light grey silty sandy slightly gravelly CLAY, gravel is fine grained	18												
2	1.60	-	D	Mottled orange and light grey silty sandy CLAY with rare rootlets	23	60	19	41	100								
2	2.60	-	D	Orange grey clayey silty gravelly SAND, gravel is fine to coarse sandstone													Particle Size Distribution Test

SUMMARY OF GEOTECHNICAL TESTING

GEOLABS®

BS1377 : Part 2 : Clause 9 : 1990
Determination of Particle Size Distribution

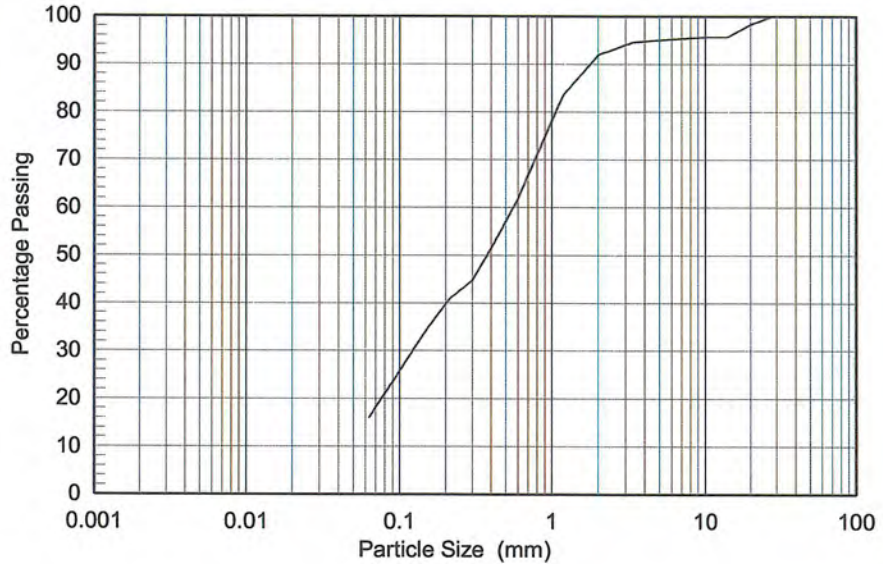
Borehole Number: 2
 Sample Number: -
 Depth (m): 1.60

Description:
 Orange grey clayey silty gravelly SAND,
 gravel is fine to coarse sandstone

BS1377 : Part 2 : Clause 9.2 : 1990 Wet Sieving Method

SIEVE	
Sieve	% pass
200 mm	100
125 mm	100
90 mm	100
75 mm	100
63 mm	100
50 mm	100
37.5 mm	100
28 mm	100
20 mm	98
14 mm	96
10 mm	96
6.3 mm	95
5 mm	95
3.35 mm	95
2 mm	92
1.18 mm	84
600 µm	62
425 µm	53
300 µm	45
212 µm	41
150 µm	34
63 µm	16

CLAY	SILT			SAND			GRAVEL			COBBLES
	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coars	



Particle Proportions	
Cobbles	0.0 %
Gravel	8.0 %
Sand	76.1 %
Silt & Clay	15.9 %

Checked and Approved

Initials:

JS

Date: 29/09/2009

Project Number:

GEO / 14933

Project Name:

