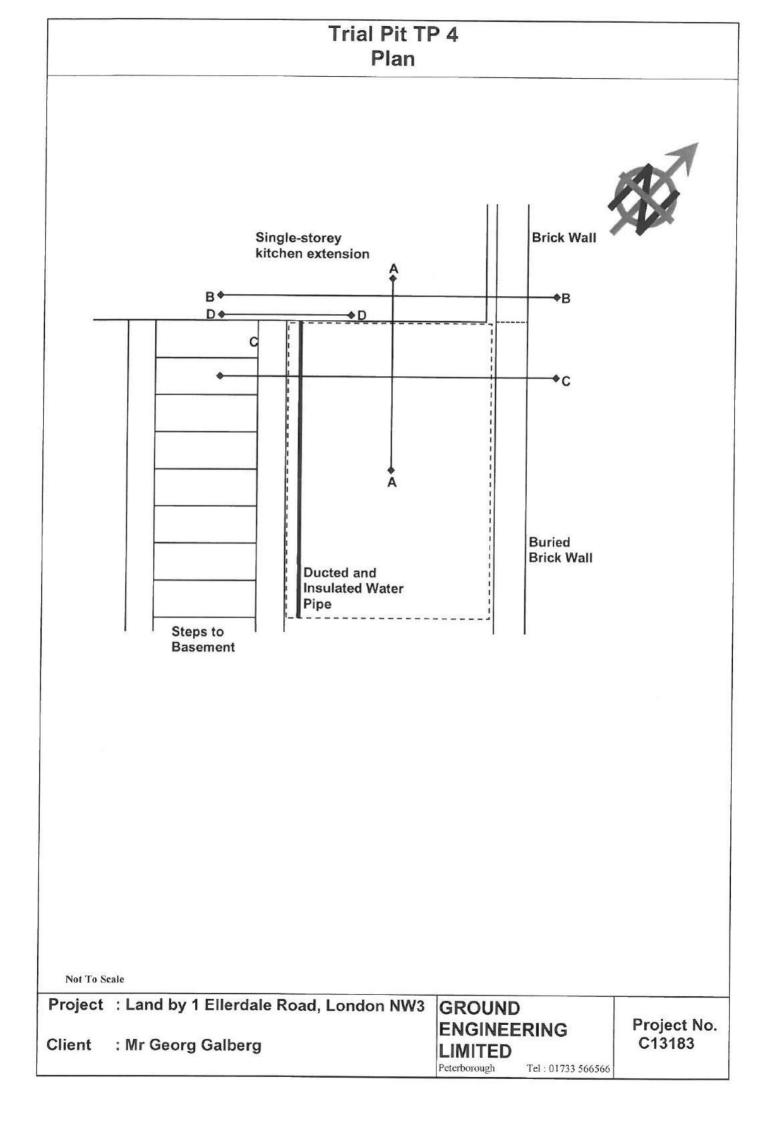
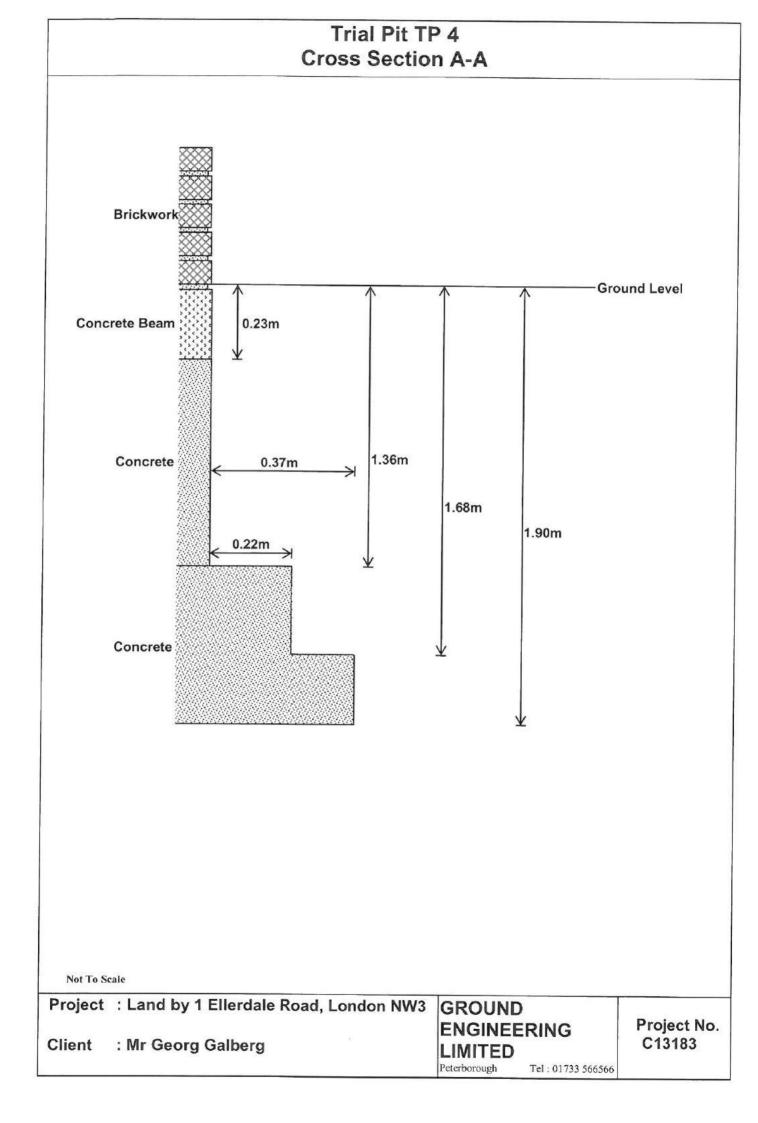
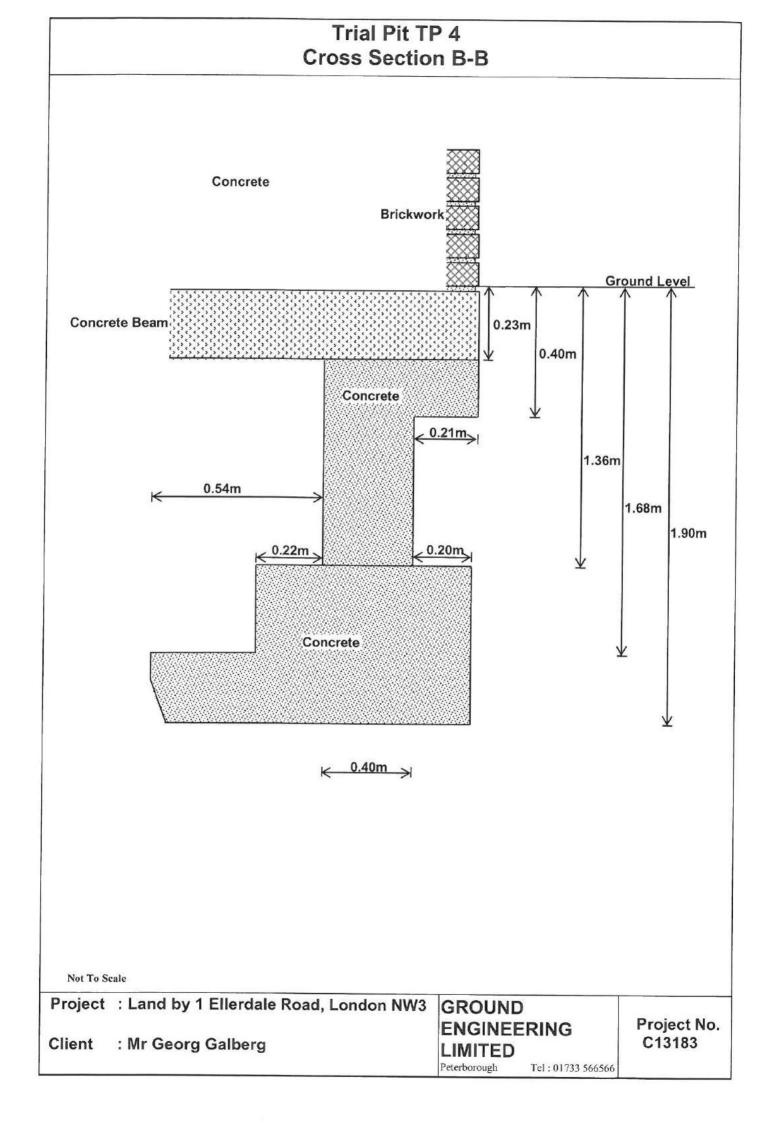
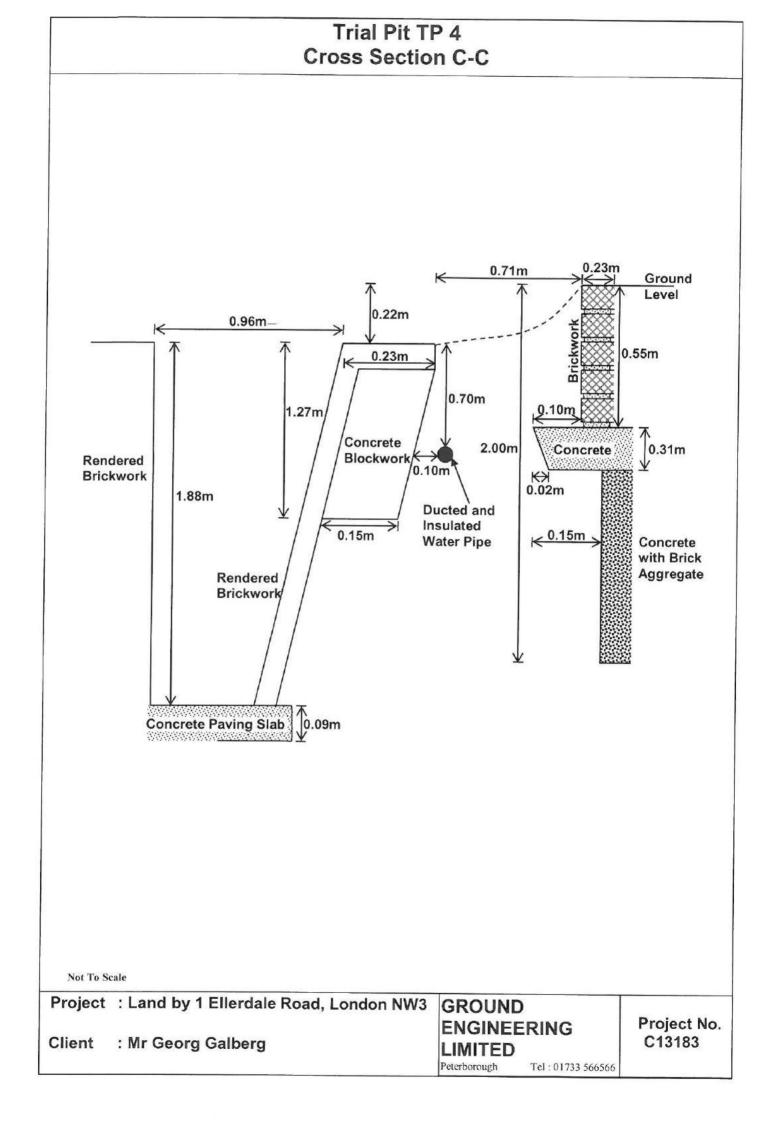


