DYNAMIC PROBE PENETRATION

Date 10/04/19

Project

**PROBE No DP124** 

Number 14727 Sheet 1 of 1 Site

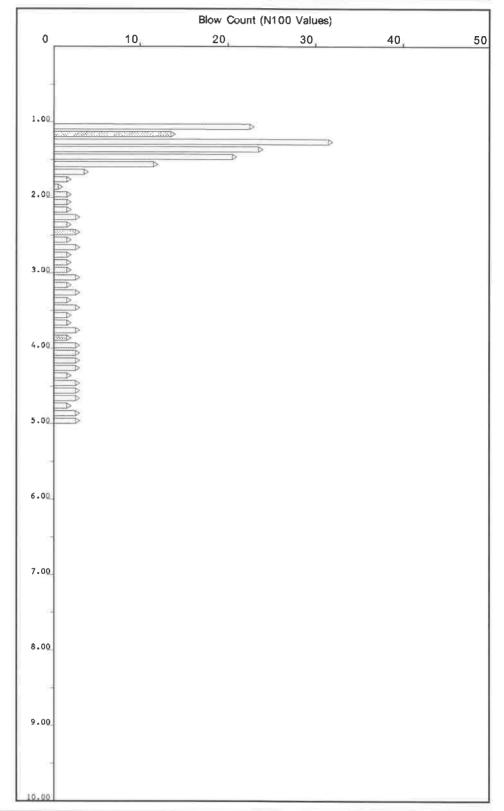
BRILL PLACE, LONDON NW1

Method BS 1377 : Part 9 : Clause 3.2 (DPSH)

Client ED JERSEY LIMITED

Depth Torque Blows (100mm) (m)

123345678901233456789012334567890





G	ROUN		NG	Site: 1	BRILL PLACE, LONDON NW1		RIAL P	
ľ	I M I	T	E D	Date:	Pit Size: 0.40m L x 0.35m W x 1.00m D.	5298		33138 mN
\\\\\\\\\\	el: 01733-566566 www.groundengine	ering.c	o.uk	107	94/19	Ground Level:	18.6	óm. О.D.
-	Samples and in Depth m	Type	Result	(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
	0.30	D1			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded flint, concrete, brick and ash.			
	0.60	D2						
							1.20	17.46
					Pît completed at 1.20m depth			
К	EY D - Disturbed B - Bulk Sam U - Undisturb R - Root San W - Water Sa ES - Environm V Water St V Water Ris	iple sed Sam iple imple ental Si rike	nple	REMARKS	1. Live roots observed to 0.70m depth 2. Pit dry 3. Pit sides stable 4. Hole extended by dynamic probe to 5.00m depth			
	Level on MP - Mackinto P( ) - Hand Per Cohesion	comple sh Prob letrome	e ter				Proje	27
	V - Vane She Cohesion	ear Test	:				Scale 1:25	Page 1/1

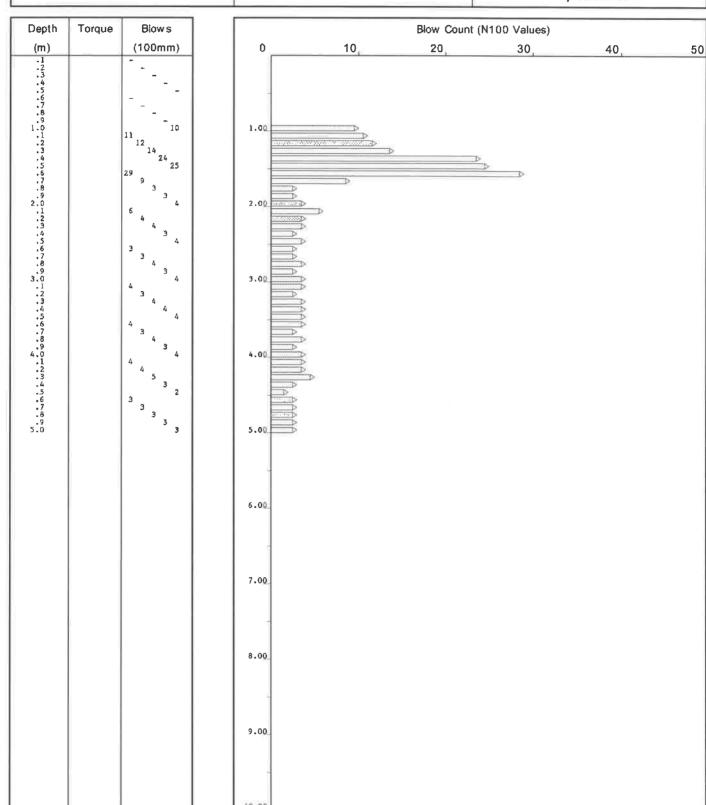
L I M I T E D Tel: 01733-566566 www.groundengineering.co.uk DYNAMIC PROBE PENETRATION TEST Date 10/04/19

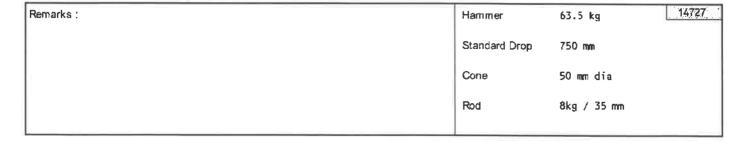
Project Number 14727 PROBE No DP125

Sheet 1 of 1

Method BS 1377 : Part 9 : Clause 3.2 (DPSH)

Client ED JERSEY LIMITED Site BRILL PLACE, LONDON NW1





GROUN	ID EERi	NG	Site: 1	BRILL PLACE, LONDON NW1		RIAL P	
L   M   Tel: 01733-56656 www.groundeng	T £	D	Date: 10/0	Pit Size: 0.35m L x 0.30m W x 1.20m D.		87 mE 18	
Samples and			(Date)	D. 18 (D. 1			0.0.
Depth m	Туре	Result	Water	Description of Strata	Legend	Depth m	Level m
0.30	D1			MADE GROUND - Soft, brown and dark brown mottled, slightly sandy, slightly gravelly, silty CLAY with some concrete cobbles. Gravel of angular to sub-rounded flint, brick, concrete and ash.		0.40	18.58
0.70	D2			MADE GROUND - Soft, brown, slightly sandy, slightly gravelly, silty CLAY. Gravel of angular to sub-rounded concrete, brick, flint, ash and plastic pipe fregments.			
1.10	D3					1.20	17.78
KEY			REMARKS	1. Live roots observed to at least 1.20m depth			
MP - Mackin P( ) - Hand P Cohesi V - Vane S	ample urbed Sam ample Sample sample mental Sa Strike Rise on complei atosh Prob enetrome on ( ) kPa	aple ample lion e ter	ı	2. Pit dry 3. Pit sides stable 4. Hole extended by dynamic probe to 5.00m depth		Proje 147 Scale 1:25	

L I M I T E D
Tel: 01733-566566 www.groundengineering.co.uk

Method BS 1377 : Part 9 : Clause 3.2 (DPSH) DYNAMIC PROBE PENETRATION TEST Date 10/04/19

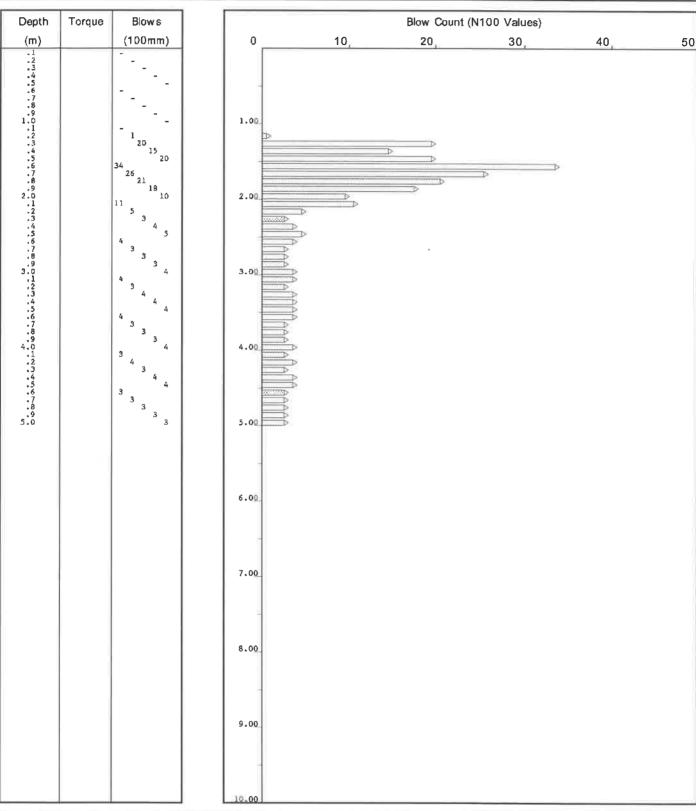
Project Number 14727 PROBE No DP126

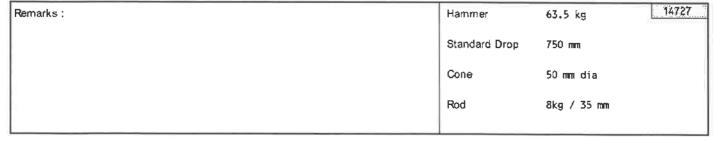
Sheet 1 of 1

Client

ED JERSEY LIMITED

Site BRILL PLACE, LONDON NW1





GROUND ENGINEERING	Site: BRIL	PLACE, LONDON NW1	_	RIAL PI	
LIMITED	Date: 10/04/19	Pît Size: 0.30m L x 0.30m W x 1.00m D.		55 mE 18	3131 mN
Tel: 01733-566565 www.groundengineering.co.uk	.,,,,,,		Level:	19.54	m. O.D.
Samples and in-situ Tests  Depth m Type Result	(Date) Water	Description of Strata	Legend	Depth	O.D. Level m
0.20 01		GROUND - Soft, dark brown and brown mottled, slightly y, slightly gravelly, silty CLAY. Gravel of angular to rounded flint, brick, concrete and ash.  GROUND - Soft, brown, slightly sandy, slightly elly, silty CLAY with some concrete cobbles. Gravel of lar to sub-rounded concrete, flint, brick, concrete and		0.30	19.24
0.70 D2	Pît			1.00	18.54
KEY	REMARK\$1. I is	re roots observed to at least 1.00m depth			
D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample R - Root Sample W - Water Sample ES - Environmental Sample W water Strike W Water Rise Level on completion MP - Mackintosh Probe R() - Hand Penetrometer Cohesion () kPa V - Vane Shear Test Cohesion () kPa	3. Pi	ve roots observed to at least 1.00m depth : dry : sides stable :e extended by dynamic probe to refusal at 2.00m depth		Project 147 Scale 1:25	

L I M I T E D Tel: 01733-566666 www.groundengineering.co.uk

DYNAMIC PROBE PENETRATION TEST

Date 10/04/19

Project

Number 14727

**PROBE No DP127** Sheet 1 of 1

50

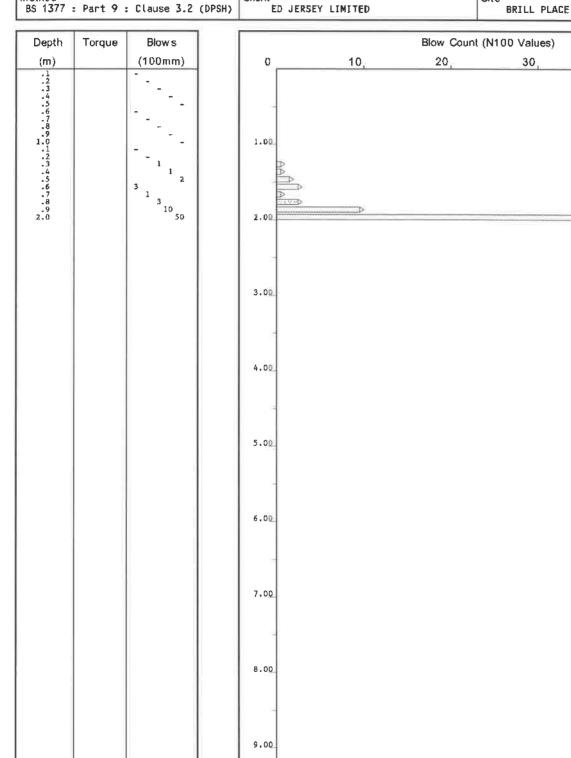
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Site

BRILL PLACE, LONDON NW1

11-11-1					
Method					
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BS 1377	Part	v	L'Hallige	5 7	COPSHA

CHOIL		
ED	JERSEY	LIM





Groundwater/Gas Monitoring Record

Site: Brill Place, London NW1

Date	Borehole	Meth {%	Methane (% v/v)	Carbon (%)	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	Mín.	Мах.				
18/04/19	WS 101	<0.1	<0.1	0.5	0.5	19.7	19.7	<0.1	1022	1.40	Dry
	WS 102A	<0.1	<0.1	6.0	6.0	19.5	19.5	<0.1	1022	1.00	Dry
	WS 103	<0.1	<0.1	1.1	1:	19.3	19.3	<0.1	1022	2.50	Dry
	WS 104B	<0.1	<0.1	1.2	1.2	19.0	19.0	<0.1	1022	1,10	Dry

## Groundwater/Gas Monitoring Record

Site: Brill Place, London NW1

to /ater							
Depth to Groundwater (m)		Dry	Dry	Dry	Dry		
Depth of Well (m)		1.40	1.00	2.50	1.10		
Atmosph. Pressure (mb)		266	266	266	266		
Flow Rate (I/hr)		<0.1	<0.1	<0.1	<0.1		
Oxygen (% v/v)	Мах.	19.4	19.3	19.2	18.8		
(%)	Min.	19.4	19.3	19.2	18.8		
Carbon Dioxide (% v/v)	Steady	9.0	6:0	0.8	1.6		
Carbon (%	Peak	9.0	6.0	0.8	1.6		
iane //v)	Steady	<0.1	<0.1	<0.1	<0.1		
Methane (% v/v)	Peak	<0.1	<0.1	<0.1	<0.1		
Borehole		WS 101	WS 102A	WS 103	WS 104B		
Date		23/04/19					

## Groundwater/Gas Monitoring Record

Site: Brill Place, London NW1

Date	Borehole	Meti (%)	Methane (% v/v)	Carbon (%	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.				
26/04/19	WS 101	\$0.1	<0.1	0.9	6.0	19.4	19.4	<0.1	1008	1.40	Dry
	WS 102A	<0.1	<0.1	1.5	5:1	18.6	18.6	<0.1	1008	1.00	Dry
	WS 103	<0.1	<0.1	1.2	1.2	19.0	19.0	<0.1	1008	2.50	Dry
	WS 104B	<0.1	<0.1	1.5	1,5	18.9	18.9	<0.1	1008	1.10	Dry

## Groundwater/Gas Monitoring Record

Site: Brill Place, London NW1

Date	Borehole	Methane (% v/v)	lane v/v)	Carbon (%	Carbon Dioxide (% v/v)	0x)	Oxygen (% v/v)	Flow Rate (l/hr)	Atmosph. Pressure (mb)	Depth of Well (m)	Depth to Groundwater (m)
		Peak	Steady	Peak	Steady	Min.	Мах.				
29/04/19	WS 101	<0.1	<0.1	0.9	6.0	19.9	19.9	<0.1	1026	1.40	Dry
	WS 102A	<0.1	<0.1	9.0	9:0	20.2	20.2	<0.1	1026	1.00	Dry
	WS 103	<0.1	<0.1	1.2	1.2	19.3	19.3	<0.1	1026	2.50	Dry
	WS 104B	<0.1	<0.1	0.2	0.2	20.4	20.4	<0.1	1026	1.10	Dry

## Groundwater/Gas Monitoring Record

Site: Brill Place, London NW1

r -							1
Depth to Groundwater (m)		Dry	Dny	Dry	Dry		
Depth of Well (m)		1.40	1.00	2.50	1.10		
Atmosph. Pressure (mb)		1006	1006	1006	1006		
Flow Rate (I/hr)		<0.1	<0.1	<0.1	<0.1		
lα)	Мах.	20.2	20.3	19.9	20.6		
Oxygen (% v/v)	Min.	20.2	20.3	19.9	20.6		
Dioxide //v)	Steady	2.0	0.3	6.0	0.1		
Carbon Dioxide (% v/v)	Peak	0.7	0.3	6.0	<0.1		
Methane (% v/v)	Steady	<0.1	<0.1	<0.1	<0.1		
Meth (%)	Peak	<0.1	<0.1	<0.1	<0.1		
Borehole		WS 101	WS 102A	WS 103	WS 104B		
Date		04/05/19					

## Groundwater/Gas Monitoring Record

Site: Brill Place, London NW1

Date	Borehole	Methane (% v/v)	Methane (% v/v)	Carbon (%	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.				
07/05/19	WS 101	<0.1	<0.1	1:	1.7	19.9	19.9	<0.1	1015	1.40	Dry
	WS 102A	<0.1	<0.1	9.0	9.0	20.0	20.0	<0.1	1015	1.00	Dry
	WS 103	<0.1	<0.1	0.9	6:0	19.9	19.9	<0.1	1015	2.50	Dry
	WS 104B	<0.1	40.1	0.5	0.5	20.2	20.2	<0.1	1015	1.10	Dry







Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070

Tel: 01638 606070 Email: Info@chemtest.com

### **Final Report**

Report No.:

19-13609-1

Initial Date of Issue:

29-Apr-2019

Client

Ground Engineering Limited

Client Address:

Newark Road Peterborough Cambridgeshire PE1 5UA

Contact(s):

Steve Fleming

**Project** 

C14727 Brill Place, London NW1

Quotation No.:

**Date Received:** 

23-Apr-2019

Order No.:

C14727

Date Instructed:

23-Apr-2019

No. of Samples:

20

Turnaround (Wkdays):

Results Due:

29-Apr-2019

Date Approved:

29-Apr-2019

Approved By:

Details:

Robert Monk, Technical Manager

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Ouotation No										2000		2000
The second second		Chemte	Chemtest Sample ID.	ple ID.:	814387	814388	814389	814390	814391	814392	814393	814394
		ő	Client Sample 1D	Tole ID.:	D2	5	40	10	53	2	82	D11
		SS	Sample Location:	ocation:	WS101	WS101A	WS101A	WS102A	WS102A	WS103	WS103	WS103
			Sampl	Sample Type:	NOS	SOIL	SOIL	SOII	SOIL	CS	108	I OS
			Top Depth (m)	(m) ylc	1 30	0.10	1 00	0.20	1 00	0.40	2 30	300
			Date Sampled	ampled.	11-Apr.2010	11-Apr2010	11 Apr 2010	14 Apr 2010	44 000 2040	40 0040	40 6 2040	2000
			Aspest	Aspestos Lab	INFREDOI	I IVERPOOI	1 IVERPOOL	INFREDO	I WERPOOI	I IVERPOOI	1 IVERPOOL	INTERDOOM
Determinand	Accred.	SOP		go		בוגבות המב	בו אבו אמר	בו זרו אי ממר	בואבעו ססר	בוארוא מסר	LINE NO.	CIVEN
Ha	o	2010		ΑX	8.7	6.6	9.0	1.8	8.8	8.4	6.7	7.8
Moisture	z	2030	%	0.020		9.6	15	18	13	13	21	6
Boron	z	2450	mg/kg			6.5	6.1	5,6	52.88	8.0	6.2	83.3
Sulphate (2:1 Water Soluble) as SO4	٥	2120			0.063	0.28	0.13	0.026	0.073	0.10	0.78	10
Cyanide (Free)	-	2300	=		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	n	2450		_	12	14	17	13	20	18	0.6	41
Cadmium	ם	2450		0.10	0.19	0.21	0.34	0.28	0.29	0:30	< 0.10	0.14
Chromium	>	2450	mg/kg	1.0	21	24	25	24	28	31	39	44
Copper	ם -	2450	mg/kg	0.50	25	33	59	34	52	35	30	34
Mercury	ם	2450	mg/kg	0.10	0.27	0.22	0.42	0.32	0.75	0.84	< 0.10	0.10
Nickel	n	2450	mg/kg	0.50	19	22	21	17	24	30	34	56
Lead	n I	2450	mg/kg	$\overline{}$	420	130	900	210	290	190	29	25
Selenium	D	2450	mg/kg		0.33	< 0.20	0.87	1.3	0.61	0.81	0.70	1.9
Zinc	n 	2450	mg/kg		170	88	120	91	100	100	63	96
Chromium (Hexavalent)	z	2490	mg/kg		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	<b>D</b>	2625	%	0.40	< 0.40	1.9	5.9	1.9	1.3	2.6	< 0.40	0.47
Acenaphthene	D	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.25
Acenaphthylene	5	2700	mg/kg		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.56
Anthracene	<b>&gt;</b>	2700	mg/kg	_	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.24	< 0.10	0.42
Benzo[a]anthracene	o —	2700	mg/kg	_	< 0.10	7.9	=	1.4	1.8	0.88	< 0.10	< 0.10
Benzo[a]pyrene	n	2700	mg/kg		< 0.10	8.2	10	1.4	1.9	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	n l	2700	mg/kg		< 0.10	8.8	9.6	2.2	2.7	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	o —	2700	mg/kg	0.10	< 0.10	5.6	5.7	1.2	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	٥		mg/kg	_	< 0.10	4.2	5.1	1.1	1.2	< 0.10	< 0.10	< 0.10
Chrysene	ם	2700	mg/kg	_	< 0.10	9.0	11	1.9	2.3	0.95	< 0.10	< 0.10
Dibenz(a,h)Anthracene	⊃	2700	mg/kg	_	< 0.10	1.6	1.3	0.73	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	D	2700	mg/kg	_	2.0	16	56	2.4	3.7	1.5	< 0.10	0.65
Fluorene	ם	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	. < 0.10	< 0.10	0.46
Indeno(1,2,3-c,d)Pyrene	⊃	2700	mg/kg	_	< 0.10	5.7	5.6	0.92	< 0.10	< 0.10	< 0.10	< 0.10
Naphthalene	>	2700	mg/kg		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	<b>&gt;</b>	2700	mg/kg		< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.95	< 0.10	1.3
Pyrene	٥	2700	mg/kg	0.10	2.1	16	25	2.5	3.8	1.7	< 0.10	29.0
Total Of 16 PAH's	5	2700		2.0	4.1	83	110	16	17	6.2	< 2.0	4.3
Total Phenols	ם	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
ACM Type	Э	2192		ΚŅ		-	-	,		•		1
Asbestos Identification	=	2192	/6	2004	No Asbestos	No Asbestos	No Asbestos	No Asbestos	No Asbestos	No Asbestos	No Asbestos	No Asbestos

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Clicat County Programme 2 and 1 and 1		3	4000	ah Ma	40 42000	40 40000	40.40000	0000000	DOUGE OF	40 40000	40.40000	00000
Cilent: Ground Engineering Limited		euo.	Chemiest Job No	OD NO.:	60051-61	19-13bU8	19-13609	19-13008	19-13509	19-13609	19-13609	80961-61
Quotation No.:	٦	Shemte	st Sam	Chemtest Sample ID.:	814387	814388	814389	814390	814391	814392	814393	814394
		Ď	ent San	Client Sample ID.:	D5	D1	04	ŏ	D3	D2	D8	011
		Š	ample L	ocation:	WS101	WS101A	WS101A	WS102A	WS102A	WS103	WS103	WS103
			Samp	le Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top De	Top Depth (m):		0.10	1.00	0.20	1.00	0.40	2.30	3.00
			Date S.	:pajdue		11-Apr-2019	11-Apr-2019	11-Apr-2019	11-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019
			Asbest	Asbestos Lab:	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	Accred.	SOP	-	Units LOD								
ACM Detection Stage	2	2192		N/A	1				r	,	,	
Asbestos by Gravimetry	>	2192	%	0.001								
Total Asbestos	z	2192	%	0.001								
Aliphatic TPH >C5-C6	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	2	2680	mg/kg	1.0	< 1.0	< 1.0	× 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	n	2680	mg/kg	1.0	< 1.0	19	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	Ω	2680	mg/kg	1.0	47	80	24	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	Z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	z	2680	mg/kg	5.0	47	100	24	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	Λ	2680	тд/кд	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	n	2680	2680 mg/kg	$\Box$	< 1.0	35	8.3	22	30	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	n	2680	mg/kg		9.1	480	86	120	97	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	z	2680			< 1.0	< 1.0	< 1.0	7.5	4.4	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	z	2680	mg/kg	_	9.1	520	95	150	130	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	z		mg/kg		99	620	120	150	130	< 10	< 10	< 10
Benzene	n	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	n	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	n	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	D	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	Ω	2760	µg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	U	2760	pg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Resorcinol	n	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	n		mg/kg		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	n	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenols	O		mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	z	2920	$\overline{}$	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethylphenols	n	2920	mg/kg		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

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Clour, Ground Engineering Limited		C. C.	tankon t	Chemicat Joh Mo .	10 13600	40 42E00	40 42600	40 43600	40 42200	40 43600	40 49500	40 40000
Orotation No.	,	E	200	Chomfort Sample ID .		044906	014207	044200	944200	19-13003	19-13009	19-13003
GUOTAIIOI NO.:	1		IDC 193	indicate in	014390	014390	014387	014390	0.14388	814400	814401	814402
		دً	ent sa	Client sample IU.:	D16	DZ	32	20	0.5	DZ	D3	01
		ζŠ	ample I	Sample Location:	WS103	WS104	WS104	WS104	WS104A	DP101	DP110	DP115
			Sami	Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	NOS
			Top D	Top Depth (m):	4.70	0:30	1.20	1.80	0.40	0.70	0.50	0:30
			Date 5	Date Sampled:	10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	08-Apr-2019	09-Apr-2019	09-Apr-2019
				01	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	Accred.	SOP	Units	1000								
Ha	ח	2010		N/A	6.7	8.0	8.9	8.2	9.4	9.0	8.8	9.2
Moisture	z	2030	%	0.020		18	15	19	14	16	18	6.0
Boron	z	2450	ĮΕ	0.40	12	2.0	8.0	=	5.5	7.5	6.6	1.6
Suiphate (2:1 Water Soluble) as SO4	2	2120		0.010	0.82	0.043	0.12	0.080	0.11	0.064	0.023	0.15
Cyanide (Free)	2	2300	JE	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	[B] < 0.50	< 0.50	< 0.50
Arsenic	2	2450	mg/kg	1.0	14	14	22	11	16	17	18	20
Cadmium	2	2450		0.10	08.0	0.29	0.36	0.10	0.34	0.25	0.31	0.46
Chromium	ם ס	2450	mg/kg	1.0	47	34	120	90	26	31	38	16
Copper	ס	2450	mg/kg	9 0.50	32	31	56	31	29	38	36	15
Mercury	Э	2450	mg/kg	0.10	< 0.10	0.40	0.49	< 0.10	0.28	0.67	0.65	0.19
Nickel	ס	2450	mg/kg	_	48	28	29	45	21	27	28	12
Lead	ס	2450	mg/kg	0.50	19	160	350	92	400	300	240	290
Selenium	D	2450	mg/kg	9 0.20	0.94	1.2	0.78	0.75	1.0	0.85	0.74	0.36
Zin¢	ס	2450		3 0.50	73	91	160	70	80	97	110	63
Chromium (Hexavalent)	z	2490	mg/kg	3 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	ס	2625	%	0.40	0.64	3.3	8.1	0.43	3.3	2.6	1.7	0.91
Acenaphthene	0	2700	mg/kg	3 0.10	< 0.10	1.2	0.68	< 0.10	1.2	< 0.10	< 0.10	< 0.10
Acenaphthylene	ס	2700	mg/kg	3 0.10	< 0.10	0:30	0.85	< 0.10	0.41	< 0.10	< 0.10	< 0.10
Anthracene	D	2700	mg/kg	3 0.10	< 0.10	1.0	1.4	< 0.10	1.0	0.32	0.40	1.1
Benzo[a]anthracene	n	2700	mg/kg	0.10	< 0.10	1.6	3.3	< 0.10	2.4	0.76	1.5	1.9
Benzo[a]pyrene	5	2700	mg/kg	0.10	< 0.10	< 0.10	2.9	< 0.10	1.5	< 0.10	1.6	1.5
Benzo[b]fluoranthene	ס	2700	mg/kg	0.10	< 0.10	< 0.10	3.5	< 0.10	2.4	< 0.10	1.7	2.2
Benzo[g,h,i]perylene	ח	2700	mg/kg	0.10	< 0.10	< 0.10	2.4	< 0.10	1.0	< 0.10	1.3	1.3
Benzo[k]fluoranthene	n	2700	mg/kg	0.10	< 0.10	< 0.10	1.8	< 0.10	0.98	< 0.10	0.99	0.92
Chrysene	ח	2700	mg/kg		< 0.10	1.8	3.3	< 0.10	2.4	0.79	1.6	1.9
Dibenz(a,h)Anthracene	n	2700	mg/kg	_	< 0.10	< 0.10	0.28	< 0.10	0.19	< 0.10	0.13	0.14
Fluoranthene	n	2700	mg/kg		< 0.10	5.4	7.6	< 0.10	2.6	1.3	3.2	4.9
Fluorene		2700	mg/kg	0.10	< 0.10	0.80	98.0	< 0.10	0.70	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	_ 	2700	2700 mg/kg	-	< 0.10	< 0.10	2.0	< 0.10	06.0	< 0.10	1.3	1.0
Naphthalene		2700	2700 mg/kg	-	< 0.10	2.0	2.7	< 0.10	1.6	< 0.10	< 0.10	< 0.10
Phenanthrene	n	2700	mg/kg	0.10	< 0.10	6.4	6.1	< 0.10	6.7	0.99	1.9	3.8
Pyrene	n	2700	mg/kg	0.10	< 0.10	5.1	7.3	< 0.10	7.4	1.4	3.2	4.5
Total Of 16 PAH's	n	2700	mg/kg		< 2.0	26	47	< 2.0	38	5.6	19	25
Total Phenols	0	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
ACM Type	n	2192		N/A	,	-	Fibres/Clumps	,	,	,		-
Asbestos Identification	_	2192	%	0.001	No Asbestos	No Asbestos	Amosite	No Asbestos				
					Delecied	Delected		Delected	Delected	Defected	Delected	Detected