QUEENSWOOD SCHOOL, HATFIELD, HERTFORDSHIRE



GEOLABS®

Site Queenswood School, Shepherd's Way, Hatfield, Hertfordshire

Job Number
J09020a

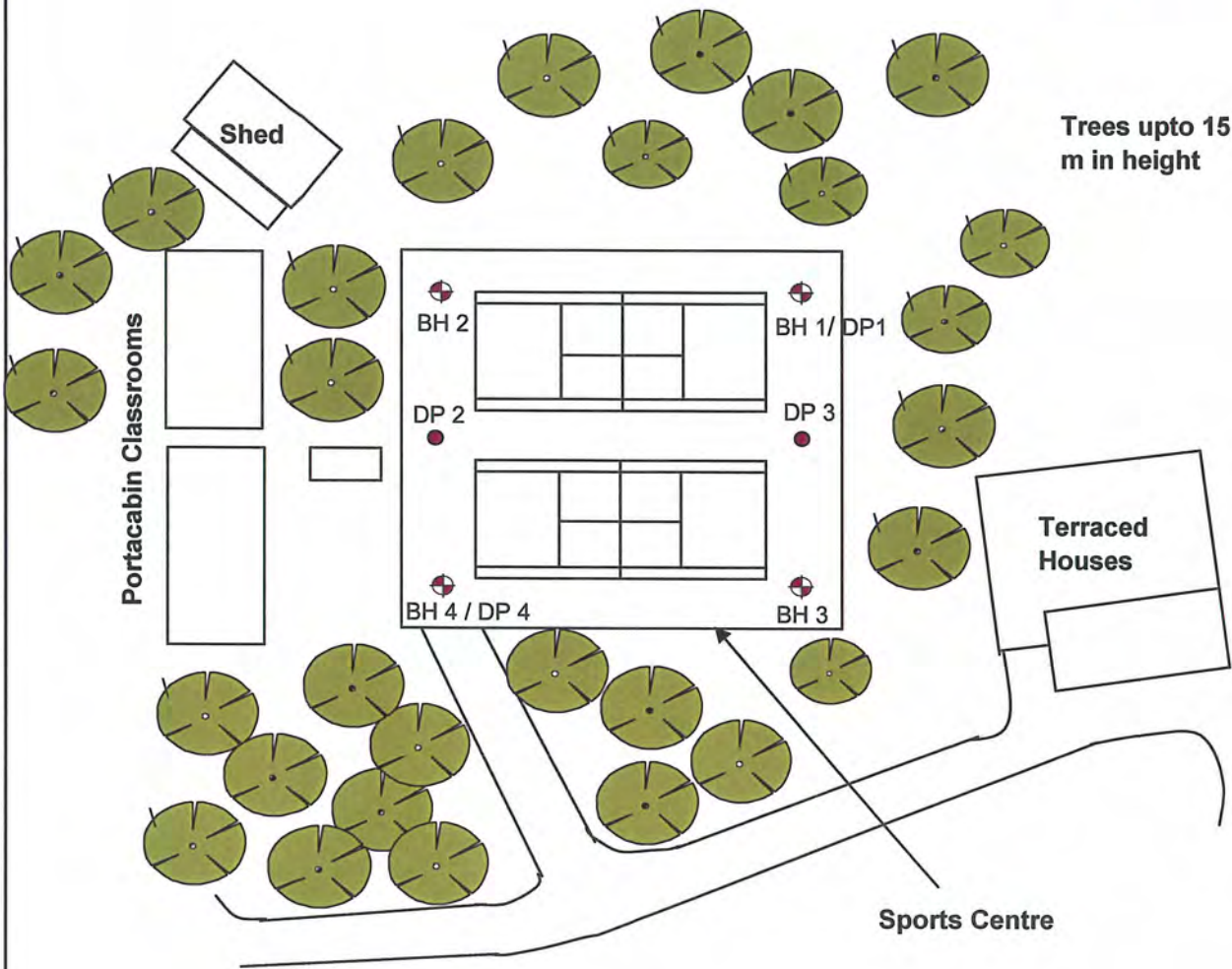
Client Queenswood School

Sheet
1 / 1

Engineer Colin Toms & Partners



Trees upto 15 m in height



Approximate Scale in metres

Appendix C

Exploratory hole logs



Project Name: Queenswood School	Project No. 47875	Co-ords:		Date 14/02/2017
		Orientation:	Dimensions (m) 2.10	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS			Level (m, aOD): 0.70	Scale 1:20
Client: Ball Hall (Project Management) Ltd			Depth (m): 2.90	

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20 0.20	ES1 PID	PID=1.5				Dark brown slightly gravelly clayey fine to medium SAND with roots. Gravel of subangular fine to medium brick, glass, plastic. wood chippings and decayed plant matter. MADE GROUND	
	0.70 0.70 0.80	ES2 PID IVN	PID=0.5 40		0.60		Soft becoming firm, grey brown, slightly sandy CLAY with occasional roots and rare fine flint gravel. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	1
	1.20 1.20	D1 IVN	74		1.30		Firm orange and pale grey mottled, slightly gravelly, silty CLAY. Gravel of subangular fine to medium flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	
▼	1.50	IVN	63				...Sandy pockets present from 1.5m	
	2.00 2.00	D2 PID	PID=0.5		2.10		Orange brown, slightly gravelly, very clayey fine to coarse SAND. Gravel of subangular to subrounded, fine to coarse flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	2
▼	2.40 2.40	D3 PID	PID=1.2					
	2.90 2.90	B1 PID	PID=0.8		2.90		End of Pit at 2.900m	3
								4