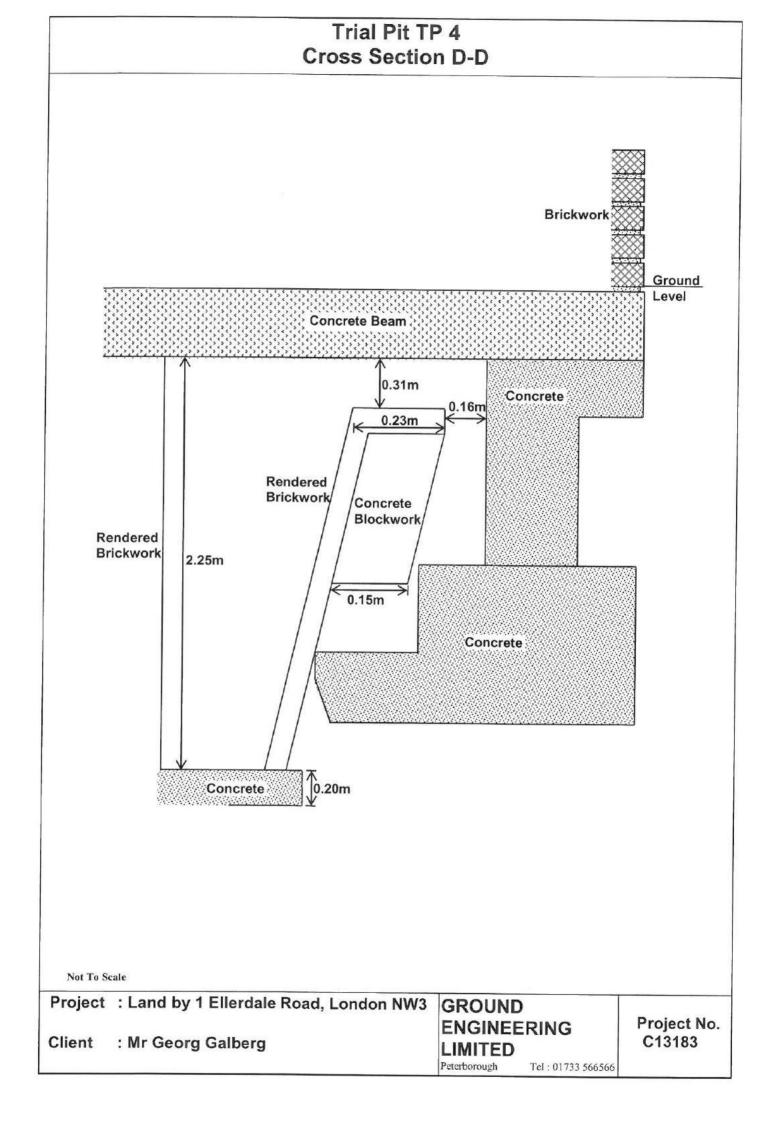
GROUN ENGiN	ND EERiNG		AND BY 1 ELLERDALE ROAD, LONDON NW3	Т	rial p TP4	IT
LIMI Tel: 01733-56656 www.groundeng	T E D	Date:	Pit Size: 1.10m L x 0.70m W x 3.00m D. 1/14 1/14	Ground Level:	49.42	2m. S.I
Samples and Depth m	t in-situ Tests Type Result	(Date) Water	Description of Strata	Legend	Depth m	S.D. Level m
0.10	D1 D2		MADE GROUND - Soft, friable, dark grey, slightly sandy, gravelly CLAY and a manhole cover. Gravel of brick, metal, ceramic pipe, flint, slate, concrete and plastic.			
0.40	D2		MADE GROUND - Firm, brown, sandy, gravelly CLAY. Gravel of flint, brick, concrete, plastic and metal.		0.45	48.9
1.00	D4				1.05	48.3
1.30	D5		MADE GROUND - Firm, friable, brown, sandy, gravelly CLAY. Gravel of brick, concrete, plastic, flint, wood, metal pipe, coal and ash.			
1.60	D6				1.90	47.5
2.00	D7		MADE GROUND - Firm, friable, orange brown and dark brown mottled, slightly gravelly, sandy CLAY. Gravel of flint and coal.	1	2.20	47.2
2.30	D8		MADE GROUND - Brown, slightly gravelly, very silty SAND. Gravel of coal, flint and ash.			
2.60	D9		MADE GROUND - Grey and grey brown, slightly gravelly, silt SAND. Gravel of flint, brick, and ash.	7	2.75	46.6
2.90	D10		Pit completed at 3.00m depth		3.00	46.4
KEY		REMARKS	1. Then make absorbed to 1.70m Junti			
B - Bulk Sa U - Undistu R - Root S W - Water J - Jar Sa ▼ Water	urbed Sample sample Sample mple Strike		1. Live roots observed to 1.70m depth 2. Pit sides stable 3. Pit dry			
MP - Mackir P() - Hand F	on completion ntosh Probe				Project 131 Scale	
V - Vane S Cohesi	Shear Test on () kPa				1:25	1/1











Trial Pit TP 4 Photographs



Not To Scale

Project Client	 GROUND ENGINEE LIMITED		Project No. C13183
	Peterborough	Tel : 01733 566566	

Trial Pit TP 4 Photographs



Not To Scale

Project Client	: Land by 1 Ellerdale Road, London NW3 : Mr Georg Galberg	GROUND ENGINEE LIMITED		Project No. C13183
		Peterborough	Tel : 01733 566566	

Groundwater/Gas Monitoring Record

GROUND ENGINEERING LIMITED

Site: Land by 1 Ellerdale Road, London NW3

Report Ref: C13183

Date	Borehole	Methane (% v/v)		Carbon Dioxide (% v/v)		Oxygen (% v/v)		Flow Rate (I/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Max.				
06/02/14	BH 1	<0.1	<0.1	2.4	2.4	12.9	20.5	<0.1	971	10.00	6.29
13/02/14	BH 1	<0.1	<0.1	1.2	1.2	17.3	17.3	<0.1	977	10.00	6.22
25/02/14	BH 1	<0.1	<0.1	1.7	1.7	16.6	16.6	<0.1	988	10.00	6.15
04/03/14	BH 1	<0.1	<0.1	1.9	1.9	16.7	16.7	<0.1	991	10.00	6.33

LABORATORY TEST RESULTS

CONTRACT LAND BY 1 ELLERDALE ROAD, LONDON NW3

				Classi	fication		Dens	sity		Tri	axial Compre	ssion			Sulpha	tes (SO ₄)		
re- le	Sample	Depth m	Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m ³	Dry Mg/m ³	Туре	Principal Stress Difference kPa	Cell Pressure kPa	Shear Strength kPa	Angle of Shear Resistance degrees	So Total % Dry Wt.	il Aqueous Extract mg/l	Water mg/l	рН	Remarks
	В2	0.60 -				22							degrees	Diy Wi	ing/i			
		1.20																
	B3	1.20 -				21									33		7.3	
		1.70																
	В4	1.70 -				18												
	21	2.00				10												
	DE	2.00				17									10		7.6	
	в5	2.00 - 2.50				17									49		/.6	
	Вб	2.80 - 3.30	41	16	25	17												SOIL CLASSIFICATION = CI 18% retained on 425µm sieve
	U1	4.00 -				27	2.08	1.63	QM	133	50	80	0		61		7.3	
	01	4.45				27	2.00	1.05	2.1	167	50	00	0		01		1.5	
										181	100							
	в7	5.00 -	49	18	31	26									166		5.5	SOIL CLASSIFICATION = CI
		5.50																0% retained on 425µm sieve
	U2	6.00 -				26	1.95	1.54	Q	140	100	70	0					
		6.20																
	D4	7.00				26												
		TURBED SA IRBED SAMP			U CONSO D CONSO			1	<u>n</u>	Aqueous	Extract	2:1 Wate	r:Soil		1	1	1	1
В	- BULK	SAMPLE	خست	Q.	- IMMED	IATE UNDRA	INED	ᡴ᠋ᠴᢗᡊ᠇ᢧ										
W	- WATER	SAMPLE		Q.	M. – IMMEDI	LAIL UNDRA	נידחש היאמיד	LISIAGE						GR	OU	ND	ENC	GINEERING Tel: 01733-566

LABORATORY TEST RESULTS

CONTRACT LAND BY 1 ELLERDALE ROAD, LONDON NW3

				Classi	ification		Dens	sity		Tr	iaxial Compre	ession			Sulpha	tes (SO ₄)		
re- le	Sample	Depth m	Liquid Limit	Plastic Limit	Plasticity Index	Moisture Content	Bulk	Dry	-	Principal Stress	Cell Pressure	Shear Strength	Angle of Shear	So Total	il Aqueous	Water		Remarks
			%	%	%	%	Mg/m ³	Mg/m ³	Туре	Difference kPa	kPa	kPa	Resistance degrees	% Dry Wt.	Extract mg/l	mg/l	рН	
	в8	7.50 -	66	22	44	27									904		7.1	SOIL CLASSIFICATION = CH
		8.00																0% retained on 425µm sieve
	U3	9.00 - 9.45				26	2.04	1.61	QM	159 179 199	100 200 400	90	0					
	в9	10.50 - 11.00	45	19	26	30												SOIL CLASSIFICATION = CI 0% retained on 425µm sieve
	U4	12.00 - 12.30				37												Unsuitable for triaxial testing
	B10	13.00 - 13.50	47	19	28	31									523		6.7	SOIL CLASSIFICATION = CI 2% retained on 425µm sieve
	Wl	13.50														354	7.8	
	D14	14.50	51	20	31	22												SOIL CLASSIFICATION = CH 0% retained on 425µm sieve
D	- DISTU	TURBED SA IRBED SAMP		С.	U CONSO D CONSO	LIDATED DR	AINED			Aqueous	Extract	2:1 Wate	r:Soil					
	- BULK - WATEF	SAMPLE SAMPLE			- IMMED M IMMED			TISTAGE							NOU			GINEERING Tel: 01733-56 D www.groundengineering.c



