6		Key to Site Investigation Records							
har	risongroup	Project:	6 Templewood Avenue, Hampstead, London, NW3						
Project ID.: GL	_14468	Client: Engineer: Contractor	Mr Alan Chaytor Davidson Walsh Consulting Engineers : Harrison Group Environmental Ltd						
In-situ Testing	& Observations								
S or C	Standard Penetration Test engineering purposes'. I split spoon or C - solid c	as per BS1 Jncorrected	377:1990 'Methods of test for soils for civil d test result shown on the log at the relevant depth. S -						
*	n100 - dynamic penetration	n test graph	ical presentation of the blows taken to drive 100mm.						
+	Equivalent SPT 'N' value. B	ased on sta	andard empirical calculation after Card & Roche for sandy						
IV	soils unless specificed ir In-situ (down hole) vane sh peak - p or remoulded - r	n the text. lear strengt	h						
HV	In-situ hand vane test, shea peak - p or remoulded - r	ar strength	reported in kPa						
PP	Pocket penetrometer test,	shear stren	gth reported in kPa						
K	In-situ permeability test res	ult, express	sed in m/s						
PID	In-situ screening by photo- Head space testing undert	lonisation o aken as per	detector, expressed as ppm r contract documents.						
TCR SCB	Total Core Recovery, %	As de aiv	efined in BS5930:1999. Details of flush returns etc. are ven on the relevant log sheet.						
RQD	Rock Quality Designation,	%							
lf	Fracture spacing, mm								
\square	Groundwater strike		Level to which groundwater has risen after the specified time. (Nominal 20 mins)						
 Sampling									
D B LB W ES EW U U P LS CBR General comr 1. Samples ha unless an a be recorde 2. Electronic o Geotechnic publication	Small disturbed sample, ar Bulk disturbed sample, ard Large bulk disturbed sample Environmental soil sample, Environmental water samp Undisturbed driven tube sa 38mm diameter, 100mm individual records. The number of blows taker sheet at the appropriate Pushed piston sampler, no Liner sample, e.g. from wir California Bearing Ratio (C individual record sheet f nents ave been described in accord thernative material specific we d in the report text. data provided in relation to th cal & Geoenvironmental Spe	ound 1kg und 5Kg le, around 1 in more the le, in more mple. Norr length in V to drive th depth. 'NR' minal 100n dowless sa BR) test - ei or further in dance with reathering of his project h calists (AGS	20Kg for earthworks testing an one container if appropriate than one container if appropriate anal 100mm diameter, 450mm length in CP boreholes, VS borehole. Dimension of trial pit cores to be specfied on the e sample tube the full length is reported on the log indicates no recovery achieved. and diameter ampler ther mould sample taken or in situ testing. See formation BS5930:1999 'Code of practice for site investigation' classification is considered more appropriate. This will has been produced using the Association of S) data transfer format, with specific reference the their						
Site specific o		are as per l							
	This data was produced by Harrison Geotec	hnical Engineering	Limited, Unit C14, Poplar Business Park, 10 Prestons Road, London, E14 9RL t: 020 7537 9233 f: 020 7987 0361						