Groundwater: Groundwater seepage at 1.5m, moderate inflow at 2.2m

Stability: Stable

Remarks: Terminated due to groundwater inflow

Key			
D	Disturbed	IVN	Hand Vane
B	Bulk	PID	PID Reading
ES	Environmental	PP	Pocket Penetrometer
▼	Groundwater strike	▼	Standing water level



Project Name: Queenswood School	Project No. 47875	Co-ords:		Date 14/02/2017
		Orientation:	Dimensions (m) 1.90	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS		Level (m, aOD):	0.70	Scale 1:20
Client: Ball Hall (Project Management) Ltd		Depth (m): 3.00		

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.10	ES1					Dark brown slightly gravelly clayey fine to medium SAND with roots. Gravel of subangular to subrounded fine to medium flint and metal. MADE GROUND		
	0.10	PID	PID=2.4						
	0.30	ES2			0.30		Soft grey brown, slightly sandy, gravelly CLAY. Gravel of subangular to subrounded fine to coarse flint. MADE GROUND		
	0.30	PID	PID=0.5						
	0.50	ES3			0.50		Firm, orange mottled grey, slightly sandy, slightly gravelly CLAY. Gravel of subangular fine to medium flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN		
	0.50	PID	PID=0.3						
	1.00	D1			1.30		Orange mottled pale grey, very sandy CLAY. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	1	
	1.00	IVN	64					...Sandy pockets present from 1.1m	
	1.20	IVN	40					..Locally soft at 1.2m	
	1.50	B1			1.50		Brown, gravelly, slightly clayey fine to coarse SAND. Gravel of subangular to rounded, fine to coarse flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	2	
	1.50	PID	PID=0.0					...Collapsing from 2.6m	
	2.50	B2			2.20		End of Pit at 3.000m	3	
	2.50	PID	PID=0.0		3.00				4

Groundwater: Groundwater seepage at 1.8m, moderate inflow at 2.2m	Key			
Stability: Sidewall collapse from 2.2m	D	Disturbed	IVN	Hand Vane
Remarks: Terminated due to groundwater inflow	B	Bulk	PID	PID Reading
	ES	Environmental	PP	Pocket Penetrometer
		Groundwater strike		Standing water level



Project Name: Queenswood School	Project No. 47875	Co-ords:		Date 14/02/2017
		Orientation:	Dimensions (m) 1.80	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS		Level (m, aOD):		Scale 1:20
Client: Ball Hall (Project Management) Ltd		Depth (m): 1.80		Logged JS

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description	
	Depth	Type	Results					
					0.20		Dark brown slightly gravelly clayey fine to medium SAND with roots, decayed plant matter, occasional brick and plastic fragments. MADE GROUND	
					0.80		Firm orange brown mottled grey slightly gravelly CLAY. Gravel of subangular fine to medium flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	1
					1.30		Orange mottled pale grey, slightly sandy CLAY with occasional sand pockets. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	
					1.80		Orange mottled pale grey very sandy CLAY. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	
							End of Pit at 1.800m	2
								3
								4

Groundwater: Groundwater not encountered.		Key			
Stability: Stable	D	Disturbed	IVN	Hand Vane	
	B	Bulk	PID	PID Reading	
Remarks: Infiltration test undertaken between ~1.3m - 1.8m	ES	Environmental	PP	Pocket Penetrometer	
		Groundwater strike		Standing water level	



Project Name: Queenswood School	Project No. 47875	Co-ords:		Date 14/02/2017
		Orientation:	Dimensions (m) 2.40	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS		Level (m, aOD):	0.60	Scale 1:20
Client: Ball Hall (Project Management) Ltd		Depth (m): 3.50		