Determination of Particle Size Distribution

Newark Road Peterborough t: 01733 566566 f: 01733 315280 e: admin@groundengineering.co.uk

		cie Size Distri						
Client: Client Address:	Tested in Accordance with BS 13 Sieved Grading and Sedi Ground Engineering Ltd Newark Road Peterborough PE1 5UA							
Contact:	Steve Fleming		Date Received: 05.02.2014 Date Tested: 28.02.2014					
o	-		Certificate of Sampling:					
Site Name: Site Address:	Land By 1 Ellerdale Road London NW3		Sampling Certificate No.: Sampled By:					
TEST RESULTS	Laboratory Reference:	PL4474-1/5		eatment for	No			
	Client Reference:	B6		ic material:				
Sample Description	Brown orange brown gre	y clayey SILT/SAND)					
Material Specificati	on: Not Required		Depth Top:	2.80m				
Location:	BH1		Depth Base:					
Source:	2		Supplier:					
			oupplier					
	Determination of Particle S	ize Distribution		Sieve An	alysis			
0.002 0.	006 0.02 0.06 0.20 0.60	2.0 6 20	60 200 1000	Sieve mm	%Passing			
100 -				125	100			
				90	100			
90				90 75	100			
90 -			90	75	100			
				75 63	100 100			
90			90	75 63 50	100 100 100			
				75 63 50 37.5	100 100 100 100			
80				75 63 50 37.5 28	100 100 100 100 100			
80			80	75 63 50 37.5 28 20	100 100 100 100 100 97			
80			80	75 63 50 37.5 28 20 14	100 100 100 100 100 97 97 97			
80			70	75 63 50 37.5 28 20 14 10	100 100 100 100 97 97 97 94			
80			70 60	75 63 50 37.5 28 20 14 10 6.3	100 100 100 100 97 97 97 94 93			
80			70	75 63 50 37.5 28 20 14 10 6.3 5.0	100 100 100 100 97 97 94 93 92			
80			80 70 60 50	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35	100 100 100 100 97 97 94 93 92 91			
80			70 60	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00	100 100 100 100 97 97 94 93 92 91 89			
80			80 70 60 50	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18	100 100 100 100 97 97 94 93 92 91 89 87			
80			80 70 60 50	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600	100 100 100 100 97 97 94 93 92 91 89 87 84			
80 Bercentage Passing 00 00 00 0 00 0			80 70 60 50 40	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425	100 100 100 100 97 97 94 93 92 91 89 87 84 82			
80 70 70 60 60 40 40 40 30 30			80 70 60 50 40	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300	100 100 100 97 97 94 93 92 91 89 87 84 82 80			
Cumulative Percentage Passing			80 70 60 50 40 30	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212	100 100 100 97 97 94 93 92 91 89 87 84 82 80 78			
Cumulative Percentage Passing			80 70 60 50 40 30 20	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150	100 100 100 97 97 94 93 92 91 89 87 84 82 80 78 75			
Cumulative Percentage Passing			80 70 60 50 40 30	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150 0.063	100 100 100 97 97 94 93 92 91 89 87 84 82 80 78 75 49			
80 70 70 70 70 70 70 70 70 70 7			80 70 60 50 40 30 20 10	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150 0.063 0.020	100 100 100 100 97 97 94 93 92 91 89 87 84 82 80 78 75 49 32			
80 70 70 60 60 60 60 60 60 60 60 60 60 60 60 60	Medium Coarse Fine Medium Coarse	Fine Medium Cox	80 70 60 50 40 30 20 10	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150 0.063 0.020 0.006	100 100 100 97 97 94 93 92 91 89 87 84 82 80 78 75 49 32 23			
Cumulative Percentage Passing	Silt Silt Sand Sand Sand	Gravel Gravel Gra	80 70 60 50 40 30 20 10 0 0	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150 0.063 0.020	100 100 100 100 97 97 94 93 92 91 89 87 84 82 80 78 75 49 32			
Clay Fine Silt			80 70 60 50 40 30 20 10 10 0	75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150 0.063 0.020 0.006	100 100 100 97 97 94 93 92 91 89 87 84 82 80 78 75 49 32 23			

Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

Date Reported: Form Number: 06.03.2014 Page 1 of 1 GELab/C/709-2 Version 37 for and on behalf of Ground Engineering Ltd

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Determination of Particle Size Distribution

Newark Road Peterborough t: 01733 566566 f: 01733 315280 e: admin@groundengineering.co.uk

-	Determination of Particle Size Distr	IDUTION					
Client: Client Address:	Tested in Accordance with BS 1377-2: 1990: Clause Sieved Grading and Sedimentation by Pipett Ground Engineering Ltd Newark Road Peterborough PE1 5UA						
Contact:	Steve Fleming	Date Received: 05.02.2014 Date Tested: 28.02.2014					
Contact.	Steverienning	Certificate of Sampling: N/A					
Site Name:	Land By 1 Ellerdale Road	Sampling Certificate No.: N/A					
Site Address:	London NW3	Sampled By: Client					
TEST RESULTS	Laboratory Reference: PL4474-1/7	Bro-trootmont for					
	Client Reference: B7	organic material:					
Sample Description	Brown orange brown grey clayey SILT/SAN	-					
Material Specification Location: Source:	on: Not Required BH1	Depth Top: 5.00m Depth Base: 5.50m Supplier:					
	Determination of Particle Size Distribution	Sieve Analysis					
	006 0.02 0.06 0.20 0.60 2.0 6 20	60 200 1000 Sieve mm %Passing					
¹⁰⁰ T							
90		90 100 90 100					
		63 100					
80		80 50 100					
		37.5 100					
5 , 70		70 28 100					
		20 100					
mulative Percentage Passing		14 100 60 10 100					
age		100 - 100					
50		50 5.0 100					
erc		3.35 100					
9 40		40 2.00 99					
Ilati		<u>1.18 98</u> 0.600 97					
		30 0.425 97					
ប <u> </u>		0.300 96					
20		20 0.212 96					
		0.150 95					
10		10 0.063 59					
		0.020 44 0.006 35					
0 Fine		Darse Cabble D					
Clay Silt	Silt Sand Sand Sand Gravel Gravel G	ravel Cobble Boulder					
0.002 0.0	006 0.02 0.06 0.20 0.60 2.0 6 20 Nominal Size of Material [mm]	60 200 1000					

Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

Date Reported: 06. Form Number: GE

06.03.2014 Page 1 of 1 GELab/C/709-2 Version 37 for and on behalf of Ground Engineering Ltd

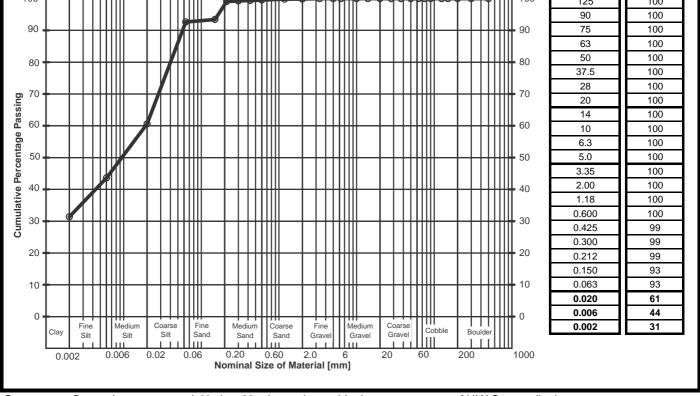
Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation This report may not be reproduced other than in full without the prior written approval of the issuing laboratory



Determination of Particle Size Distribution

NewarkRoadPeterborought: 01733566566f:01733315280e: admin@groundengineering.co.uk

F	Tested in Accordance with BS 1377-2: 1990: Cla	
	Sieved Grading and Sedimentation by P	ipette
Client:	Ground Engineering Ltd	Certificate Number: PL4474-1/10/710-2
Client Address:	Newark Road	Client Reference: C13183
	Peterborough	Lab Job Number: PL4474-1
	PE1 5UA	Date Sampled: Unknown
		Date Received: 05.02.2014
Contact:	Steve Fleming	Date Tested: 03.02.2014
Contact.	Sleve Fleining	
011 N.		Certificate of Sampling: N/A
Site Name:	Land By 1 Ellerdale Road	Sampling Certificate No.: N/A
Site Address:	London NW3	Sampled By: Client
TEST RESULTS	Laboratory Reference: PL4474-1/10) Pre-treatment for No
	Client Reference: B8	organic material:
Sample Description:	Grey brown slightly sandy clayey SILT	
Material Specificatio	n: Not Required	Depth Top: 7.50m
Location:	BH1	Depth Base: 8.00m
Source:		Supplier:
	Determination of Particle Size Distribution	
		Sieve Analysis
0.002 0.00	06 0.02 0.06 0.20 0.60 2.0 6	20 60 200 1000 Sieve mm %Passing
¹⁰⁰ T		100 125 100
90		90 100
90		90 75 100 63 100
		50 100
80		80 30 100
ຼືຍ ⁷⁰		70 20 100
B 70		60 <u>14 100</u> 10 100



Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

Date Reported: Form Number: 06.03.2014 Page 1 of 1 GELab/C/709-2 Version 37 for and on behalf of Ground Engineering Ltd

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Determination of Particle Size Distribution

Newark Road Peterborough t: 01733 566566 f: 01733 315280 e: admin@groundengineering.co.uk