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Project: C14/2/ Brill Flace, London NW		3				40 40000	40.45000	00007 07	00000	00001		
Client: Ground Engineering Limited		2	emiest.	Chemiest Job No.:		19-13609	19-13609	19-13608	18-13609	19-13609	19-13609	19-13609
Quotation No.:		hemt	Chemtest Sample ID.	ple ID.	814395	814396	814397	814398	814399	814400	814401	814402
		ō	Client Sample ID	nple ID.:	D16	D2	D5	D7	D2	D2	D3	5
		Ś	Sample Location	ocation:	WS103	WS104	WS104	WS104	WS104A	DP101	DP110	DP115
			Samp	Sample Type:	SOIL							
			Top De	Top Depth (m):	4.70	0:30	1.20	1.80	0.40	0.70	0.50	0:30
			Date 5	Date Sampled:	10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019	08-Apr-2019	09-Apr-2019	09-Apr-2019
			Asbes	Asbestos Lab:	LIVERPOOL							
Determinand	Accred.	SOP		Units LOD			THE RESERVE					
ACM Detection Stage	מ	2192		N/A	,		Stereo	ı	•	,	,	
Aspestos by Gravimetry	5	2192	%	0.001			<0.001					
Total Asbestos	z	2192	_	0.001			<0.001					
Aliphatic TPH >C5-C6	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1,0	< 1.0	< 1.0	[B] < 1.0	< 1.0	× 1.0
Aliphatic TPH >C6-C8	z	2680		1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	ס	2680		1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1,0
Aliphatic TPH >C12-C16		2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[8] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	z	2680		5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	[B] < 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[8] < 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	Π	2680	mg/kg	1.0	< 1.0	6.5	4.1	< 1.0	4.6	[B] < 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	n	2680	mg/kg	1.0	< 1.0	20	20	< 1.0	16	[B] < 1.0	< 1.0	7.1
Aromatic TPH >C16-C21	n	2680		1.0	< 1.0	45	33	< 1.0	09	[B] < 1.0	< 1.0	57
Aromatic TPH >C21-C35	ח	2680		1.0	< 1.0	62	64	< 1.0	100	[B] < 1.0	< 1.0	96
Aromatic TPH >C35-C44	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.2	[B] < 1.0	< 1.0	2.8
Total Aromatic Hydrocarbons	z	2680	mg/kg	5.0	< 5.0	130	120	< 5.0	190	[B] < 5.0	< 5.0	160
Total Petroleum Hydrocarbons	z	2680	mg/kg	10.0	< 10	130	120	< 10	190	[B] < 10	< 10	160
Benzene	n	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Toluene	ລ	2760	l µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Ethylbenzene	n	2760	l µg/kg	_	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
m & p-Xylene	n	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
o-Xylene	n	2760	ug/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	n	2760		1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	[B] < 1.0	< 1.0	< 1.0
Resorcinol	n	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	>	2920	mg/kg	$\overline{}$	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	n	2920	mg/kg	$\overline{}$	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenois	n	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	z	2920	mg/kg	-	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethy/phenols	∍	2920	2920 mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050

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Chemter San San San San San 2010 2030 2030 20450 2450 2450 2450 2450 2450 2450	Chemtest Sample ID.:   Client Sample ID.:   Sample Location:   Sample Type:   Top Depth (M):   Date Sampled:   Asbestos Lab:   Sop   Units   LOD     2010   N/A     2030   %   0.020     2450   mg/kg   0.40     2120   g/l   0.010     2300   mg/kg   0.50     2300   mg/kg   0.50	D.: 814403 D.: D2 on: DP117 pe: SOIL n): 0.70	8 0	814405 D2 DP126	814406 D1 DP127
San	nnt Sample I mple Locati Sample Ty Sample Ty Op Depth (Opte Sample Asbestos L Units LC N/		DP121	D2 DP126	D1 DP127
San Sop 2010 2030 2030 2450 2450 2450 2450 2450 2450 2450 2450	Sample Locati Sample Ty op Depth ( Date Sampl Asbestos L Units LC N/ N/ N/ 0.0 9/ 0.0 9/ 0.0 mg/kg 0.4		DP121	DP126	DP127
SOP 2010 2030 2450 2450 2450 2450 2450 2450 2450 245	Sample Ty op Depth ( Date Sampl Asbestos L Units LC N/ N/ 0.0 90 0.0		100		
\$0P 2010 2030 2450 2120 2300 2450 2450 2450 2450 2450 2450	op Depth ( Date Sampl Asbestos L Units LC Units N/ N/ N/ N/ 0.0 0,0 0,0 0,0 0,0		SOIL	SOIL	SOIL
\$0P 2010 2030 2450 2450 2450 2450 2450 2450 2450 245	Asbestos L.  Units LC  Units N/  N/  0.0  mg/kg 0.4  g/l 0.0  mg/kg 0.4	Į	H	0.70	0.20
	Asbestos L  Units LC  N/  N/  0.0  mg/kg 0.4  mg/kg 0.4	$\Box$	$\dashv$	10-Apr-2019	10-Apr-2019
		ab:   LIVERPOOL	L   LIVERPOOL	LIVERPOOL	LIVERPOOL
2010 2030 2450 2450 2450 2450 2450 2450 2450		Q			
2030 2450 2300 2300 2450 2450 2450 2450 2450 2450 2450			8.7	9.8	8.8
2450 2300 2300 2450 2450 2450 2450 2450 2450 2450		20 9.8	13	12	16
2120 2300 2450 2450 2450 2450 2450 2450		10	14	12	9.9
2300 2450 2450 2450 2450 2450 2450	_		0.12	< 0.010	0.029
2450 2450 2450 2450 2450 2450	-	0.50 > 0.50	< 0.50	< 0.50	< 0.50
2450 2450 2450 2450 2450 2450	mg/kg 1.0		15	14	15
2450 2450 2450 2450 2450	mg/kg   0.10	0 0.51	0.63	0.25	0.54
2450 2450 2450 2450	mg/kg 1.0		31	28	26
2450	mg/kg   0.50		30	35	51
2450	mg/kg 0.10	0 0.28	0.43	0.52	0.38
2450	mg/kg 0.50		22	27	19
-	mg/kg 0.50	00 220	140	170	130
2450	mg/kg 0.20	0.73	1.2	0.86	1.2
2450	mg/kg 0.50	140	90	82	120
2490	mg/kg 0.50	09:0 > 0:20	< 0.50	< 0.50	< 0.50
2625		10 2.6	1.9	1.7	3.8
2700	mg/kg 0.10	0 < 0.10	< 0.10	1.6	< 0.10
2700	mg/kg 0.10	0 < 0.10	< 0.10	1.2	< 0.10
2700	mg/kg 0.10	0 0.73	0.48	3.0	0.49
2700	mg/kg 0.10		0.74	4.7	1.1
2700	mg/kg 0.1		< 0.10	3.6	< 0.10
2700			< 0.10	4.1	< 0.10
2700			< 0.10	2.3	< 0.10
	ш		< 0.10	2.1	< 0.10
			1.3	4.4	1.3
	_	0 0.22	< 0.10	0.34	< 0.10
	_		1.7	14	2.5
2700			< 0.10	1.2	< 0.10
2700		0 1.7	< 0.10	2.1	< 0.10
2700	_	0 < 0.10	< 0.10	4.6	< 0.10
2700	$\vdash$	0 2.3	0.80	13	1.4
2700			1.7	13	2.5
			6.7	75	9.3
2920	_	0.30	< 0.30	< 0.30	< 0.30
2192		٠.	-	,	,
2192		_	Z	No Asbestos	No Asbestos
	2700 2700 2700 2700 2700 2700 2700 2700	M9/kg	mg/kg 0.10	mg/kg         0.10         2.3           mg/kg         0.10         2.7           mg/kg         0.10         1.9           mg/kg         0.10         1.3           mg/kg         0.10         4.5           mg/kg         0.10         4.5           mg/kg         0.10         < 0.10           mg/kg         0.10         < 0.10           mg/kg         0.10         < 0.30           mg/kg         0.10         4.6           mg/kg         0.10         < 0.30           mg/kg         0.30         < 0.30           M/A         N/A         N/A           M/A         Detected	mg/kg         0.10         2.3         < 0.10           mg/kg         0.10         2.7         < 0.10

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Client: Ground Engineering Limited		Che	Chemtest Job No.:	op No.:	19-13609	19-13609	19-13609	19-13609
Quotation No.:		Chemte	Chemtest Sample ID.:	ple ID.:	814403	814404	814405	814406
		ō	Client Sample 10.	ple IO.:	D2	5	02	5
		တိ	Sample Location:	cation:	DP117	DP121	DP126	DP127
			Sample	Sample Type:	SOIL	SOIL	SOIL	SOIL
			Top Depth (m)	oth (m):	0.70	0:30	0.70	0.20
			Date Sampled:	impled:	09-Apr-2019	10-Apr-2019	10-Apr-2019	10-Apr-2019
			Asbest	Asbestos Lab:	LIVERPOOL	LIVERPOOL	LIVERPOOL	LIVERPOOL
Determinand	Accred.	SOP	Units	LOD				
ACM Detection Stage	<u> </u>	2192		N/A		,		ı
Asbestos by Gravimetry	_	2192	%	0.001				
Total Asbestos	z	2192	%	0.001				
Aliphatic TPH >C5-C6	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	ס	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	n	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	ם	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	n	2680	mg/kg	1.0	37	20	< 1.0	43
Aliphatic TPH >C35-C44	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	z	2680	mg/kg	5.0	37	20	< 5.0	43
Aromatic TPH >C5-C7	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	z	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	٥	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	<u> </u>	2680	mg/kg		< 1.0	< 1.0	4.2	< 1.0
Aromatic TPH >C12-C16	ח	2680	mg/kg		< 1.0	< 1.0	55	< 1.0
Aromatic TPH >C16-C21	<u>ם</u>	2680	mg/kg		11	6.8	270	< 1.0
Aromatic TPH >C21-C35	n	2680	mg/kg	1.0	65	33	380	20
Aromatic TPH >C35-C44	z	2680	mg/kg	1.0	< 1.0	< 1.0	11	< 1.0
Total Aromatic Hydrocarbons	z	2680	mg/kg	5.0	75	40	720	20
Total Petroleum Hydrocarbons	z	2680	mg/kg	10.0	110	90	720	63
Benzene	כ	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	5	2760	ug/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	>	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	D	2760	pg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	<b>&gt;</b>	2760	pg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	ם	2760	pg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Resordinol	<b>D</b>	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenol	n	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cresols	n	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Xylenois	n	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
1-Naphthol	z	2920	mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Trimethylphenols	_	2920	2920 mg/kg	0.050	< 0.050	< 0.050	< 0.050	< 0.050



### **Deviations**

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s). This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
814400		D2	DP101	08-Apr-2019	В	Amber Glass 250ml
814400	_	D2	DP101	08-Apr-2019	В	Plastic Tub 500g



### Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	рН	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5-C6, >C6-C8, >C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21- C35, >C35-C44Aromatics: >C5-C7, >C7-C8, >C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35-C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1- Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.



### Report Information

### Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN. This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
  - < "less than"
  - "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

### **Sample Deviation Codes**

- A Date of sampling not supplied
- B Sample age exceeds stability time (sampling to extraction)
- C Sample not received in appropriate containers
- D Broken Container
- E Insufficient Sample (Applies to LOI in Trommel Fines Only)

### Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to: customerservices@chemtest.com



Chemtest
The right chemistry to deliver results

Chemtest Ltd.
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

### **Final Report**

Report No.: 19-1

19-13614-1

Initial Date of Issue:

01-May-2019

Client

Ground Engineering Limited

**Client Address:** 

Newark Road Peterborough Cambridgeshire

PE1 5UA

Contact(s):

Steve Fleming

**Project** 

C14727 Brill Place, London NW1

**Quotation No.:** 

Date Received:

23-Apr-2019

Order No.:

C14727

Date Instructed:

23-Apr-2019

No. of Samples:

6

Turnaround (Wkdays):

Results Due:

01-May-2019

Date Approved:

01-May-2019

Approved By:

Details:

Robert Monk, Technical Manager



Project: C14727 Brill Place, London NW1	NW1								
Chemtest Job No:	19-13614						Landfill V	Landfill Waste Acceptance Criteria	e Criteria
Chemtest Sample ID:	814413							Limits	
Sample Ref:								Stable, Non-	
Sample ID:	¥							reactive	
Sample Location:	WS101A							hazardous	Hazardous
Top Depth(m):	1.00						Inert Waste	waste in non-	Waste
Bottom Depth(m):							Landfill	hazardous	Landfiil
Sampling Date:	11-Apr-2019							Landfill	
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	n	%			1.2	က	5	9
Loss On Ignition	2610	n	%			2.4	ı	:	10
Total BTEX	2760	ח	mg/kg			< 0.010	9	:	:
Total PCBs (7 Congeners)	2815	Ω	mg/kg			< 0.10	-	ř	ı
TPH Total WAC (Mineral Oil)	2670	n	mg/kg			100	200		t
Total (Of 17) PAH's	2700	2	mg/kg			2.7	100	ı	;
Hd	2010	n				10.6	i	9^	1
Acid Neutralisation Capacity	2015	z	mol/kg			0.035	ı	To evaluate	To evaluate
Eluate Analysis			2:1	8:1	2:1	Cumulative	Limit values	Limit values for compliance leaching test	leaching test
			∥/gш	mg/l	mg/kg	mg/kg 10:1	using B:	using BS EN 12457 at L/S 10 l/kg	S 10 l/kg
Arsenic	1450	n	0.0025	0.0028	< 0.050	< 0.050	9.0	2	25
Barium	1450	Ω	0.012	0.0073	< 0.50	< 0.50	83	100	300
Cadmium	1450	ח	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	-	2
Chromium	1450	n	0.0098	0.0011	< 0.050	< 0.050	0.5	10	7.0
Copper	1450	O	0.037	0.010	0.073	0.057	2	50	100
Mercury	1450	n	< 0.00050	< 0.00050	< 0.0010	< 0.0050	10.0	0.2	2
Molybdenum	1450	O	0.031	0.0055	0.062	0.094	0.5	10	30
Nickel	1450	Π	0.0037	0.0017	< 0.050	< 0.050	0.4	10	40
Lead	1450	n	0.0012	0.0078	< 0.010	0.068	0.5	10	25
Antimony	1450	Ω	0.0080	0.0042	0.016	0.048	90.0	0.7	သ
Selenium	1450	n	0.0034	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	Ω	0.0032	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	ס	11	3.2	22	44	800	15000	25000
Fluoride	1220	ס	0.55	0.32	1.1	3.5	10	150	200
Sulphate	1220	n	130	31	260	470	1000	20000	50000
Total Dissolved Solids	1020	z	290	120	570	1400	4000	60000	100000
Phenol Index	1920	n	1.5	0.16	3.0	3.7	1	-	-
Dissolved Organic Carbon	1610	n	32	22	88	260	200	800	1000
Solid Information				Leachate Test Information	Information				
Dry mass of test portion/kg	0.175			Leachant volume 1st extract//	e 1st extract/l		0.327		

Moisture (%)

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

1.400

Eluant recovered from 1st extract/l

Leachant volume 2nd extract/



Project: C14727 Brill Place, London NW1	n NW1								
Chemtest Job No:	19-13614						Landfill V	Landfill Waste Acceptance Criteria	se Criteria
Chemiest Sample ID:	0 144 14							Limits Ct-t-1- N	
Sample ver.	2							Stable, Non-	
Sample 10:	WS1024							Paradona	o i o passe o l
Ton Danth(m):	1.00						Inort Wasto	waste in non-	Waefe
Bottom Depth(m):							Landfill	hazardous	Landfill
Sampling Date:	11-Apr-2019							Landfill	
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	ס	%			1.7	9	2	9
Loss On Ignition	2610	b	%			3.6	:	1	10
Total BTEX	2760	Ω	mg/kg			< 0.010	9	;	
Total PCBs (7 Congeners)	2815	ם	mg/kg			< 0.10	,	t	
TPH Total WAC (Mineral Oil)	2670	Π	mg/kg			7.7	200	-	ţ
Total (Of 17) PAH's	2700	z	mg/kg			44	100	-	-
Hd	2010	Ω				8.8	**	9×	;
Acid Neutralisation Capacity	2015	Z	mol/kg			0.053	:	To evaluate	To evaluate
Eluate Analysis			2:1	6:1	2:1	Cumulative	Limit values	Limit values for compliance leaching test	leaching test
			l/gm	mg/f	mg/kg	mg/kg 10:1	using B	using BS EN 12457 at L/S 10 l/kg	'S 10 l/kg
Arsenic	1450	n	0.0049	0.0067	< 0.050	0.065	0.5	2	25
Barium	1450	ñ	0.011	0.0054	< 0.50	< 0.50	20	100	300
Cadmium	1450	n	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	22
Chromium	1450	n	0.0082	0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	n	0.0084	0.0029	< 0.050	< 0.050	2	50	100
Mercury	1450	Ω	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	n	0.031	0.0055	0.062	0.084	0.5	10	30
Nickel	1450	n	0.0016	0.0013	< 0.050	< 0.050	0.4	10	40
Lead	1450	D	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	n	0.050	0.031	0.099	0.33	90.0	0.7	ф
Selenium	1450	n	0.0014	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	ם	0.0016	< 0.0010	< 0.50	< 0.50	4	20	200
Chloride	1220	ם	16	6.0	32	7.1	800	15000	25000
Fluoride	1220	n	0.85	0.47	1.7	5.1	10	150	200
Sulphate	1220	ם	180	38	350	540	1000	20000	20000
Total Dissolved Solids	1020	z	340	130	029	1500	4000	00009	100000
Phenol Index	1920	Đ	0.14	060:0	< 0.30	96:0	-	-	-
Dissolved Organic Carbon	1610	Þ	20	17	< 50	170	500	800	1000
Solid Information				Leachate Test Information	nformation				
Dry mass of test portion/kg	0.175			Leachant volume 1st extract/	e 1st extract/l		0.328		
Moisture (%)	11			Leachant volume 2nd extract/	e 2nd extract/l		1.400		
				Etuant recovered from 1st extract/	I from 1st extra	D.C.C.	0.198		

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.





Project: C14727 Brill Place, London NW1	IWI								
Chemtest Job No: Chemtest Sample ID:	19-13614 814415						Landfill W	Landfill Waste Acceptance Criteria Limits	e Criteria
Sample Ref;								Stable, Non-	
Sample ID:	110							reactive	
Sample Location:	WS103							hazardous	Hazardons
Top Depth(π): Bottom Depth(m):	3.00						Inert Waste	waste in non-	Waste
Sampling Date:	10-Apr-2019							Landfill	
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	Ω	%			0.33	က	Ω	9
Loss On Ignition	2610	ם	%			4.9	-		10
Total BTEX	2760	D	mg/kg			< 0.010	9	-	:
Total PCBs (7 Congeners)	2815	D	mg/kg			< 0.10	1	-	-
TPH Total WAC (Mineral Oil)	2670	O	mg/kg	_		< 10	500	-	-
Total (Of 17) PAH's	2700	z	mg/kg			< 2.0	100		;
Hd	2010	Ω		_		7.7	1	9×	:
Acid Neutralisation Capacity	2015	z	mol/kg			0.010	-	To evaluate	To evaluate
Eluate Analysis			2:1	8:1	2:1	Cumulative	Limit values	Limit values for compliance leaching test	leaching test
			l/gm	пвл	mg/kg	mg/kg 10:1	using B?	using BS EN 12457 at L/S 10 l/kg	S 10 l/kg
Arsenic	1450	n	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25
Barium	1450	<b>D</b>	0.0031	0.0017	< 0.50	< 0.50	20	100	300
Cadmium	1450	n	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	3
Chromium	1450	n	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	20
Copper	1450	n	< 0.0010	< 0.0010	< 0.050	< 0.050	2	90	100
Mercury	1450	n	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	n	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	99
Nickel	1450	n	0.0012	0.0011	< 0.050	< 0.050	0.4	10	40
Lead	1450	n	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	90
Antimony	1450	D	0.0012	< 0.0010	< 0.010	< 0.010	90.0	0.7	5
Selenium	1450	n	0.0013	0.0010	< 0.010	0.010	0.1	0.5	7
Zinc	1450	n	< 0.0010	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	D	21	12	41	130	800	15000	25000
Fluoride	1220	n	0.33	0.70	< 1.0	9.9	10	150	200
Sulphate	1220	n	110	69	210	730	1000	20000	20000
Total Dissolved Solids	1020	z	210	160	420	1600	4000	60000	100000
Phenol Index	1920	ֹם	< 0.030	< 0.030	< 0.30	< 0.50	1	*	-
Dissolved Organic Carbon	1610	D.	7.0	14	< 50	140	200	800	1000
									64
Solid Information				Leachate Test Information	nformation				
Dry mass of test portion/kg	0,175			Leachant volume 1st extract/	e 1st extract/l		0.311		
Moisture (%)	18			Leachant volume 2nd extract/	e 2nd extract/l		1.400		

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

0.172

Eluant recovered from 1st extract/l



Project: C14727 Brill Place, London NW1	NW1								
Chemtest Job No:	19-13614						Landfill W	Landfill Waste Acceptance Criteria	se Criteria
Chemtest Sample ID:	814416							Limits	
Sample Ref:								Stable, Non-	
Sample ID:	D16							reactive	
Sample Location:	WS103							hazardous	Hazardous
Top Depth(m):	4.70						Inert Waste	waste in non-	Waste
Bottom Depth(m):							Landfill	hazardous	Landfill
Sampling Date:	10-Apr-2019							Landfill	
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	n	%			0.45	3	5	9
Loss On Ignition	2610	n	%			5.1			10
Total BTEX	2760	U	mg/kg	_		< 0.010	9	-	-
Total PCBs (7 Congeners)	2815	n	mg/kg			< 0.10	1		
TPH Total WAC (Mineral Oil)	2670	n	mg/kg			< 10	500		-
Total (Of 17) PAH's	2700	z	mg/kg			< 2.0	100	:	
Hd	2010	U				7.7		9<	
Acid Neutralisation Capacity	2015	z	mol/kg			0.0040	-	To evaluate	To evaluate
Eluate Analysis			2:1	8:1	2:1	Cumulative	Limit values	Limit values for compliance leaching test	leaching test
			ng/l	mg/l	mg/kg	mg/kg 10:1	using B	using BS EN 12457 at US 10 l/kg	S 10 l/kg
Arsenic	1450	n	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25
Baríum	1450	n	0.013	0.0028	< 0.50	< 0.50	20	100	300
Cadmium	1450	n	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	ņ	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	n	< 0.0010	< 0.0010	< 0.050	< 0.050	2	20	100
Mercury	1450	n	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	Ú	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	30
Nickel	1450	n	0.0014	0.0011	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	n	< 0.0010	< 0.0010	< 0.010	< 0.010	90.0	0.7	co.
Selenium	1450	n	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	ב	0.016	0.0032	< 0.50	< 0.50	4	50	200
Chloride	1220	n	19	4.5	37	55	800	15000	25000
Fluoride	1220	n	0.66	0.51	1.3	5.2	10	150	200
Sulphate	1220	n	1200	230	2300	3000	1000	20000	20000
Total Dissolved Solids	1020	z	1400	330	2700	4000	4000	00009	100000
Phenol Index	1920	ם	< 0.030	< 0.030	< 0.30	< 0.50	Ţ	1	-
Dissolved Organic Carbon	1610	n	9.2	14	< 20	140	200	800	1000
		7/2							
Solid Information				Leachate Test Information	nformation				
Dry mass of test portion/kg	0.175			Leachant volume 1st extract/	e 1st extract//		0.307		

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

1.400

Eluant recovered from 1st extract/

Leachant volume 2nd extract/

29

Moisture (%)



The color of the	Chemtest Job No:	19-13614						Landfill	Landfill Waste Acceptance Criteria	ce Criteria
1.   1.   1.   1.   1.   1.   1.   1.	Chemtest Sample ID:	814417							Limits	
1.0 Apr. 2019   Part   Part	Sample Ref:								Stable, Non-	
1.30   1.30   M.5104   M.510	Sample ID:	D7							reactive	
1,80   1,80	Sample Location:	WS104							hazardous	Hazardous
10-App-2019   SOP   Accred   Units   Units   SOP   Accred   Units   SOP   Accred   Units   SOP   Accred   Units   SOP   Accred   Units   So   Sol	Top Depth(m):	1.80						Inert Waste	waste in non-	Waste
con         Signer         Accred.         Units         %         Caraction           con         2625         U         %         51          50           geners)         2610         U         mg/kg          -          -           geners)         2760         U         mg/kg          -          -           s         2770         U         mg/kg          -         -          -           s         2770         U         mg/kg          -         -         -          -         -           s         2710         U         mg/kg          -	Bottom Depth(m): Sampling Date:	10-Aor-2019						Landfill	hazardous	Landfill
bon         2825         U         %         R         C<	Determinand	SOP	Accred.	Units						
Seito   U   %%   Colin   Col	Total Organic Carbon	2625	n	%			0.21	3	LC)	9
Sample   S	Loss On Ignition	2610	٦	%			5.1		:	9
Capacity   2815   U   mg/kg   Feb.   Capacity   2200   N   mg/kg   Feb.   Capacity   2200   N   mg/kg   Feb.   Capacity   Capacity	Total BTEX	2760	>	mg/kg			< 0.010	9		,
Capacity   2670   U   mg/kg   R   R   R   R   R   R   R   R   R	Total PCBs (7 Congeners)	2815	n	mg/kg			< 0.10	-	:	:
Capacity   2700   N   mg/kg   R   F   F   F   F   F   F   F   F   F	TPH Total WAC (Mineral Oil)	2670	Э	mg/kg			848	200		
Cappacity   Capp	Total (Of 17) PAH's	2700	z	mg/kg			< 2.0	100		;
Carbacity   2015   N   mol/kg   B:1   2:1   Cumulative   Lanit values for compilance legacity   Carbacity   Carbacity   Carbacity   Carbacity   Carbacity   Carbacity   Last   Carbacity   C	H	2010	Э				7.7	-	94	;
1450	Acid Neutralisation Capacity	2015	z	тој/ка			0.0000		To evaluate	To evaluate
1450	Eluate Analysis			2:1	8:1	23.1	Cumufative	Limit values	for compliance	leaching test
1450				mg/l	mg/l	mg/kg	mg/kg 10:1	using B	S EN 12457 at L.	/S 10 l/kg
1450   U   0.0030   0.0031   < 0.50   < 0.50   20   100   1450   U   < 0.0030   0.0031   < 0.050   < 0.050   0.04   U   1   1   1   1   1   1   1   1   1	Arsenic	1450	0	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	22
1450   U   <0.00010   <0.0010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.010   <0.01	3arium	1450	<b>5</b>	0.0030	0.0031	< 0.50	< 0.50	20	100	300
1450   U   < 0.0010   < 0.050   < 0.050   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   < 0.055   <	Sadmium	1450	n	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	-	S
1450         U         < 0.0010         < 0.050         < 0.056         < 0.056         2         50           1450         U         < 0.0010	Chromium	1450	O	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	02
1450         U         < 0.0050         < 0.0010         < 0.0010         < 0.050         < 0.050         0.05 </td <td>Copper</td> <td>1450</td> <td>&gt;</td> <td>&lt; 0.0010</td> <td>&lt; 0.0010</td> <td>&lt; 0.050</td> <td>&lt; 0.050</td> <td>2</td> <td>20</td> <td>100</td>	Copper	1450	>	< 0.0010	< 0.0010	< 0.050	< 0.050	2	20	100
1450         U         < 0.0010         < 0.050         < 0.056         < 0.056         0.0         10	Wercury	1450	n	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
1450         U         0.0012         0.0011         < 0.050         < 0.066         0.4         10           1450         U         < 0.0010	Molybdenum	1450	ח	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	8
1450         U         < 0.0010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.01	licke	1450	n	0.0012	0.0011	< 0.050	< 0.050	0.4	10	04
1450         U         < 0.0010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.01	-ead	1450	n	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	20
1450         U         < 0.0010         < 0.0010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.010         < 0.0	Antimony	1450	n	< 0.0010	< 0.0010	< 0.010	< 0.010	90.0	0.7	ιΩ
1450   U   0.0020   <0.050   <0.50   4   50	Selenium	1450	n	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
1220   U   8.1   6.1   16   62   800   15000   15000   1520   U   0.34   1.2   <1.0   11   10   150   150   150   150   150   150   150   150   1020   N   120   140   120   140   1000   20000   1920   U   <0.030   <0.030   <0.050   1   1   -	Zinc	1450	n	0.0020	< 0.0010	< 0.50	09:0 >	4	20	200
1220   U   0.34   1.2   <1.0   11   10   150   150   160   120	Chloride	1220	n	8.1	6.1	16	62	800	15000	25000
1220   U   59   40   120   410   1000   20000   1000   1020   N   120   140   240   1300   4000   60000   1920   U   < 0.030   < 0.030   < 0.50   1   -	-Iuoride	1220	n	0.34	1.2	< 1.0	11	10	150	200
lids         1020         N         120         140         240         1300         4000         60000           Carbon         1920         U         < 0.030         < 0.030         < 0.50         1         -         -           Carbon         1610         U         8.5         14         < 50         140         500         800           Leachate Test Information	Sulphate	1220	n	59	40	120	410	1000	20000	20000
Carbon         1920         U         < 0.030         < 0.30         < 0.30         < 0.50         1         - <th< td=""><td>Fotal Dissolved Solids</td><td>1020</td><td>z</td><td>120</td><td>140</td><td>240</td><td>1300</td><td>4000</td><td>00009</td><td>100000</td></th<>	Fotal Dissolved Solids	1020	z	120	140	240	1300	4000	00009	100000
Carbon         1610         U         8.5         14         < 50         140         500         800           Leachate Test Information         Leachate Test Information	Phenol Index	1920	ח	< 0.030	< 0.030	< 0.30	< 0.50	-	-	,
	Dissolved Organic Carbon	1610	Ω	8.5	14	< 50	140	200	800	1000
									2 23	
	tolid Information				Leachate Test	Information			_	

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.