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.20	ES1					Dark brown clayey fine to medium sand with frequent roots and rare plastic packaging. MADE GROUND
	0.20	PID	PID=2.3		0.25		
	0.50	ES2			0.40		Soft grey brown gravelly CLAY. Gravel of subangular to subrounded, fine to coarse flint. MADE GROUND
	0.50	PID	PID=1.3				
	0.60	IVN	50				Firm becoming stiff, orange mottled grey CLAY with occasional subangular, fine to medium flint gravel. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN
	0.90	IVN	74				
	1.10	D1					
	1.10	IVN	92				
	1.10	PID	PID=0.3				...Becoming sandy from 1.6m
	1.90	D2			1.80		Orange mottled grey, slightly gravelly, very clayey, fine to coarse SAND. Gravel of subrounded to rounded, fine to coarse flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN
▼	1.90	PID	PID=0.0				
	2.60	B1			2.60		Orange brown slightly clayey, gravelly fine to coarse SAND with frequent grey fine sand partings. Gravel of subangular to subrounded, fine to medium flint SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN
	2.60	PID	PID=0.0				
	2.90				2.90		Yellowish grey brown fine to medium, gravelly SAND. Gravel of subangular to rounded, fine to coarse flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN
	3.50	B2					
	3.50	PID	PID=0.0		3.50		End of Pit at 3.500m

Groundwater: Groundwater encountered at 2.0m	Key			
Stability: Some sidewall collapse	D	Disturbed	IVN	Hand Vane
Remarks:	B	Bulk	PID	PID Reading
	ES	Environmental	PP	Pocket Penetrometer
		Groundwater strike		Standing water level



Project Name: Queenswood School	Project No. 47875	Co-ords:		Date 14/02/2017
		Orientation:	Dimensions (m) 1.50	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS		Level (m, aOD):	0.60	Scale 1:20
Client: Ball Hall (Project Management) Ltd		Depth (m): 1.45		

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30	ES1			0.35		Dark brown, slightly gravelly, silty fine to coarse SAND with roots. Gravel and occasional cobbles of flint, brick and wood fragments. MADE GROUND
▼	0.50	D1					Soft orange mottled grey, slightly sandy silty CLAY with roots.
	0.50	IVN	40				SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN <i>...Locally soft at 0.60m</i>
▼	0.80	ES2					
	1.00	D2					<i>...Becoming stiff and slightly gravelly from 1.0m</i>
	1.00	IVN	105		1.45		
							End of Pit at 1.450m

Groundwater: Perched groundwater at 0.5 and 0.9m		Key			
Stability: Stable	D	Disturbed	IVN	Hand Vane	
	B	Bulk	PID	PID Reading	
Remarks: Excavated to expose foundation	ES	Environmental	PP	Pocket Penetrometer	
	▼	Groundwater strike	▼	Standing water level	



Project Name: Queenswood School	Project No. 47875	Co-ords:		Date 14/02/2017
		Orientation:	Dimensions (m) 1.90	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS		Level (m, aOD):	0.70	Scale 1:20
Client: Ball Hall (Project Management) Ltd		Depth (m): 3.10		

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.10 0.10	ES1 PID	PID=0.1		0.20		Dark brown CLAY with humus and frequent roots, wood and decayed plant matter. MADE GROUND	
	0.40 0.40	ES2 PID	PID=0.3		0.60		Soft grey brown gravelly CLAY. Gravel of fine to coarse subangular to subrounded flint. MADE GROUND <i>...Becoming darker grey from 0.4m</i>	
	1.00	IVN	70				Firm orange mottled grey, slightly gravelly CLAY. Gravel of fine to coarse subangular flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	1
	1.20 1.20	D1 PID	PID=0.0		1.30		Firm orange mottled grey, slightly gravelly silty CLAY with orange sandy pockets. Gravel of subangular fine to medium flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	
	2.00 2.00	D2 PID	PID=0.0		2.20		Orange mottled grey, slightly gravelly, clayey fine to medium SAND. Gravel of fine to coarse subangular to subrounded flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	2
▼	2.50	B1			2.60		Yellow brown, slightly clayey, gravelly, fine to coarse SAND, Gravel of subrounded to rounded fine to coarse flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	
	3.00	B2			3.10		End of Pit at 3.100m	3
								4

Groundwater: Groundwater encountered at 2.5m	Key			
Stability: Collapse of sidewalls from 2.50m	D	Disturbed Bulk	IVN	Hand Vane
Remarks: Terminated due to collapse of sidewalls	B	Environmental	PID	PID Reading
	ES	Groundwater strike	PP	Pocket Penetrometer
	▼		▼	Standing water level