harrisongroup			Percu	issio	n Bo	rehe	ole Re	cord		BH1					
				U I		Project: 6	Temple	wood A	venue	, Hampste	ead, Lon	don, N	W3		
						Coordinate	es:				Ground Level:				
Project	ID.: GL	.14468											Sheet 1 of 1		
		Descri	ption			Legend	Legend Depth (m) O.D. Level (m) Samples/ Test (Water) (Water) (M) Depth (m) Depth (m) Depth (m) Casing (Water) (M) Depth (m) Casing (Water) (M) Ca			1	Remarks and est Results	Installations			
BRICK P	AVING.						0.10				,			0.10 -	
MADE GI Gravel is brick, cha At 0.30m At 0.50m	DE GROUND. Yellow brown gravelly SAND. vel is angular to subrounded fine to coarse flint, k, chalk and clinker. .30m: becomes light brown. .50m: geo-membrane.				0.50		D1	1.00							
MADE GI GRAVEL coarse b	ROUND Gravel	Brown gre is angular f and rare c	y slightly c to subroun concrete.	clayey sa Ided fine	ındy to		1.75		B1 D2 S U1	1.50-2.00 1.50-1.95 1.50 2.00-2.50	1.50	N=4 (1,1	/1,1,1,1)		
MADE GI and blue is angula concrete	ROUND grey sli to rour and bri	Red brown ightly grave nded fine a ck.	n mottled y ally silty CL nd medium	yellow br AY. Grav n flint,	own /el	× × × × × × × × × × × × × × × × × × ×			D3 B2	2.50		ZZ DIONO	100 %		
From 1.5 brown pe	Om: occ	asional poo	wn fine sar	ry dark nd.			 3.10		D4 S	3.00-3.45 3.00	1.50	N=5 (1,1	/1,1,1,2)		
and light slightly g subangu From 1.7	t low strength dark grey mottled blue grey I light brown CLAY becoming slightly clayey htly gravelly sandy SILT. Gravel is angular to subrounded fine and medium flint. m 1.75m to 2.50m: occasional pockets of very						U2	4.00-4.45		41 blows	100%				
Soft to fir orange b CLAY. Re	Soft to firm medium strength dark brown and orange brown mottled blue grey silty sandy CLAY. Rare rootlets. Rare pyrite nodules and					5 20		D6 S	4.50 5.00-5.50 5.00	1.50	N=11 (1,	1/2,2,3,4)			
Selenite of Firm to st and rarel Rare gree	irystals. tiff fissur y orange en brow	ed high str e brown sil ⁱ n infilled bı	ength dark ty very san urrows.	् grey dy CLAY	/ '.	× × × × ×			U3	6.00-6.50		50 blows	100%		
									D7	6.50					
							D8 S	8.00-8.45 8.00	1.50	N=24 (3,	4,4,6,7,7)				
Borehole Complete at 8.50 m					8.50							8.50			
										Water Level	Observat	ions			
Hole Diameter Details Chiselling Details					Date		Water		Standing	Stan	ding	Casing	Depth		
(mm) 150	(m) 8.50	Depth (m) 1.50	(m)	(m)	(hours)	07/10/09		Strike (r 7.00	n) 1	Time (mins)	Leve 8.2	I (m) 5	Depth (m) 1.50	Sealed (m)	
Client: Mr Alan Chaytor Engineer: Davidson Walsh Consulting Engineers Contractor: Harrison Group Environmental Ltd Dates: 07/10/2009 Plant: Dando 2000 Cable Percussive Rig Drilled By: B. Maclaren Logged By: G. Pursey Checked By: A. Partridge				Remarks: 1. Inspecti 2. Backfill 8.50mbg 3. Upon cr 8.25mbg	on pit wa details: u gl to 0.10 ompletion gl.	as excava upon con Ombgl an n of drillir	ated fro npletior d brick ng grou	m GL to 1.2 borehole b paving fron indwater for	0mbgl. backfilled n n 0.10mbg und to be	with aris gl to GL. standing	ings from g at a depth of				
EM.Hp.B.3080 Brist Data: 20/40/2020															

APPENDIX C

LABORATORY TESTING

															GEC	DTECH	NICAL	LABOR	RATOR	Y SCH	EDULE						0
		h	arris	ongr	oup					Projec	Project Name: 6 Templewood Avenue, Hampstead, London, NW3 [Date Scheduled: 08/10/2009										
										Project ID: GL14468						Lab turn around: 2 Weeks											
Project Engineer	:	Davids	son Wal	sh Con	nsulting	Engine	ers			Projec	t Client			Mr Ala	n Chay	tor											Results Due Date: 22/10/2009
Email Reports to:	Johnk	@harris	ongrou	puk.cor	<u>m</u>																						
		Sar	nple	1		1	Cla	assificat	tion				Che	mical		С	ompacti	on		5	Strengt	h	1	Addit	ional		
ВНЛР	Sample Type	Sample Ref	Depth From	Depth To	Moisture Content	Density	Atterberg Limit	Particle Density	Wet Sieve	Dry Sieve	Pipette	Organic Matter	Water soluble sulphate & pH	Initial BRE Special Digest 1 suite for "Brownfield sites"	Initial BRE Special Digest 1 suite for"Pyrite bearing ground"	2.5kg Rammer	4.5kg Rammer	Vibrating Rammer	CBR Test	Oedometer	Unconfined	Triaxial U100	Triaxial U38				Remarks
BH1	D	1	1.00	1.00									x														
BH1	U	1	2.00	2.50			x															x					
BH1	D	3	2.50	2.50									x														
BH1	D	4	3.00	3.45											x												
BH1	U	2	4.00	4.45			x															x					
BH1	D	6	5.00	5.50											x												
BH1	U	3	6.00	6.50																		x					
		Total Sar	nples Scl	neduled:			2						2		2							3					
		Tota	Samples	Tested:			2						2		2							3					



harrisontesting SERVICES

Harrison Testing Services

Units 1 & 2 Alston Road Hellesdon Park Industrial Estate Norwich NR6 5DS Tel:+44 (0) 1603 416333 Fax +44 (0) 1603 416443

Client: Harrison Group Environmental Poplar Business Park 10 Preston Road London E14 9RL