Tested in Accordance with BS 1377-2: 1990: Clause 9.2 & 9.4 Sieved Grading and Sedimentation by Pipette Client Address: Newark Road Peterborough Lab Job Number: PL4474-1/14/10-2 Client Reference: C13183 Peterborough Lab Job Number: PL4474-1 PE1 5UA Date Sampled: Unknown Date Received: 05.02.2014 Contact: Steve Fleming Contact: Steve Fleming Sampled for Sampling: N/A Site Name: Land By 1 Ellerdale Road Sampling Certificate No.: N/A Site Address: London NW3 Sampled By: Client TEST RESULTS Laboratory Reference: PL4474-1/14 Test Results Laboratory Reference: B10 Popth By: Client Sample Description : Grey brown clayey SILT/SAND Material Specification: Not Required Depth Top: 13.00m Source: Steve Analysis Steve Analysis Steve Analysis 			_	etermi												
Contact: Steve Fleming Date Tested: 28.02.2014 Certificate of Sampling: N/A Site Address: London NW3 Sampled By: Client TEST RESULTS Laboratory Reference: B10 organic material: No Sample Description: Grey brown clayey SLIT/SAND Material Specification: Not Required Depth Top: 13.00m Source: Supplier: Supplier: Sieve Analysis Sieve Analysis S		Sieved Grading and Sedimentation by lient: Ground Engineering Ltd lient Address: Newark Road Peterborough								y Pipette Certificate Number: PL4474-1/14/710-2 Client Reference: C13183 Lab Job Number: PL4474-1						
Certificate of Sampling: N/A Site Name: Land By 1 Ellerdale Road Sampled By: Client <u>TEST RESULTS</u> Laboratory Reference: B10 Sample Description: Client Reference: B10 Sample Description: No Reterial Specification: BH1 Depth Base: 13.50m Source: <u>Supplier:</u> <u>Sieve Anatysis</u> <u>Sieve Anatysis</u> <u>Sieve Matysis</u> <u>Sieve Anatysis</u> <u>Sieve Matysis</u> <u>Sieve M</u>	Conta	ct:		Steve Fl	emina											
Site Name: Land By 1 Ellerdale Road Sampling Certificate No.: N/A Site Address: London NW3 Sampled By: Client TEST RESULTS Laboratory Reference: PL4474-1/14 Pre-treatment for organic material: No Sample Description: Grey brown clayey SILT/SAND Depth Top: 13.00m Doepth Base: 13.50m Material Specification: No Required Depth Base: 13.50m Supplier: Outcoation: BH1 Depth Base: 13.50m Supplier: Outcoation: BH1 Depth Base: 13.50m Supplier: Outcoation: BH1 Depth Base: 13.50m Supplier: Outcoation: Sieve Analysis Sieve Analysis Outcoation: Sieve Analysis Sieve Analysis Sieve Analysis Outcoation: Outcoation: Outcoation: Outcoation: Outcoation: Outcoat					- 0						Certifi					
Site Address: London NW3 Sampled By: Client TEST RESULTS Laboratory Reference: PL4474-1/14 Pre-treatment for organic material: No Sample Description: Grey brown clayey SILT/SAND Depth Top: 13.00m Depth Top: 13.00m Material Specification: BH1 Depth Tags: 13.50m Supplier: Source: Supplier: Sieve Analysis 100 0.002 0.06 0.20 6 20 60 200 1000 0 0.002 0.06 0.20 6 20 60 200 1000 0 0.002 0.06 0.00 2.0 6 20 60 20 100 100 0 0.00 0.00 0.00 0.00 10	Sito N	lama		Lond By		dala Da	and a									
TEST RESULTS Laboratory Reference: PL4474-1/14 Pre-treatment for organic material: No Sample Description: Grey brown clayey SILT/SAND B10 Depth Top: 13.00m Depth Top: 13.00m Material Specification: Not Required Depth Tase: 13.50m Supplier: Source: BH1 Depth Tase: 13.50m Supplier: Determination of Particle Size Distribution Sieve Analysis Sieve mm VPassing 0000 0.002 0.06 0.20 6 20 60 200 100 0000 0.002 0.06 0.20 6.6 20 60 200 100 100 0000 0.002 0.06 0.20 6.6 20 60 200 100				-			Jau			0	ampiin					
Client Reference: B10 organic material: Sample Description: Grey brown clayey SILT/SAND Material Specification: Not Required Depth Top: 13.00m Location: BH1 Depth Base: 13.50m Source: Supplier: Determination of Particle Size Distribution Sieve Analysis 00002 0.002 0.006 0.20 0.60 20 60 20 00 100 100 00 0.002 0.006 0.20 0.60 20 60 20 00 100 100 00 0.002 0.006 0.02 0.60 20 60 20 00 100													Sam			
Sample Description: Grey brown clayey SiLT/SAND Material Specification: Not Required Depth Top: 13.00m Source: Depth Base: 13.50m Source: Sieve Analysis Determination of Particle Size Distribution Sieve Analysis Output Sieve Analysis Sieve of the second of the sec	<u>TEST I</u>	RESULTS	<u>S</u>		-				4-1/14							No
Maximum control Not Required BH1 Depth Top: 13.00m Depth Base: 13.50m Supplier: Depth Base: 13.00m Supplier: Outcome Determination of Particle Size Distribution Outcome Silve Analysis Silve Analysis Sil								-						organi	ic material:	
Location: BH1 Depth Base: 13.50m Source: Sieve Analysis Output Output Output Output Output Output Output Output Output Output Output Output Output Output Output Output Output <	Sampl	le Descrip	otion:	Gre	ey browr	n clayey	SILT/S	SAND								
Sieve Analysis Sieve	Locati	ion:	ication		-	ed							Dept	h Base:	: 13.50m	
0.002 0.006 0.02 0.06 0.20 0.60 2.0 6 20 60 200 1000 125 100 100 125 100 100 63 100 100 63 100 100 114 100 100 114 100 100 118 100 118 100 118 100 118 100 118 100 0.600 0.600 0.602 99 0.300 99 0.300 99 0.300 <t< td=""><td></td><td></td><td></td><td>D</td><td>eterminat</td><td>ion of Pa</td><td>rticle Siz</td><td>ze Distrib</td><td>ution</td><td></td><td></td><td></td><td></td><td></td><td>Siava Ar</td><td></td></t<>				D	eterminat	ion of Pa	rticle Siz	ze Distrib	ution						Siava Ar	
100 100 125 100 90 90 75 100 80 70 80 70 80 70 70 70 70 28 100 14 100 14 100 90 70 70 70 70 28 100 14 100 14 100 100 90 70 70 70 70 28 100 90 10 10 10 10 10 10 90 70 <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></td></td<>																
90 100 90 90 80 90 70 90 70 70 70	100		2 0.000	6 0.02	0.06	0.20	0.60	2.0	6	20	60	200		1000	Sieve mm	%Passing
90 80 70 70 60 60 70 70 60 60 70 70 70 60 70 70 70 70 70 70 70 70 70 7	100													100		
0 0										1999	TIII -		TÎII	100 III	125	100
80 50 100 70 70 70 70 28 100 60 60 60 10 100 100 50 100 37.5 100 28 100 60 60 60 14 100 10 100 14 100 118 100 100 118 100 100 100 118 100	90				1										125 90	100 100
30 37.5 100 70 70 70 70 70 60 60 60 60 14 100 50 50 50 50 50 100 50 50 50 50 50 100 40 40 40 40 10 100 33.5 100 33.5 100 100 30 20 60 11.8 100 0 0.600 100 3.35 100 1.18 100 0.000 1.18 100 0.002 99 0.300 98 0.212 97 0.150 95 0.063 48 0.020 31 0.002 31 0 0 0 0.002 19 19	90				1										125 90 75	100 100 100
0 70 28 100 60 70 60 14 100 50 60 60 60 10 100 50 50 50 50 50 100 40 40 40 3.35 100 100 30 2.00 100 1.18 100 100 100 30 2.00 100 1.18 100 0.600 100		+++			ſ									90	125 90 75 63	100 100 100 100
20 100 60 14 100 50 60 60 60 50 50 50 100 40 40 40 3.35 100 30 30 0.000 1.18 100 0 0 0.000 99 0.300 98 0.2020 31 0.0006 24 0.0006 24 0.0006 24 0.0006 24 0.0002 19		+++												90	125 90 75 63 50	100 100 100 100 100
3 0.425 99 20 0 0.300 98 10 0 0.150 95 10 0 0.002 31 0 Fine Medium Coarse Fine Medium Coarse Coarse 0 0.002 19	80) 												90 80	125 90 75 63 50 37.5	100 100 100 100 100 100 100
3 0.425 99 20 0 0.300 98 10 0 0.150 95 10 0 0.002 31 0 Fine Medium Coarse Fine Medium Coarse Coarse 0 0.002 19	80) 												90 80	125 90 75 63 50 37.5 28	100 100 100 100 100 100 100 100
3 0.425 99 20 0 0.300 98 10 0 0.150 95 10 0 0.002 31 0 Fine Medium Coarse Fine Medium Coarse Coarse 0 0.002 19	80)												90 80 70	125 90 75 63 50 37.5 28 20	100 100 100 100 100 100 100 100 100
3 0.425 99 20 0 0.300 98 10 0 0.150 95 10 0 0.002 31 0 Fine Medium Coarse Fine Medium Coarse Coarse 0 0.002 19	80)												90 80 70	125 90 75 63 50 37.5 28 20 14	100 100 100 100 100 100 100 100 100 100
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3 0.425 99 20 0 0.300 98 10 0 0.150 95 10 0 0.002 31 0 Fine Medium Coarse Fine Medium Coarse Coarse 0 0.002 19	80) 												90 80 70 60	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0	100 100
3 0.425 99 20 0 0.300 98 10 0 0.150 95 10 0 0.002 31 0 Fine Medium Coarse Fine Medium Coarse Coarse 0 0.002 19	80) 												90 80 70 60	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35	100 100
3 0.425 99 20 0 0.300 98 10 0 0.150 95 10 0 0.002 31 0 Fine Medium Coarse Fine Medium Coarse Coarse 0 0.002 19	80) 												90 80 70 60 50	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00	100 100
20 0	80) 												90 80 70 60 50	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18	100 100
20 0.212 97 10 0 0.003 48 0 <	mulative Percentage Passing 00 00 00 00 00)												90 80 70 60 50 40	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600	100 100
10 0	mulative Percentage Passing 00 00 00 00 00)												90 80 70 60 50 40	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425	100 99
10 0	Cumulative Percentage Passing 00 00 00 00 00 00 00 00													90 80 70 60 50 40 30	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300	100 99 98
O Fine Medium Coarse Fine Medium Coarse The Medium Coarse The Medium Coarse Coarse <t< td=""><td>Cumulative Percentage Passing 00 00 00 00 00 00 00 00</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>90 80 70 60 50 40 30</td><td>125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212</td><td>100 99 98 97</td></t<>	Cumulative Percentage Passing 00 00 00 00 00 00 00 00													90 80 70 60 50 40 30	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212	100 99 98 97
0 Fine Medium Coarse Fine Medium Coarse Fine Medium Coarse Coarse Cobble Doute 0 0.006 24	08 Cumulative Percentage Passing 00 01 02 03 03 03 03 03 03 03 04 05 05 05 05 05 05 05 05 05 05													90 80 70 60 50 40 30 20	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150	100 99 98 97 95
Circu Fine Medium Coarse Fine Medium Coarse Fine Medium Coarse Fine Medium Coarse	00 Cumulative Percentage Passing 00 00 00 00 00 00 00 00 00 00 00 00 00													90 80 70 60 50 40 30 20	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150 0.063	100 100
	00 00 00 00 00 00 00 00 00 00 00 00 00													90 80 70 60 50 40 30 20 10	125 90 75 63 50 37.5 28 20 14 10 6.3 5.0 3.35 2.00 1.18 0.600 0.425 0.300 0.212 0.150 0.063 0.020	100 100

Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Nominal Size of Material [mm]

2.0

Шш

0.60

0.20

Approved Signatory: M. Hartnup - Laboratory Manager

0.02

60

20

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6

1000

200

Signed:

Date Reported: Form Number:

0.002

0.006

06.03.2014 Page 1 of 1 GELab/C/709-2 Version 37

Шш

0.06

for and on behalf of Ground Engineering Ltd

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Determination of Particle Size Distribution

NewarkRoadPeterborought: 01733566566f: 01733315280e: admin@groundengineering.co.uk

0100	Determination of Parti	<u>cle Size Dis</u>	<u>tribution</u>					
	Tested in Accordance with BS 13	377-2: 1990: Clau	se 9.2 & 9.4					
	Sieved Grading and Sed							
Client:	Ground Engineering Ltd			mber: PL4474-1/16/710-2				
Client Address:	Newark Road			ence: C13183				
Client Address.								
	Peterborough			mber: PL4474-1				
	PE1 5UA		Date Sampled: Unknown					
			Date Received: 05.02.2014					
Contact:	Steve Fleming		Date Te	ested: 28.02.2014				
			Certificate of Sam	pling: N/A				
Site Name:	Land By 1 Ellerdale Road		Sampling Certificate					
Site Address:	London NW3			d By: Client				
TEST RESULTS	Laboratory Reference:	PL4474-1/16		Pre-treatment for No				
	Client Reference:	D14	C	organic material:				
Sample Descript	ion: Grey orange brown clay	ey SILT						
Material Specific	ation: Not Required		D	epth: 14.50m				
Location:	BH1							
Source:			Sup	plier:				
	Determination of Particle	Size Distribution		Sieve Analysis				
0.002	0.006 0.02 0.06 0.20 0.60	2.0 6	20 60 200 1	000 Sieve mm %Passing				
100 T				100 125 100				
				90 100				
90	····· · · · · · · · · · · · · · · · ·			90 75 100				
				63 100				
80				80 50 100				
				37.5 100				
5 70				70 28 100				
sing				20 100				
Se 60				60 <u>10</u> <u>100</u>				
ge ge				10 100				
50				6.3 100 50 5.0 100				
0, 10 0, 10,				3.35 100				
				0.00 100				
				40 2.00 100 100				
				0.600 99				
<u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>				30 0.425 99				
°				0.300 97				
20				20 0.212 94				
				0.150 92				
10				10 0.063 51				
				0.020 34				
0 + + + +				0 0.006 29				
Clay Fine Silt	Medium Coarse Fine Medium Coarse Silt Silt Sand Sand Sand		Coarse Gravel Cobble Boulder	0.002 20				
	<u>llim Errilim Errilim</u>							
0.002	0.006 0.02 0.06 0.20 0.60 Nominal Size of	2.0 6 Material [mm]	20 60 200 1	000				
	Nominal Size Of	inatoriai [iiiii]						

Comments: Data relevant to material below 63 microns is outside the current scope of UKAS accreditation

Approved Signatory: M. Hartnup - Laboratory Manager

Signed:

Date Reported: Form Number: 06.03.2014 Page 1 of 1 GELab/C/709-2 Version 37 for and on behalf of Ground Engineering Ltd

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GROUND ENGINEERING

TEST CERTIFICATE

One-Dimensional Consolidation

Properties

(Tested in accordance with BS1377 : Part 5 1990)

Client: Ground Engineering Client Address: Newark Road Peterborough Cambridgeshire Postcode: PE1 5UA Contact: Steve Fleming Site Name: Ellerdale Road Site Address: London NW3

Newark Road Peterborough

t:01733 566566 f:01733 315280

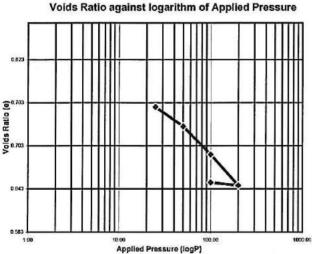
e: admin@groundengineering.co.uk

Certificate Number: PL4474-1-6/731 Client Reference Number: C13183 Date Sampled: Unknown Date Received: 05.02.2014 Date Tested: 20.02.2014 Sampling Certificate No: N/A Certificate of Sampling: N/A Sampled By: Client

Test Details

Specimen Details

Location:	BH1				INITIAL	FINAL
Sample Ref:	U1			Height (mm):	18.67	17.18
Sample		orange brown		Bulk Density (Mg/m ³):	1.87	2.02
Description:	gravelly very	y sandy CLAY		Moisture Content (%):	24	23
				Dry Density (Mg/m ³):	1.51	1.64
Particle Densit	y (Mg/m ³):	2.71	Assumed	Voids Ratio:	0.795	0.652
Mean Lab Tem	np. (°C):	22		Degree of Saturation (%):	80.6	95.3
Variations from	Standard:	None		Diameter (mm):	74.98	N/A
Lab Reference	:	PL4474-1-6	3	Swelling Pressure (kPa):	0	N/A
Depth (m):		4.00 m		Method of time fitting used:	Log Time	N/A



Applied	Coefficient of	Coefficient of	
Pressure	Compressibility	Consolidation	
(kPa)	m _v (m²/MN)	c _v (m²/year)	
0	- 0.87	13.00	
25			
50 100	- 0.60	5.92	
	0.45	6.84	
	0.26	9.20	
200	0.03		
100	0.03		

Comments:

Approved Signatory: [x] M.Hartnup - Laboratory Manager [] G.Meadows - Team Leader

Signed:

or and on behalf of Ground Engineering Ltd

Registered in England Wales Reg Number 6929574 Reg Office: Diasma Willie Snaith Rd Newmarket CB8 7SQ

Date Reported: 06/03/2014

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Form No: GELab/C/731 Issue 1

GROUND ENGINEERING

Newark Road Peterborough

Certificate Number: PL4474-1-11/731

Date Sampled: Unknown

Sampled By: Client

Date Received: 05.02.2014

Date Tested: 20.02.2014

Client Reference Number: C13183

Sampling Certificate No: N/A

Certificate of Sampling: N/A

t:01733 566566 f:01733 315280

e: admin@groundengineering.co.uk

TEST CERTIFICATE

One-Dimensional Consolidation

Properties

(Tested in accordance with BS1377 : Part 5 1990)

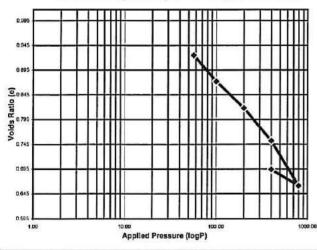
Client: Ground Engineering Client Address: Newark Road Peterborough Cambridgeshire Postcode: PE1 5UA Contact: Steve Fleming Site Name: Ellerdale Road Site Address: London NW3

Test Details

Specimen Details

Location:	BH1				INITIAL	FINAL
Sample Ref:	U3			Height (mm):	18.94	16.67
Sample	Very Stiff da	ark brown dark	grey slightly	Bulk Density (Mg/m ³):	1.83	2.07
Description:	silty CLAY			Moisture Content (%):	28	28
				Dry Density (Mg/m ³):	1.42	1.62
Particle Densit	y (Mg/m ³):	2.74	Assumed	Voids Ratio:	0.925	0.694
Mean Lab Terr	пр. (°С):	22		Degree of Saturation (%):	84.3	109.9
Variations from	Standard:	None		Diameter (mm):	74.96	N/A
Lab Reference	:	PL4474-1-1	1	Swelling Pressure (kPa):	57	N/A
Depth (m):		9.00 m		Method of time fitting used:	Log Time	N/A

Voids Ratio against logarithm of Applied Pressure



Applied Pressure (kPa)	Coefficient of Compressibility m _v (m ² /MN)	Coefficient of Consolidation c _v (m ² /year)
57	0.02	0.04
100	0.63	0.94
200	0.29	0.74
	0.18	0.76
400	0.13	0.42
800	0.05	
400	- 0.05	

Comments:

Approved Signatory: [x] M.Hartnup - Laboratory Manager [] G.Meadows - Team Leader Signed:

for and on behalf of Ground Engineering Ltd

Registered in England Wales Reg Number 6929574 Reg Office: Diasma Willie Snaith Rd Newmarket CB8 7SQ

Date Reported: 06/03/2014

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Form No: GELab/C/731 Issue 1

GROUND ENGINEERING

TEST CERTIFICATE One-Dimensional Consolidation

Properties

(Tested in accordance with BS1377 : Part 5 1990)

Client:Ground EngineeringClient Address:Newark RoadPeterboroughPeterboroughCambridgeshirePE1 5UAContact:Steve FlemingSite Name:Ellerdale RoadSite Address:London NW3

e: admin@groundengineering.co.uk Certificate Number: PL4474-1-13/731

Newark Road Peterborough

t:01733 566566 f:01733 315280

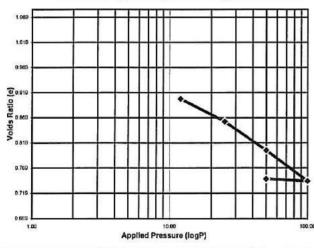
Client Reference Number: C13183 Date Sampled: Unknown Date Received: 05.02.2014 Date Tested: 20.02.2014 Sampling Certificate No: N/A Certificate of Sampling: N/A Sampled By: Client

Test Details

Specimen Details

Location:	BH1				INITIAL	FINAL
Sample Ref:	U4			Height (mm):	18.59	16.35
Sample	Soft grey si	Ity CLAY		Bulk Density (Mg/m ³):	1.89	2.02
Description:				Moisture Content (%):	37	29
				Dry Density (Mg/m ³):	1.37	1.56
Particle Density	/ (Mg/m ³):	2.73	Assumed	Voids Ratio:	0.986	0.747
Mean Lab Tem	p. (°C):	22		Degree of Saturation (%):	103.1	107.6
Variations from	Standard:	None		Diameter (mm):	75.06	N/A
Lab Reference:		PL4474-1-13	3	Swelling Pressure (kPa):	0	N/A
Depth (m):		12.00 m		Method of time fitting used:	Log Time	N/A

Voids Ratio against logarithm of Applied Pressure



Applied Pressure (kPa)	Coefficient of Compressibility m _v (m ² /MN)	Coefficient of Consolidation c _v (m ² /year)	
0	3.37	0.59	
12			
25	- 1.81	0.51	
101100	1.24	0.70	
50	0.67	1.05	
100	0.05		
50	- 0.05		