Project Name: Queenswood School	Project No.: 47875	Co-ords:		Date: 14/02/2017
		Orientation:	Dimensions (m): 2.30	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS			Level (m, aOD): 0.70	Logged: JW
Client: Ball Hall (Project Management) Ltd			Depth (m): 1.10	

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description
	Depth	Type	Results				
	0.30	ES1			0.30		Dark brown slightly gravelly, slightly clayey, silty fine SAND with organic matter, roots, wood, concrete and ceramic tile fragments. MADE GROUND
	0.50	D1			0.40		Soft grey brown gravelly CLAY. Gravel of fine to coarse subangular to subrounded flint. MADE GROUND
	0.50	IVN	62				
	1.00	D2			1.10		Firm orange brown mottled pale grey, slightly sandy, slightly gravelly CLAY with rare roots. Gravel of subrounded, fine to medium flint and rare chalk. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN
	1.00	IVN	50				...Becoming sandy from 0.8m ...groundwater seepage at 1.00m End of Pit at 1.100m

Groundwater: Groundwater seepage at 1.00m		Key			
Stability: Stable	D Disturbed	IVN Hand Vane			
	B Bulk	PID PID Reading			
	ES Environmental	PP Pocket Penetrometer			
Remarks: Excavated to expose foundation			Standing water level		




Project Name: Queenswood School	Project No. 47875	Co-ords:		Date 14/02/2017
		Orientation:	Dimensions (m) 2.00	
Location: Shepherds Way, Hatfield, Hertfordshire, AL9 6NS		Level (m, aOD):	0.70	Scale 1:20
Client: Ball Hall (Project Management) Ltd		Depth (m): 3.00		

Ground water	Samples & In Situ Testing			Level (m)	Depth (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	ES1			0.30		Dark brown CLAY with humus roots, wood and decayed plant matter. MADE GROUND	
	0.40	ES2			0.60		Soft grey brown mottled orange, slightly gravelly CLAY. Gravel of fine to coarse subangular to subrounded flint. MADE GROUND	
	1.20 1.20	D1 IVN	45		1.80		Soft becoming firm, orange mottled grey, slightly gravelly CLAY. Gravel of subangular to subrounded fine to medium flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	1
	2.00	D2			2.30		Firm orange mottled grey, slightly gravelly, silty CLAY. Gravel of subangular fine to coarse subangular flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN	2
					2.70		Orange and grey silty fine to coarse SAND. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN <i>...Becoming gravelly from 2.6m</i>	
▼	2.90	B3			3.00		Brown slightly silty, gravelly, fine to coarse SAND. Gravel subrounded to rounded, fine to coarse flint. SAND & GRAVEL OF UNCERTAIN AGE AND ORIGIN End of Pit at 3.000m	3
								4

Groundwater: Groundwater encountered at 2.7m	Key			
Stability: Sidewall collapse from 2.70m	D	Disturbed Bulk	IVN	Hand Vane
Remarks: Terminated due to groundwater inflow	B	Environmental	PID	PID Reading
	ES	Groundwater strike	PP	Pocket Penetrometer
	▼		▼	Standing water level

Description	Legend	Depth (m)	Water Level	Description Sample		Tests		Field Observations
				Type	Depth (m)	Type	Depth (m)	
0.33 SMOOTH CONCRETE MG: DARK BROWN SLIGHTLY CLAYEY, SLIGHTLY GRAVELLY, SILTY, FINE SAND WITH FREQUENT ROOTS, ORGANIC MATERIAL AND OCCASIONAL COBBLES OF CONCRETE AND RED BRICK. GRAVEL OF FINE TO COARSE FLINT BRICK. (MADE GROUND)	GL							
0.22 ROUGH CONCRETE FIRM, ORANGISH BROWN MOTTLED LIGHT GREY, SLIGHTLY GRAVELLY, SLIGHTLY SANDY, SILTY CLAY WITH ROOTS. GRAVEL OF SUBROUNDED, FINE TO MEDIUM FLINT AND RACE CHALK. ...BECOMING SANDY FROM 0.60m		0.35		E51	0.30			
0.73 ROUGH CONCRETE FIRM, ORANGISH BROWN MOTTLED LIGHT GREY, SLIGHTLY GRAVELLY, SLIGHTLY SANDY, SILTY CLAY WITH ROOTS. GRAVEL OF SUBROUNDED, FINE TO MEDIUM FLINT AND RACE CHALK. ...BECOMING SANDY FROM 0.60m				D1	0.50	V	0.50m = 40kPa	WATER SEEPAGE NOTED AT 0.50m
0.50 NATURAL SOILS ...BECOMING STIFF FROM 1.00m ...BECOMING MORE SANDY FROM 1.30m				D2	1.00	V	1.00 = 105kPa	WATER SEEPAGE NOTED AT 0.95m
		1.45						
Sample test key: D - Disturbed sample U - Undisturbed sample B - Bulk disturbed sample W - Water sample M - Mackintosh Pen - Penetrometer V - Vane		Remarks						