For the attention of: Glenn Pursey

Date of Issue: 26/10/2009 Page Number 1 of 5

			Report Form FMR	3000 Rev.C Revision Date 26/11/08
Project	6 Templewood Avenue, Hampstead, NW3	Samples	Received	12/10/2009
Report No	GL14468	Instructio	n received	08/10/2009
Your Ref	GL14468	Testing c	ommenced	16/10/2009
	SUMMARY OF RESULTS AT	TACHED		
	Test Method and Description		Quantity	UKAS Accredited
BS1377: Part 2 BS1377: Part 2 BS1377: Part 7	: 1990:3.2 Moisture Content : 1990:4.4/5.0 Liquid & Plastic Limits - Single Point Meth : 1990:8.0 Unconsolidated Undrained Shear Strength - S	od Single Stage	2 2 3	Yes Yes Yes
All of the abov	ve tests were performed by Harrison Testing Services at subcontracted to other laborat	our permanent labora tory facilities	tory premises. I	No tests were
Remarks:				
Issued by: M W	Villson			
Approved Signator	ies:			
M Willson (Laborat	ory Manager), G Bream (Senior Laboratory Technician)			
Unles	ss we are notified to the contrary, samples will be dispos	ed after a period of o	ne month from t	his date
	This report should not be reproduced except in full without	out the written approv	al of the laborate	ory
Only those res	sults indicated in this report are UKAS accredited and an scope of UKAS accred	y opinion or interpret litation	ations expressed	d are outside the

TEST REPORT TRANSMITTAL



PROJECT NAME:	6 Templewood Avenue, Hampstead, NW3
PROJECT NUMBER:	GL14468
CLIENT:	Mr Alan Chaytor
DATE OF ISSUE:	26/10/2009

SUMMARY OF MOISTURE CONTENT, LIQUID LIMIT (ONE POINT CONE PENETROMETER METHOD), PLASTIC LIMIT, PLASTICITY INDEX AND LIQUIDITY INDEX TO BS1377 : PART 2 : 1990

BH/TP	Depth	Sample	Moisture	Liquid	Plastic	Plasticity	Liquidity	Passing	Soil Class	Sample Description
No	(m)	No.	Content	Limit	Limit	Index	Index	0.425mm		
			(70)	(70)	(70)			(70)		
BH1	2.00	111	41	40	17	23	1.05	88	CL	Dark grov mottled blue grov CLAV with occasional
DITI	2.00	01	41	40	17	20	1.05	00	Ci	pockets of peat
BH1	4.00	U2	30	51	18	33	0.36	100	СН	Orange brown mottled blue grey slightly sandy
										CLAY

BS1377 : Part 2 : Clause 3.2 : 1990 Determination of Moisture Content

BS1377 : Part 2 : Clause 4.4 : 1990 Determination of Liquid Limit (Single Point Cone Penetrometer Method)

BS1377 : Part 2 : Clause 5 : 1990 Determination of Plastic Limit and Plasticity Index

REMARKS (Including any abnormalities or departures from procedure)



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PROJECT NAME:	6 Templewood Avenue, Hampstead, NW3
PROJECT NUMBER:	GL14468
CLIENT:	Mr Alan Chaytor
DATE OF ISSUE:	26/10/2009

BH/TP No.:	BH1
Depth (m):	2.00
Sample No.:	U1

DETERMINATION OF UNCONSOLIDATED UNDRAINED SINGLE STAGE SHEAR STRENGTH TO BS1377 : PART 7 : 1990 : CLAUSE 8



Harrison Geotechnical Engineering Units 1 & 2 Alston Road Norwich Nofolk NR6 5DS Tel: +44 (0)1603 416333 Fax: +44 (0)1603 416443 email: laboratory@harrisongroupuk.com



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PROJECT NAME:	6 Templewood Avenue, Hampstead, NW3
PROJECT NUMBER:	GL14468
CLIENT:	Mr Alan Chaytor
DATE OF ISSUE:	26/10/2009

BH/TP No.:	BH1
Depth (m):	4.00
Sample No.:	U2

DETERMINATION OF UNCONSOLIDATED UNDRAINED SINGLE STAGE SHEAR STRENGTH TO BS1377 : PART 7 : 1990 : CLAUSE 8



REMARKS (Including any abnormalities or departures from procedure)