Comments:

Approved Signatory: [x] M.Hartnup - Laboratory Manager [] G.Meadows - Team Leader

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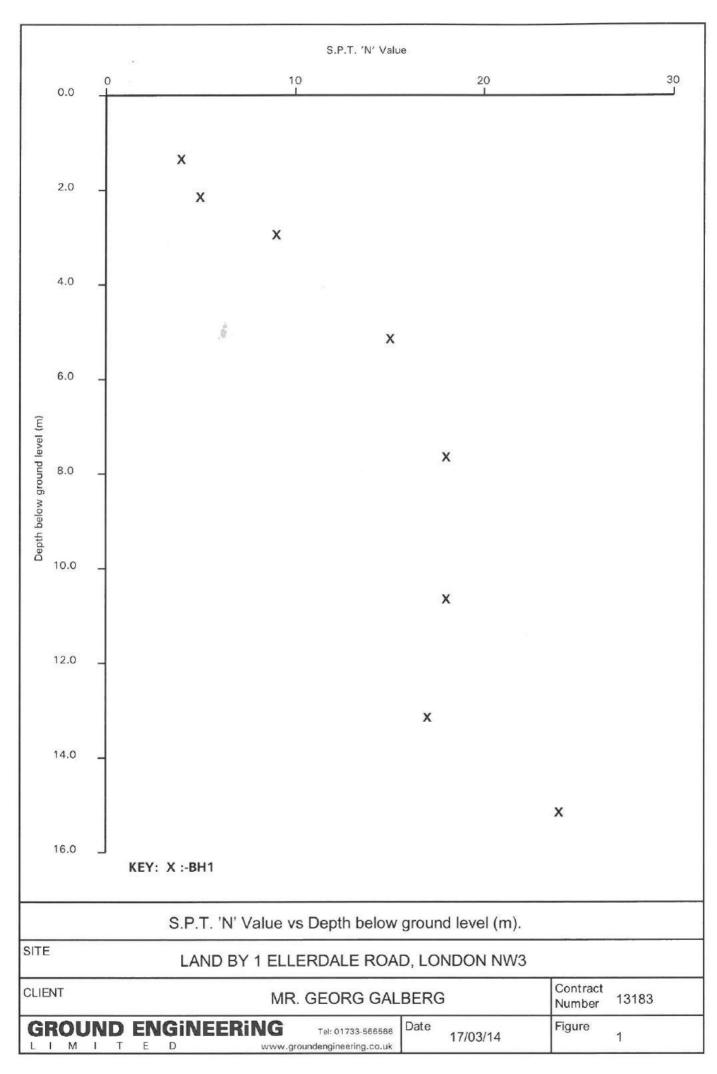
Signed:

for and on behalf of Ground Engineering Ltd

Registered in England Wales Reg Number 6929574 Reg Office: Diasma Willie Snaith Rd Newmarket CB8 7SQ

Form No: GELab/C/731 Issue 1

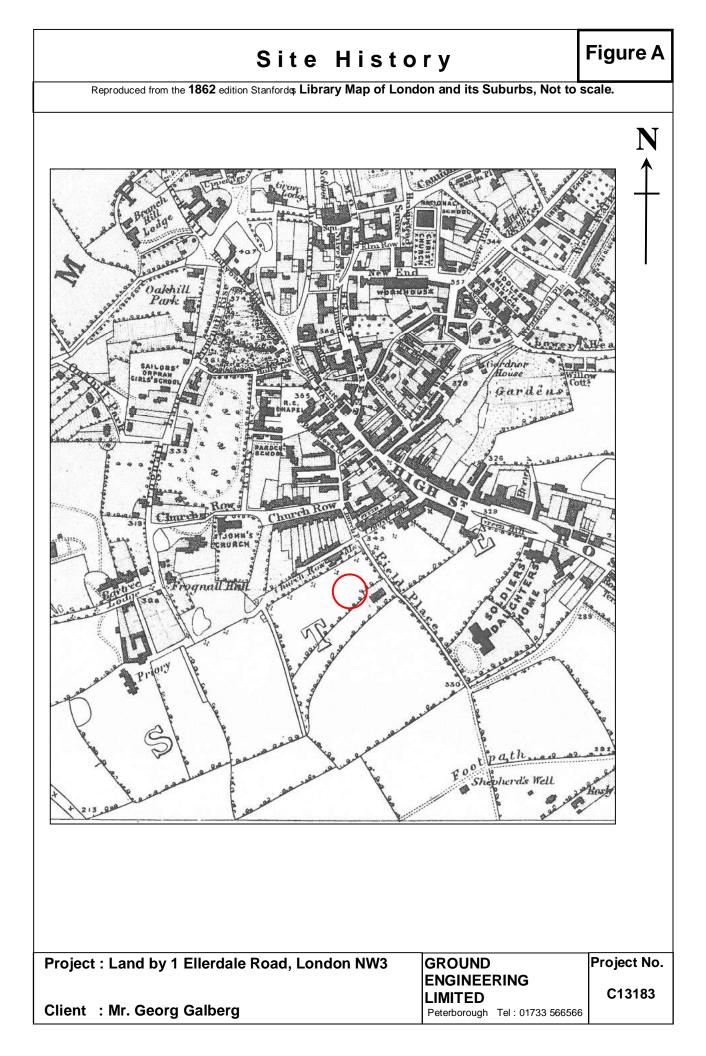
Date Reported: 06/03/2014

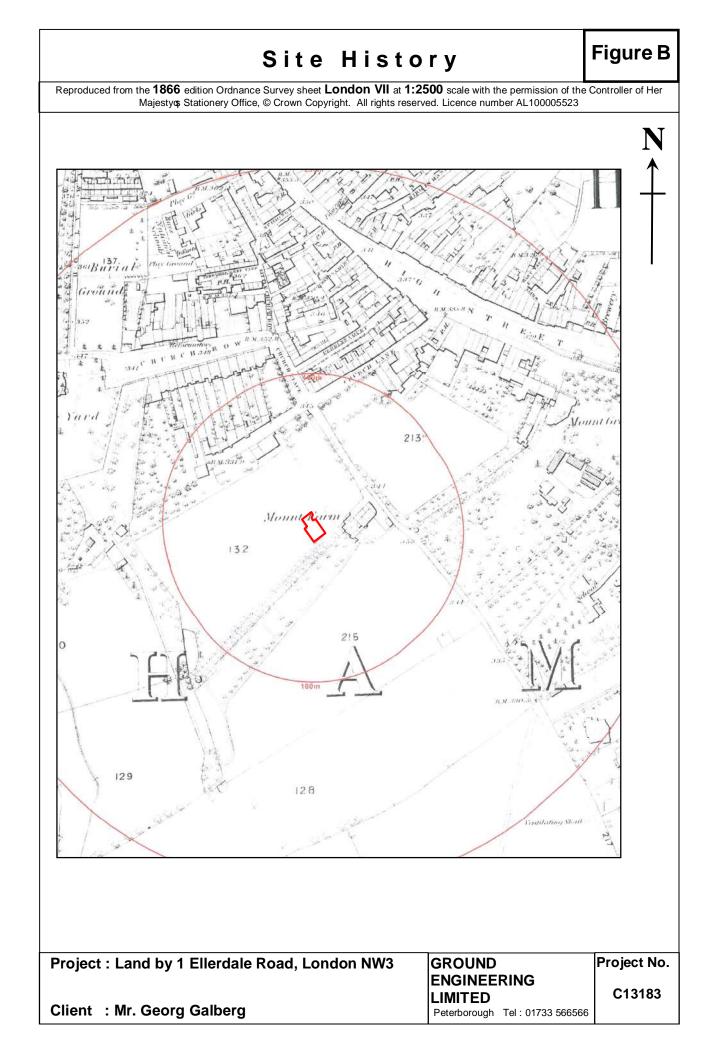


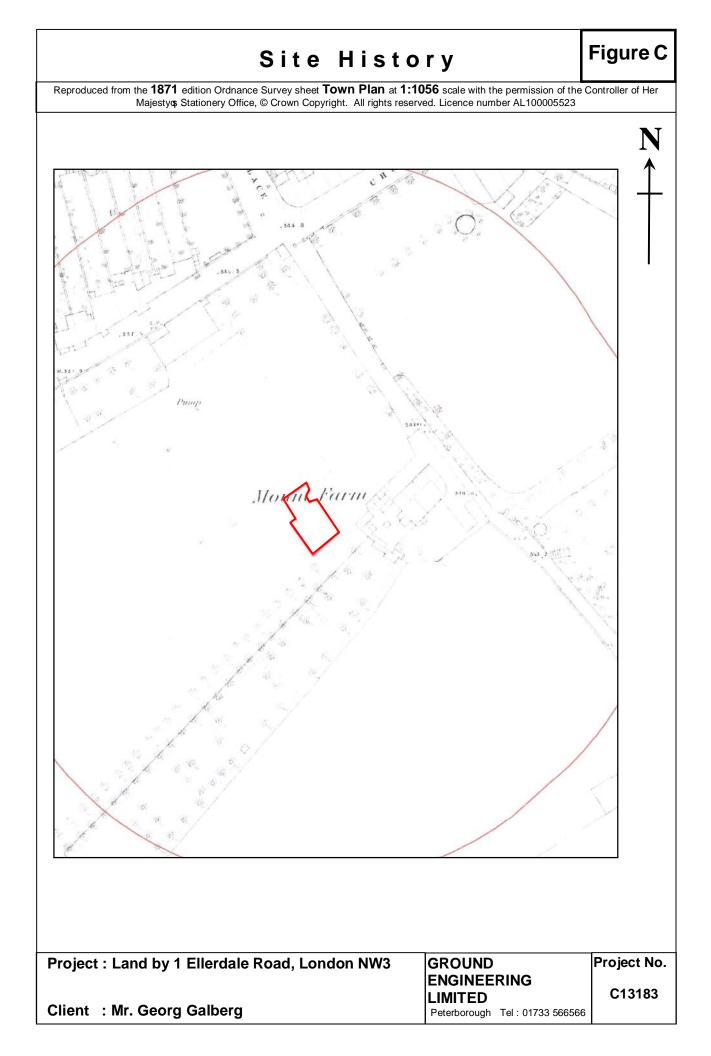
APPENDIX 1

ģ.