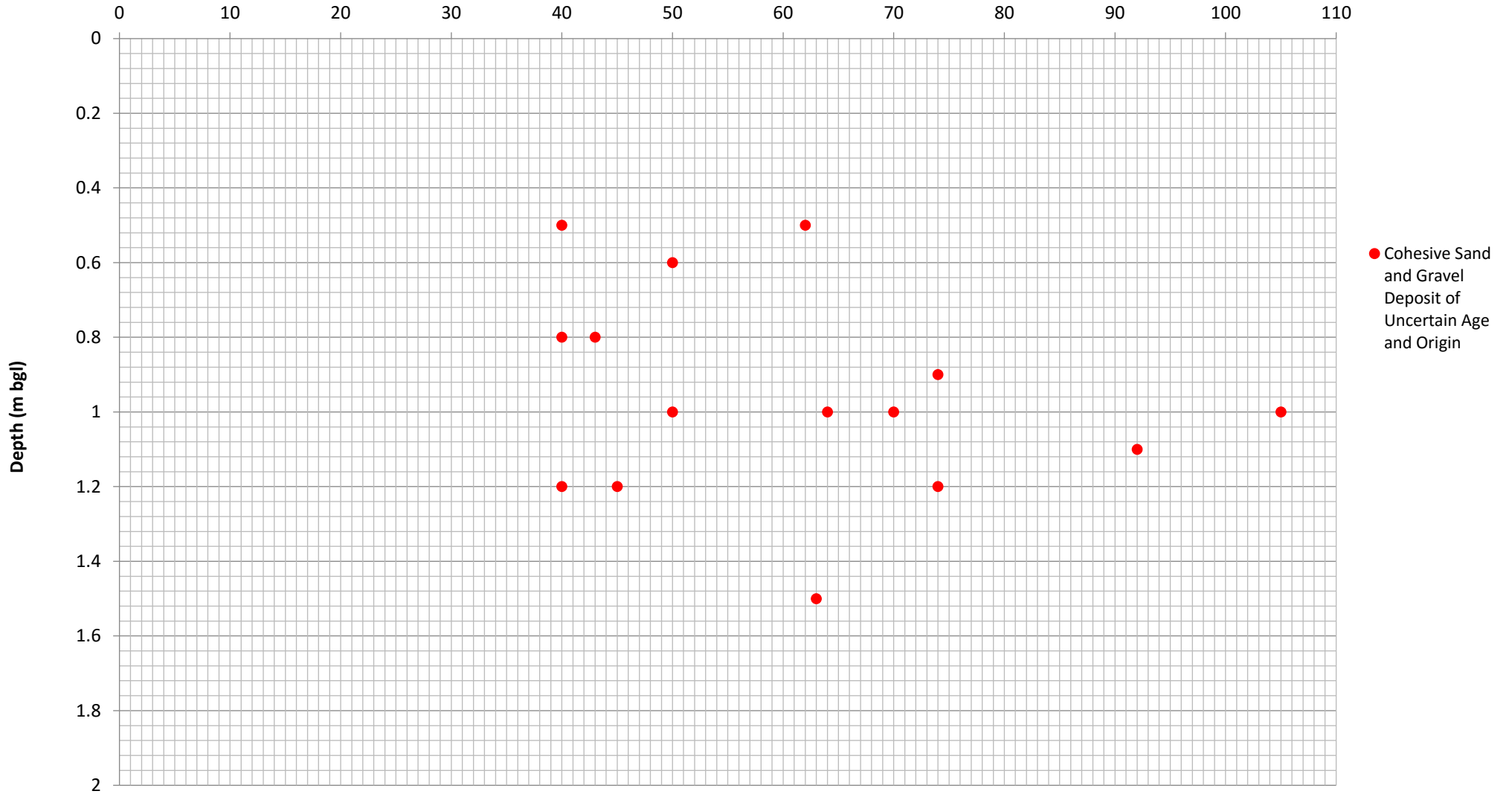
Project Queenswood School, Hatfield	Title Foundation Trial Hole Log - TP4	 <p>847 The Crescent, Colchester, Essex CO4 9YQ Tel: 01206 228800</p> <p>Suite 409, 1 Alie Street, London E1 8DE Tel: 020 7448 9910</p> <p>York House, 3 Statton Court, Great Shelford, Cambs CB22 5NE Tel: 01223 314794</p> <p>6 The Old Church, St. Matthews Road, Norwich, Norfolk NR1 1SP Tel: 01603 230240</p> <p>The Wheelhouse, Bonds Mill, Stonehouse, Gloucestershire GL10 3RF Tel: 01172 020070</p> <p>Email Address: mail@rj.uk.com Website: http://www.rj.uk.com</p>
This drawing is to be read in conjunction with all other Engineer's drawings and all other project information. Any discrepancy between the Engineer's drawings and other project information is to be reported to the Engineer immediately.	Client Ball Hall (Property Management) LTD	
Scale 1:10 @ A4 Drawn MW Date March 2017 Logged By JW Checked Approved JW		Borehole/Trial Hole Log No. 47875-G-TP4
Drawing Status <input checked="" type="checkbox"/> INFORMATION <input type="checkbox"/> APPROVAL <input type="checkbox"/> COSTING <input type="checkbox"/> TENDER <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> AS CONSTRUCTED		