0.305 1.400 0.150

Efuant recovered from 1st extract/

-eachant volume 1st extract/l

0.175

Dry mass of test portion/kg

Moisture (%)



Project: C14727 Brill Place, London NW1 Chemtest Job No: 11 Chemtest Sample ID: 8	19-13614 814418						Landfill V	Landfill Waste Acceptance Criteria Limits	e Criterla
Sample Ref:								Stable Non-	
Sample ID:	D2							reactive	
Sample Location:	DP117							hazardous	Hazardous
Top Depth(m): Rottom Depth(m):	0.70						Inert Waste	waste in non-	Waste
Sampling Date:	09-Apr-2019							Landfill	
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	n	%			1.7	က	ıЮ	9
Loss On Ignition	2610	n	%			3.8	1	:	10
Total BTEX	2760	n	mg/kg			< 0.010	9	ı	:
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10		:	-
TPH Total WAC (Mineral Oil)	2670	n	mg/kg			130	500	-	-
Total (Of 17) PAH's	2700	z	mg/kg			45	100	1	1
Hd	2010	n				10.8	1	9<	
Acid Neutralisation Capacity	2015	z	mol/kg			0.059	1	To evaluate	To evaluate
Eluate Analysis			2:1	8:1	2:1	Cumulative	Limit values	Limit values for compliance leaching test	eaching test
			l/gm	l/gm	mg/kg	mg/kg 10:1	using B	using BS EN 12457 at L/S 10 l/kg	S 10 l/kg
Arsenic	1450	A	0.0036	0.0053	< 0.050	0.051	0.5	2	25
Barium	1450	n	0.019	0.013	< 0.50	< 0.50	20	100	300
Cadmium	1450	n	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	2
Chromium	1450	O	0.062	0.0088	0.12	0.16	0.5	10	70
Copper	1450	D	0.11	0.026	0.22	0.15	2	50	100
Mercury	1450	n	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.013	0.0021	< 0.050	< 0.050	0.5	10	30
Nickel	1450	n	0.0079	0.0025	< 0.050	< 0.050	0.4	10	40
Lead	1450	0	< 0.0010	0.0043	< 0.010	0.037	0.5	10	50
Antimony	1450	n	0.0035	0.0021	< 0.010	0.023	90.0	0.7	5
Selenium	1450	כ	0.0019	0.0015	< 0.010	0.016	0.1	0.5	7
Zinc	1450	ס	0.0029	0.0022	< 0.50	< 0.50	4	90	200
Chloride	1220	⊃	ස	9.0	90	120	800	15000	25000
Fluoride	1220	5	0.48	0.38	< 1.0	3.9	10	150	200
Sulphate	1220	ס	180	30	360	200	1000	20000	20000
Total Dissolved Solids	1020	z	380	140	750	1700	4000	60000	100000
Phenol Index	1920	n	< 0.030	< 0.030	< 0.30	< 0.50	ļ		
Dissolved Organic Carbon	1610	n	53	17	100	220	500	800	1000
Solid Information				Leachate Test Information	Information				
Dry mass of test portion/kg	0.175			Leachant volume 1st extract/l	e 1st extract/l		0.330	_	
Moisture (%)	10			Leachant volume 2nd extract/	e 2nd extract/l		1.400		
				Eluant recovered from 1st extract/	d from 1st extra	Ctyl	0.234		
						A.			

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes. This analysis is only applicable for hazardous waste landfill acceptance and does not give any indication as to whether a waste may be hazardous or non-hazardous.



### **Test Methods**

SOP	Title	Parameters included	Method summary
1020	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Electrical Conductivity and Total Dissolved Solids (TDS) in Waters	Conductivity Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper: Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	рН	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by Ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene: Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge



### Report Information

### Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
  - < "less than"
  - > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

### Sample Deviation Codes

- A Date of sampling not supplied
- B Sample age exceeds stability time (sampling to extraction)
- C Sample not received in appropriate containers
- D Broken Container
- E Insufficient Sample (Applies to LOI in Trommel Fines Only)

### Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to: customerservices@chemtest.com

### Appendix E

HISTORICAL SI INFORMATION





### **CENTRAL SOMERS TOWN, LONDON**



**VOLUME 1: FACTUAL REPORT** 

Report No D5061-15/1

September 2016

### Carried out for:

London Borough of Camden 5 Pancras Square London N1C 4AG

### Engineer:

**AKT II** 100 St John Street London EC1M 4EH





Glossop House, Hogwood Industrial Estate, Hogwood Lane Finchampstead, Berkshire, RG40 4QW, UK Tel: +44 (0) 118 932 8888 email: geo.wokingham@esg.co.uk

### Report No D5061-15/1

### September 2016

Issue No Date	Status	Prepared by	Checked by	Approved by
1		NAME and QUALIFICATIONS Ellen Phillips BSc FGS	NAME and QUALIFICATIONS  David Beskeen BSc	NAME and QUALIFICATIONS Miles Martin BSc MSc FGS
Feb 2016	Draft report	SIGNATURE	D. Berbeen	SIGNATURE
1		NAME and QUALIFICATIONS Miles Martin BSc MSc FGS	NAME and QUALIFICATIONS  David Beskeen BSc	NAME and QUALIFICATIONS Sean Wheeliker BSc (Hons) FGS APMP
April 2016	Full Draft report	SIGNATURE	D. Berbeen	SIGNATURE
1		NAME and QUALIFICATIONS Miles Martin BSc MSc FGS	NAME and QUALIFICATIONS  David Beskeen BSc	NAME and QUALIFICATIONS Sean Wheeliker BSc (Hons) FGS APMP
April 2016	Final report	SIGNATURE	D. Berbeen	SIGNATURE

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Whilst every effort has been made to ensure the accuracy of the data supplied and any analysis interpretation derived from it, the possibility exists of variations in the ground and groundwater conditions around and between the exploratory positions. No liability can be accepted for any such variations in these conditions. Furthermore, any recommendations are specific to the development as detailed in this Report and no liability will be accepted should they be used for the design of alternative schemes without prior consultant with ESGL



#### **REPORT STRUCTURE**

DATE	TITLE	REPORT NO.
September 2016	FACTUAL REPORT	D5061-15/1
September 2016	INTERPRETATIVE REPORT	D5061-15/2



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#### 1 INTRODUCTION

In November 2015 ESG was commissioned by AKT II, on behalf of the London Borough of Camden, to carry out a ground investigation at Central Somers Town. The investigation was required to obtain geotechnical and geoenvironmental information for the proposed redevelopment of Edith Neville Primary School and the construction of new residential properties and local community facilities.

The scope of the investigation was specified by ESG and comprised cable percussion boreholes, windowless sampler boreholes, trial pits, in situ testing and laboratory testing. The investigation was performed in accordance with the contract specification, and the general requirements of BS 5930 (2015), BS EN 1997-2 (2007), BS EN ISO 22475-1 (2006) and other relevant related standards identified below. The fieldwork took place between 16 November and 7 January 2016.

#### 2 SITE SETTING

#### 2.1 Location and Description

Central Somers Town is located within the London Borough of Camden in central London at National Grid reference TQ 297 831, see Site Location Plan in Appendix A.

The site area can be divided in to three sections. The western part of the site comprises a children's play area, an outdoor fitness area and a community play project. The children's play area is on hard standing, whilst the outdoor fitness equipment is on a mix of grass and rubber matting. There is some vegetation in the form of trees and bushes around the perimeter of the area. The community play project consists of a building and outdoor play area which is divided into a hard standing football pitch and a grass covered play area.

The central part of the site comprises Edith Neville Primary School. There is vegetation, comprising trees and shrubs, mainly along the external boundaries of the school. This part of the site is predominately level with the exception of a playground in the south west corner of the school which is on a lower level, accessed by steps and a ramp.

The eastern end of the site comprises Brill Place Park. This area is mainly grassed with hard standing footpaths crossing the park. There are dense bushes along the eastern boundary of the site with mature trees scattered across the park. In the north east corner of the park there is a



children's play area on hard standing with additional play equipment immediately adjacent to the boundary of the park on rubber matting. The park is gently undulating and slopes down towards the north western corner.

#### 2.2 Published Geology

The published geological map for the area, BGS Sheet 256 (2006) and the BGS Geology of Britain Viewer (2016) show the solid geology to comprise the London Clay Formation which is underlain by the Lambeth Group.

There is no record of any superficial deposits in the area, although the geology map shows localised areas of 'Reworked Ground' to the east and west of the site.

#### 3 FIELDWORK

The fieldwork was carried out in general accordance with BS 5930 (2015), BS EN 1997-2 (2007) and BS EN ISO 22475-1 (2006).

The exploratory hole and in situ test locations were selected by AKT II. The locations were set out from local features. The co-ordinates and reduced levels were surveyed by ESG to National Grid and Ordnance Datum. The exploratory hole and in situ test locations are shown on the Site Plan in Appendix A.

#### 3.1 Exploratory Holes

TABLE 1: SUMMARY OF EXPLORATORY HOLES

ТҮРЕ	QUANTITY	MAXIMUM DEPTH (m)	REMARKS				
Cable Percussion Boring	11	30.30	Designated BH1, BH1A, BH2 to BH10				
Trial Pit (machine dug)	2	2.20	Designated TP4 and TP5				
Trial Pit (hand dug)	2	1.20	Designated HP2 and HP3.				
Window Sampling	46	7.65	Designated WS2 to WS7, WS7B, WS8, WS9, WS9A, WS9B, WS10, WS10A, WS11, WS11A, WS11B, WS12, WS12A, WS13, WS13A, WS14, WS14A, WS14B, WS15, WS15A, WS16, WS17, WS17A, WS17B, WS18, WS19, WS20, WS20A, WS21, WS21A, WS22 to 24, WS24A, WS25, WS25A, WS26, WS26A and WS27 to 29.				



BH1A was terminated on an obstruction at 0.40 m depth and relocated to BH1. BH6 also encountered an obstruction (at 2.80 m depth), but could not be relocated due to the space restrictions and the presence of numerous buried services in that part of the site.

In addition, a number of window sampler boreholes were terminated short of their scheduled depth, either due to encountering obstructions or due to evidence of asbestos. Further details are provided on the borehole logs.

The exploratory hole logs are presented in Appendix B. These provide information including the equipment and methods used, samples taken, tests carried out, water observations and descriptions of the strata encountered. Explanation of the terms and abbreviations used on the logs is given in the Key to Exploratory Hole Records in Appendix B, together with other explanatory information. The logging of soil is in accordance with BS EN ISO 14688-1+A1 (2013), as amplified by BS 5930 (2015).

Photographs of the trial pits are presented in Appendix G.

On completion of the fieldwork geotechnical samples were transported to the Wokingham office of ESG for temporary retention, with those required for testing being transferred to the in-house laboratories. Geoenvironmental samples were transported from site directly to ESG's environmental chemistry laboratory.

#### 3.2 Groundwater and Gas Monitoring

Instrumentation installed in the exploratory holes for groundwater and gas monitoring are shown on the logs and summarised in Appendix C. Records of the six rounds of monitoring, being carried out by ESG on 15 / 22 January, 17 February, 22 March, 12 April, 23 May and 20 June 2016, are presented in Appendix C.

#### 3.3 In Situ Testing

In situ testing was carried out in accordance with the relevant standards as tabulated below. The testing is summarised in the following table and the results are presented in Appendix D unless noted otherwise.

Relevant calibration certificates are included with the results in the appendix.



TABLE 2: SUMMARY OF IN SITU TESTING

TYPE	QUANTITY	REMARKS
Standard Penetration Tests	122	BS EN ISO 22476-3 (2011). Results presented on the borehole logs in Appendix B
Dynamic Cone Penetrometer Test	8	Designated TRL1, 2 and 5 to 10. Test results used to estimate California Bearing Ratio (CBR) values based on TRRL Overseas Road Note 8 (1990)

#### 4 LABORATORY TESTING

#### 4.1 Geotechnical Testing

Geotechnical laboratory testing was scheduled by ESG and was carried out in accordance with BS 1377 (1990) unless otherwise stated. The tests completed are summarised below and the results presented in Appendix E.

TABLE 3: SUMMARY OF GEOTECHNICAL LABORATORY TESTING

TYPE	REMARKS
Water Content Determination	36 tests
Atterberg Limit Determination	36 tests
Particle Density	6 tests
Particle Size Distribution Analysis	4 tests
Oedometer Consolidation	6 tests
Unconsolidated Undrained Triaxial Compression Testing	58 tests
Consolidated Undrained Triaxial Compression Testing (Multistage)	3 tests
Water-soluble Sulphate Content Acid-soluble Sulphate Content Total Sulphur Content pH	Test methods are BS 1377 or others recognised in BRE Special Digest 1 (2005), as indicated on the results sheets in Appendix E.

#### 4.2 Geoenvironmental Testing

Geoenvironmental laboratory testing was scheduled by ESG on selected soil samples recovered during the fieldwork. The testing was carried out by ESG's environmental chemistry laboratory at Burton on Trent. The results are presented in Appendix F.



#### **REFERENCES**

BGS England and Wales Sheet 256: 2006: North London. 1:50000 geological map (solid and drift) (Bedrock and Superficials). British Geological Survey.

BGS Geology of Britain Viewer: 2016. www.bgs.ac.uk. British Geological Survey.

BS 1377 : 1990 : Methods of test for soils for civil engineering purposes. British Standards Institution.

BS 5930: 2015: Code of practice for ground investigations. British Standards Institution.

BS EN 1997-2 : 2007 : Eurocode 7 - Geotechnical design - Part 2 Ground investigation and testing. British Standards Institution.

BS EN ISO 14688-1:2002+A1 : 2013 : Geotechnical investigation and testing - Identification and classification of soil - Part 1 Identification and description. British Standards Institution.

BS EN ISO 14688-2:2004+A1 : 2013 : Geotechnical investigation and testing - Identification and classification of soil - Part 2 Principles for a classification. British Standards Institution.

BS EN ISO 22475-1 : 2006 : Geotechnical investigation and testing – Sampling methods and groundwater measurements - Part 1 Technical principles for execution. British Standards Institution.

BS EN ISO 22476-3:2005+A1 : 2011 : Geotechnical investigation and testing - Field testing - Part 3 Standard penetration test. British Standards Institution.

TRRL: 1990: Overseas Road Note 8 – A user's manual for a programme to analyse dynamic cone penetrometer data. Transport and Road.



# APPENDIX A FIGURES AND DRAWINGS

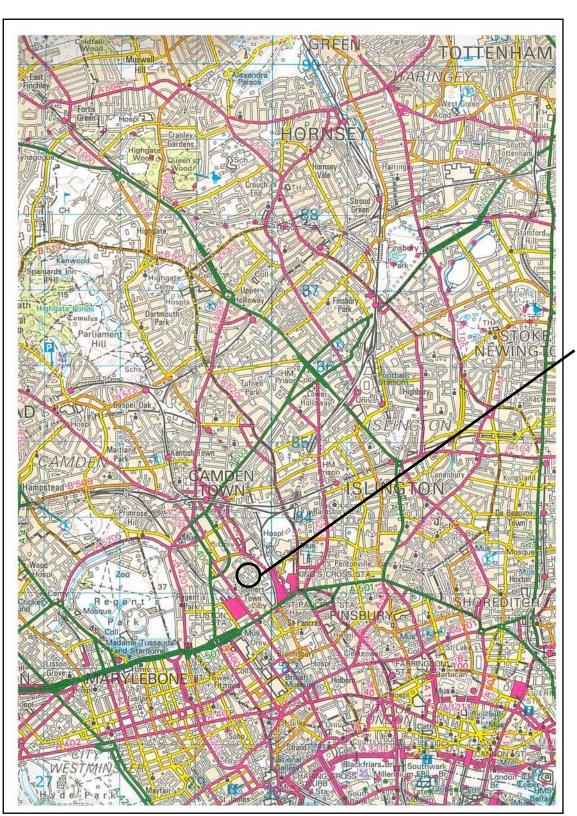
Site Location Plan	A1
Site Plan	A2

### **Site Location Plan**



THE

SITE



Reproduced from the 2012 Ordnance Survey 1:50 000 scale Landranger map No 176 by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, © Crown copyright, Environmental Services Group Limited. All rights reserved. Licence Number 100006060

Notes: Scale 1:50 000

Project No.

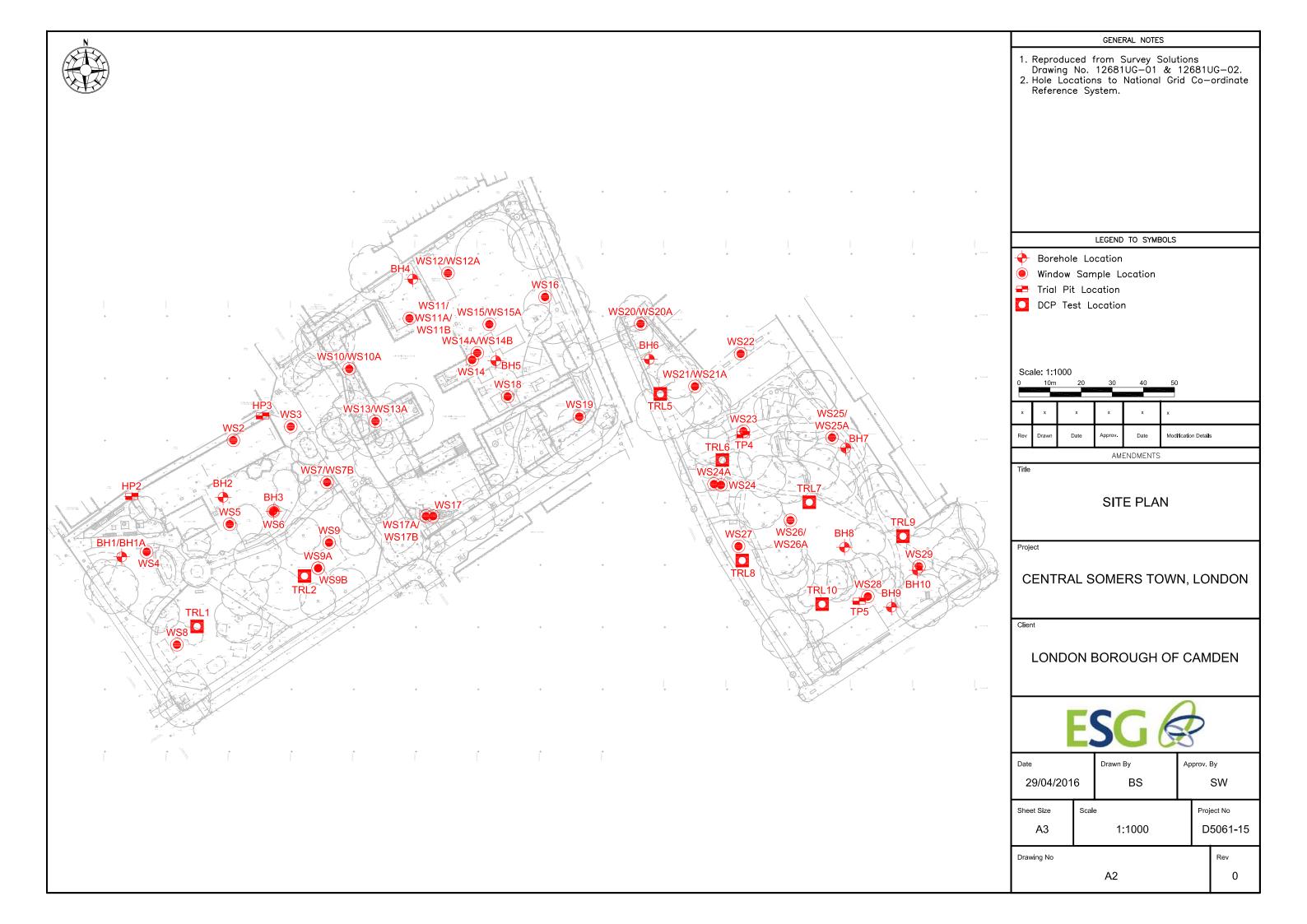
Central Somers Town, London

D5061-15

Carried out for London Borough of Camden

Figure

**A1** 





# APPENDIX B EXPLORATORY HOLE RECORDS

Key to Exploratory Hole Records

Key

SPT Hammer Energy Ratio Report

SPT Hammer References SM22 and SM28

**Borehole Logs** 

BH1, 1A, 2, to 10

Trial Pit Logs

TP4 and 5, HP2 and 3

Window Sampler Hole Logs

WS2 to 7, 7B, 8, 9, 9A, 9B, 10, 10A, 11, 11A, 11B, 12, 12A, 13, 13A, 14, 14A, 14B, 15, 15A, 16, 17, 17A, 17B, 18, 19, 20, 20A, 21, 21A, 22, 23, 24, 24A, 25, 25A, 26, 26A and 27 to 29

### **Key to Exploratory Hole Records**



#### **SAMPLES**

Undisturbed

Driven tube sample

Driven thin wall tube sample UT nominally 100 mm diameter and full recovery unless otherwise stated

TW Pushed thin wall tube sample Pushed piston sample

Liner sample (from Windowless or similar sampler), full recovery unless otherwise stated

CBR CBR mould sample **BLK** Block sample

CS Core sample (from rotary core) taken for laboratory testing

AMAL Amalgamated sample

**Disturbed** 

Small sample В Bulk sample

Other

Water sample W G Gas sample

Environmental chemistry samples (in more than one container where appropriate)

ES Soil sample FW Water sample

Comments Sample reference numbers are assigned to every sample taken. A sample reference of 'NR' indicates that attempt was

made to take a tube sample, however, there was no recovery.

Monitoring samples taken after completion of hole construction are not shown on the exploratory hole logs.

**TESTS** 

SPT S or SPT C Standard Penetration Test, open shoe (S) or solid cone (C)

> The Standard Penetration Test is defined in BS EN ISO 22476-3:2005+A1:2011. The incremental blow counts are given in the Field Records column; each increment is 75 mm unless stated otherwise and any penetration under self weight in mm (SW) is noted. Where the full 300 mm test drive is achieved the total number of blows for the test drive is presented as N = \*\* in the Test column. Where the test drive blows reach 50 the total blow count beyond the seating

drive is given (without the N = prefix).

in situ Vane shear strength, peak (p) and remoulded (r) Hand vane shear strength, peak (p) and remoulded (r) HV Pocket penetrometer test, converted to shear strength

KFH, KRH, KPI Permeability tests (KFH = falling head, KRH = rising head; KPI = packer inflow); results provided in Field Records

column (one value per stage for packer tests)

#### **DRILLING RECORDS**

The mechanical indices (TCR/SCR/RQD & If) are defined in BS 5930:2015

**TCR** Total Core Recovery, % SCR Solid Core Recovery, % RQD Rock Quality Designation, %

Fracture spacing, mm. Minimum, typical and maximum spacings are presented. The term

non-intact (NI) is used where the core is fragmented.

Flush returns, estimated percentage with colour where relevant, are given in the Records column

**CRF** Core recovered (length in m) in the following run Assessed zone of core loss

**AZCL** NR Not recovered

**GROUNDWATER** 

Groundwater strike

Groundwater level after standing period

See report text for full references of standards

Project Central Somers Town

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Sheet 1 of 2

### **Key to Exploratory Hole Records**



#### INSTALLATION

Standpipe/ piezometer Details of standpipe/piezometer installations are given on the Record. Legend column shows installed instrument depths including slotted pipe section or tip depth, response zone filter material type and layers of backfill.

The type of instrument installed is indicated by a code in the Legend column at the depth of the response zone:

SP SPIE PPIE

**EPIE** 

Standpipe Standpipe piezometer Pneumatic piezometer Electronic piezometer

Inclinometer or Slip Indicator

The installation of vertical profiling instruments is indicated on the Record. The base of tubing is shown in the Legend column.

The type of instrument installed is indicated by a code in the Legend column at the base of the tubing:

ICE ICM SLIP

Biaxial inclinometer Inclinometer tubing for use with probe

Slip indicator

Settlement Points or Pressure Cells The installation of single point instruments is indicated on the Record. The location of the measuring device is shown in the Legend column.

The type of instrument installed is indicated by a code in the Legend column:

ESET
ETM
EPCE
Magnetic extensometer settlement point
Electronic embedment pressure cell
Electronic push in pressure cell

INSTALLATION

**LEGENDS** 

A legend describing the installation is shown in the rightmost column. Legends used to describe the backfill materials as indicated below.



Concrete











**NOTES** 

2

5

6

Soils and rocks are described in accordance with BS EN ISO 14688-1:2002+A1:2013 and 14689-1:2003 respectively as amplified by BS 5930:2015.

For fine soils, consistency determined during description is reported for those strata where undisturbed samples are available. Where the logger considers that the sample may not be representative of the condition in situ, for whatever reason, the reported consistency is given in brackets. The reliability of the sample is indicated by Probably or Possibly as appropriate. Hence (Probably firm) indicates the logger is reasonably confident of the assessment, but (Possibly firm) means less certainty. Where the samples available are too disturbed to allow a reasonable assessment of the in situ condition, no consistency is given.

Evidence of the occurrence of very coarse particles (cobbles and boulders) is presented on the logs, however, because of their size in relation to the exploratory hole these records may not be fully representative of their size and frequency in the ground mass.

The declination of bedding and joints is given with respect to the normal to the core axis. Thus in a vertical borehole this will be the dip.

The assessment of SCR, RQD and Fracture Spacing excludes artificial fractures

Water level observations of discernible entries during the advancing of the exploratory hole are given at the foot of the log and in the Legend column. The term "none observed" is used where no discrete entries are identified although this does not necessarily indicate that the hole has not been advanced below groundwater level. Under certain conditions groundwater cannot be observed, for instance, drilling with water flush or overwater, or boring at a rate much faster than water can make its way into the borehole In addition, where appropriate, water levels in the hole at the time of recovering individual samples or carrying out in situ tests and at shift changes are given in the Records column.

The borehole logs present the results of Standard Penetration Tests recorded in the field without correction or interpretation. However, in certain ground conditions (eg high hydraulic head or where very coarse particles are present) some judgement may be necessary in considering whether the results are representative of in situ mass conditions.

See report text for full references of standards

Project Central Somers Town

Project No. D5061-1

Carried out for London Borough of Camden

Key

### **Hammer Energy Report**



**Date of test:** 23/07/2015 **Hammer ID:** SM22

Instrumented rod:Hammer mass (m)63.5 kgTypeBWFall height (h)0.76 mTest type:SPT

Cross-sectional area (A a) 11.30 cm<sup>2</sup> Manufacturer: Archway

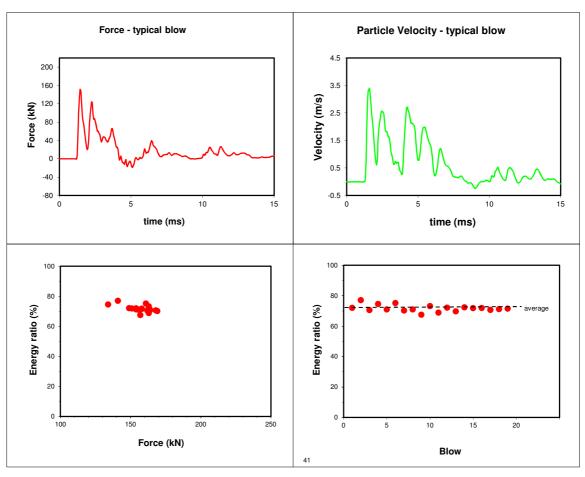
Young's modulus (Ea) 207000 MPa Model: Automatic Trip Hammer Length 0.60 m

Length 0.60 m Rig: Geotech 10

Test rod type: NWY Rig ID: T61
Type: Rotary
Foreman: J Swan

#### Remarks:

Data obtained from test carried out in BH1, located in ESG Doncaster yard. Test carried out at depth of 5.36 mbgl, with a total blow count of 19. Energy determined from every blow.



Theoretical energy ( $E_{theor}$ ) =  $m \times g \times h$  =

0.473 kN-m (473 J)

Measured energy ( $E_{\text{meas}}$ ) average of 19 blows =

0.339 kN-m

Energy ratio =  $\frac{E_{meas}}{E_{meas}}$  = 72 %

Test carried out by: Malcolm Carr

Test carried out in accordance with BS EN ISO 22476-3:2005

Signed for issue:

Jan Ton

Equipment used: SPT Analyzer Serial No. 4032T

### **Hammer Energy Report**



**Date of test:** 23/07/2015 **Hammer ID:** SM28

Instrumented rod:Hammer mass (m)63.5 kgTypeBWFall height (h)0.76 mTest type:SPT

Cross-sectional area (A a)11.30 cm²Manufacturer:ArchwayYoung's modulus (Ea)207000 MPaModel:Automatic Trip Hammer

Young's modulus (Ea) 207000 MPa Length 0.60 m

Rig: Geotech 10

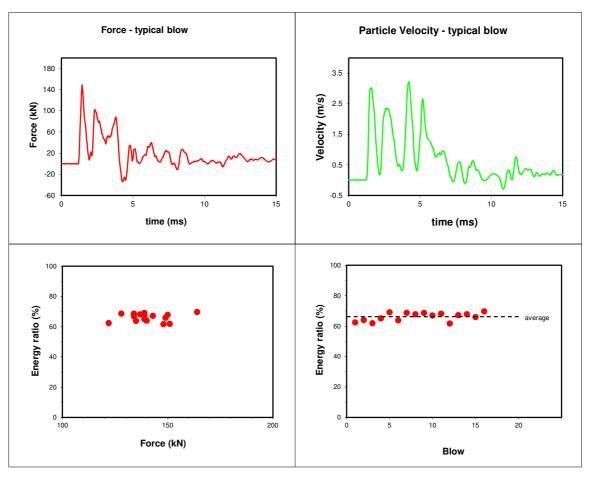
Test rod type: NWY Rig ID: R61

Type: Rotary

Foreman: J Swan

#### Remarks:

Data obtained from test carried out in BH1, located in ESG Doncaster yard. Test carried out at depth of 5.42mbgl, with a total blow count of 16. Energy determined from every blow.