HISTORICAL MAPS



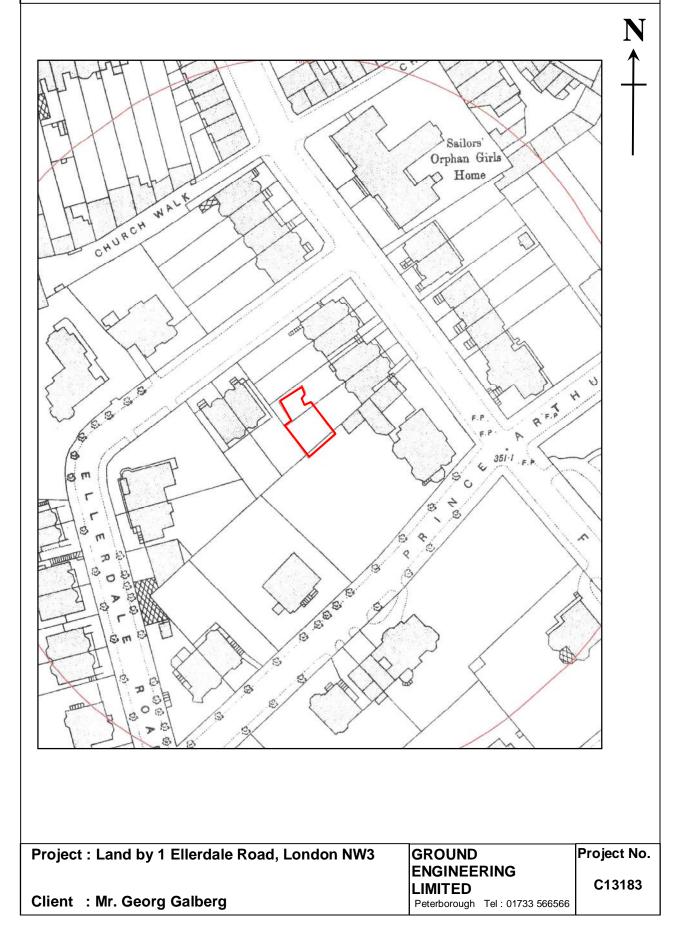


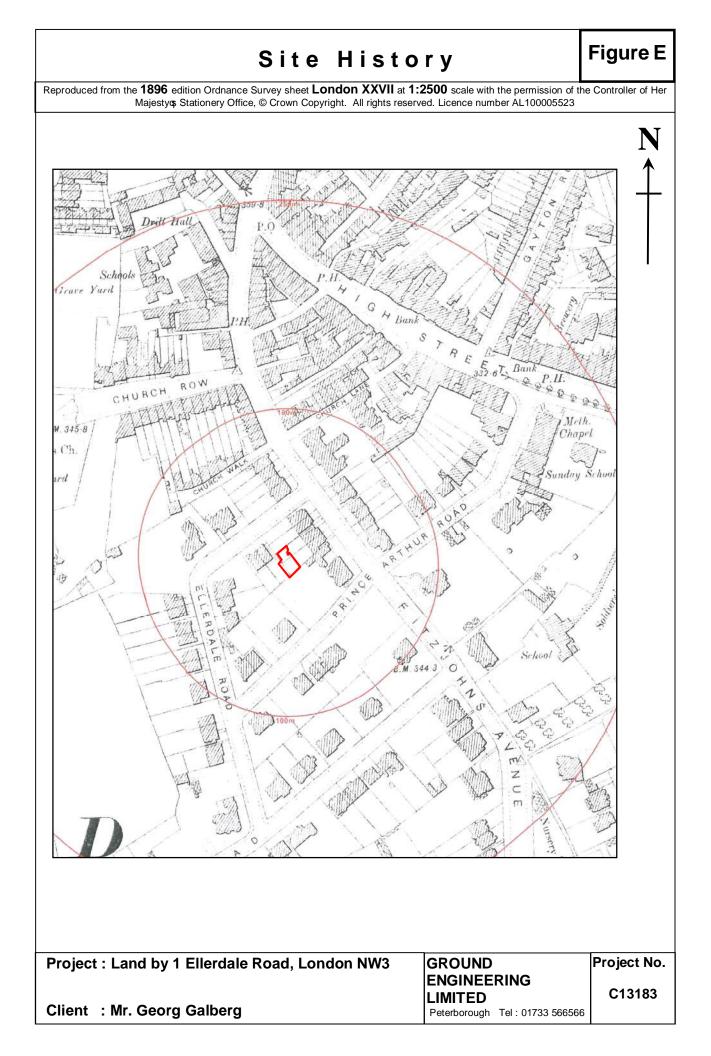


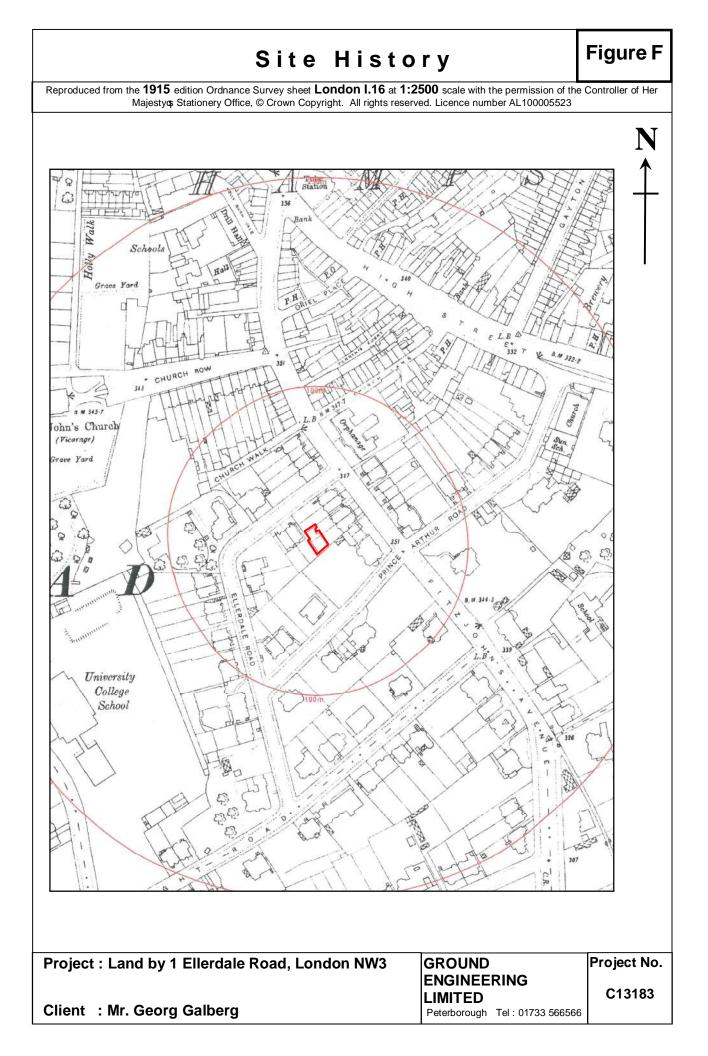


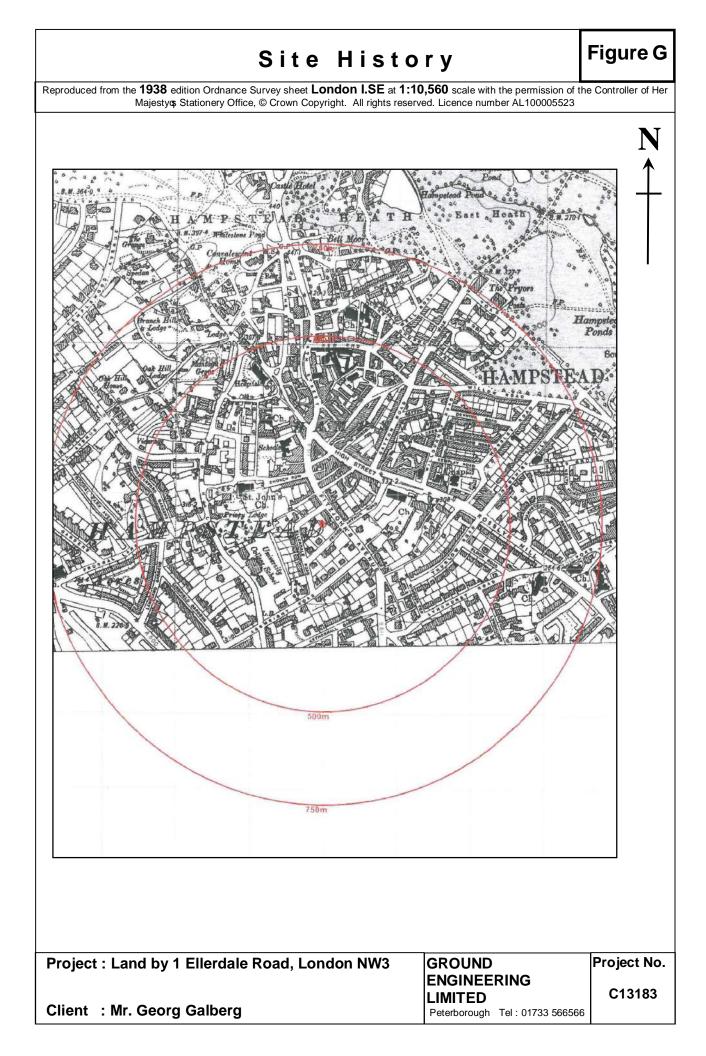


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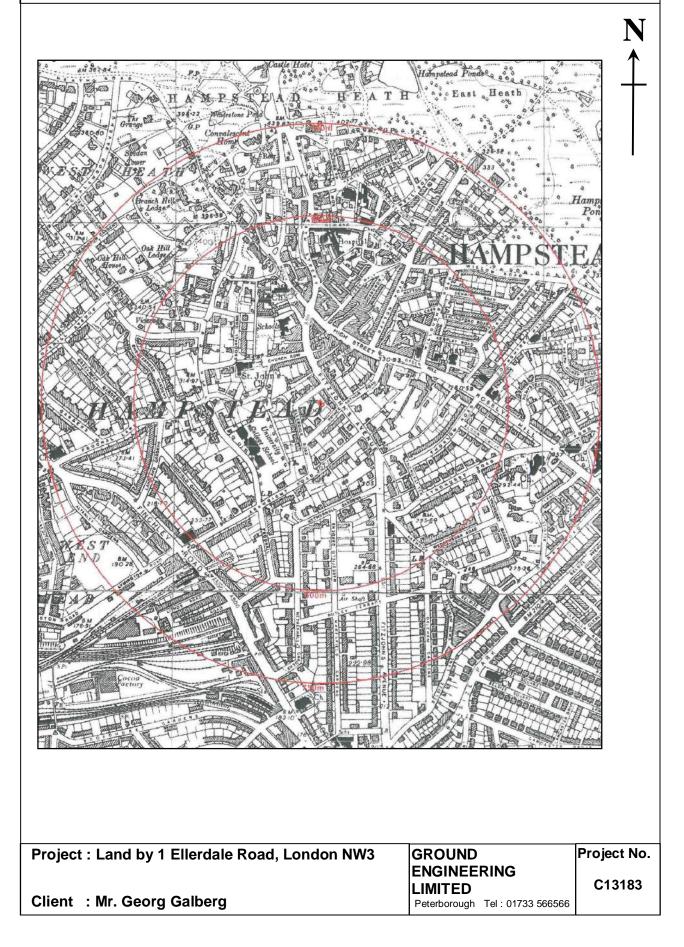