Description	Legend	Depth (m)	Water Level	Description Sample		Tests		Field Observations
				Type	Depth (m)	Type	Depth (m)	
	<p>GL</p>	<p>0.24</p> <p>0.40</p> <p>1.10</p>	<p>GL</p> <p>Water Level</p>	<p>E51</p> <p>D1</p> <p>D2</p>	<p>0.30</p> <p>0.50</p> <p>1.00</p>	<p>V</p> <p>V</p> <p>V</p>	<p>0.50 = 62kPa</p> <p>1.00 = 50kPa</p>	<p>WATER SEEPAGES NOTED AT 1.00M</p>
<p>0.31</p> <p>0.13</p> <p>0.23</p> <p>SMOOTH CONCRETE</p> <p>0.97</p> <p>ROUGH CONCRETE</p> <p>0.74</p> <p>ROUGH CONCRETE</p> <p>0.13</p> <p>NATURAL SOILS</p> <p>DARK BROWN SLIGHTLY GRAVELLY, SILTY, FINE SAND WITH ORGANIC MATTER, ROOTS, WOOD MATERIAL AND FRAGMENTS OF CONCRETE AND CERAMIC TILE. (MADE GROUND)</p> <p>SOFT GREY BROWN GRAVELLY CLAY. GRAVEL OF FINE TO COARSE SUBANGULAR TO SUBROUNDED FLINT.</p> <p>FIRM, ORANGISH BROWN MOTTLED LIGHT GREY, SLIGHTLY GRAVELLY, SILTY CLAY WITH CORE ROOTS. GRAVEL OF SUBROUNDED, FINE TO MEDIUM, FLINT AND RARE CHALK.</p> <p>BECOMING SANDY FROM 0.80m</p>								
<p>Sample test key:</p> <p>D - Disturbed sample</p> <p>U - Undisturbed sample</p> <p>B - Bulk disturbed sample</p> <p>W - Water sample</p> <p>M - Mackintosh</p> <p>Pen - Penetrometer</p> <p>V - Vane</p>	<p>Remarks</p>							