Theoretical energy ( $E_{theor}$ ) =  $m \times g \times h$  =

0.473 kN-m (473 J)

Measured energy (E<sub>meas</sub>) average of 16 blows =

0.313 kN-m

Energy ratio =  $\frac{E_{meas}}{E_{theor}}$  = 66 %

Test carried out by: Malcolm Carr

Test carried out in accordance with BS EN ISO 22476-3:2005

Signed for issue:



Equipment used: SPT Analyzer Serial No. 4032T



the second secon



Depth from (m) 0.00 Diameter (mm) 150 Casing Depth (m) 4.00 Drilled PH/SS Equipment, Methods and Remarks Ground Level to (m) 24.20 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 24.20m. Logged CM 03/12/2015 E 529625.39 Coordinates (m) Checked MM National Grid N 183142.60 End Approved SW 04/12/2015

amples and			Date	Time	Strata Description		Depth, Level	Legend	Backfi
Depth	Type & No	Records	Casing	Water	Main	Detail	(Thickness)	Legend	DdCKII
0.20 0.20 0.20 - 0.40 0.50 0.50	D 2 ES 1 B 3 D 5 ES 4				(TOPSOIL) Dark brown organic silty SAND with rootlets. (MADE GROUND) Type 1 stone. (DRILLER DESCRIPTION) (MADE GROUND)	0.40-1.20 Low - cobble content Occasional wood - and metal	(0.25) 9:35 (0.05) \$\pm\$26:98		0
1.00 1.00 1.00 - 1.20 1.20 - 1.65 1.20 1.20 - 1.70	B 6  D 8 ES 7 B 9 SPTS D 10 B 11	N=2 (1/1,,1,)	0.00	dry	Brown and grey sandy gravelly CLAY, locally with low cobble content. Gravel is angular of brick, concrete and occasional pottery. Sand is fine to coarse. Cobbles are angular of brick and concrete.	fragments.	(2.90)		
2.20 - 2.65 2.20 2.20 - 2.70	SPTS D 12 B 13	N=2 (1/,1,,1)	2.00	dry					
3.20 - 3.65 3.20 3.20 - 3.70	SPTS D 14 B 15	N=7 (1/1,1,2,3)	3.00	dry	Soft greyish brown slightly sandy slightly gravelly CLAY with black organic lenses (up to 30mm across). Sand is fine to coarse. (Possibly ALLUVIUM)	- - - -	3.20 +18.05	1	▼ / /
4.20 - 4.65	UT 16	30 blows 100% rec	4.00	dry	Firm brown CLAY with frequent partings of orange silt. (LONDON CLAY FORMATION)	- - - - -	3.80 +17.45		
4.70	D 17					:			
5.20 - 5.65 5.20	SPTS D 18	N=14 (1,2/2,3,4,5)	4.00	dry		5.20 Occasional - selenite crystals	44.00	2 2	
6.20	D 19					- - -	(4.00)		
6.50 - 6.95	UT 20	40 blows 100% rec	4.00	dry		- - - - -			
7.00	D 21					_ - - - -	-		
7.80	D 22				Stiff to very stiff fissured dark grey CLAY with		7.80 +13.45		
8.00 - 8.45 8.00	SPTS D 23	N=15 (2,2/3,3,4,5)	4.00	dry	occasional partings of grey silf. Fissures are randomly orientated, closed and clean. (LONDON CLAY FORMATION)	- - - - -	(1.20)		
9.00	D 24				Very stiff dark grey silty CLAY with occasional partings of dark grey silt and burrows infilled (up to 3mm diameter) with grey silt. (LONDON CLAY	<u>-</u> -	9.00 +12.25	 	
9.50 - 9.95	UT 25	45 blows 100% rec	4.00	dry	FORMATION)	- - - -		×x	
					Hole continues on next sheet			<u> </u>	_141
ndwater Entries Depth Strike (r 3.40 5.20	Remained at 3.4	40 m after 20 minutes. 20 m after 20 minutes.	Depth Sea	led (m) 3.50	Depth Related Remarks Depths (m) Remarks 0.00 - 24.20 SPT hammer ID SM28 (Er 66%) rod type NW	Y	Hard Boring Depths (m)	Duration (min	s) Tools use
es: For explanation Key to Exploratory	of symbols and abi	breviations Proje	ct	Cen	tral Somers Town, London		Borehole		
ced levels in metre kets in depth colum	s. Stratum thicknes	ss given in	ct No.	D50	61-15			BH1	
ale 1:50	(c) ESG w 03/05/2	ww.esg.co.uk 2016 11:43:36 Carrie	ed out for	Lon	don Borough of Camden			Sheet 1 of 3	



Drilled PH/SS Equipment, Methods and Remarks Depth from Casing Depth to (m) 24.20 Ground Level (mm) 150 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 24.20m. СМ 03/12/2015 E 529625.39 oaaed Coordinates (m) Checked MM National Grid N 183142.60 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Type & No Records Detail Casing Wate 11.00 - 11.45 11.00 N=26 (3,5/5,6,7,8) 03/12/15 4.00 04/12/15 4.00 0800 dry 50 blows 100% rec 4.00 D 30 (8.00) 13.00 SPTS D 31 14.00 - 14.45 14.00 N=28 (3,4/6,7,7,8) 4.00 dry 15.00 D 32 15.50 - 15.95 UT 33 55 blows 100% rec 4.00 dry N=24 (3,3/5,5,6,8) 4.00 Very stiff fissured dark grey CLAY. Fissures are randomly orientated, closed and clean. (LONDON CLAY FORMATION) 17.00 18.00 D 36 18.50 - 18.95 UT 37 55 blows 100% rec 4.00 damp (3.00)19.00 D 38 Hole continues on next sheet Depth Related Remarks Depth Sealed (m) Depth Strike (m) Remarks Duration (mins) Tools used Remained at 16.00 m after 20 minutes Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH1 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:26 Project No. D5061-15 Carried out for London Borough of Camden



Drilled PH/SS Depth from Casing Depth Equipment, Methods and Remarks to (m) 24.20 Ground Level (mm) 150 (m) 4.00 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 24.20m. СМ 03/12/2015 E 529625.39 Loaaed Coordinates (m) Checked MM National Grid N 183142.60 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing SPTS D 39 Very stiff dark grey silty CLAY with partings of dark grey silt. (LONDON CLAY FORMATION) (1.20)D 40 D 41 +0.05 Very stiff fissured light grey mottled brown silty 0 CLAY. Fissures are randomly orientated, closed and clean.
(LAMBETH GROUP) 21.50 - 21.75 UT 42 90 blows 100% rec 4.00 O 0 O 0 Very stiff reddish brown mottled bluish grey CLAY. Ö (LAMBETH GROUP) 0 23.00 - 23.45 23.00 SPTS D 45 N=48 (4,6/9,11,12,16) 4.00 damp Ö (1.70) 0 Ō 04/12/15 4.00 24.00 D 46 1800 0 24.20 -2.95 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH1 (c) ESG\_www.esg.co.uk 03/05/2016 11:43:22 Project No. D5061-15

Carried out for

London Borough of Camden



Drilled Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug pit from GL to 0.40m. Pit terminated due to concrete obstruction. Logged 01/12/2015 E 529625.39 Coordinates (m) N 183142.60 Checked MM National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Wate Casing 0.20) 01/12/15 Grass over brown clayey fine to coarse sand with 0.40 (0.20) occasional rootlets.
(MADE GROUND) +20.85 Brown gravelly fine to coarse SAND with a low cobble content. Gravel is angular to subangular, fine to coarse of brick and concrete. Cobbles are angular of brick. Rare wood fragments.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH1A (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:37 Project No. Carried out for London Borough of Camden



Drilled PH/SS Equipment, Methods and Remarks Depth from Casing Depth Ground Level (m) 20.45 (mm) 150 (m) 1.50 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 20.45m. СМ 26/11/2015 E 529657.69 oaaed Coordinates (m) National Grid N 183161.76 Checked MM End Approved SW Samples and Tests **Strata Description** Depth, Level Backfill Legend Depth Type & No Records Detail Casing Wate 0.10 (0.10) Dark brown organic silty SAND. (MADE GROUND) D 2 ES 1 B 3 D 5 ES 4 (0.40)(MADE GROUND)

Brown and grey gravelly silty SAND with low cobble content. Gravel is angular, fine to medium of brick and concrete. Cobbles are angular of 4 samples taken 0.50 +20.31 0.50 0.50 - 0.70 B 6 4 samples taken (0.70) 1.00 1.00 1.00 - 1.20 1.20 - 1.65 D 8 ES 7 B 9 SPTS Soft grey mottled brown slightly gravelly CLAY. Gravel is angular, fine to medium of brick and flint. Firm grey silty CLAY with occasional black 0.00 1.20 4 samples taken N=8 (1,1/1,2,2,3) D 10 staining and orange silt partings. 26/11/15 1.50 1.50 4 samples taken (ALLUVIUM) (0.80)dry 27/11/15 1.50 0800 dry 2.00 Firm brown silty CLAY with numerous partings of 2.20 - 2.65 40 blows 100% rec 1.50 dry orange silt. (LONDON CLAY FORMATION) 2.70 D 13 1.50 N=12 (1,2/2,3,3,4) 3.20 - 3.65 3.20 dry 4.20 - 4.65 UT 15 40 blows 100% rec 1.50 dr 4.70 D 16 (5.70)5.20 - 5.65 5.20 N=18 (2,3/3,4,5,6) 1.50 dry D 18 Occasional selenite crystals and 6.50 - 6.95 UT 19 45 blows 100% rec 1.50 7.00 D 21 Stiff dark grey CLAY with occasional partings of grey silt and burrows.
(LONDON CLAY FORMATION) 7.70 7.70 N=19 (3,5/4,4,5,6) 1.50 8.00 - 8.45 8.00 9.00 D 23 9.50 - 9.95UT 24 45 blows 100% rec 1.50 dry (4.30)10.00 No bu Hole continues on next sheet **Depth Related Remarks** Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used Remained at 1.10 m after 20 minutes SPT hammer ID SM28 (Er 66%) rod type NWY 1.20 - 20.45 Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Project Central Somers Town, London Borehole BH<sub>2</sub> (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:27 Project No. D5061-15

Carried out for

London Borough of Camden



Drilled PH/SS Depth from Casing Depth Equipment, Methods and Remarks to (m) 20.45 Ground Level (mm) 150 (m) 1.50 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 20.45m. СМ 26/11/2015 Loaaed Coordinates (m) Checked MM National Grid N 183161.76 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Type & No Records Detail Casing Wate 11.00 - 11.45 11.00 N=26 (3,5/5,6,7,8) 1.50 12.00 Stiff dark grey silty CLAY with numerous partings of grey silt.
(LONDON CLAY FORMATION) 45 blows 100% rec 1.50 D 29 13.00 14.00 - 14.45 14.00 SPTS D 30 N=29 (3,5/6,7,8,8) 1.50 (4.00)dry 15.00 D 31 15.50 - 15.95 UT 32 45 blows 100% rec 1.50 damı D 33 Stiff fissured dark grey CLAY with occasional partings of dark grey silt. Fissures are closely spaced, randomly orientated, closed and clean. (LONDON CLAY FORMATION) 16.00 N=29 (3,5/7,6,8,8) 1.50 damp 18.00 (4.45) 18.50 - 18.95 UT 36 45 blows 100% rec 1.50 damp 19.00 D 37 Hole continues on next sheet Depth Related Remarks Depth Sealed (m) Depth Strike (m) Remarks Duration (mins) Tools used Rose to 15.40 m after 20 minutes Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH<sub>2</sub> (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:27 Project No. D5061-15 Carried out for London Borough of Camden



						<u> </u>						00
Drilled PH/SS	Start	Equipment, Methods a	and Remarks			Depth from t	to Diar	neter Ca	sing Depth	Ground Level		20.81 mOD
Logged CM	26/11/2015	Dando 100 Hand excavated inspec	tion nit from GL to 1.20	ım Cahle	percussive boring from 1.20m	( <b>m)</b> (I 0.00 20	( <b>m) (m</b> 0.45	<b>im)</b> 150	<b>(m)</b> 1.50	Coordinates (m)		E 529657.69
Checked MM	End	to 20.45m.			, p					National Grid		N 183161.76
	27/11/2015											
Samples and	Tests				Strata Description	n						
Depth	Type & No	o Records	Date Casing	Time Water	14	ain		Det	ail	Depth, Level (Thickness)	Legend	Backfill
20.00 - 20.45 20.00	SPTS D 38	N=33 (3,5/6,7,9,11		damp						, , , ,		
_ 20.00	D 38		27/11/15	1800					_			-V/
- -			1.50	damp		RATORY HOLE				20.45 +0.36		
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roundwater Entries					Depth Related Remarks					Hard Boring		
No. Depth Strike (m	n) Remarks		Depth Sea	led (m)	Depths (m) Remarks						Duration (min	s) Tools used
otes: For explanation of	of symbols and	l abbreviations	Project	Cer	ntral Somers Town, London					Borehole		
ee Key to Exploratory I duced levels in metres	Hole Records s. Stratum thick	All depths and kness given in									BH2	
ackets in depth colum	n. (c) FS(	G www.esg.co.uk	Project No.		061-15							
Scale 1:50	03/	05/2016 11:43:37	Carried out for	Lor	don Borough of Camden						Sheet 3 of 3	



Depth from (m) 0.00 Diameter (mm) 150 Casing Depth (m) 2.30 Drilled PH/SS Start Equipment, Methods and Remarks to (m) 23.90 Ground Level Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 23.90m. Logged CM 30/11/2015 Coordinates (m) E 529674.30 Checked MM End National Grid N 183157.25

proved SW	01/12/2015								
amples and	l Tests		ID-4-	T	Strata Description				
Depth	Type & No	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfi
0.00	2.0				(TOPSOIL)  Dark brown organic silty SAND with rootlets.		(0.25)		
0.20 0.20	D 2 ES 1				(MADE GROUND)	-	0.25 +20.4	<sup>1</sup>	
0.20 - 0.40 0.50	B 3 D 5				Greyish brown gravelly SAND with low cobble	_	(0.00)		
0.50	ES 4				content. Gravel and cobbles are angular of brick and concrete.		(0.60)		
0.50 - 0.70	B 6						0.85 +19.88		
1.00	D 8				(MADE GROUND)	_	(0.35)	·	
1.00	ES 7		0.00	alan s	Dark grey and brown gravelly CLAY. Gravel is angular of brick, occasional oyster shells and				
1.00 - 1.20 1.20 - 1.65	B 9 SPTS	N=7 (1,1/1,2,2,2)	0.00	dry	black ash.	Λ	1.20 +19.5	×	
1.20	D 10	, , , , , ,			Firm grey slightly organic slightly sandy clayey SILT with occasional black staining (Possibly	_		216 26	
1.70	ES 11				ALLUVIUM)		(1.00)	36 30	
1.70	E5 11				,		(1.00)	×	
						_		X Nic 9	
2.20 - 2.65	UT 12	30 blows 100% rec	1.60	da			2.20 +18.53	36 <del>36</del>	
2.20 - 2.05	01 12	30 blows 100% fec	1.00	dry	Firm to stiff brown mottled grey CLAY with		2.20 +10.5	,[===]	
					orangish brown silt partings. (LONDON CLAY FORMATION)	_		H	
0.70	D 40				(LONDON OEM FORWINGN)		-		
2.70	D 13							L	
						_	1		
3.20 - 3.65	SPTS	N=14 (2 2/2 2 2 5)	2 20	- سلم			$\exists$		
3.20 - 3.65 3.20	D 14	N=14 (2,2/3,3,3,5)	2.30	dry			4	H	
						_	1	[]	
							$\exists$	<u></u>	
								$\vdash$ $ +$	
						_			
400 405	UTAE	40.61 4000/	0.00	alan s			_	H	
4.20 - 4.65	UT 15	40 blows 100% rec	2.30	dry					
						_			
4.70	D 40					4 70 5 00	_		
4.70	D 16					4.70-5.20 Occasional selenite			
						crystals.	(5.50)	L	
						_	]	<del></del>	
5.20 - 5.65 5.20	SPTS D 17	N=15 (2,3/3,3,4,5)	2.30	dry					
0.20	5 17						-		
						-			
							_	H	
						_			
6.20	D 18							H	
0.50 0.05		4000					_	$\vdash$ $\vdash$ $\dashv$	
6.50 - 6.95	UT 19	40 blows 100% rec	2.30	dry		-			
			30/11/15	1800				H	
			2.30	dry					
7.00	D 20		01/12/15	0800		7.00 Fissured.— Fissures are			
			2.30	6.90		randomly orientated,			
						closed and clean.	_		
						-	7	H	
7.70	D 21				Stiff fissured dark grey CLAY. Fissures are	+	7.70 +13.00	3 <u>==</u>	
					randomly orientated, closed and clean.		$\dashv$	<u> </u>	
8.00 - 8.45 8.00	SPTS D 22	N=18 (2,2/3,4,5,6)	2.30	damp	(LONDON CLAY FORMATION)	_	1	HH	
2.30							Ⅎ	[]	
							(1.30)	HH	
						-	]		
							$\exists$	L]	
							<b>⊣</b>	<u> </u>	
9.00	D 23				Stiff dark grey silty CLAY with partings of dark	1 -	9.00 +11.73	y ×	
					grey silt.		$\exists$	X	
					(LONDON CLAY FORMATION)			××	
9.50 - 9.95	UT 24	45 blows 100% rec	2.30	dry		-	1	$\times$	
							+	× ×	
							7	×——×	
					Hole continues on next sheet			- V -	
undwater Entries					Donath Deleted Demonto		Hand Death		
undwater Entries	m) Remarks		Depth Sea	led (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins	) Tools use
,				•	0.00 - 23.90 SPT hammer ID SM28 (Er 66%) rod type NV	WY			,
					· ·				
s: For explanation	n of symbols and ab	breviations Proje	ct	Con	tral Somers Town, London		Borehole		
Key to Exploratory	/ Hole Records. All of	depths and		Oeli			120.011010	_	
	es. Stratum thicknes	ss given in	-4.81-	DEO	61-15		I	BH3	
ced levels in metr kets in depth colui	mn	ww.esg.co.uk	Ct NO.	Dou	01-15				



Depth from (m) 0.00 Diameter (mm) 150 Casing Depth (m) 2.30 Drilled PH/SS Start Equipment, Methods and Remarks Ground Level Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 23.90m. Logged CM 30/11/2015 E 529674.30 Coordinates (m) Checked MM End National Grid N 183157.25 Approved SW 01/12/2015

Approved SW	01/12/2015						ļ		
Samples and			Date	Time	Strata Description	<u> </u>	Depth, Level	Legend	Backfill
Depth	Type & No	Records	Casing	Water	Main	Detail	(Thickness)	Legend	Dackilli
10.00	D 25			,		10.00 Occasional burrows (up to 3mm		×	
						burrows (up to 3mm _ Ø) infilled with grey _ silt		××	
-						_	(3.00)	××	
						_		×	
- 11.00 - 11.45	SPTS	N=25 (2,4/6,6,6,7)	2.30	dry		11.00 Fissured.		<u> </u>	
11.00	D 26					Fissures are - randomly orientated, -		×	
						closed and clean.		x	
-						_		××	
						=		×——×	
- 12.00	D 27				Very stiff dark grey silty CLAY with occasional	12.00 Fissured.— Fissures are	12.00 +8.7		
					partings of dark grey silt. (LONDON CLAY FORMATION)	randomly orientated, - closed and clean		××	
12.50 - 12.95	UT 28	45 blows 100% rec	2.30	dry	(LONDON CLAT FORWIATION)	closed and clean.		×_×	
12.00 12.00	0120	40 blows 100 % 100	2.00	ury		=		$\boxed{}$ $\times$ $\boxed{}$	
						_		<u>×</u> <u>×</u>	
- 13.00	D 29					_		××	
						_		×x	
						_	-	×— —×	
						=	-	××	
						=	-	×_ ×	
- 14.00 - 14.45 14.00	SPTS D 30	N=27 (2,4/6,6,7,8)	2.30	dry		_		$\frac{1}{2}$	
						=		× ×	
•								××	
						_		××	
						_		<u>×x</u>	
- 15.00	D 31							××	
						-		$\times$	
15.50 - 15.95	UT 32	45 blows 100% rec	2.30	dry				<u>×</u> ×	
						_		×—_×	
						=		<u>×</u> x	
- 16.00	D 33					_		×——×	
						- - -		××	
							(8.80)	×_×_	
						=		$\frac{\times}{\times}$	
	0.070					_		<u>×</u> ×	
- 17.00 - 17.45 17.00	SPTS D 34	N=33 (3,6/7,7,9,10)	2.30	dry				× ×	
						=		<u>×</u> x	
						_		×—×	
						_		××	
- 18.00	D 35					18.00 Occasional—		×	
10.00	2 55					burrows (up to 3mm - Ø) infilled with grey	_	× × 1	
						silt	1	× ×	
18.50 - 18.85	UT 36	55 blows 100% rec	2.30	dry		-		<u>×</u> <u>×</u> <u>×</u>	
						-		×x	
18.90	D 37						-	××	
						=	-	<u>×</u> ×	
						=		××	
						-	1	×_ ×	
						=	-	<u> </u>	
					Hole continues on next sheet			FX	
roundwater Entries No. Depth Strike (n	n) Remarks		Depth Se	aled (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins) To	ols used
								,	
otes: For explanation ee Key to Exploratory	Hole Records. All of	lepths and	et	Cen	tral Somers Town, London		Borehole		
duced levels in metre ackets in depth colum	nn	■ ■ Project	ct No.	D50	61-15			BH3	
Scale 1:50	(c) ESG w	ww.esg.co.uk AGS Carrie	d out for	Lon	don Borough of Camden			Sheet 2 of 3	
	03/05/2	016 11:43:38			=				



Drilled PH/SS Depth from Casing Depth Equipment, Methods and Remarks to (m) 23.90 Ground Level (mm) 150 (m) 2.30 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 23.90m. СМ 30/11/2015 Loaaed Coordinates (m) Checked MM National Grid N 183157.25 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate D 38 20.80 D 39 20.80 -0.07 Very stiff fissured dark grey and light bluish grey mottled silty CLAY. Fissures are randomly orientated, closed and clean. (LAMBETH GROUP) 21.00 - 21.30 70 blows 100% rec 2.30 22.00 Very dense light bluish grey and brown mottled very silty fine SAND. (LAMBETH GROUP) 50 (7,12/12,14,24 for 70mm) 2.30 (1.90) 01/12/15 2.30 1800 21.90 23.90 -3.17 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used Rose to 21.90 m after 20 minutes. Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH3 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:29 Project No. D5061-15

Carried out for

London Borough of Camden



Drilled PH/SS Equipment, Methods and Remarks Depth from Diameter Casing Depth Ground Level (m) 20.45 (mm) 150 (m) 2.50 บอเกอบ บับบบ Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 20.45m. ΕP E 529718.95 oaaed 20/11/2015 Coordinates (m) N 183231.91 Checked MM End National Grid Approved SW Samples and Tests **Strata Description** Depth, Level Backfill Legend Depth Type & No Records Detail Casing Wate 0.10 (0.10) ES 2 D 1 B 3 ES 5 (MADE GROUND) Dark brown to black silty (0.40)gravelly SAND with high cobble content. Sand is fine to coarse. Gravel is angular to subrounded, 0.50 +19.65 D 4 B 6 4 samples taken fine to coarse of macadam and brick. Cobbles are 0.50 - 0.60 (0.50)angular of brick.
(MADE GROUND) Soft to firm brown slightly 1.00 1.00 1.00 - 1.20 1.20 ES 8 D 7 B 9 D 10 B 11 1.00 +19.15 gravelly CLAY with low cobble content. Gravel is angular to subangular, fine to medium of brick.
Cobbles are angular of brick.
(MADE GROUND) Soft dark greenish brown 0.00 (0.50) 1.20 - 1.70 1.20 - 1.65 1.50 +18.65 SPTS N=5 (1.1/1.1.1.2) slightly gravelly CLAY. Gravel is angular to subangular, fine to medium of brick and macadam.

Firm becoming stiff brown mottled grey and orangish brown CLAY. (LONDON CLAY 2.00 FORMATION) 2.20 - 2.65 40 blows 100% rec 1.50 dry D 14 2.70 23/11/15 2.50 0800 3.20 D 16 (5.20)4.20 - 4.60 UT 17 45 blows 100% rec 2.50 drv 4 65 D 18 4.65-5.20 Fine to medium gravel sized selenite crystals\_ 5.20 5.20 - 5.65 2.50 dry N=16 (1,2/3,4,4,5) D 20 6.50 - 6.95 UT 21 45 blows 100% rec 2.50 +13.45 Firm to stiff fissured brownish grey CLAY. Fissures are randomly orientated, planar and smooth.
(LONDON CLAY FORMATION) 7.00 Ō 0 0 (2.30)8.00 Fine to medium O 2.50 8.00 8.00 - 8.45 dry N=16 (2.3/4.3.4.5) gravel sized claystone Ō  $\bigcirc$ Ö 9.00 Rare hard-9.00 D 25 9.00 +11.15 Stiff fissured dark grey CLAY. Fissures are randomly orientated, planar, undulating and smooth. (LONDON CLAY FORMATION) Ō wood fragments (<5mm x 10mm). 9.50 - 9.85 UT 26 50 blows 100% rec 2.50 dami Ō 9.70-9.90 Rare O infilled burrows with light grey silt (1mm 9.90 D 27 0 Hole continues on next sheet **Depth Related Remarks** Depth Sealed (m) Depth Strike (m) Remarks Rose to 7.90 m after 20 minutes, seepage SPT hammer ID SM22 (Er 72%) rod type NWY 1.20 - 20.45 7.80 - 8.0045 Chisel Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Project Central Somers Town, London Borehole BH4 (c) ESG\_www.esg.co.uk 03/05/2016 11-40-2 Project No. D5061-15 Carried out for London Borough of Camden



Drilled PH/SS Depth from Casing Depth Equipment, Methods and Remarks to (m) 20.45 Ground Level (mm) 150 Dando 3000 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 20.45m. 20/11/2015 E 529718.95 oaaed Coordinates (m) National Grid N 183231.91 Checked MM Approved SW 23/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Type & No Records Detail Casing Wate 0 O 0 2.50 11.00-12.00 Silty N=19 (1,3/3,5,5,6) О 0 0 0 О 0 50 blows 100% rec 2.50 damp O 13.00 Ō Ö 0 Ō Stiff to very stiff fissured dark grey CLAY with partings of light brownish grey silt and rare silt infilled burrows (1mm x 10mm). (LONDON CLAY FORMATION) 14.00 +6.15 14.00 14.00 - 14.45 2.50 N=29 (2,4/6,7,7,9) Ö О 0 O 15.00 D 33 0 2 록 15.50 - 15.95 UT 34 55 blows 100% rec 2.50 damp 0 Ö D 35 16.00 Rare fine 17.00 17.00 - 17.45 2.50 damp N=26 (3,5/5,6,7,8) (6.45) 18.00 - 18.95 18.00 55 blows 100% rec 2.50 damp 19.00 D 39 Hole continues on next sheet Depth Related Remarks Depth Sealed (m) Depth Strike (m) Remarks Duration (mins) Tools used Remained at 15.50 m after 20 minutes seepage 15.50 Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH4 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:20 Project No. D5061-15 Carried out for London Borough of Camden



Drilled PH/SS Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) 20.45 Diameter (mm) 150 Dando 3000 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 20.45m. Logged 20/11/2015 Coordinates (m) E 529718.95 N 183231.91 Checked MM End National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Records Detail Casing Wate 20.00 20.00 - 20.45 N=32 (3,5/7,8,8,9) 23/11/15 2.50 1800 damp 20.45 -0.30 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH4 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:29 Project No. Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level (m) 20.45 (mm) 150 (m) 1.80 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 20.45m. oaaed 24/11/2015 Coordinates (m) E 529745.67 N 183205.64 Checked MM End National Grid Approved SW Samples and Tests **Strata Description** Depth, Level Backfill Legend Depth Type & No Records Detail Casing Wate 0.10 (0.10) +20.07 ES 2 D 1 B 3 ES 5 (MADE GROUND) 4 samples taken Dark brown silty sandy GRAVEL with high cobble (0.70)content. Gravel is angular to subangular, fine to 0.50 0.50 - 0.70 D 4 B 6 coarse of macadam, brick and concrete. Sand is 4 samples taken fine to coarse. Cobbles are angular of brick.
Occasional tile fragments.
(MADE GROUND) 0.80 ES 8 D 7 B 9 SPTS D 10 1.00 1.00 1.00 - 1.20 1.20 - 1.65 (0.50) Dark brown clayey sandy GRAVEL with medium cobble content. Gravel is angular to subangular, 0.00 4 samples taken N=6 (1,1/1,1,2,2) 1.30 +18.87 fine to coarse of macadam, brick and concrete. Sand is fine to coarse. Cobbles are angular of ES 11 Firm to stiff brown CLAY. (Possibly LONDON CLAY FORMATION) 2.20 - 2.65 35 blows 100% rec 1.80 2.70 D 13 (3.50) 1.80 N=12 (1,1/2,3,3,4) 3.20 - 3.65 3.20 dry 4.20 - 4.65 UT 15 45 blows 100% rec 1.80 dr 24/11/15 1800 4.70 D 16 25/11/15 0800 4 80 +15.37 Firm to stiff brownish grey CLAY with occasional partings of fine orange silt. (LONDON CLAY FORMATION) 1.80 5.20 - 5.65 5.20 N=15 (1,2/3,3,4,5) 1.80 dn 5.50-6.00 Rare fine to medium gravel size gypsum crystals. D 18 (3.20)6.50 - 6.95 UT 19 45 blows 100% rec 1.80 7.00 N=18 (5,4/3,4,5,6) 1.80 8.20 (0.20) 8.00 - 8.45 8.00 Grey CLAYSTONE recovered as fine to coarse gravel. (LONDON CLAY FORMATION) Stiff to very stiff fissured dark grey CLAY with partings of light grey silt. Fissures are randomly orientated, planar and undulating. (LONDON CLAY FORMATION) 9.00 D 22 9.50 - 9.95 UT 23 45 blows 100% rec 1.80 dry Hole continues on next sheet Hard Boring **Depth Related Remarks** No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used SPT hammer ID SM28 (Er 66%) rod type NWY 0.00 - 20.45Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Project Central Somers Town, London Borehole BH5 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:20 Project No. D5061-15