Harrison Geotechnical Engineering Units 1 & 2 Alston Road Norwich Norfolk NR6 5DS Tel: +44 (0)1603 416333 Fax: +44 (0)1603 416443 email: laboratory@harrisongroupuk.com



harrisontesting

6 Templewood Avenue, Hampstead, NW3
GL14468
Mr Alan Chaytor
26/10/2009

BH/TP No.:	BH1
Depth (m):	6.00
Sample No.:	U3

DETERMINATION OF UNCONSOLIDATED UNDRAINED SINGLE STAGE SHEAR STRENGTH TO BS1377 : PART 7 : 1990 : CLAUSE 8

Sample Details					Mod	e of failure
Sample Condition		Undisturbed			WOU	e or lanure
Height	mm	199.7				
Diameter	mm	103.2				
Moisture Content	%	24				
Bulk Density	Mg/m ³	2.04				
Dry Density	Mg/m³	1.64				\geq
Test Details					l l	/
Membrane Thickness	mm	0.25			-	
Membrane Correction	kPa	0.82				
Rate of Axial Displacement	%/min	2.00				
Cell Pressure	kPa	120				
Strain at Failure	%	17.0				
Maximum Deviator Stress	kPa	257				
Shear Strength	kPa	129			Shea	ar Strength
Mode of Failure		Plastic			Pa	rameters
		Fissured high st	ength dark grey bi	rown CLAY		
Sample Description					Cu	129 kPa
					Phi	0.0 °
200						
-			****	*****	→	
a a		A MARTINE MARTINE				
₩ 200 -	Jan Market	*				
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St Str						
100 × 100						





Harrison Geotechnical Engineering Units 1 & 2 Alston Road Norwich Nofolk NR6 5DS Tel: +44 (0)1603 416333 Fax: +44 (0)1603 416443 email: laboratory@harrisongroupuk.com



ALcontrol Laboratories Analytical Services Sample Descriptions

Job Number:	09/11270/02/01
Client:	Harrison Group Env. Ltd.
Client Ref :	GL14468

Grain sizes

<0.063mm	Very Fine
0.1mm - 0.063mm	Fine
0.1mm - 2mm	Medium
2mm - 10mm	Coarse
>10mm	Very Coarse

Sample Identity	Depth (m)	Colour	Grain Size	Description	Batch
BH1 D1	1.0	Brown	0.1mm - 2mm	Clay	1
BH1 D3	2.5	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	1
BH1 D4	3-3.45	Brown	<0.063mm	Clay	1
BH1 D6	5-5.45	Brown	0.1mm - 0.063mm	Silty Clay	1

* These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials-whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample. ¹ Sample Description supplied by client

Job Number: 09/11270/02/01 Matrix: SOLID Shown on prev. Client: Harrison Group Env. Ltd. Location: 6 TEMPLEWOOD AVENUE Client Ref. No.: GL14468 Client Contact:Matthew Wilson	report	
Sample Identity BHI D1 BHI D3 BHI D4 BHI D6		
Depth (m) 1.0 2.5 3-3.45 5-5.45 ∠		
Sample Type SOLID SOLID SOLID SOLID	LoD/Units	
Sampled Date 15.10.09 15.10.09 15.10.09 15.10.09		
Sample Received Date 17.10.09 17.10.09 17.10.09 17.10.09		
Batch 1 1 1 1		
Sample Number(s) 1 2 3 4		
Total Sulphate BRE <0.01 0.13 TM129	<0.01 %	
Magnesium 2:1 water/soil extract BRE 0.98 26 TM129 [#]	<0.001 g/l	
pH Value 7.62 7.61 7.80 8.60 TM133 [#] _N	<1.00 pH Units	
Soluble Sulphate 2:1 Extract as SO4 BRE 0.046 0.018 0.008 0.22 TM098 [#]	<0.003 g/l	
Total Sulphur 0.01 0.60 TM132 [#]	<0.01 %	
	<u> </u>	
	<u> </u>	

All results expressed on a dry weight basis.

Date 23.10.2009

ALcontrol Laboratories Analytical Services Table Of Results - Appendix

Job Number: Client: Client Ref. No.: 09/11270/02/01 Harrison Group Env. Ltd. GL14468

<u>Report Key :</u>

NDP

ACM

#

Key:Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03x10-7No Determination Possible*Asbestos Containing Materia>ISO 17025 accreditedMMCERTS Accredited

EC Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

			Υ	¥ 🖸	in ei	
Method No.	Reference	Description	17025 edited	ERTS edited	t/Dry 1ple 1	ogate rected
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	~		DRY	
TM129	Method 3120B, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 3050B	Determination of Metal Cations by IRIS Emission Spectrometer			DRY	
TM129	Method 3120B, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 3050B	Determination of Metal Cations by IRIS Emission Spectrometer	~		DRY	
TM132	In - house Method	ELTRA CS800 Operators Guide	~		DRY	
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	~	~	WET	

NA = not applicable.

ALcontrol Laboratories Analytical Services Table Of Results - Appendix

 Job Number:
 09/11270/02/01

 Client:
 Harrison Group Env. Ltd.

 Client Ref. No.:
 GL14468

Summary of Coolbox temperatures

Coolbox Temperature (°C)
5.8