<p>Project</p> <p>Queenswood School, Hatfield</p>	<p>Title</p> <p>Foundation Trial Hole Log - TP6</p>	<p>847 The Crescent, Colchester, Essex CO4 9YQ Tel: 01206 228800</p> <p>Suite 409, 1 Alie Street, London E1 8DE Tel: 020 7448 9910</p> <p>York House, 3 Station Court, Great Shelford, Cambs CB22 5NE Tel: 01223 314794</p> <p>6 The Old Church, St. Matthews Road, Norwich, Norfolk NR1 1SP Tel: 01603 230240</p> <p>The Wheelhouse, Bonds Mill, Stonehouse, Gloucestershire GL10 3RF Tel: 01172 020070</p> <p>Email Address: mail@rj.co.uk Website: http://www.rj.co.uk</p>
<p>This drawing is to be read in conjunction with all other Engineer's drawings and all other project information. Any discrepancy between the Engineer's drawings and other project information is to be reported to the Engineer immediately.</p>	<p>Client</p> <p>Ball Hall (Property Management) LTD</p>	
<p>Scale 1:10 @ A4</p> <p>Drawn MW</p> <p>Date March 2017</p> <p>Logged By JW</p> <p>Checked</p> <p>Approved JW</p>		<p>Borehole/Trial Hole Log No.</p> <p>47875-G-TP6</p> <p>Drawing Status</p> <p><input checked="" type="checkbox"/> INFORMATION <input type="checkbox"/> APPROVAL <input type="checkbox"/> COSTING</p> <p><input type="checkbox"/> TENDER <input type="checkbox"/> CONSTRUCTION <input type="checkbox"/> AS CONSTRUCTED</p>

Plot of Undrained Shear Strength vs Depth at Queenswood School, Hatfield - 47875

Undrained Shear Strength (Hand Vane) kN/m² (Cu)



Appendix D

Results of Chemical Analyses



Final Report

Report No.: 17-03897-1

Initial Date of Issue: 21-Feb-2017

Client: Richard Jackson Limited

Client Address: 847 The Crescent
Colchester Business Park
Colchester
Essex
CO4 9YQ

Contact(s): Jessica Sheridan

Project: 47875 Queenswood School Hatfield

Quotation No.: **Date Received:** 17-Feb-2017


Order No.: **Date Instructed:** 17-Feb-2017

No. of Samples: 6

Turnaround (Wkdays): 3 **Results Due:** 21-Feb-2017

Date Approved: 21-Feb-2017

Approved By:



Details: Keith Jones, Technical Manager

Results - Soil

Client: Richard Jackson Limited	Chemtest Job No.:		17-03897	17-03897	17-03897	17-03897	17-03897	17-03897	17-03897
Quotation No.:	Chemtest Sample ID.:		413410	413411	413412	413413	413414	413415	
Order No.:	Client Sample Ref.:		TP1	TP2	TP3	TP4	TP6	TP7	
	Client Sample ID.:		ES1	ES1	ES1	ES1	ES1	ES1	
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):		0.2	0.1	0.2	0.3	0.3	0.2	
	Date Sampled:		14-Feb-2017	14-Feb-2017	14-Feb-2017	14-Feb-2017	14-Feb-2017	14-Feb-2017	
	Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD					
ACM Type	U	2192		N/A	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	49	72	30	35	27
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones, Roots	Roots	Stones, Roots	Stones, Roots	Stones, Roots
Soil Texture	N	2040		N/A	Loam	Loam	Loam	Clay	Clay
pH	M	2010		N/A	6.5	4.5	5.5	6.0	4.8
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.026	0.031	0.027	< 0.010	< 0.010
Total Sulphur	M	2175	%	0.010	0.080	0.16	0.050	0.060	0.050
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	14	1.6	16	13	13
Cadmium	M	2450	mg/kg	0.10	0.52	0.72	0.86	1.6	0.61
Chromium	M	2450	mg/kg	1.0	18	5.6	23	25	17
Copper	M	2450	mg/kg	0.50	33	27	27	36	38
Mercury	M	2450	mg/kg	0.10	0.28	0.39	0.23	0.28	0.54
Nickel	M	2450	mg/kg	0.50	14	8.9	13	22	11
Lead	M	2450	mg/kg	0.50	140	120	150	150	160
Selenium	M	2450	mg/kg	0.20	0.21	0.63	0.69	0.76	0.39
Zinc	M	2450	mg/kg	0.50	100	75	110	1400	190
Organic Matter	M	2625	%	0.40	26	72	15	14	8.3
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	3.7	4.7	< 1.0	< 1.0	2.9
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0