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London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth to (m) 20.45 Ground Level (mm) 150 (m) 1.80 Dando 100 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 20.45m. 24/11/2015 oaaed Coordinates (m) Checked MM National Grid N 183205.64 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Type & No Records Detail Wate Casing 11.00 - 11.45 11.00 N=22 (3,4/5,5,6,6) 1.80 (5.80) 45 blows 100% rec 1.80 D 28 13.00 14.00 - 14.45 14.00 SPTS D 29 N=25 (3,4/4,6,7,8) 1.80 14.00 +6.17 Very stiff fissured dark grey CLAY with occasional partings of light grey silt. Fissures are planar and undulating. (LONDON CLAY FORMATION) 15.00 D 30 15.50 - 15.95 UT 31 45 blows 100% rec 1.80 dry D 32 17.00 - 17.45 17.00 N=28 (3,5/6,6,8,8) 1.80 (6.45)18.00 D 34 18.50 - 18.95 UT 35 45 blows 100% rec 1.80 19.00 D 36 Hole continues on next sheet Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH<sub>5</sub> (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:20 Project No. D5061-15 Carried out for London Borough of Camden



	<u> </u>					I					
orilled PH/SS	Start 24/11/2015	Equipment, Methods an Dando 100	d Remarks			Depth from to (m) (m 0.00 20.4	Diamet n) (mm) 45 150	er Casing Depth (m) 1.80	Ground Level Coordinates (m)		20.17 mOE E 529745.67
necked MM	End	Hand excavated inspection to 20.45m.	on pit from GL to 1.20	m. Cable	percussive boring from 1.20m	0.00 20.2	45 150	1.80	National Grid		N 183205.64
proved SW	25/11/2015										
amples and	Tests				Strata Description	n			e .		
Depth	Type & N	o Records	Date Casing	Time Water		ain		Detail	Depth, Level (Thickness)	Legend	Backfi
20.00 - 20.45	SPTS D 37	N=28 (3,5/5,6,8,9)	1.80	dry							
20.00	D 37		25/11/15 1.80	1800 dry				=		F_=_=	
			100	,	END OF EXPLO	RATORY HOLE			20.45 -0.28		
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oundwater Entries lo. Depth Strike (r	n) Remarks		Depth Sea	led (m)	Depth Related Remarks Depths (m) Remarks				Hard Boring Depths (m)	Duration (mir	s) Tools use
										,	
es: For explanation Key to Exploratory	Hole Records.	All depths and	Project	Cen	tral Somers Town, London				Borehole		
uced levels in metre ckets in depth colum	nn. (c) ES	G www.esg.co.uk AGS	Project No. Carried out for		61-15 don Borough of Camden					BH5 Sheet 3 of 3	
ale 1:50	03.	/05/2016 11:43:39		2011						SHEEL S ULS	



Depth from (m) 0.00 Diameter (mm) 150 Casing Depth (m) 2.50 Drilled GW Equipment, Methods and Remarks Ground Level to (m) 2.80 Dando 2000
Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 2.80m.
Borehole terminated due to obstruction. Logged CM 16/12/2015 E 529794.98 Coordinates (m) Checked MM National Grid N 183206.13 End Approved SW 18/12/2015

Saı	mples and	Tests				Strata Description		1		
	Depth	Type & No	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
_				- Cuog		(TOPSOIL)		0.10 (0.10) +19.21	******	
	0.30 - 1.00	B 4				Brown organic silty SAND with rootlets. (MADE GROUND)	-			
-	0.30 - 1.50 0.60 - 2.00	ES 1 ES 2				Brown silty gravelly slightly organic SAND with low cobble content. Gravel and cobbles are of	_			
	0.00 - 2.00	E3 2				brick, concrete and occasional oyster shells. Occasional boulder sized concrete fragments.	-	(1.40)		
	1.00	ES 3				Occasional boulder sized concrete tragments.	_	(1.40)		
	1.20 - 1.50	SPTC	47 (12,12/19,28 for 75mm)	0.00	dry		-			
			,		. ,		-			
-	1.50 - 2.00	B 5				(MADE GROUND)	-	1.50 +17.81		
				16/12/15	1800	Brown and grey COBBLES and BOULDERS of brick and concrete with a little CLAY.	-			
_	2.00 - 2.00	SPTC		2.50	dry <del>dry</del>		_			
	2.00 2.25	ES 6 D 7		17/12/15	0800 dry		-	(1.30)		
							-			
-				17/12/15 2.50	1800		-			
				2.50	dry	END OF EXPLORATORY HOLE		2.80 +16.51	**********	
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	ndwater Entries Depth Strike (m	n) Remarks		Depth Seal	led (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m) 1.20 - 2.00 2.80 - 2.80	Duration (mins) 150 90	Tools used Chisel Chisel
oto	e: For evolunation	of eymbols and abb	areviations Pro:+		Co-	tral Somere Town London		Borobolo		
e k	(ey to Exploratory I	of symbols and abb Hole Records. All d	epths and		Cen	tral Somers Town, London		Borehole		
duc	ced levels in metres sets in depth colum	s. Stratum thicknes	s given in	No.	D50	61-15			BH6	
		(c) ESG ww	. Marcis	out for	Lon	don Borough of Camden			Sheet 1 of 1	



Depth from (m) 0.00 22.75 Diameter (mm) 200 150 GW Equipment, Methods and Remarks Drilled to (m) 22.75 30.00 Casing Depth Ground Level (m) 1.50 26.00 Dando 2000 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 30.36m. Logged CM 08/12/2015 E 529858.15 Coordinates (m) Checked MM End National Grid N 183177.61 Approved SW 15/12/2015

Approved SW	15/12/2015						_		
Samples and	Tests		Date	Time	Strata Description		<u> </u>		
Depth	Type & No	Records	Casing	Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
					(TOPSOIL)   Brown organic silty SAND with rootlets. /	-	0.10 (0.10) +17.7	70	°. 4 0
0.30	ES 1				(MADE GROUND) Grey silty SAND of ash.	] =	(0.30) 0.40 +17.4	40	
0.60	ES 2				(MADE GROUND)	_	(0.45)		- KJY
0.60 - 1.50	B 4				Brown sandy GRÁVEL with high cobble content. Gravel and cobbles are of brick and concrete.	] =	0.85 +16.9	95	-VV
1.00	ES 3				Occasional boulder sized concrete fragments. / Firm to stiff locally fissured brown CLAY with	]	_	F_=_	- A
					occasional orange veins and rootlets. (LONDON CLAY FORMATION)	-	-	F_==	
1.50 - 1.95	SPTS	N=9 (1,2/2,2,2,3)	1.50	dry	(20.120.102.11.0.11.11.11)				
1.50 - 1.95	D 5					=	-		
						=	-	F	-Y]Y
							]		
2.25	D 6					2.25-3.00 Gleying on fissure surfaces.	_		-1/11/
2.50 - 2.95	U 7	22 blows 100% rec	1.50	dry		2.25-5.70 Clay is fissured	-		
						=	-		
- 3.00	D 8					3.00-4.25 Occasional selenite	}	<u> </u>	
3.25	D 9					crystals.	(4.85)	<u> </u>	
3.50 - 3.95	SPTS	N=15 (2,2/4,3,4,4)	1.50	dry			1		
3.50 - 3.95	D 10			,		=	1		$-\square$
						] -	1	<u> </u>	
_						_	-	F_=_	141
4.25	D 11					-	_	F_==	
4.50 - 4.95	U 12	17 blows 100% rec	1.50	dry		-			-VIV
						]	_		-141
- 5.00	D 13						-	F	
						]	]		
- 5.50	D 14					_	]		
0.00					Chiff fire and a second a second and a second a second and a second a second and a second and a second and a	-	5.70 +12.	10	- Y J Y
					Stiff fissured grey CLAY with occasional partings of grey silt. Fissures are randomly orientated,	=	-		-VV
- 6.00 - 6.45 6.00 - 6.45	SPTS D 15	N=16 (2,2/3,4,4,5)	1.50	dry	closed and clean. (LONDON CLAY FORMATION)		-		-1/11/
						]	]		
-						_	_		
						=	-		TH.
- 7.00	D 16						1		- KJY
							-	F	
7.50 - 7.95	U 17	21 blows 100% rec	1.50	dry		_	-	F_=_	-1/1
						_	_		
			08/12/15 1.50	1800 dry			-		
- 8.00	D 18		09/12/15 1.50	0800		8.00 Occasional— burrows (up to 2mm -	-		Taľ.
			1.50	dry		Ø) infilled with grey silt.	]		- YJY
8.50	D 19					-	1	<u> </u>	
						=	1	F	1/1/
9.00 - 9.45	SPTS	N=25 (2,4/6,6,6,7)	1.50	dry		9.00-13.00 Silty.—	1	[]	
9.00	D 20					] =	]	F	
						] =	1	<u> </u>	
						=	1	<u> </u>	
						=	1		
					Hole continues on next sheet				
roundwater Entries	> 5				Depth Related Remarks		Hard Boring		
No. Depth Strike (	m) Kemarks		Depth Sea	iea (m)	Depths (m) Remarks		Depths (m)	Duration (mins	s) Tools used
tes: For explanation of symbols and abbreviations Leve to Exploratory Hole Records. All depths and Leved levels in metres. Stratum thickness given in						Borehole	DUZ		
ackets in depth colur	mn	AGS	ect No.		61-15			BH7	
Scale 1:50	(c) ESG v 03/05/	www.esg.co.uk	ed out for	Lon	don Borough of Camden		I	Sheet 1 of 4	



Drilled GW Equipment, Methods and Remarks Depth from Casing Depth to (m) 22.75 30.00 Diameter Ground Level (mm) 200 150 (m) 1.50 26.00 Dando 2000 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 30.36m. СМ 08/12/2015 E 529858.15 Loaaed Coordinates (m) Checked MM National Grid N 183177.61 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Type & No Records Detail Wate Casing 10.50 - 10.95 U 22 31 blows 100% rec 1.50 D 24 12.00 - 12.45 12.00 - 12.45 N=27 (2,3/6,7,7,7) 1800 dry (13.30) 0800 D 26 13.00 U 27 34 blows 100% rec 1.50 13.50 - 13.95 drv 14.00 D 28 14.50 D 29 15.00 - 15.45 15.00 - 15.45 1 50 SPTS N=26 (2,3/6,6,7,7) drv D 31 16.50 - 16.95 U 32 29 blows 100% rec 1.50 17.50 D 34 SPTS D 35 N=31 (3,3/7,8,8,8) 1.50 18.00 - 18.45 18.00 - 18.45 dry Very stiff brown light bluish grey mottled silty CLAY. 19.00 -1.20 19.00 D 36 (LAMBETH GROUP) 19.50 - 19.95 U 37 40 blows 100% rec 1.50 (1.50) Hole continues on next sheet Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH7 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43-40 Project No. D5061-15

Carried out for

London Borough of Camden



gged CM ecked MM proved SW	Start 08/12/2015 End 15/12/2015	Equipment, Methods and Ren Dando 2000 Hand excavated inspection pit f to 30.36m.		0m. Cable	percussive boring from 1.20m (m) (m) 0.00 22.75 22.75 30.00	Diameter Casing (mm) (m 200 1.5 150 26.6	Depth Ground Level Coordinates (n National Grid	)	17.80 mG E 529858. N 183177.
amples and			Date	Time	Strata Description		Depth, Level	Legend	Back
<b>Depth</b> 20.00	Type & No	Records	Casing	Water	Main	Detail	(Thickness)		
20.50 21.00 - 21.45 21.00 - 21.45	D 39 SPTS D 40	N=40 (3,3/6,10,11,13)	1.50	dry	Very stiff reddish brown and bluish grey mottled silty CLAY. (LAMBETH GROUP)		20.50 -2.7	× – –× × – –× × – –× × – –× × – –×	000000000000000000000000000000000000000
22.00 22.50 - 22.70 22.75 22.75 - 23.80	D 41 U 42 D 43 B 44	67 blows 100% rec	1.50	dry	Very stiff fissured grey with occasional light bluish grey mottling CLAY. Fissures are randomly orientated, closed and clean. (LAMBETH GROUP) Light bluish grey very silty SAND. Sand is fine. (LAMBETH GROUP)		22.00 -4.2 (0.25) -22.25 -4.4	5 = = = = = = = = = = = = = = = = = = =	1 *
24.00 - 24.45 24.00 - 24.45	SPTS D 45	N=49 (2,3/7,11,14,17)	1.50 14/12/15 1.50 15/12/15 24.00	damp 1800 damp 0800 damp	Very stiff bluish grey CLAY. (LAMBETH GROUP)		24.00 -6.2	× × × × × × × × × × × × × × × × × × ×	
25.00 25.30 25.50 - 25.95 25.50	D 46 D 47 SPTS D 48	N=49 (7,8/10,10,14,15)	24.00	25.50	Very stiff dark grey sandy CLAY. Sand is fine. (LAMBETH GROUP)  Dense dark grey clayey SAND. Sand is fine. (LAMBETH GROUP)		25.00 -7.2 (0.50) - 25.50 -7.7		2 - 0
26.50 27.00 - 27.44 27.00	D 49 SPTS D 50	50 (3,6/9,14,15,12 for 67mm)	26.00	dry	Very stiff reddish brown and bluish grey mottled CLAY with occasional orange silt lenses. (LAMBETH GROUP)		26.50 -8.7		
28.00 28.50 - 28.88 28.50	D 51 SPTS D 52	51 (4,7/12,14,25,0 for 0mm)	26.00	dry			(3.00)		
29.50	D 53				Very stiff brown silty CLAY. (LAMBETH GROUP)		29.50 -11:	0 × - ×	
roundwater Entries  No. Depth Strike (m) Remarks  1 22.75 Rose to 21.90 m after 20 minutes.  24.00				aled (m) 24.00 26.00	Hole continues on next sheet  Depth Related Remarks Depths (m) Remarks	1	Hard Boring Depths (m)	Duration (m	

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column.

Scale 1:50 (c) ESG www.esg.co.uk

Project Central Somers Town, London

Project No. D5061-15

Carried out for London Borough of Camden

BH7

Borehole

Sheet 3 of 4



Drilled GW Equipment, Methods and Remarks Depth from Diameter Casing Depth Ground Level to (m) 22.75 30.00 (mm) 200 150 (m) 1.50 26.00 Dando 2000 Hand excavated inspection pit from GL to 1.20m. Cable percussive boring from 1.20m to 30.36m. СМ Logged 08/12/2015 Coordinates (m) E 529858.15 N 183177.61 Checked MM End National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Detail Casing Wate 26.00 15/12/15 26.00 30.00 - 30.36 30.00 SPTS D 54 END OF EXPLORATORY HOLE dry 1800 dry ŏĦc 30.36 -12.56 Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH7 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43-40 Project No. D5061-15

Carried out for



Director	
Samples and Tests   Strata Description   Strata D	18.51 mOD
Samples and Tests	E 529857.74
Strate   Description   Strate   Description   Strate   Description   D	N 183145.70
Company   Type & No   Records   Caping   Water   Water   Caping	
Casing   Main   Main   Detail   (Pathward)	
1.50   1.95   1.50   1.95   1.50   1.95   1.50	egena Backiiii
150 - 160   5075   N-6 (1,12,2,2,3)   1.00   Firm brown ellity CLAY with occasional light blue glering and occasional light blue glering blue glering and occasional light blue glering blue glering and occasional light blue glering blue glering	
1.50   1.56	
1.50   1.56	
150-156   SPTS   N=9 (1.12.2.2.3)   1.50   Sitt dark gray CLAY with non-consortal grown gr	
150-156   SPTS   N=9 (1.12.2.2.3)   1.50   Sitt dark gray CLAY with non-consortal grown gr	
150-156   SPTS   N=9 (1.12.2.2.3)   1.50   Sitt dark gray CLAY with non-consortal grown gr	
2.50	<u> </u>
2.25	$\equiv \hat{1}$
2.25 D.7  2.20 - 2.95 U.8 17 blows 100% rec  2.95 - 3.00 D.9  3.25 D.10  3.25 D.10  3.25 D.10  3.25 D.10  3.25 D.11  N-16 (1.23.4.4.5) 2.50  3.50 - 3.85  3.50 - 3.85  3.50 - 3.85  3.50 D.12  4.25 D.12  4.25 D.12  4.35 - 5.00 D.16  6.00 - 6.45 D.16  7.40 D.17  7.45 - 7.95 U.18  7.45 - 7.95 U.18  8.50 D.20  7.50 D.20  8.50 D.20  8	<u></u>
2.50 - 2.95  U. 8 17 blows 100% rec  2.55 - 3.00  D 9  3.25  D 10  3.25  SPTS S 10 11  N=16 (1,2/3,4,4,5)  Z 50  D 10  4.26  4.50 - 4.85  D 12  4.50 - 4.85  D 16  Silf dark grey CLAY with thin laminate of grey silt and occasional silventing in concentration of the grave things of radicines. (LONDON CLAY FORMATION)  Silf dark grey CLAY with thin laminate of grey silt and occasional fire grave things of radicines. (LONDON CLAY FORMATION)  Silf dark grey CLAY with thin laminate of grey silt and occasional fire grave things of radicines. (LONDON CLAY FORMATION)  Silf dark grey CLAY with thin laminate of grey silt and occasional fire grave things of radicines. (LONDON CLAY FORMATION)  Silf dark grey CLAY with thin laminate of grey silt and occasional fire grave things of radicines. (LONDON CLAY FORMATION)  Silf dark grey Silf and occasional burrows (-2mm) filled with grey silt and occasional burrows (-2mm) filled with grey silt. (LONDON CLAY FORMATION)  Silf dark grey silf Land occasional burrows (-2mm) filled with grey silt. (LONDON CLAY FORMATION)  White certainues on next dreet  Depth Related Remarks  Hard Boring	<u>-</u>
2.95 - 3.00 D 9 3.25 D 10 3.25 D 10 3.25 SPT3 O 11 T 5lows 100% rec orange brown sit. (LONDON CLAY FORMATION)  4.25 D 12 4.55 - 5.00 D 14 5.50 - 6.50 D 15 5.50 - 6.50 D 16 5.50 D 17 5.50 - 8.50 D 19 5.50 D	- <del>-</del>
Stiff forwing fissured CLAY with occasional selential crystate. Fissure described to very closely speed, randomly orientated and closed with groups. SPTS   N=16 (1.2/3.4.4.5)   2.50   2.	- <u>-</u>
Stiff forwing fissured CLAY with occasional selential crystate. Fissure described to very closely speed, randomly orientated and closed with groups. SPTS   N=16 (1.2/3.4.4.5)   2.50   2.	- <u>-</u>
3.25 D 10 3.50 - 3.95 SPTS D 11 N=18 (1.2/3.4.4.5) 2.50 crystals. Fissures are extremely to very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings of variety of very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings of variety of very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings of variety of very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings of variety of very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings of variety of very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings of variety of very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings of variety or very closely spaced, randomly orientated and closed with gleying on surfaces. Occasional partings or very sill and cocasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)  7.45 - 7.95 U 18  Silff dark grey (CLAY with this laminace of grey sill and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)  1.00	<u>-</u>   / /
3.50 - 3.96 SPTS	- <u>-</u> 1 //
A 25	
4.50 - 4.95 U 13 17 blows 100% rec	
4.50 - 4.95 U 13 17 blows 100% rec	<u>-</u>
4.50 - 4.95 U 13 17 blows 100% rec	_=_1
4.95 - 5.00 D 14  6.50 D 15  6.00 - 6.45 SPTS 6.00 - 6.50 D 16  7.00 D 17  7.45 - 7.95 U 18  7.95 - 8.00 D 19  8.50 D 20  8.50 D 20  8.50 D 20  Stiff dark grey CLAY with thin laminae of grey silt and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)  Stiff dark grey Silt and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)  Stiff dark grey fissured CLAY. Fissures are close, clean and randomly orientated. (LONDON CLAY FORMATION)  Stiff dark grey silt and occasional burrows (>2 mm) infiliated with grey Silt and occasional burrows (>2 mm) infiliated with grey silt. (LONDON CLAY FORMATION)  Hole continues on next sheet  Depth Related Remarks  Hard Borting	_=_1
5.50 D 15  - 6.00 - 6.45 SPTS	_=_1
5.50 D 15  - 6.00 - 6.45	<u> </u>
- 6.00 - 6.45 SPTS D 16 N=17 (1,2/3,4,4,6) 2.50  - 7.00 D 17  - 8.00 C 18  - 7.00 D 19  - 9.00 - 9.45 D 21	
- 6.00 - 6.45 SPTS D 16 N=17 (1,2/3,4,4,6) 2.50  - 7.00 D 17  - 7.00 D 17  - 7.45 - 7.95 U 18  - 7.95 - 8.00 D 19  - 8.50 D 20  - 8.50 D 20  - 9.00 - 9.45 SPTS D 21 N=22 (2,4/4,6,6,6) D 2.50  - 9.00 - 9.45 D 21 D 21 D 22 D 22 D 22 D 22 D 22 D 2	'글'님 「/ / /
- 6.00 - 6.45 SPTS D 16 N=17 (1,2/3,4,4,6) 2.50  - 7.00 D 17  - 7.00 Stiff dark grey CLAY with thin laminae of grey silt and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)  - 7.95 - 8.00 D 19  - 8.00 410.51  - 9.00 - 9.45 SPTS D 21  - 9.00 - 9.45 D 21  - 9.	글
Stiff dark grey CLAY with thin laminae of grey silt and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)   1,100   1,1	- <u>-</u> ]
Stiff dark grey CLAY with thin laminae of grey silt and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)   1,100   1,1	=
Table   Stiff dark grey sized mudstone nodules. (LONDON CLAY FORMATION)	
Stiff dark grey CLAY. Fissures are close, clean and randomly orientated. (LONDON CLAY FORMATION)	-=-1  //
Stiff dark grey LLAY with finit number of grey sit and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)	-=-1 [//
Stiff dark grey LLAY with finit number of grey sit and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)	-=-1
and occasional fine gravel sized mudstone nodules. (LONDON CLAY FORMATION)  7.95 - 8.00  D 19  Stiff dark grey fissured CLAY. Fissures are close, clean and randomly orientated. (LONDON CLAY FORMATION)  Stiff dark grey silty CLAY with numerous partings of dark grey silt and occasional burrows (>2mm) infilled with grey silt. (LONDON CLAY FORMATION)  N=22 (2,4/4,6,6,6)  D 21  N=22 (2,4/4,6,6,6)  D 2.50  A 303/12/15  B 800 D 2.50  Hole continues on next sheet  D 6 pth Related Remarks  Hard Boring	<u>-</u>
7.45 - 7.95 U 18  - 7.95 - 8.00 D 19  - 8.50 D 20  - 8.50 D 20  - 9.00 - 9.45 D 21  - 9.00 - 9.45 D 21  N=22 (2.4/4,6,6,6)  - 0.3/12/15	- <u>-</u> / /
Stiff dark grey fissured CLAY. Fissures are close, clean and randomly orientated. (LONDON CLAY FORMATION)   Stiff dark grey silty CLAY with numerous partings of dark grey SILT and occasional burrows (>2mm) infilled with grey silt. (LONDON CLAY FORMATION)   Stiff dark grey silt. (LONDON CLAY FORMATION CLAY FOR	
Stiff dark grey fissured CLAY. Fissures are close, clean and randomly orientated. (LONDON CLAY FORMATION)   Stiff dark grey sity CLAY with numerous partings of dark grey SILT and occasional burrows (>2mm) infilled with grey silt. (LONDON CLAY FORMATION)   Stiff dark grey sity CLAY with numerous partings of dark grey SILT and occasional burrows (>2mm) infilled with grey silt. (LONDON CLAY FORMATION)   Stiff dark grey sity CLAY with numerous partings of dark grey sity CLAY with numerous partings of dark grey silt. (LONDON CLAY FORMATION)   Stiff dark grey silt. (LONDON CLAY FORMATION CLAY FORMATION CLAY FORMATION FORMATION CLAY FORMAT	<i>=</i> 3 1/ /
Stiff dark grey fissured CLAY. Fissures are close, clean and randomly orientated. (LONDON CLAY FORMATION)   Stiff dark grey sity CLAY with numerous partings of dark grey SILT and occasional burrows (>2mm) infilled with grey silt. (LONDON CLAY FORMATION)   Stiff dark grey sity CLAY with numerous partings of dark grey SILT and occasional burrows (>2mm) infilled with grey silt. (LONDON CLAY FORMATION)   Stiff dark grey sity CLAY with numerous partings of dark grey sity CLAY with numerous partings of dark grey silt. (LONDON CLAY FORMATION)   Stiff dark grey silt. (LONDON CLAY FORMATION CLAY FORMATION CLAY FORMATION FORMATION CLAY FORMAT	<u>=</u> =
8.50 D 20  Stiff dark grey silty CLAY with numerous partings of dark grey SILT and occasional burrows (>2mm) infilled with grey silt. (LONDON CLAY FORMATION)  9.00 - 9.45 D 21  N=22 (2.4/4,6,6,6)  03/12/15 1800 2.50 dry  04/12/15 0800 2.50 dry  Hole continues on next sheet  Depth Related Remarks  Hard Boring	<u> </u>
Set of dark grey Silt. (LONDON CLAY with numerous partings of dark grey Silt. (LONDON CLAY properties)  - 9.00 - 9.45	_=_1
9.00 - 9.45 9.00 - 9.45 D 21 N=22 (2,4/4,6,6,6) 2.50 infilled with grey silt. (LONDON CLAY FORMATION)	<del></del>
9.00 - 9.45 D 21	<u>-</u>
03/12/15 1800 2.50 dry 04/12/15 0800 2.50 dry  Hole continues on next sheet    Hard Boring   Hard Bo	<u>-</u>
2.50   dry	- <u>-</u>
04/12/15 0800 2.50 dry  Hole continues on next sheet    Hard Boring   Ha	- <u>-</u>
Hole continues on next sheet  Depth Related Remarks  Hard Boring	- <u>I</u> -3 / /
roundwater Entries Depth Related Remarks Hard Boring	<u></u>
ио. Берия Sealed (m)   Depths (m) Remarks   Depths (m) Duratic	
	ration (mins) Tools used
otes: For explanation of symbols and abbreviations	
e Key to Exploratory Hole Records. All depths and	21.10
ackets in depth column. Project No. D5061-15	3H8
Scale 1:50 (c) ESG www.esg.co.uk Landon Borough of Camden Sheet 1	eet 1 of 3



<b>D</b> 0.0.	.0.0										000
Drilled GW	Start	Equipment, Methods and Re	marks			Depth from to		Casing Depth	Ground Level		18.51 mOD
Logged EP	03/12/2015	Pilcon CP				(m) (m) 0.00 1.00	(mm) 200	<b>(m)</b> 1.00	Coordinates (m)		E 529857.74
Checked MM	End	CF				1.00 24.00	150	2.50	National Grid		N 183145.70
Approved SW	04/12/2015										
Samples and	Tests				Strata Description	1					
Depth	Type & N	o Records	Date Casing	Time Water	Ma	ain		Detail	Depth, Level (Thickness)	Legend	Backfill
10.00	D 22							_		×_^_×	
= =								=		××	
- 10.50	U 23	29 blows 100% rec						-		×	
-									(4.50)	× ×	
10.95 - 11.00	D 24							_		X	
<u>-</u> -								-		××	
- -								_		××	- Y /
- 11.50 -	D 25							_		×——×	
- -								-		<u>×</u>	
- 12.00 - 12.45	SPTS	N=25 (2,4/4,6,7,8)	2.50					_	-	××	
- 12.00 - 12.45 -	D 26							_		×_ × =	
-								=		$\frac{1}{x}$	
-								_		<u>×</u> ×	
-									1	×——×	
13.00 -	D 27				Stiff to very stiff dark grey			_	13.00 +5.5	$\overline{}$	
- -					numerous partings of dar CLAY FORMATION)	k grey silt. (LONDON		-		×x	
- 13.50 - 13.95	U 28	31 blows 100% rec						_		××	
<del>-</del> -								_		××	
- - 13.95 - 30.00	D 29							-		××	
-	D 23							_		× × 1	
<del>-</del> -								=		$\overline{\times}$	
- - 14.50	D 30							_		×—×	
-										×——×	
_ — 15.00 - 15.45	SPTS	N=22 (2,3/5,5,6,6)	2.50					_		× × ×	
15.00 - 15.45	D 31	(2,0.0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,						=		××	
- -								-		×— —×	
_ -								_		<u>×</u>	
- -								-		××	
16.00	D 32							_		×_ × ¬	
-									(6.30)	×_ ×	
- 16.50 - 16.95	U 33	33 blows 1000% rec						_		$\overline{\times}$	
- -								=		×—×	
- - 16.95 - 17.00	D 34							_		×—×	
-	30.							_		××	
- -								=		××	1/.
- - 17.50 -	D 35									×	
-								_		×	
- — 18.00 - 18.45	SPTS	N=25 (2,4/5,6,7,7)	2.50							<u>×</u> x	
18.00 - 18.45	D 36							-	1	××	
								-	1	×_ ×	
<del>-</del>								-	]	× × 1	
								=	]	× ×	
<u> </u>								_		<u>×</u> ×	
- - 19.30	D 37							=	19.30 -0.79	×——×	
- - 19.50 - 19.95	U 38	41 blows 100% rec			Very stiff brown mottled b (LAMBETH GROUP)	luish grey silty CLAY.		_	0.78	×	1/
					<u> </u>			-	1	×	
19.95 - 20.00	D 39							-	1	×	
					Hole continues	s on next sheet				× 1	
Groundwater Entries			<u> </u>		Depth Related Remarks				Hard Boring		
No. Depth Strike (r	n) Remarks		Depth Sea	aled (m)	Depths (m) Remarks				Depths (m)	Duration (mi	ns) Tools used
lotes: For explanation	of symbols and	d abbreviations Proje	ct	Cer	ntral Somers Town, London				Borehole		
ee Key to Exploratory educed levels in metre	Hole Records.	All depths and								ВН8	
rackets in depth colum	nn. (c) ES	G www.esg.co.uk AGS	ct No. ed out for		161-15 Idon Borough of Camden						
Scale 1:50	03.	/05/2016 11:43:41		LUI	Do. ough or camaen				l	Sheet 2 of 3	