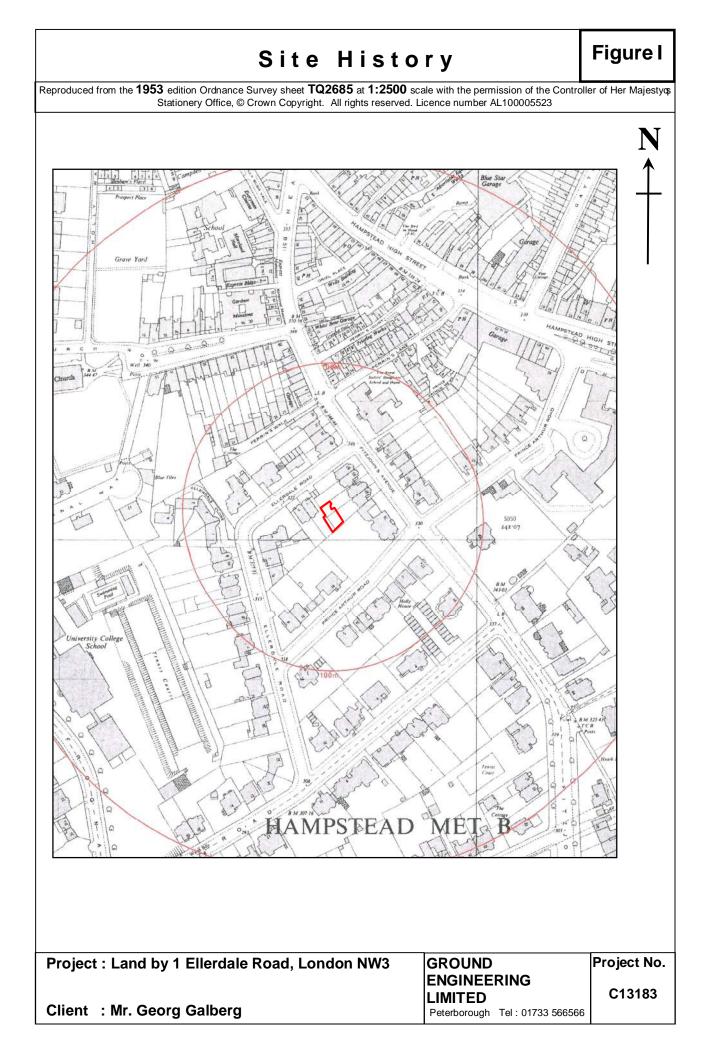


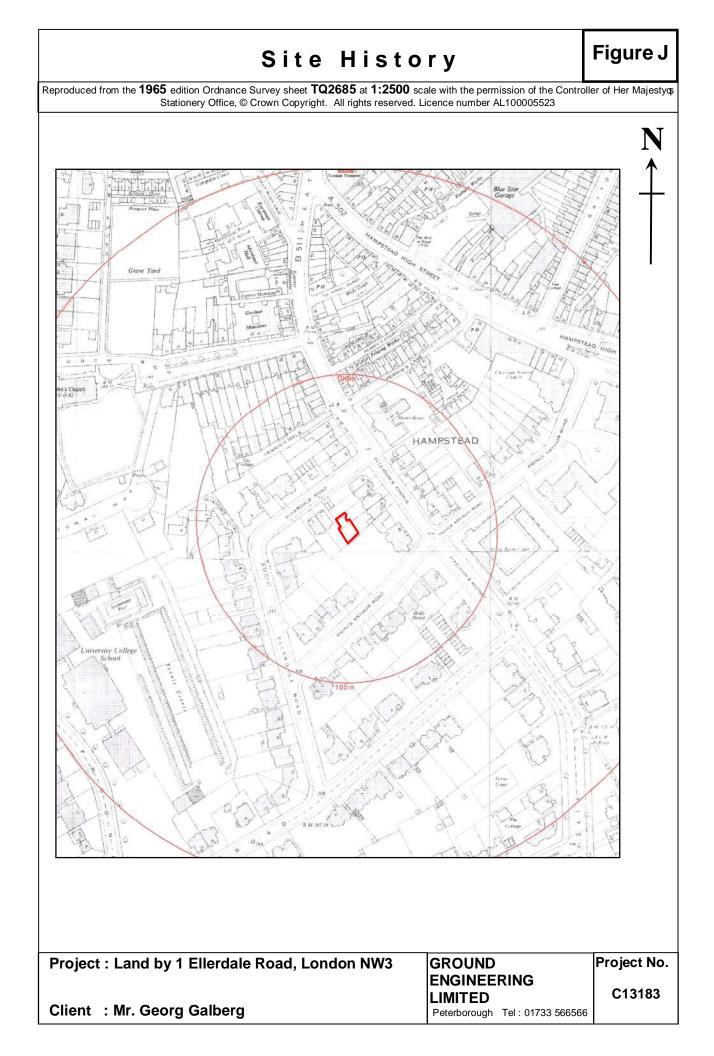
Site History

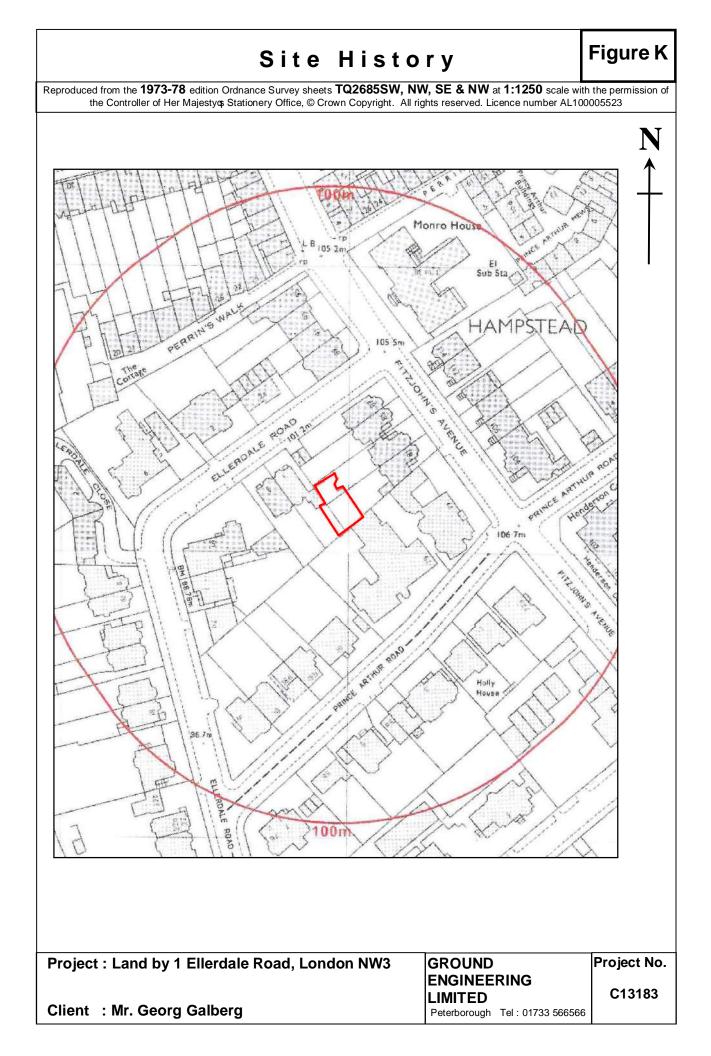
Figure H

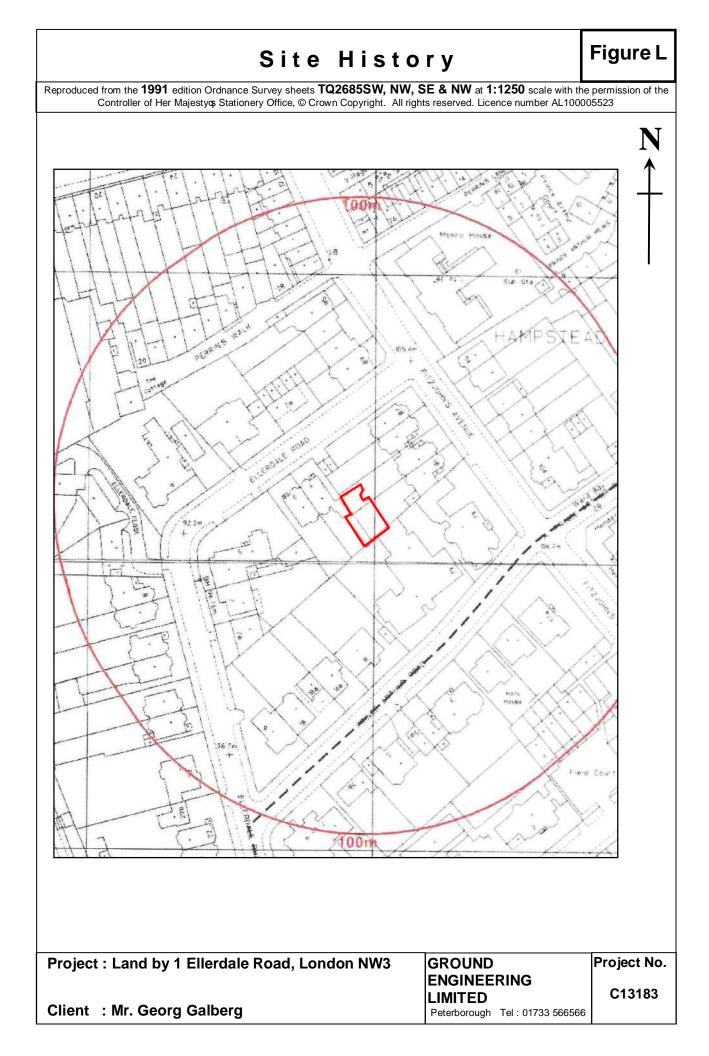
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