	<u>.</u>							_	-		00
Orilled GW		Equipment, Methods and Rem	narks			(m) (m)	(mm)	Casing Depth (m)	Ground Level		18.51 mOD
ogged EP		Pilcon CP				0.00 1.00 1.00 24.00	200 150	( <b>m</b> ) 1.00 2.50	Coordinates (m)		E 529857.74
pproved SW	End 04/12/2015								National Grid		N 183145.70
Samples and					Strata Descriptio	<u>I</u> n			1		
Depth	Type & No	Records	Date	Time		lain		Detail	Depth, Level	Legend	Backfill
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1.000.00	Casing	Water					(Thickness)	▼ ^ ∃	
								-	(1.70)	× ×	
- 20.50	D 40							_		× ×	
										× ×	
21.00 - 21.45	SPTS	N=37 (2,3/7,9,10,11)	2.50					_	21.00 -2.49	× ×	
21.00 - 21.45	D 41	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Very stiff brown, red and CLAY. (LAMBETH GROU	JP)		-		<u>×</u> <u>×</u> <u>×</u>	1//
-								-		<u>×</u> <u>×</u> <u>×</u>	1/,
-								-		××	
= -								-		××	
— 22.00 -	D 42							_		××	
- -									(2.70)	××	
– 22.50 - 22.95 -	U 43	62 blows 100% rec						-		× ×	
								-		××	
22.95 - 23.00	D 44									××	
- -								-		××	
- - 23.50	D 45							=		××	
-			04/12/15	1800	Very stiff brown with light	bluish grey mottling silty	,	-	23.70 -5.19	× - ×	
- — 24.00 - 24.23	SPTS	28 (6,13/17,11 for 0mm)	2.50 2.50	dry	CLÁY with fine and medi calcareous mudstone no	um gravel sized dules. (LAMBETH			(0.30) 24.00 -5.49	××	_/_/
24.00 - 24.30	D 46				GROUP)  END OF EXPLO	DRATORY HOLE	_/	-			
- -								-			
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Groundwater Entries					Depth Related Remarks				Hard Boring		
No. Depth Strike (r	m) Remarks		Depth Sea	iled (m)	Depths (m) Remarks				Depths (m)	Duration (mir	ns) Tools used
lotes: For explanation			t	Cer	ntral Somers Town, London				Borehole		
ee Key to Exploratory educed levels in metre rackets in depth colun	es. Stratum thickn	ess given in	t No.	D50	061-15					BH8	
Scale 1:50	(c) ESG	AGS	d out for		don Borough of Camden					Sheet 3 of 3	
	03/05								-		



led GW	Start	Equipment, Methods and Re	maino		Depth from to D	iameter Casing Depth	Ground Level		18.77 mOE
	18/12/2015	Dando 2000			(m) (m)	(mm) (m) 200 3.30	Coordinates (m)		E 529872.8
cked MM	End	Hand dug pit to 1.00m, Cable	percussion drilli	ng from 1	00m to 25m.	200 3.00	National Grid		N 183126.4
proved SW	22/12/2015								
imples an	d Tests				Strata Description				
Depth	Type & No	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfil
			18/12/15 0.00	0800	(MADE GROUND) Brick concrete and flagstones (Driller's	=			١٩٠١
			0.00		description)	-			
									ГИ
						=	(1.90)		
1.20 - 1.50	B 5		18/12/15 0.00	1800 Dry		_	()		
			21/12/15 0.00	0800 Dry					
1.50 - 1.95 1.50 - 1.95	SPTS D 6	N=43 (3,14/14,9,13,7)				-			
2.00 - 2.40	B 7				WOOD		1.90 (0.10) +16.8 2.00 (0.10) +16.7	7	
					\(\(\text{(Driller's description)}\) (MADE GROUND) Brown sandy clayey GRAVEL	1			1▼//
2.40 - 2.70	В8				with high cobble content. Gravel is subangular to angular fine to coarse of brick and concrete.	=	(0.70)		
2.70	D 9				Cobbles are of concrete and brick.  Firm becoming stiff brown CLAY with rare pockets	_ =	2.70 +16.0	7	
2.70 - 3.50	B 10				of orange fine sand. (LONDON CLAY FORMATION)				
			21/12/15	1800	- ····································			<u> </u>	
3.50 - 3.95	U 11	14 blows 100% rec	3.30 3.20	Dry Dry		=			
			22/12/15 3.30	0800 Dry		=			
4.00	D 12								
4.25	D 13					=			
4.50 - 4.95	SPTS	N=14 (1,2/2,3,4,5)	3.20			=			4
4.50 - 4.95	D 14	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						<u> </u>	
								<u> </u>	$ \cdot $ .
						=	(4.80)	<u> </u>	'. .
5.50	D 15								-
						-		E==-	
6.00 - 6.45	U 16	22 blows 100% rec	3.20	Dry					. [ ]
				,		-			•   .
						=			• •
7.00	D 17								1.1
7.10 - 7.40	D 18					7.10-7.40 Very weak - to weak dark grey -		F_=_	2 🗷
7.50 - 7.95	SPTS	N=16 (1,2/3,3,5,5)	3.20			claystone.	7.50 +11.2	7 = = =	
7.50 - 7.95	D 19				Stiff brownish grey CLAY with rare silt infilled burrows. (LONDON CLAY FORMATION)	=		E_=_	//
						=			
8.50	D 20					-			
							1		
9.00 - 9.45	U 21	20 blows 100% rec	3.20	Dry		-	(3.00)		
				,		-	1		
9.50	D 22					] =		<u> </u>	
								E-E-F	
					Hole continues on next sheet		1		
undwater Entries					Depth Related Remarks		Hard Boring		
<ul><li>Depth Strike</li><li>2.10</li></ul>	(m) Remarks Rose to 1.90	0 m after 20 minutes. Fast	Depth Sea	led (m) 2.70	Depths (m) Remarks		Depths (m) 1.00 - 1.20	Duration (mi	ins) Tools use
7.10	Seepage						1.00 - 1.20 1.20 - 2.10 7.10 - 7.40	420 45	Chisel Chisel
on: For our least	n of number '	abbraviations In :	ot .	2-	tral Samara Taura I and an				
Key to Explorator	on of symbols and ry Hole Records. A tres. Stratum thick	All depths and kness given in			tral Somers Town, London		Borehole	ВПО	
kets in depth colu	ımn	AGS Proje	ct No. ed out for		61-15 don Borough of Camden			BH9 Sheet 1 of 3	



Drilled GW Depth from Casing Depth Equipment, Methods and Remarks to (m) 25.00 Ground Level (mm) 200 Dando 2000 Hand dug pit to 1.00m, Cable percussion drilling from 1.00m to 25m. ogged 18/12/2015 Coordinates (m) Checked MM National Grid N 183126.44 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate 10.50 - 10.95 10.50 - 10.95 SPTS D 24 N=20 (2,2/4,5,5,6) 3.20 10.50 +8.27 Stiff to very stiff brownish grey silty CLAY with rare light grey silt infilled burrows. (LONDON CLAY FORMATION) D 25 12.00 - 12.45 24 blows 100% rec Dry 13.00 D 28 13.50 - 13.95 D 29 13.95 - 14.40 SPTS N=26 (2,4/6,6,7,7) 3.20 14.50 D 30 15.00 - 15.45 U 31 28 blows 100% rec 3.20 Dry (9.10) 15.50 D 32 D 33 N=27 (3,5/6,7,7,7) 3.20 D 35 17.50 18.00 - 18.45 U 36 35 blows 100% rec 3.20 Dry 18.50 D 37 19.00 D 38 19.50 - 19.95 19.50 - 19.95 SPTS D 39 N=55 (5,7/9,14,16,16) 3.20 19.60 -0.83 Very stiff brownish red mottled bluish grey CLAY. (LAMBETH GROUP) Hole continues on next sheet Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH9 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43-42 Project No. D5061-15

Carried out for



Drilled GW Depth from Casing Depth Equipment, Methods and Remarks to (m) 25.00 Ground Level (mm) 200 Dando 2000 Hand dug pit to 1.00m, Cable percussion drilling from 1.00m to 25m. Logged 18/12/2015 Coordinates (m) Checked MM National Grid N 183126.44 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Type & No Records Detail Wate Casing 20.50 D 40 21.00 - 21.45 41 blows 100% rec 3.20 D 42 50 (4,7/10,18,22 for 75mm) 23.50 D 45 80 blows 77% rec 24.00 - 24.35 U 46 3.20 Dry D 47 24.40 24.50 -5.73 Very stiff brown mottled bluish grey gravelly CLAY. Gravel is subangular to angular fine to coarse of calcrete. (LAMBETH GROUP) (0.50)22/12/15 1800 25.00 D 48 25.00 -6 23 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London BH9 (c) ESG\_www.esg.co.uk 03/05/2016\_11:43-42 Project No. D5061-15 Carried out for London Borough of Camden



Drilled GW Equipment, Methods and Remarks Depth from Diameter Casing Depth Ground Level (m) 30.30 (mm) 200 (m) 2.80 Dando 2000 Hand dug pit to 1.20m, Cable percussion drilling from 1.20m to 30.30m. E 529881.14 oaaed 04/01/2016 Coordinates (m) N 183138.30 Checked MM End National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate 04/01/16 080 GRAVEL with high cobble content. Gravel is subangular to angular fine to coarse of brick and concrete. Sand is fine to coarse. Cobbles are angular of concrete. (1.40) 1.40 1.50 - 1.95 1.50 - 1.95 (MADE GROUND) Firm to stiff brown mottled N=18 (2,2/4,4,5,5) 0.00 orange slightly gravelly CLAY. Gravel is angular to subangular fine to coarse of flint and brick. Occasional wood fragments (Driller notes occasional sleepers). Slight hydrocarbon odour. (0.85)04/01/16 2.25 1800 Dry Firm to stiff brown mottled grey CLAY. (LONDON CLAY FORMATION). 2.25 2.80 Dry Dry 27 blows 100% rec 3.00-3.05 Weak 3.00 D 9 light brown claystone. 3.25 D 10 3.50 - 3.95 3.50 - 3.95 N=14 (1.2/3.3.4.4) 2.80 Drv (2.75)3.70-3.75 Weak light brown claystone. 4.25 D 12 4.50 - 4.95 U 13 20 blows 100% rec 2.80 Dry 5.00 D 14 5.00 +13 57 Stiff brown mottled orange CLAY with fine sand partings and rare fine gravel sized gypsum crystals. (LONDON CLAY FORMATION). 5.50 D 15 (1.00) N=16 (1,2/3,4,4,5) 2.80 Stiff to very stiff dark greyish brown CLAY with rare grey silt infilled burrows (<1mm x 4mm) and rare fine gravel sized pockets of black silt. (LONDON CLAY FORMATION). 6.00 +12.57 22 blows 100% rec 2.80 7.50 - 7.95 U 18 Dry D 19 8.00 8.50 D 20 SPTS D 21 N=19 (2,3/4,5,5,5) 2.80 Dry 9.00 - 9.45 9.00 - 9.45 (7.70)Hole continues on next sheet Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used

Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. (c) ESG\_www.esg.co.uk 03/05/2016\_11:43:42

Project

Central Somers Town, London

Project No. D5061-15

Carried out for London Borough of Camden **BH10** 

Borehole



Drilled GW Depth from Casing Depth Equipment, Methods and Remarks to (m) 30.30 Ground Level (mm) 200 Dando 2000 Hand dug pit to 1.20m, Cable percussion drilling from 1.20m to 30.30m. ogged 04/01/2016 E 529881.14 Coordinates (m) Checked MM National Grid N 183138.30 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate 10.50 - 10.95 U 23 25 blows 100% rec 2.80 Dry D 25 12.00 - 12.45 12.00 - 12.45 N=24 (2,5/5,6,6,7) D 27 13.00 28 blows 100% rec 2.80 Drv 13.50 - 13.95 U 28 13.70 +4.87 Very stiff dark brownish grey silty CLAY with rare grey silt infilled burrows (<1mm x 4mm). (LONDON CLAY FORMATION) 14.00 D 29 14.50 D 30 15.00 - 15.45 15.00 - 15.45 SPTS N=28 (2.3/5.6.8.9) 2 80 Drv 16.50 - 16.95 U 33 30 blows 2.80 17.50 D 35 SPTS D 36 N=36 (3,5/6,9,10,11) 2.80 Dry 18.00 - 18.45 18.00 - 18.45 19.00 D 37 19.50 - 19.95 U 38 32 blows 2.80 Dry 19.80 -1.23 Very stiff becoming hard brownish red mottled Hole continues on next sheet Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **BH10** (c) ESG\_www.esg.co.uk 03/05/2016\_11:43-42 Project No. D5061-15

Carried out for



Drilled GW Equipment, Methods and Remarks Depth from Casing Depth to (m) 30.30 Ground Level (mm) 200 Dando 2000 Hand dug pit to 1.20m, Cable percussion drilling from 1.20m to 30.30m. Logged 04/01/2016 Coordinates (m) E 529881.14 Checked MM National Grid N 183138.30 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Detail Type & No Records Wate Casing bluish grey CLAY. (LAMBETH GROUP) 20.50 D 40 21.00 - 21.45 21.00 - 21.45 N=31 (4,4/6,7,9,9) 2.80 Dry 2.80 47 blows Dry 23.00 23.50 D 45 SPTS D 46 24.00 - 24.45 24.00 - 24.45 Dry N=45 (4,8/10,10,11,14) 2.80 05/01/16 1800 25.00 D 47 06/01/16 (10.50)0800 Dry 25.50 - 25.95 U 48 41 blows 2.80 Dry N=47 (3,5/8,10,12,17) Dry 28.00 2.80 28.50 - 28.95 U 53 53 blows Drv 29.00 D 54 29.50 D 55 Hole continues on next sheet Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **BH10** (c) ESG\_www.esg.co.uk 03/05/2016\_11:43-42 Project No. D5061-15

Carried out for



Drilled GW Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) 30.30 Diameter (mm) 200 (m) 2.80 Dando 2000 Hand dug pit to 1.20m, Cable percussion drilling from 1.20m to 30.30m. Logged 04/01/2016 Coordinates (m) E 529881.14 N 183138.30 Checked MM National Grid End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate 06/01/16 1800 30.30 - 30.69 30.30 50 (5,8/12,16,16,6 for 19mm) 30.30 -11.73 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **BH10** (c) ESG\_www.esg.co.uk 03/05/2016 11:43:43 Project No. D5061-15 Carried out for London Borough of Camden



Equipment, Methods and Remarks Dimension and Orientation Ground Level то Logged JCB 3CX Machine excavated trial pit from GL to 2.20m. Terminated at 2.20m due to concrete obstruction. E 529825.13 24/11/2015 Coordinates (m) MM Checked Width 0.80 m National Grid N 183181.90 End 56 (Deg) SW Length 2.00 m Strata Description Samples and Tests Depth, Level (Thickness) Legend Type & No Records Brown slightly clayey slightly gravelly fine to coarse SAND with occasional rootlets. Gravel is angular to subangular, fine to coarse of (0.30)brick, flint and sandstone. 0.30 0.30 - 1.30 4 samples taken 0.30 +19.36 (MADE GROUND) Brown gravelly fine to coarse SAND with medium cobble content and occasional boulders. Gravel is angular to subangular, fine to coarse of flint, brick, concrete and sandstone. Cobbles are angular of brick and concrete. Boulders are angular of concrete. Occasional metal and wood fragments. D6 ES3 4 samples taken (1.90) 1.30 - 1.80 В9 4 samples taken D8 ES7 D10 2.00 2.20 +17.46 END OF EXPLORATORY HOLE Groundwater Entries

No. Depth Strike (m) Remarks Stable Stability Shoring None Dry Weather Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Project Central Somers Town, London Borehole TP4 D5061-15 (c) ESG www.esg.co.uk

(c) ESG www.esg.co.uk



Equipment, Methods and Remarks Dimension and Orientation Ground Level то Logged JCB 3CX Machine excavated trial pit from GL to 1.80m. Trial pit terminated at 1.80m due to concrete obstruction. E 529862.48 24/11/2015 Coordinates (m) MM Checked Width 0.70 m National Grid N 183128.37 End 76 (Deg) SW Length 2.20 m Samples and Tests Strata Description Depth, Level (Thickness) Legend Type & No Records Main Detail Brown slightly clayey fine to coarse SAND with occasional rootlets. (0.20)0.20 +19.32 (MADE GROUND) Brown sandy gravelly CLAY with medium cobble content and occasional boulders. Gravel is angular to subangular, fine to coarse of brick, concrete, flint and sandstone. Cobbles are angular of 0.30 0.30 - 1.00 4 samples taken brick and concrete. Boulders are angular of concrete. Rare fragments of glass, metal (including reinforcement bars) and wood. D6 ES3 4 samples taken (1.60) 1.30 - 1.80 B8 4 samples taken D9 ES7 D10 1.80 +17.72 END OF EXPLORATORY HOLE Groundwater Entries

No. Depth Strike (m) Remarks Stable Stability Shoring None Dry Weather Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Project Central Somers Town, London Borehole TP5 D5061-15



Equipment, Methods and Remarks Dimension and Orientation Ground Level то Logged Hand tools Hand excavated trial pit from GL to 0.30m. Terminated at 0.30m due to concrete obstruction. 03/12/2015 Coordinates (m) E 529628.63 Checked MM Width N 183162.04 National Grid End SW Length Approved Samples and Tests Strata Description Depth, Level (Thickness) Legend Type & No Records Main (MADE GROUND)
CONCRETE SLAB.
(MADE GROUND) Brown slightly gravelly fine to coarse SAND. Gravel is angular to subrounded, fine to coarse of flint and sandstone. 0.10 (0.20) 0.30 +20.76 END OF EXPLORATORY HOLE Groundwater Entries

No. Depth Strike (m) Remarks Stable Stability N/A Shoring Cloudy Weather Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Central Somers Town, London Borehole Project HP<sub>2</sub> Project No. D5061-15 (c) ESG www.esg.co.uk London Borough of Camden



<b>Logged</b> TO	Start	Equipment, Methods and Re	marks	Dimension and Orientation	_	Ground Level		21.09 mOD
	02/12/2015	Hand tools	SI to 1.20m	Width 0.40 m		Coordinates (m)		E 529670.66
	End	Tiand excavated that pit from C	2 (0 1.2011).	D	127 (Deg)	National Grid		N 183187.92
Approved SW	02/12/2015			Length 0.50 m C				
Samples an	d Tests		Strata Description					
Depth	Type & No	Records	Main		Detail	Depth, Level	Legend	Backfill
Checked MM Approved SW	<b>End</b> 02/12/2015	Hand excavated trial pit from G	Strata Description			National Grid	Legend	N 183187.92
Groundwater Entries No. Depth Strike (m)  Notes: For explanatic see Key to Explorator reduced levels in met	n of symbols and y Hole Records. Jres. Stratum thick	All depths and ness given in	Remarks Depths (m) Remarks  Project Central Somers Town, London			Stability Stal Shoring Nor Weather Sur	ne	
brackets in depth col	umn.	G www.esg.co.uk	Project No. D5061-15  Carried out for London Borough of Camden				HP3 Sheet 1 of 1	



Drilled BM/AM Equipment, Methods and Remarks Depth from Casing Depth to (m) 0.30 Ground Level (mm) 283 Hand tools Hand dug inspection pit from GL to 0.30m. Hole terminated at 0.30m due to limits of the breaker. ΕP Logged 24/11/2015 E 529661.28 Coordinates (m) N 183180.07 Checked MM National Grid End Approved SW 24/11/2015 Samples and Tests Strata Description Backfill Depth, Level (Thickness) Legend Records Detail Casing Wate 0.10 (0.10) +21.01 0.30 MACADAM. Strong grey CONCRETE. 70% matrix. 30% flint +20.81 \ aggregate.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS2 (c) ESG\_www.esg.co.uk 03/05/2016 11:49:04 Project No. D5061-15 Carried out for London Borough of Camden



Drilled	GV	Start	Equipment, Methods and Ren	narks		Depth from to D (m) (m)	liameter Casing Depth (mm) (m)	Ground Level		21.15 mOD
Logged	то	24/11/2015	Hand dug inspection pit from G	I to1 20m Window san	onling from 1 20m to 4 20m	1.20 2.20	101	Coordinates (m)		E 529679.72
Checked	d MM	End	Hole terminated at 4.20m during	g SPT due to refusal.	.pg 110111 1.20111 to 4.20111.	2.20 4.20	87	National Grid		N 183184.48
Approve	ed SW	24/11/2015								
Samı	ples and	Tests			Strata Descriptio	n				
	Depth	Type & No	Records	Date Time		ain	Detail	Depth, Level	Legend	Backfill
		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	11000140	Casing Wate	CONCRETE.			(Thickness) - 0.10 (0.10) +21.05	5 St. N & St. Dt.	
- -					(MADE GROUND)		1 :	0.10 <sup>(0.10)</sup> +21.05		
- - 0	0.30 .30 - 1.20	ES 1 B 4	4 samples taken		Brown sandy angular to a GRAVEL of flint, brick an	subangular, fine to coarse		(0.60)		
-	0.50	ES 2	4 samples taken		cobble content. Frequent	pieces of wood and	_			
_					porcelain. Sand is fine to angular of brick.	coarse. Cobbles are	1 =	0.70 +20.45		
_	1.00	ES 3	4 samples taken		(MADE GROUND)		′l <u>-</u>	(0.50)		
- - 1	.20 - 1.65	SPTS	N=5 (0,0/1,1,2,1)		Brown sandy gravelly CL coarse. Gravel is angular	AY. Sand is fine to to subangular, fine to	_	1.20 +19.95		
- '	1.20	D 5	14-5 (0,0/1,1,2,1)		\ coarse of brick, concrete		Л -	1.20 +19.33		
	1.50	D 6			(MADE GROUND) Brown slightly sandy gra	velly CLAY. Sand is fine	_			
-					to medium, gravel is ang	ular to subangular, fine to				
-					medium of brick and flint		=			
_	2.00 2.00	ES 7 D 8	4 samples taken				_			
_ 2	.20 - 2.65	SPTS	N=9 (2,0/1,2,3,3)							
-	2.50	D 9					_	-		
_							_	(3.00)		
-								,		- / /
_	3.00	ES 10	4 samples taken							
- 3	.20 - 3.65	SPTS	N=9 (2,2/2,2,2,3)				-			
_	2.50	D 44					] =	1		
-	3.50	D 11								-1/
-										
_							_			
- - 4	.20 - 4.65	SPTS	N=30 (10,13/15,15,,)		5 N D O S 5 N D I		-	4.20 +16.95		
-					END OF EXPLO	PRATORY HOLE	_			
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	vater Entries Depth Strike (i	m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks			Hard Boring Depths (m)	Duration (mi	ns) Tools used
					1.20 - 2.00	ery			,	
					3.00 - 4.00 0.40m recove	et y				
ee Key	to Exploratory	of symbols and Hole Records. A es. Stratum thick	All depths and	t Ce	ntral Somers Town, London			Borehole	\A/O ^	
rackets	in depth colur	mn	AGS Project		061-15				WS3	
Scale	1:50	(c) E30	05/2016 11:49:51	d out for Lo	ndon Borough of Camden				Sheet 1 of 1	



									00
Orilled GW	Start	Equipment, Methods and Rema	arks			ameter Casing Depth (mm) (m)			21.17 mOD
Logged TO	25/11/2015	Hand dug inspection pit from GL	to1.20m. Window sam	apling from 1.20m to 7.65m.	1.20 3.20 3.20 5.20	101 87 77	Coordinates (m)		E 529633.40
Checked MM	End				5.20 6.20 6.20 7.20	77 67	National Grid		N 183144.21
Approved SW  Samples and	25/11/2015			Strata Descriptio	<u>l</u>		ł		
			Date Time				Depth, Level	Legend	Backfill
Depth	Type & No	o Records	Casing Water	(MADE GROUND)	lain	Detail	(Thickness)	***********	
0.30	ES 1			Grass over brown slightl		) <u> </u>	0.20 (0.20)	·	
0.30 - 1.20 - 0.50	B 4 ES 2	4 samples taken 4 samples taken		\SAND with occasional ro (MADE GROUND)		´  <u>-</u>			
. 0.50	E3 2	4 samples taken		Brown gravelly fine to co cobble content. Gravel is		_	(1.00)		
				fine to coarse of brick, co are angular of brick.	oncrete and flint. Cobbles	_			
— 1.00 ·	ES 3	4 samples taken		are angular or priori		_	-		
1.20 - 1.65 1.20	SPTS D 5	1.20-2.00 0.70m recovery. N=4 (0,0/0,1,1,2)		Firm becoming stiff brow (LONDON CLAY FORM	n mottled grey silty CLAY.	] =	1.20 +19.97	×—×	
- 1.50 1.50	ES 7 D 6			(LONDON CLAT I ONW	ATION)	_		××	
1.50	D 6	4 samples taken				=		×	
_ 2.00	D 8	2.00-3.00 0.70m recovery.					-	× ×	
2.20 - 2.65	SPTS	N=7 (0,1/2,1,2,2)					-	$\boxed{}$	
0.50						=	(2.30)	× ×	
2.50	D 9					_		×——×	
						]		×——×	
- 3.00	D 10	3.00-4.00 0.60m recovery.				-		××	1/.
3.20 - 3.65	SPTS	N=10 (2,2/2,2,3,3)				_	_	××	
3.50	D 11			Stiff brown mottled grey	silty CLAY with		3.50 +17.67	$\times$ – $\Box$	
				occasional angular to su	bangular, fine to coarse	=		×——×	
- 4.00	D 12	4.00-5.00 0.80m recovery.		gravei of siltstone. (LON	DON CLAY FORMATION)	]		××	
4.20 - 4.65	SPTS	N=31 (7,7/6,8,7,10)					_	××	
		2. (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				=	-	××	
4.50	D 13					_		×_×_×	-Y/
								××	록 / /
- 5.00	D 14	5.00-6.00 0.70m recovery.						× × 1	
5.20 - 5.65	SPTS	N=38 (8,9/9,8,10,11)				_	-	× ×	
5.50	D 15						(A 1E)	× ×	
							(4.15)	× ×	
- 6.00	D 16	6.00-7.00 0.60m recovery.					1	××	-Y/
6.20 - 6.65	SPTS	N=38 (9,9/10,11,9,8)				=	1	×——×	- V /
		(0,000,00,00,00,00,00,00,00,00,00,00,00,				=		×——×	
- 6.50	D 17					_		×x	//
								××	
7.00	D 18					_		××	
7.20 - 7.65	SPTS	N=37 (8,10/9,9,9,10)					-	<u>×</u> ×	- $Y$ $/$
							-	××	
				END OF EXPLO	ORATORY HOLE	<del>                                     </del>	7.65 +13.52	×	
_									
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roundwater Entries No. Depth Strike (ı	m) Remarks		Depth Sealed (m)	Depth Related Remarks Depths (m) Remarks			Hard Boring Depths (m)	Duration (mir	ns) Tools used
1 4.75								,	
otes: For explanation ee Key to Exploratory			Cer	ntral Somers Town, London			Borehole		
duced levels in metre ackets in depth colur	es. Stratum thick	kness given in	No. D50	061-15				WS4	
Scale 1:50	(c) ESO	G www.esg.co.uk AGS Carried	out for Lor	ndon Borough of Camden				Sheet 1 of 1	
	03/								



Drilled GW	Start E	quipment, Methods and Re	marks				Ground Level		20.68 mOD
<b>Logged</b> TO	25/11/2015				(m) (m) 1.20 2.20	(mm) (m) 101	Coordinates (m)		E 529660.10
Checked MM	End	and dug inspection pit from 0	∍∟ to1.20m. Windo	w samp	4.20 6.20	87 77 67	National Grid		N 183153.09
pproved SW	25/11/2015				6.20 7.20	67	]		
Samples and	Tests		ID-:		Strata Description				
Depth	Type & No	Records	Date Casing	Time Water	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
			-		Grass over TOPSOIL. (MADE GROUND)	-	0.10 (0.10) +20.58	3	
- 0.30 - 0.30 - 1.20	ES 1	4 camples takes			Brown slightly clavey slightly grayelly fine to	-	0.30 (0.20)	1	Y/.
0.30 - 1.20 - 0.50	B 4 ES 2	4 samples taken 4 samples taken			coarse SAND with occasional rootlets. Gravel is angular to subangular, fine to coarse of brick, flint	_			-//
-					and concrete. (MADE GROUND)	<u> </u>	(0.90)		
- <del>-</del> 1.00	ES 3	4 samples taken			Brown slightly sandy gravelly CLAY with low cobble content. Gravel is angular to subangular,		-		
1.20 - 1.65	SPTS	N=4 (0,0/1,1,1,1)			fine to coarse of brick, concrete and flint. Sand is	]	1.20 +19.48	,	1//
1.20	D 5				fine to medium. Cobbles are angular of brick and concrete.	/	(0.40)		$\mathbb{Z}/\mathbb{Z}$
- - 1.60	ES 7				(MADE GROUND)  Brown mottled grey slightly gravelly silty CLAY.		1.60 +19.08	3	$\vee$
- 1.60 -	D 6	4 samples taken			Gravel is angular to subangular, fine to coarse of			×	
2.00	D 8				brick and concrete. Firm locally stiff brown mottled grey silty CLAY.	-	1	×	//
2.20 - 2.65	SPTS	N=8 (0,1/2,2,2,2)			(LONDON CLAY FORMATION)		(1.40)	×	
- - 2.50	D 9					_	‡	××	1/.
- -						-	1	××	$\mathbb{Z}/$
- - - 2.00	D 40						200 :47.00	<u>×</u> <del>×</del> <del>1</del>	
- 3.00 - 3.20 - 3.65	D 10 SPTS	N=13 (1,1/3,3,3,4)			Stiff brown mottled grey CLAY. (LONDON CLAY FORMATION)		3.00 +17.68	, = = =	//
- -	5113	14-10 (1,1/0,0,0,4)				-	1		
3.50	D 11						-		1/.
- -							‡	<u> </u>	$\mathbb{Y}/$
4.00	D 12						1	F1	-V/
- - 4.20 - 4.65	SPTS	N=16 (2,2/3,4,4,5)				-	1	<u> </u>	
- - - 4.50	D 13						]		
4.5U -	וט						1	<u></u>	1/,
- -							1	<u> </u>	$\mathbb{Y}/$
5.00	D 14						1	$F_{-}=$	
5.20 - 5.65	SPTS	N=18 (2,3/4,5,4,5)				-	(4.65)	F_=_‡	
- - 5.50	D 15						1		
- -							]		1/,
- - - 6.00	D 16						1	F	$\mathbb{Y}/$
- - 6.20 - 6.65	SPTS	N=18 (3,3/5,4,4,5)							//
-							1	[ <del>-</del> ]	
- 6.50 -	D 17					-	1	<u> </u>	1//
-						-	1	<u> </u>	
- 7.00	D 18						]	<u></u>	Y/.
7.20 - 7.65	SPTS	N=24 (4,3/6,5,6,7)					1		$\mathbb{Z}/\mathbb{Z}$
- =						=	-	F_=	
					END OF EXPLORATORY HOLE	<del> </del> :	7.65 +13.03		+
• •							1		
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Groundwater Entries					Double Dalated Davis		Hand S. C.		
No. Depth Strike (	m) Remarks		Depth Sealed	d (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (mins	s) Tools used
otes: For explanation	of symbols and at	obreviations Proje	ct	Cen	tral Somers Town, London		Borehole		
ee Key to Exploratory educed levels in metre	Hole Records. All	depths and						WSE	
ackets in depth colur	mn.	AGS	ct No.		61-15			WS5	
Scale 1:50	03/05/	2016 11:49:52 Carrie	ed out for	Lon	don Borough of Camden			Sheet 1 of 1	



Drilled GW Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) то 25/11/2015 E 529674.16 oaaed Coordinates (m) Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to Checked MM National Grid N 183157.31 End Terminated at 2.20m due to concrete obstruction. Approved SW 25/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate (0.20) 0.20 (MADE GROUND) 0.30 0.30 - 1.20 0.50 ES 1 B 4 ES 2 Brown mottled grey sandy gravelly CLAY with low cobble content. Gravel is angular to subangular, (0.60)fine to coarse of brick, flint and concrete with occasional pieces of metal and glass. Sand is fine 0.80 to medium. Cobbles are angular of brick and 1.00 ES 3 4 samples taken (0.40)concrete.
(MADE GROUND) 1.20 Light brown mottled grey sandy GRAVEL with medium cobble content. Gravel is angular to subangular, fine of brick and concrete. Sand is D 6 fine to coarse. Cobbles are angular of brick. (MADE GROUND) (1.00) 1.80 ES 7 4 samples taken Brown sandy GRAVEL. Gravel is angular, fine to coarse of brick and concrete. Sand is fine to coarse. 2.20 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used 1.00 - 2.00 0.70m recovery Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS6 (c) ESG\_www.esg.co.uk 03/05/2016\_11:49-F2 Project No. D5061-15

Carried out for



Drilled GW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.50m. Hole terminated at 0.50m due to asbestos. то Logged 23/11/2015 E 529691.40 Coordinates (m) N 183166.57 Checked MM National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate Grass over TOPSO (MADE GROUND) 0.10 (0.10) Brown gravelly fine to coarse SAND with occasional asbestos fragments. Gravel is angular to subangular, fine to coarse of brick, concrete, 0.30 ES 1 4 samples taken (0.40)0.50 ES 2 4 samples taken 0.50 +20.66 flint, metal and glass.
END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS7** (c) ESG\_www.esg.co.uk 03/05/2016 11:49:53 Project No. Carried out for London Borough of Camden



Drilled GW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.57m. Hole terminated at 0.57m due to asbestos. то Logged 23/11/2015 E 529691.40 Coordinates (m) N 183166.57 Checked MM National Grid End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate Grass over TOPSO (MADE GROUND) 0.10 (0.10) Brown gravelly fine to coarse SAND with occasional asbestos. Gravel is angular to subangular, fine to coarse of brick, concrete, flint, 0.30 ES 1 4 samples taken (0.47)0.50 ES 2 4 samples taken 0.57 metal and glass.
END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS7B (c) ESG\_www.esg.co.uk 03/05/2016 11:49:53 Project No. D5061-15 Carried out for London Borough of Camden



rilled GW	Start E	Equipment, Methods and Rema	nrks	Depth from to	Diameter Casing Depth	Ground Level		21.20 mOD
ogged TP	03/12/2015			(m) (m) 120 220	(mm) (m)	Coordinates (m)		E 529643.14
hecked MM	ŀ	Hand excavated inspection pit from 7.65m.	m GL to 1.20m. Wi	dow sampling from 1.20m to 2.20 5.20 5.20 5.20 7.65	87 77	National Grid		N 183114.37
pproved SW	03/12/2015							
Samples an	d Tests			Strata Description				
Depth	Type & No	Records	Date Till Casing Wa	Main	Detail	Depth, Level (Thickness)	Legend	Backfill
				(MADE GROUND) \ MACADAM.		0.10 (0.10) +21.10		
0.30 0.30 - 1.20	ES 1 B 4	4 samples taken		(MADE GROUND)		(0.50)		
0.50	ES 2	4 samples taken		Brown slightly sandy gravelly CLAY with low cobble content. Gravel is angular to subangular,	-	0.60 +20.60		
				fine to coarse of brick, concrete and sandstone.  Sand is fine to medium. Occasional pieces of	1	(0.40)		
- 1.00	ES 3	4 samples taken		metal and glass. Cobbles are angular of concret (MADE GROUND)	e.	1.00 +20.20		
1.20 - 1.65	SPTS	1.20-2.00 0.64m recovery		Light yellowish brown slightly gravelly SAND with				
1.20	D 5	N=9 (0,3/3,2,2,2)		low cobble content. Sand is fine to coarse. Grave is angular to subangular, fine to coarse of brick				
1.50 1.50	ES 7 D 6	4 samples taken		and concrete. Cobbles are angular of brick and concrete.				
				(MADE GROUND) Loose dark brown slightly clayey gravelly fine to		(1.50)		
- 2.00	D 8	2.00-3.00 0.90m recovery		coarse SAND. Gravel is angular to subangular,				
2.20 - 2.65	SPTS	N=4 (0,0/2,2,0,0)		fine to coarse of brick, concrete and sandstone.				
2.60	D 10			Firm becoming stiff brown mottled grey slightly		2.50 +18.70		
2.60	ES 9	4 samples taken		sandy CLAY. Sand is fine to medium. (LONDON CLAY FORMATION)		_	<u> </u>	
- 3.00	D 11	3.00-4.00 0.90m recovery		(		=	<u> </u>	
3.20 - 3.65	SPTS	N=11 (2,2/2,3,3,3)						
- 3.50	D 12				_			
0.00	J 12						<u></u>	
4.00	5.40						F_=_	
- 4.00 4.20 - 4.65	D 13 SPTS	4.00-5.00 0.90m recovery					F_=_7	
4.20 - 4.00	3113	N=16 (2,2/3,4,4,5)					F_=_7	
4.50	D 14				-		F_=_	
							F_=_‡	
- 5.00	D 15	5.00-6.00 0.90m recovery			_	(5.15)	F_=_=	
5.20 - 5.65	SPTS	N=17 (2,3/4,4,4,5)					<u>                                     </u>	
5.50	D 16						F	
							F	
- 6.00	D 17	6.00-7.00 0.80m recovery				=	F=-	
6.20 - 6.65	SPTS	N=19 (3,3/4,4,5,6)					F	
- 6.50	D 18						F=-	
0.50	D 10							
- 7.00 7.20 - 7.65	D 19 SPTS	N=21 (4,3/5,4,6,6)					F	
7.20 - 7.00	3113	14-21 (4,5/5,4,0,0)					F	
-					-	7.65 +13.55	<u> </u>	
				END OF EXPLORATORY HOLE				
_					-			
						=		
-								
_						1		
						=		
						_		
						=		
_							•	
Froundwater Entries No. Depth Strike	(m) Remarks	<u> </u>	Depth Sealed (m	Depth Related Remarks		Hard Boring	Duration ('	e) Tools ···s
Jopan Guine	.,		p-: Godiou (III	Depths (m) Remarks		Depths (m)	Duration (min	aj ludis USEC
otes: For explanation	n of symbols and a ry Hole Records. Al	abbreviations Project	(	entral Somers Town, London		Borehole		
educed levels in met rackets in depth colu	res. Stratum thickn	ess given in	No. [	5061-15			WS8	
Scale 1:50	(c) ESG 03/05	www.esg.co.uk AGS 5/2016 11:49:53	out for l	ondon Borough of Camden		<u>L</u>	Sheet 1 of 1	
	03/00					<del>-</del>		



Drilled GW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.47m. Hole terminated at 0.47m due to asbestos. то Logged 23/11/2015 E 529692.04 Coordinates (m) N 183147.17 Checked MM National Grid Approved SW Samples and Tests Strata Description Backfill Depth, Level (Thickness) Legend Records Detail Casing Wate Grass over TOPSO (MADE GROUND) 0.10 (0.10) Brown slightly clayey gravelly fine to coarse SAND with occasional asbestos fragments. Gravel is angular to subangular, fine to coarse of (0.37)0.30 ES 1 4 samples taken +20.58 brick, concrete, flint, wood and glass.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS9 (c) ESG\_www.esg.co.uk 03/05/2016 11:49:54 Project No. Carried out for London Borough of Camden



Drilled GW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.50m. Hole terminated at 0.50m due to concrete obstruction. то Logged 23/11/2015 E 529688.52 Coordinates (m) N 183138.69 Checked MM National Grid End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing Grass over TOPSO (MADE GROUND) 0.10 (0.10) (MADE GROUND)

Brown gravelly fine to coarse SAND with occasional metal fragments. Gravel is angular to subangular, fine to coarse of brick, concrete and flint. 0.30 ES 1 4 samples taken (0.40)0.50 ES 2 4 samples taken 0.50 +20.64 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS9A (c) ESG\_www.esg.co.uk 03/05/2016 11:49:54 Project No. Carried out for London Borough of Camden



Drilled GW Equipment, Methods and Remarks Depth from Casing Depth to (m) 1.50 Ground Level (mm) 101 то Logged 24/11/2015 E 529688.51 Coordinates (m) Hand dug inspection pit from GL to 1.20m. Window sampling from 1.20m to 1.65m. Hole terminated during SPT due to refusal. Checked MM National Grid N 183138.97 End Approved SW 24/11/2015 Samples and Tests Strata Description Date Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing 0.10 (0.10) Grass over TOPSO (MADE GROUND) (0.30)0.30 0.30 - 1.20 0.50 Brown slightly clayey gravelly fine to coarse SAND with low cobble content. Gravel is angular 0.40 to subangular, fine to coarse of brick, concrete and flint. Cobbles are angular of brick.
(MADE GROUND) Brown mottled grey slightly sandy gravelly CLAY with low cobble content. 1.00 ES 3 (1.25)Gravel is angular to subangular, fine to coarse of 1.20 - 1.65 1.20 1.40 SPTS D 5 D 6 brick, concrete, flint and sandstone. Sand is fine to medium. Cobbles are angular of brick. N=3 (0,0/0,1,1,1) 1.65 +19.51 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used 1.20 - 1.50 0.15m recovery Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS9B (c) ESG\_www.esg.co.uk 03/05/2016 11:49:54 Project No. D5061-15 Carried out for London Borough of Camden



Drilled JW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 05/12/2015 E 529698.52 Coordinates (m) Hand excavated inspection pit from GL to 0.20m. Terminated at 0.20m due to probable asbestos. N 183203.05 Checked MM National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) 0.20 (0.10) +20.17 +20.07 (MADE GROUND)
MACADAM.

(MADE GROUND) Dark brown sandy GRAVEL with high cobble content. Gravel is angular to subangular, fine to coarse of brick, macadam and concrete. Sand is fine to coarse. Possible asbestos material observed.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS10** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:25 Project No. Carried out for London Borough of Camden



### CONSCIPTION   Page - exampled integration page from 1 Constitution with many control of Constitution wit													
March   Marc			Equipment, Methods and Ro	emarks			Depth from (m)	to (m)	Diameter (mm)				20.27 mOE
October   Octo				it from GL to 1.20	Om. Winde	ow sampling from 1.20m to	1.20 3.20	3.20 4.20	101 87	. ,			E 529698.52
Strata Description	necked MM		4.65m. Terminated at 4.6m due to co	llapse of hole.							National Grid		N 183203.05
Description	proved SW					Strata Docorintic	<u> </u>			_	ł		
Carrier   Company   Carrier   Carr			_	Date	Time						Depth. Level	Legend	Backfill
122   1.55	Depth	Type & No	Records	Casing	Water		ain			Detail	(Thickness)		1000000000000
CANDON CLAY FORMATION    CANDON CLAY FORMATI	0.20	ES 1	4 samples taken			MACADAM. (MADE GROUND)			_/	- - -	0.10 (0.10) +20.1		
120	0.70	ES 2	4 samples taken			GRAVEL with occasional angular to subrounded, fi macadam and flint. Sand	cobbles. Gravine to coarse of is fine to coarse	el is f brick, se.		- - - -		7	
2.50	1.20 - 1.65 1.20	SPTS D 3	N=4 (0,0/0,1,1,2)			CLAY.		0 ,		- - -			
229 - 266										- - -			
2.00 ES 0 4 semples tables  3.00 D7  3.00 D8  4.00 D9  4.00 D9  4.00 A70 - 4.65 SPTS N-24 (5.57/10.8.9)  END OF EXPLORATORY HOLE  END OF EXPLORATORY HOLE  4.00 A15.00  Find Depth Related Remarks Depth Sinker (vi) Remarks  Depth Related Remarks Depth Sinker (vii) Remarks  Depth Related Remarks Depth Sinker (viii) Remarks  Depth Related Remarks Depth Sinker (viii) Remarks  Depth Sinker (viii) Remarks			N. 44 (4.0(0.0.0.0)							-			
3.00 0.7 3.00 1.05 8975 N=13 (1.02.3.4.4) 3.00 0.9 4.00 0	2.20 - 2.65	SPIS	N=11 (1,2/2,3,3,3)							-		F	
3.20 - 3.65 SPTS N=13 (1,32,23,4.4)  4.00 D D A A 20 - 4.65 SPTS N=3 (1,5.71,0,8.6)  END OF EXPLORATORY HOLE  4.65 SPTS N	2.50	ES 6	4 samples taken							- - -	(3.85)		
3.20 - 3.65 SPTS N=13 (1,32,23,4.4)  4.00 D D A A 20 - 4.65 SPTS N=3 (1,5.71,0,8.6)  END OF EXPLORATORY HOLE  4.65 SPTS N	3.00	D.7								_		F_=_7	
August Enforce (m) Remarks  Depth Sealed (m) Depth Related Remarks Depth Series (m) Remarks			N=13 (1,3/2,3,4,4)							-		E_=_7	
Association of grabula and althorisations by the Endotor Helician of grabula and althorisations and grabula and althorisations and grabula and althorisations are considered in the second of the control	3.50	D 8								- -			
END OF EXPLORATORY HOLE  4.55 *15.80  END OF EXPLORATORY HOLE  4.55 *15.80  Depth Related Remarks  Depth Sealed (m) Depth Related Remarks  Depth Strike (m) Remarks  Depth Sealed (m) Depth Related Remarks  Depth Strike (m) Remarks  Depth Sealed (m) Remarks	4.00	D 9								_			
Swifer Entities Depth Senied (m) Depth Related Remarks Depth Strike (m) Remarks Depth Senied (m) Depth Related Remarks Depth (m) Depth Remarks			N=34 (5,5/7,10,8,9)							-	-	<u> </u>	
Swifer Entities Depth Senied (m) Depth Related Remarks Depth Strike (m) Remarks Depth Senied (m) Depth Related Remarks Depth (m) Depth Remarks										-			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in						END OF EXPLO	DRATORY HO	LE		-	4.65 +15.6		801001010010
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_	-		
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										=			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										-			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										=	-		
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in													
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										-	-		
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_	-		
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										-			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										-			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										-			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in													
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_	1		
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										-	1		
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										=	1		
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										_			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in										- -			
Depth Strike (m) Remarks  Depth Sealed (m)  Depths (m)  Remarks  Depths (m)  Depths (m)  Duration (mins) Tools us  For explanation of symbols and abbreviations by to Exploratory Hole Records. All depths and delevels in metres. Stratum thickness given in	undwater Entries					Depth Related Remarks					Hard Boring		
by to Exploratory Hole Records. All depths and di levels in metres. Stratum thickness given in WS10A		(m) Remarks		Depth Sea	led (m)							Duration (mir	s) Tools use
by to Exploratory Hole Records. All depths and di levels in metres. Stratum thickness given in WS10A			abbreviations Proje	ect	Cer	ntral Somers Town, London					Borehole		
ts in deput column.  1.50 (c) ESG www.esg.co.uk 2.150 (c)	Key to Explorator uced levels in metr	y Hole Records. A res. Stratum thick	All depths and kness given in									NS104	
	kets in depth colu ale 1:50	(c) ESC	G www.esg.co.uk AGS Carri								· '		-



Drilled JW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 05/12/2015 Coordinates (m) Hand excavated inspection pit from GL to 0.40m. Terminated at 0.40m due to service. Checked MM National Grid N 183219.30 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) (MADE GROUND) Dark brown sandy GRAVEL with high cobble content. Gravel is angular to subangular, fine to coarse of brick and macadam. Sand is fine to coarse. Possible asbestos material (0.30)0.40 +19.72 observed.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS11** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:25 Project No. Carried out for London Borough of Camden



Drilled JW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 05/12/2015 Coordinates (m) Hand excavated inspection pit from GL to 0.50m. Terminated at 0.50m due to possible asbestos. Checked MM National Grid N 183219.30 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) (MADE GROUND)
MACADAM.

(MADE GROUND) Dark brown sandy GRAVEL
with high cobble content. Gravel is angular to
subrounded, fine to coarse of brick and macadam.
Sand is fine to coarse.

END OF EXPLORATORY HOLE (0.40) 0.50 +19.62 Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS11A** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:25 Project No. Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 09/12/2015 Coordinates (m) Hand excavated inspection pit from GL to 0.20m. Terminated at 0.20m due to inability to break out. Checked MM National Grid N 183219.30 Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) 0.20 (0.10) +20.02 +19.92 (MADE GROUND) Dark brown GRAVEL with occasional cobbles. Gravel is angular to subangular, fine to coarse of brick and macadam. END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS11B** (c) ESG\_www.esg.co.uk 03/05/2016 11:47-26 Project No. D5061-15 Carried out for London Borough of Camden



Drilled BW/AM Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.20m. Hole terminated at 0.20m due to asbestos. ΕP Logged 21/11/2015 E 529730.27 Coordinates (m) N 183233.82 Checked MM National Grid Approved SW 21/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Casing Detail Wate (MADE GROUND) MACADAM (MADE GROUND) 0.10 (0.10) +20.10 0.20 (0.10) +20.00 0.20 D 1 Dark brown to black sandy angular to subrounded, fine to coarse GRAVEL of brick, macadam and probable asbestos with high cobble content. Cobbles are angular of brick.
END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS12** (c) ESG\_www.esg.co.uk 03/05/2016 11:47-26 Project No. Carried out for London Borough of Camden



Drilled BW/AM Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.20m. Hole terminated at 0.20m due to asbestos. ΕP 21/11/2015 E 529730.27 Loaaed Coordinates (m) N 183233.82 Checked MM National Grid Approved SW 21/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Casing Detail Wate (MADE GROUND) MACADAM (MADE GROUND) 0.10 (0.10) 0.20 (0.10) +20.10 +20.00 0.20 D 1 GRAVEL of brick, macadam and probable asbestos with high cobble content. Cobbles are angular of brick.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS12A** (c) ESG\_www.esg.co.uk 03/05/2016 11:47-26 Project No.

Carried out for



Drilled Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 05/12/2015 E 529706.96 Coordinates (m) Hand excavated inspection pit from GL to 0.20m. Terminated at 0.20m due to possible asbestos. N 183186.22 Checked MM National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) 0.20 (0.10) +20.22 +20.12 Cobble paving.

(MADE GROUND) Dark brown sandy GRAVEL with high cobble content. Gravel is angular to subrounded, fine to coarse of brick. Sand is fine to END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS13** (c) ESG\_www.esg.co.uk 03/05/2016 11:47-26 Project No. D5061-15 Carried out for London Borough of Camden



Drilled BW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 08/12/2015 E 529706.96 Coordinates (m) Hand excavated inspection pit from GL to 0.85m. Terminated at 0.85m due to concrete obstruction. N 183186.22 Checked MM National Grid Approved SW Samples and Tests Strata Description Backfill Depth, Level (Thickness) Legend Type & No Records Detail Casing Wate (MADE GROUND) 0.10 (0.10) +20.22 Cobble paving.

(MADE GROUND) Dark brown sandy GRAVEL with high cobble content. Gravel is angular to subangular, fine to coarse of brick and concrete. Sand is fine to coarse. Possible asbestos material (0.75)0.50 - 0.80 В1 observed.

END OF EXPLORATORY HOLE 0.85 +19.47 Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS13A** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:27 Project No. Carried out for London Borough of Camden



ogged EP necked MM oproved SW amples and Depth	05/12/2015  End 05/12/2015  I Tests  Type & No	Hand excavated inspection pit f Terminated at 0.70m due to void	rom GL to 0.80m. d and collapse of hole		(m)	(m)	(mm)	(m)	Coordinates (m) National Grid		E 529738.05 N 183205.94
amples and	05/12/2015 Tests	Terminated at 0.70m due to void	d and collapse of hole						National Grid		N 183205.94
amples and	l Tests										
				Strata Descriptio	n				1		
Беріп	Type & No	o Records	Date Tir	e	lain			Detail	Depth, Level	Legend	Backfill
		Necorus	Casing Wa	(MADE GROUND)	iaiii			Detail	(Thickness)		
				∖ MACADAM.			_/	-	0.10 (0.10) +20.1		
				(MADE GROUND) Brow angular to subangular fir	n COBBLES w	ith some	.	_	(0.60)		
				brick and macadam.	ie to coarse Gr	VAVEL OI		_			
				END OF EXPLO	ORATORY HO	LE			0.70 +19.5	3 ***********	
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oundwater Entries  Io. Depth Strike	(m) Remarks		Depth Sealed (m	Depth Related Remarks Depths (m) Remarks					Hard Boring Depths (m)	Duration (mir	s) Tools used
tes: For explanation E Key to Explorator luced levels in metr ckets in depth colu	y Hole Records. A es. Stratum thick	All depths and		entral Somers Town, London					Borehole	WS14	



Drilled JW Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Logged 05/12/2015 E 529739.68 Coordinates (m) Hand excavated inspection pit from GL to 0.40m. Terminated at 0.40m due to brick obstruction. N 183208.18 Checked MM National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) (MADE GROUND) Dark brown sandy GRAVEL.
Gravel is angular to subangular, fine to coarse of
brick and macadam. Sand is fine to coarse.
END OF EXPLORATORY HOLE (0.30)0.40 +19.84 Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS14A** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:27 Project No. Carried out for London Borough of Camden



Drilled JW Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Logged 05/12/2015 E 529706.96 Coordinates (m) Hand excavated inspection pit from GL to 0.10m. Terminated at 0.10m due to bitumen obstruction. N 183208.18 Checked MM National Grid End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) +20.14 MACADAM.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Central Somers Town, London Borehole Project **WS14B** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:27 Project No. D5061-15 Carried out for London Borough of Camden



Drilled JW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 05/12/2015 E 529743.55 Coordinates (m) Hand excavated inspection pit from GL to .20m. Terminated at 0.20m due to probable asbestos. N 183217.36 Checked MM National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate 0.10 (0.10) 0.20 (0.10) +20.09 +19.99 (MADE GROUND) Dark brown sandy GRAVEL.
(MADE GROUND) Dark brown sandy GRAVEL.
Gravel is angular to subangular, fine to coarse of brick. Sand is fine to coarse.

END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS15** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:28 Project No. D5061-15 Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to 7.00m. Logged 05/12/2015 E 529743.55 Coordinates (m) Checked MM National Grid N 183217.36 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing 0.10 (0.10) (MADE GROUND) Dark brown gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse of brick, macadam and (0.70)concrete. Possible asbestos material observed. 0.80 +19.39 (MADE GROUND) Dark brown clayey sandy GRAVEL. Gravel is angular to subrounded, fine to coarse of brick, macadam and concrete. Sand is fine to coarse. ES8 4 samples taken 2.20 Firm becoming stiff brown mottled bluish grey CLAY. (LONDON CLAY FORMATION) 3.00 D 9 D 10 3.50 4.00 D 11 4.50 D 12 (4.80)5.00 D 13 D 14 D 15 7.00 7.00 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS15A** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:20 Project No. D5061-15 Carried out for London Borough of Camden



Drilled BW/AM Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.65m. Hole terminated at 0.65m due to concrete obstruction. ΕP 21/11/2015 E 529761.46 Loaaed Coordinates (m) N 183226.15 Checked MM National Grid End Approved SW 21/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Wate Casing (MADE GROUND) MACADAM (MADE GROUND) 0.10 (0.10) +19.87 Dark brown sandy angular to subrounded, fine to coarse GRAVEL of brick, macadam and concrete with high cobble content. Cobbles are angular of (0.55)4 samples taken 4 samples taken 0.65 +19.32 concrete and brick.
END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS16** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:28 Project No. D5061-15 Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Logged 04/12/2015 E 529725.48 Coordinates (m) Hand dug inspection pit from GL to 0.10m.
Terminated at 0.10m due to probable asbestos. N 183155.68 Checked MM National Grid Approved SW Samples and Tests Strata Description Backfill Depth, Level (Thickness) Legend Records Detail Casing Wate (MADE GROUND) Dark brown gravelly SAND 0.10 (0.10) +19.06 Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse of brick and flint.
Possible asbestos material observed. END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS17** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:28 Project No. Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Logged 04/12/2015 Coordinates (m) E 529723.19 Hand excavated inspection pit from GL to 0.20m. Terminated at 0.20m due to probable asbestos. N 183155.68 Checked MM National Grid End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate (MADE GROUND) Dark brown gravelly SAND Sand is fine to coarse. Gravel is angular to 0.20) \subrounded, fine to coarse of brick and flint END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Central Somers Town, London Borehole Project **WS17A** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:29 Project No. D5061-15 Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Logged 08/12/2015 E 529723.19 Coordinates (m) Hand excavated inspection pit from GL to 0.60m. Terminated at 0.60m due to concrete obstruction. N 183155.68 Checked MM National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate (MADE GROUND) Dark brown gravelly SAND Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse of brick and flint. Possible asbestos material observed. (0.60)0.60 +18.55 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS17B** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:29 Project No. D5061-15 Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to 7.00m. Logged 05/12/2015 E 529749.45 Coordinates (m) Checked DB National Grid N 183194.12 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate 0.10 (0.10) +20.09 (MADE GROUND)
Brown sandy GRAVEL with high cobble content. 0.30 ES 1 4 samples taken 0.50 ES 2 4 samples taken Gravel is angular to subangular, fine to coarse of brick, macadam and concrete. Sand is fine to (1.40)ES 3 (MADE GROUND) Soft brown sandy gravelly CLAY. Gravel is angular to subangular, fine to coarse of brick and concrete. Sand is fine to coarse. 2.00 (1.60) 4 samples taken 3.00 +17.09 Firm becoming stiff brown mottled grey CLAY. (LONDON CLAY FORMATION) 3.10 ES8 3.50 4 samples taken 3.70 D 9 4.00 D 10 5.00 D 11 (3.90)D 12 6.50 - 7.00 7.00 7.00 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS18** (c) ESG\_www.esg.co.uk 03/05/2016\_11:47:20 Project No. D5061-15 Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to 7.00m. oaaed 05/12/2015 Coordinates (m) Checked DB National Grid N 183184.66 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate (0.20) Dark brown clayey SAND. Sand is fine to coarse (MADE GROUND) 0.20 (MADE GROUND)

Dark brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is angular to subrounded, fine to coarse of brick, concrete and flint.

(MADE GROUND)

Light grey sandy GRAVEL. Gravel is angular to subrounded, fine to coarse of brick and flint. Sand is fine to coarse. (0.40)0.50 ES 1 4 samples taken 0.60 +19.55 ES 2 4 samples taken (0.40)1.00 +19.14 is fine to coarse.
(MADE GROUND) Firm brown slightly sandy slightly gravelly CLAY.
Gravel is angular to subrounded, fine to coarse of flint and brick. Sand is fine to coarse. ES 4 (1.50) 2.00 Firm to stiff brown mottled bluish grey CLAY. (LONDON CLAY FORMATION) 3.00 D 7 3.50 D 8 4.00 D 9 (4.50)5.00 D 10 D 11 D 12 7.00 7.00 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Project Central Somers Town, London Borehole **WS19** (c) ESG\_www.esg.co.uk 03/05/2016 11:47:20 Project No. D5061-15 Carried out for London Borough of Camden



Depth from (m) Drilled Equipment, Methods and Remarks Casing Depth Ground Level to (m) (mm) Logged 30/11/2015 Coordinates (m) E 529792.17 Hand dug inspection pit from GL to 0.80m. Terminated at 0.80m due to concrete obstruction. Strata not recorded. N 183217.52 Checked DB National Grid Approved SW 30/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate (0.80)0.80 +17.67 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Central Somers Town, London Borehole Project **WS20** (c) ESG\_www.esg.co.uk 03/05/2016 11:48:26 Project No. D5061-15 Carried out for London Borough of Camden



Drilled GW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) то Logged 30/11/2015 E 529792.17 Coordinates (m) Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to Checked MM National Grid N 183217.52 End erminated at 1.90m due to refusal Approved SW 30/11/2015 Strata Description Samples and Tests Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate Grass over TOPSO (MADE GROUND) 0.10 (0.10) 0.20 (0.10) +18.37 +18.27 0.30 0.30 - 1.20 0.50 ES 1 B 4 ES 2 Brown slightly gravelly fine to coarse SAND with occasional rootlets. Gravel is angular to subangular, fine to coarse of brick and flint
(MADE GROUND) Brown gravelly fine to coarse SAND with low cobble content. Gravel is angular to subangular, fine to coarse brick, concrete and flint. Cobbles 1.00 ES 3 4 samples taken (1.70) are angular of brick and concrete. 1.60 D 6 1.80 ES 7 4 samples taken 1.90 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used 1.20 - 1.90 0.70m recovery Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS20A (c) ESG\_www.esg.co.uk 03/05/2016\_11:48:26 Project No. D5061-15

Carried out for

London Borough of Camden



Drilled Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Logged 30/11/2015 E 529809.66 Coordinates (m) Hand excavated inspection pit from GL to 0.50m. Terminated at 0.50m due to concrete obstruction. Checked MM National Grid N 183197.40 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing (0.25) Dark brown organic sandy SILT with rootlets.
(MADE GROUND) 0.25 (0.23) 0.30 ES 1 4 samples taken (MADE GROUND)

Dark brown gravelly sandy SILT with low cobble content. Gravel is angular, fine to coarse of brick, concrete and flint. Cobbles are angular of brick 0.48 (0.02) +17.68 and concrete.
(MADE GROUND)
Grey CONCRETE SLAB.
END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS21** (c) ESG\_www.esg.co.uk 03/05/2016 11:48:27 Project No. D5061-15 Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand excavated inspection pit from GL to 0.55m. Terminated at 0.55m due to concrete obstruction. Logged 30/11/2015 E 529809.66 Coordinates (m) Checked MM National Grid N 183197.40 End Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate (0.25) Dark brown sandy organic silty CLAY with rootlets (MADE GROUND) Dark brown gravelly sandy 0.25 (0.25) SILT with low cobble content. Gravel is angular of brick and concrete. Cobbles are angular of brick 0.45 Granite sets (15mm x 15mm). 0.59 (0.05) \$17.99 (MADE GROUND) Medium strong grey CONCRETE.
END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS21A** (c) ESG\_www.esg.co.uk 03/05/2016 11:48:27 Project No. D5061-15 Carried out for London Borough of Camden



Drilled	GW	Start	Equipment, Methods and Re	emarks			Depth from to		r Casing Depth	Ground Level		17.83 mOD
Logged	то	20/11/2015	Hand dug inspection pit from (	31 to 1 20m \\"	ndow oo	anling from 1 20m to 2 65m	(m) (m) 1.20 2.20	(mm) 101	(m)	Coordinates (m)		E 529824.34
Checked	MM is	End	Hole terminated at 3.65m duri	ng SPT due to re	idow san efusal.	ιριτι <b>g ποτη 1.20π το 3.65</b> Π.	2.20 3.20	87		National Grid		N 183207.90
Approve	ed SW	20/11/2015										
Samp	ples and	Tests				Strata Description	n			<u> </u>		
	Depth	Type & No	Records	Date	Time		ain		Detail	Depth, Level	Legend	Backfill
		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Casing	Water	(MADE GROUND) MACA				(Thickness)		
-	0.20	ES 1				(MADE GROUND)			=	0.20 +17.63		
- 0.	0.30 .30 - 1.20	B 5	4 samples taken			Brown gravelly fine to coa	arse SAND with low		=	(0.60)		
-	0.50	ES 2				cobble content and occas angular to subangular, fin	ne to coarse of brick and	d	-	(0.60)		
-						concrete. Cobbles are an concrete.			=	0.80 +17.03		-V/
_	1.00	ES 3	4 samples taken			(MADE GROUND)		_/	_			
- - 1.	.20 - 1.65	SPTS	N=8 (0,1/2,2,2,2)			Soft to firm brown slightly CLAY. Sand is fine to me	/ sandy slightly gravelly dium. Gravel is angular		=			
	1.20	D 6				to subangular, fine to coa			-			1/,
-	1.60	D 7				sandstone.			-			P / /
									=			$\perp \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$
-	2.00	D 8							_			$\parallel \parallel / \parallel$
2.	.20 - 2.65	SPTS	N=1 (0,0/0,1,0,0)							(2.85)		11//.
	2.40	ES 4							=		<b>.</b>	
-	2.40	D 9							-			'~//
									-			- /
—	3.00	D 10							_	-		
- - 3.	.20 - 3.65	SPTS	N=12 (20,7/4,3,3,2)						_			
									-	-		
-										3.65 +14.18		$-$ [/ $_{\prime}$
						END OF EXPLO	DRATORY HOLE			3.00		
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	vater Entries					Depth Related Remarks				Hard Boring		
	Depth Strike ( 2.50		m after 20 minutes.	Depth Seal	ed (m)	Depths (m)         Remarks           1.20 - 2.00         0.70m recover	erv			Depths (m)	Duration (mir	ns) Tools used
		,				2.00 - 3.20 0.60m recove						
		of symbols and Hole Records.		ct	Cer	ntral Somers Town, London				Borehole		
educed		es. Stratum thick	ness given in	ct No.	D50	061-15					<b>WS22</b>	
Scale		(c) ESG	www.esg.co.uk AGS	ed out for		don Borough of Camden					Sheet 1 of 1	
Juaie	1.00	03/0	05/2016 11:48:27								JINGE I UI I	



Drilled Equipment, Methods and Remarks Depth from Casing Depth to (m) 1.70 Ground Level (mm) 87 Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to 1.70m. Logged 30/11/2015 E 529825.24 Coordinates (m) N 183183.00 Checked MM National Grid End Ferminated at 1.70m due to refusal. Approved SW Strata Description Samples and Tests Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing 0.15 (0.15) +19.39 Dark brown organic sandy CLAY with rootlets. 0.30 0.30 - 0.90 3 samples taken Grey and brown gravelly sandy CLAY with low cobble content. Gravel is angular, fine to coarse of brick, concrete and occasional flint. Cobbles are 0.60 ES 2 3 samples taken 0.80 Rare wood fragments. angular, brick and concrete. 0.90 ES 3 3 samples taken (1.55) 1.70 +17.84 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS23** (c) ESG\_www.esg.co.uk 03/05/2016\_11:48:27 Project No. D5061-15

Carried out for

London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth to (m) 1.70 Ground Level (mm) 87 Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to 1.70m. Logged 30/11/2015 E 529825.24 Coordinates (m) N 183183.00 Checked MM National Grid End Ferminated at 1.70m due to refusal. Approved SW Strata Description Samples and Tests Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing 0.15 (0.15) +19.39 Dark brown organic sandy CLAY with rootlets. 0.30 0.30 - 0.90 3 samples taken Grey and brown gravelly sandy CLAY with low cobble content. Gravel is angular, fine to coarse of brick, concrete and occasional flint. Cobbles are 0.60 ES 2 3 samples taken 0.80 Rare wood fragments. angular, brick and concrete. 0.90 ES 3 3 samples taken (1.55) 1.70 +17.84 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS23** (c) ESG\_www.esg.co.uk 03/05/2016\_11:49:26 Project No. D5061-15

Carried out for

London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Logged 26/11/2015 Coordinates (m) E 529818.03 Hand excavated inspection pit from GL to 0.60m.

Terminated at 0.60m due to concrete obstruction. Strata not recorded. N 183165.71 Checked DB National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate (0.60)0.60 +19.48 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Central Somers Town, London Borehole Project **WS24** (c) ESG\_www.esg.co.uk 03/05/2016 11:49:26 Project No. D5061-15 Carried out for London Borough of Camden



Drilled Equipment, Methods and Remarks Depth from Casing Depth Ground Level to (m) (mm) Logged 26/11/2015 E 529815.78 Coordinates (m) Hand excavated inspection pit from GL to 0.50m.

Terminated at 0.50m due to concrete obstruction. Strata not recorded. N 183165.99 Checked DB National Grid Approved SW Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Records Detail Casing Wate (0.50)0.50 +19.47 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Central Somers Town, London Borehole Project WS24A (c) ESG\_www.esg.co.uk 03/05/2016 11:49:26 Project No. D5061-15 Carried out for London Borough of Camden



Drilled BW/AM Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand Tools Hand dug inspection pit from GL to 0.85m. Pit terminated at 0.85m due to concrete obstruction. ΕP 18/11/2015 E 529853.72 Loaaed Coordinates (m) N 183180.96 Checked SW National Grid End Approved SW 18/11/2015 Samples and Tests Strata Description Backfill Depth, Level (Thickness) Legend Records Detail Casing Wate 0.10 (0.10) +17.62 (IOPSOIL)

Brown organic silty SAND with rootlets.

(MADE GROUND)

Brown sandy GRAVEL with high cobble content.

Gravel and cobbles are of brick and concrete.

Occasional boulder sized concrete fragments. (0.75)0.85 +16.87 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS25** (c) ESG\_www.esg.co.uk 03/05/2016 11:49:26 Project No. D5061-15 Carried out for London Borough of Camden



Drilled GW Equipment, Methods and Remarks Depth from Casing Depth to (m) 2.00 Ground Level (mm) 101 то Logged E 529853.72 18/11/2015 Coordinates (m) Hand dug inspection pit from GL to 1.20m, window sampling from 1.20 to 2.65m. Hole terminated due to weather induced unsafe working conditions. Checked MM National Grid N 183180.96 End Approved SW 18/11/2015 Samples and Tests Strata Description Date Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing 0.10 (0.10) +17.62 Wood chippings.
(MADE GROUND) Medium dense brown gravelly SAND with low cobble content. Gravel is angular 0.30 0.30 - 1.20 0.50 to subangular, fine to coarse of concrete, brick and flint. Cobbles are angular of brick and (1.70) 1.00 ES 3 N=23 (1,4/4,7,7,5) 1.80 Firm to stiff brown mottled grey silty CLAY. 2.00 (LONDON CLAY FORMATION) 2.20 - 2.65 N=20 (2,3/3,5,5,7) (0.85)2.65 END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used 1.20 - 2.00 0.70m recovery Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS25A (c) ESG\_www.esg.co.uk 03/05/2016 11:49:27 Project No. D5061-15 Carried out for London Borough of Camden



rilled GW ogged	27/11/2016	uipment, Methods and R		m.	(m) (m)	iameter Casing Depth (mm) (m)	Ground Level Coordinates (m)		18.89 mOD E 529840.34
hecked DB		and excavated inspection p rminated at 0.60m due to c	oncrete obstruction	on. Strata	not recorded.		National Grid		N 183154.36
pproved SW	27/11/2016				Otracta Danasintian				
amples and			Date	Time	Strata Description	1	Depth, Level	Legend	Backfill
Depth	Type & No	Records	Casing	Water	Main Strata not recorded	Detail	(Thickness)	-	
					Strata not recorded.	=	(0.60)		
						_	(0.60)		
					END OF EXPLORATORY HOLE		0.60 +18.29		
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oundwater Entries					Donth Polated Pomarks		Hard Posi		
lo. Depth Strike (	m) Remarks		Depth Seal	ed (m)	Depth Related Remarks Depths (m) Remarks		Hard Boring Depths (m)	Duration (min	ns) Tools used
tes: For explanation	of symbols and ab Hole Records. All	breviations Projectors and	ect	Cen	tral Somers Town, London		Borehole		
Key to Exploratory uced levels in metro ckets in depth coluit	aa Chrahum thialma	na airean in	ect No.	D50	S1-15		•	<b>WS26</b>	
kets in depth colui ale 1:50	(c) ESG w	. Ares	ied out for		don Borough of Camden			Sheet 1 of 1	



Drilled Equipment, Methods and Remarks Depth from Casing Depth to (m) 1.50 Ground Level (mm) 87 Logged 30/11/2015 Hand excavated inspection pit from GL to 1.20m. Window sampling from 1.20m to 1.50m. E 529840.34 Coordinates (m) Checked MM National Grid N 183154.36 End Approved SW 30/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Legend Backfill Type & No Records Detail Wate Casing 0.20) Dark brown slightly sandy organic silty CLAY with 0.30 0.30 - 0.90 0.30 Boulder size concrete. rootlets.
(MADE GROUND) 4 samples taken Dark brown slightly sandy CLAY with low cobble content. Sand is fine to coarse. Cobbles are 0.60 ES 2 4 samples taken angular of concrete and brick. (1.30) 0.90 Occasional oyster shells. 0.90 ES 4 4 samples taken D 7 1.50 +17.39 END OF EXPLORATORY HOLE Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London WS26A (c) ESG\_www.esg.co.uk 03/05/2016\_11:49:27 Project No. D5061-15 Carried out for London Borough of Camden



Drilled GW	Start	Equipment, Methods and Rema	arks			Depth from to	Diameter	Casing Depth	Ground Level		20.19 mOD
ogged TO	17/11/2015					(m) (m) 1.20 2.20	(mm) 101	(m)	Coordinates (m)		E 529823.67
hecked MM	End	Hand dug inspection pit from GL	to1.20m. Winde	ow sam	pling from 1.20m to 7.20m.	2.20 5.20 5.20 7.20	87 77		National Grid		N 183146.01
pproved SW	17/11/2015										
amples and	d Tests				Strata Description	n					
Depth	Type & No	o Records	Date Casing	Time Water	М	ain		Detail	Depth, Level (Thickness)	Legend	Backfill
			Cusing	Water	(MADE GROUND)				(0.20)		
0.30	ES 1				Grass over brown slightly SAND with occasional ro	clayey fine to coars otlets.	e		0.20 +19.99	· ************************************	
0.30 - 1.20 0.50	B 4 ES 2	4 samples taken 4 samples taken			(MADE GROUND) Brown slightly clayey slig	htly gravelly fine to		-			
					coarse SAND. Gravel is a fine to coarse of brick and	angular to subangula	r,		(1.00)		
- 1.00	ES 3	4 samples taken			line to coarse of brick and	u concrete.					
1.20 - 1.65	SPTS	1.20-2.00 0.58m recovery.			(MARE ORGUNE)			-	1.20 +18.99	,	
1.20 1.40	D 5 D 6	N=11 (1,2/5,3,2,1)			(MADE GROUND) Medium dense brown gra						
					SAND with low cobble co to subangular, fine to coa			-			
					Cobbles are angular of bi	rick.		-	(1.30)		
- 2.00	D 7	2.00-3.00 0.80m recovery						_			//
2.20 - 2.65	SPTS	N=15 (3,3/3,3,4,5)									
2.50	D 8				(MADE GROUND)			-	2.50 +17.69		[/,
					Brown slightly gravelly sil		and	-	(0.50)		- $//$
- 3.00	D 9	3.00-4.00 0.80m recovery.			angular to subangular, fin	ie io coalse of Drick a	zi IU		3.00 +17.19		
3.20 - 3.65	SPTS	N=10 (1,2/2,2,3,3)			(MADE GROUND) Medium dense brown gra	avelly fine to coarse			1		
0.50	5.40				SAND. Gravel is angular coarse of brick and flint.	to subangular, fine to		-	1		
3.50	D 10							-	(1.20)		
4.00	D 11	4.00-5.00 0.90m recovery.						_			
4.20 - 4.65 4.20	SPTS ES 4	N=34 (6,7/7,9,10,8) 4 samples taken			Stiff brown mottled grey s CLAY FORMATION)	silty CLAY. (LONDON	·	-	4.20 +15.99	×××××××××××××××××××××××××××××××××××××××	
4.60	D 12				CLAT FORMATION)			-		× ×	
4.00	D 12									<u>×</u> ×	
5.00	D 13	5.00-6.00 0.90m recovery.						_		××	
5.20 - 5.65	SPTS	N=33 (8,7/8,9,7,9)								××	
- - 5.50	D 14									××	
- 5.50	D 14									<u>×</u> ×	
									(3.45)	××	
- 6.00	D 15	6.00-7.00 0.90m recovery.						_		<u>×</u> _ <u>×</u>	
6.20 - 6.65	SPTS	N=33 (8,6/9,8,9,7)								×-^-×	//
6.60	D 16							-		×	
- -										××	1/,
7.00	D 17							_		××	
7.20 - 7.65	SPTS	N=34 (8,7/8,9,8,9)								××	
: =-								-		××	
					END OF EXPLO	RATORY HOLE			7.65 +12.54	$\mathbb{R}^{\times}$	
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roundwater Entries No. Depth Strike	(m) Remarks		Depth Seale	 d (m)	Depth Related Remarks Depths (m) Remarks				Hard Boring Depths (m)	Duration (min	ns) Tools used
otes: For explanation	y Hole Records. A	All depths and		Cer	itral Somers Town, London				Borehole		
duced levels in met ackets in depth colu	mn	Project	No.	D50	061-15					WS27	
Scale 1:50	(c) ESG	G www.esg.co.uk AGS Carried	out for	Lor	don Borough of Camden					Sheet 1 of 1	



Drilled GW Casing Depth Equipment, Methods and Remarks Depth from to (m) 1.60 Ground Level (mm) 40 то 17/11/2015 E 529865.24 Loaaed Coordinates (m) Hand dug inspection pit from GL to 1.20m. Window sampling from 1.20m to 1.60m. Hole terminated in SPT due to refusal. Checked MM National Grid N 183129.88 End Approved SW 17/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Casing Wate Grass over brown slightly gravelly slightly clayey fine to coarse SAND. Gravel is angular to subangular, fine to coarse of flint and brick. (MADE GROUND) 0.30 0.30 - 1.20 0.50 ES 1 B 4 ES 2 0.30 +19.05 (0.40) RECORD Brown gravelly clayey fine to coarse SAND with low cobble content. Gravel is angular to subangular, fine to coarse of brick, flint and concrete. Cobbles are angular of brick (MADE GROUND) 0.70 +18.64 4 samples taken (0.90)Brown sandy gravelly CLAY with low cobble content. Sand is fine to coarse. Gravel is angular to subangular fine to coarse of brick and concrete. 1.60 Cobbles are angular of brick.
END OF EXPLORATORY HOLE Depth Related Remarks Depth Sealed (m) No. Depth Strike (m) Remarks Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS28** (c) ESG\_www.esg.co.uk 03/05/2016\_11:49:29 Project No. D5061-15 Carried out for London Borough of Camden



Drilled GW Equipment, Methods and Remarks Casing Depth Depth from Ground Level to (m) (mm) Hand tools Hand dug inspection pit from GL to 0.75m. Pit moved to three near locations, terminated on a concrete obstruction. то Logged 16/11/2015 E 529881.66 Coordinates (m) N 183139.54 Checked MM National Grid Approved SW 16/11/2015 Samples and Tests Strata Description Depth, Level (Thickness) Backfill Legend Type & No Records Detail Wate Casing Brown gravelly fine to coarse SAND with medium cobble content and occasional pieces of metal. Gravel is angular to subangular, fine to coarse of 0.30 ES 1 4 samples taken (0.75) 0.50 ES 2 4 samples taken flint, concrete and brick. Cobbles are angular of brick and concrete.

END OF EXPLORATORY HOLE 0.75 +17.62 Depth Related Remarks No. Depth Strike (m) Remarks Depth Sealed (m) Depths (m) Duration (mins) Tools used Notes: For explanation of symbols and abbreviations see Key to Exploratory Hole Records. All depths and reduced levels in metres. Stratum thickness given in brackets in depth column. Borehole Project Central Somers Town, London **WS29** (c) ESG\_www.esg.co.uk 03/05/2016 11:49:28 Project No. Carried out for London Borough of Camden



# APPENDIX C INSTRUMENTATION AND MONITORING

Installation Details	Table C1
Gas and Groundwater Monitoring	Table C2

#### **Groundwater Installation Details**



Instrument reference	Instrument type (see Notes)	Installation date	Pipe diameter (mm)	Instrument base (mbgl)	Response zone range (mbgl)	Pipe top details	Headworks	Remarks
BH1 (1)	SP	04/12/2015	50	24.20	21.20 to 24.20	Gas tap	Flush Cover	
BH1 (2)	SP	04/12/2015	50	15.50	6.50 to 15.50	Gas tap	Flush Cover	
BH10	SP	06/01/2016	50	30.30	21.00 to 30.00	Gas tap	Flush Cover	
ВН4	SP	24/11/2015	50	16.00	7.00 to 16.00	Gas tap	Flush Cover	
ВН7	SP	15/12/2015	50	30.36	20.00 to 30.36	Gas tap	Flush Cover	
ВН9	SP	22/12/2015	50	7.50	4.50 to 7.50	Gas tap	Flush Cover	



Notes:

BH1

BH1

BH1

BH1

2

2

2

2

15.50

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15.50

14:02:30

14:03:00

14:04:00

14:05:00

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#### **Gas Monitoring Record**

Project No		D5061-15		]					Project		Central S	Somers To	own					Sheet No
Date		15/01/2016		]					State of Gro	ound	Dry							C2-1/1
				<u>-</u>					Wind		Light							
Operator		AG							Wind Direct	ion	N/A							
									Cloud Cove		None							
Equipment	Used	LMSx (1463)	/ Interface N	Meter (32482	)				Precipitation	1	None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	]
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH1	1	24.20	13:45:00	1025	6	0.00	24.64	3.94	0.5	0.2	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	1	24.20	13:45:30	1025	6	0.00			0.3	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	1	24.20	13:46:00	1025	6	0.00			0.2	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	1	24.20	13:46:30	1025	6	0.00			0.2	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	1	24.20	13:47:00	1025	6	0.00			0.2	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	1	24.20	13:47:30	1025	6	0.00			0.2	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	1	24.20	13:48:00	1025	6	0.00			0.2	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	1	24.20	13:49:00	1025	6	0.00			0.2	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	1	24.20	13:50:00	1025	6	0.00			0.2	0.1	<0.1	<0.1	20.5	0.3	<1	<1		
BH1	2	15.50	14:00:00	1025	6	0.00	15.33	3.82	0.3	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	2	15.50	14:00:30	1025	6	0.00			0.2	0.1	<0.1	<0.1	19.2	1.2	<1	<1		
BH1	2	15.50	14:01:00	1025	6	0.00			0.1	0.1	<0.1	<0.1	18.1	2.0	<1	<1		
BH1	2	15.50	14:01:30	1025	6	0.00			0.1	0.1	<0.1	<0.1	18.1	2.0	<1	<1		
BH1	2	15.50	14:02:00	1025	6	0.00			0.1	0.1	<0.1	<0.1	18.1	2.0	<1	<1		

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Project No		D5061-15		]					Project		Central S	Somers To	own					Sheet No
Date		15/01/2016		]					State of Gro	ound	Dry							C21/2
				_					Wind		Light							
Operator		AG							Wind Direct	ion	N/A							]
				=					Cloud Cove	r	None							
Equipment	Used	LMSx (1463)	/ Interface N	Meter (32482	)				Precipitation		None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	1
	D	Depth of	Time of	Barometric	Air temp	Reading	Dip to	Depth to	Differential	FlowRate	CH4	CH4	02	CO2	со	H2S	Nitrogen	
Borehole ID	Inst ID	Installation	Reading	Pressure	(°C)	Depth	Base of	Groundwater	Pressure	(l/hr)	(% vol)	(% LEL)	(% vol)	(% vol)	(ppm)	(ppm)	(%vol)	Remarks
		(m BGL)	hh:mm:ss	(mbars)	( 0)	(mBGL)	Pipe	(m BGL)	(Pa)							(PP111)	(70101)	
BH4	1	16.00	14:25:00	1026	6	0.00	16.15	9.95	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:25:30	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:26:00	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:26:30	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:27:00	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:27:30	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:28:00	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:29:00	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:30:00	1026	6	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		

Wind Direction N/A  Cloud Cover Overcast  Equipment Used LMSx (1463) / Interface Meter (32482)  Detection Limits <0.1 <0.1 <0.1 <0.1 <1 <1 <0.1  One of Barometric Air toms Reading Dip to Depth to Differential FlowBets CHA	Project No		D5061-15		]					Project		Central	Somers To	own					Sheet No
AG	Date		22/01/2016		]					State of Gro	ound	Damp							C2-1/3
Equipment Used   LMSx (1463) / Interface Meter (32482)   LMSx (1463) / Interface Met					_					Wind		Light							
Equipment Used   LMSx (1463) / Interface Meter (32482)   LMSx (1463) / Interface Met	Operator		AG							Wind Direct	ion	N/A							
Equipment Use   LMSx (1463 / Interface Meter (32482)   Frecipitation   Detection Limits   Col.   C					-					Cloud Cove	r	Overcas	t						
Borehole ID   E   Depth of Installation (m BGL)   Depth of I	Equipment	Used	LMSx (1463)	/ Interface N	Meter (32482	2)						Moderat	е						]
Borehole ID   E   Depth of Installation (m BGL)   Depth of I										Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	1
Borehole ID   February   Febr		Ω	Depth of	Time of	Barometric	Air tomp	Reading	Dip to	Depth to				0114	00	000	00	1100	N I : 4	
BH7         1         30.00         11:00:00         1018         6         0.00         29.28         19.65         0.0         <0.1         <0.1         <0.1         20.9         <0.1         <1         <1         <1         <1         <1         30.00         11:00:30         1018         6         0.00         <0.0         <0.1         <0.1         <0.1         19.9         0.2         <1         <1            BH7         1         30.00         11:01:00         1018         6         0.00         0.0         <0.1	Borehole ID	st	Installation	Reading	Pressure		Depth			Pressure								Nitrogen	Remarks
BH7         1         30.00         11:00:30         1018         6         0.00         0.0         <0.1         <0.1         <0.1         19.9         0.2         <1         <1           BH7         1         30.00         11:01:00         1018         6         0.00         0.0         <0.1		드	(m BGL)	hh:mm:ss	(mbars)	( C)	(mBGL)	Pipe	(m BGL)	(Pa)	(1/111)	(76 VOI)	(76 LLL)	( /6 VOI)	( /6 VOI)	(ррііі)	(ррііі)	(76701)	
BH7         1         30.00         11:01:00         1018         6         0.00         0.0         <0.1         <0.1         <0.1         19.6         0.2         <1         <1           BH7         1         30.00         11:01:30         1018         6         0.00         0.0         <0.1		1				6		29.28	19.65							<1	<1		
BH7         1         30.00         11:01:30         1018         6         0.00         0.0         <0.1         <0.1         <0.1         19.6         0.2         <1         <1           BH7         1         30.00         11:02:00         1018         6         0.00         0.0         <0.1	BH7	1	30.00	11:00:30	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.9	0.2	<1	<1		
BH7         1         30.00         11:02:00         1018         6         0.00         0.0         <0.1         <0.1         <0.1         19.6         0.2         <1         <1           BH7         1         30.00         11:02:30         1018         6         0.00         0.0         <0.1	BH7	1	30.00	11:01:00	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.6	0.2	<1	<1		
BH7         1         30.00         11:02:30         1018         6         0.00         0.0         <0.1         <0.1         <0.1         19.6         0.2         <1         <1           BH7         1         30.00         11:03:00         1018         6         0.00         0.0         <0.1	BH7	1	30.00	11:01:30	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.6	0.2	<1	<1		
BH7         1         30.00         11:03:00         1018         6         0.00         0.0         <0.1         <0.1         <0.1         19.6         0.2         <1         <1           BH7         1         30.00         11:04:00         1018         6         0.00         0.0         <0.1	BH7	1	30.00	11:02:00	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.6	0.2	<1	<1		
BH7 1 30.00 11:04:00 1018 6 0.00 0.0 <0.1 <0.1 <0.1 19.6 0.2 <1 <1	BH7	1	30.00	11:02:30	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.6	0.2	<1	<1		
	BH7	1	30.00	11:03:00	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.6	0.2	<1	<1		
BH7 1 30.00 11:05:00 1018 6 0.00 0.0 <0.1 <0.1 <0.1 19.6 0.2 <1 <1 <1 <	BH7	1	30.00	11:04:00	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.6	0.2	<1	<1		
	BH7	1	30.00	11:05:00	1018	6	0.00			0.0	<0.1	<0.1	<0.1	19.6	0.2	<1	<1		

Project No		D5061-15		]					Project		Central S	Somers To	wn, Lond	lon				Sheet No
Date		15/01/2016		]					State of Gro	ound	Dry							C2-1/4
				4					Wind		Light							
Operator		AG							Wind Direct	ion	N/A							1
				•					Cloud Cove	r	None							
Equipment	Used	LMSx (1463)	/ Interface N	Neter (32482	)				Precipitation	า	None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	1
	_	Depth of	Time of	Barometric	A	Reading	Dip to	Depth to	Differential									
Borehole ID	Inst ID	Installation	Reading	Pressure	Air temp (°C)	Depth	Base of	Groundwater	Pressure	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S	Nitrogen (%vol)	Remarks
	ᆸ	(m BGL)	hh:mm:ss	(mbars)	( 0)	(mBGL)	Pipe	(m BGL)	(Pa)	(1/111)					(ppm)	(ppm)	( /0 V U I )	
BH10	1	30.30	13:00:00	1025	6	0.00	30.32	15.28	0.2	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH10	1	30.30	13:00:30	1025	6	0.00			0.1	<0.1	<0.1	<0.1	19.8	<0.1	<1	<1		
BH10	1	30.30	13:01:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<1	<1		
BH10	1	30.30	13:01:30	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<1	<1		
BH10	1	30.30	13:02:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<1	<1		
BH10	1	30.30	13:02:30	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<1	<1		
BH10	1	30.30	13:03:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<1	<1		
BH10	1	30.30	13:04:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<1	<1		
BH10	1	30.30	13:05:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	19.6	<0.1	<1	<1		
ВН9	1	7.50	13:15:00	1025	6	0.00	7.33	2.72	<0.1	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH9	1	7.50	13:15:30	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.4	0.4	<1	<1		
BH9	1	7.50	13:16:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.3	0.4	<1	<1		
ВН9	1	7.50	13:16:30	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.3	0.4	<1	<1		
BH9	1	7.50	13:17:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.3	0.4	<1	<1		
BH9	1	7.50	13:17:30	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.3	0.4	<1	<1		
BH9	1	7.50	13:18:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.3	0.4	<1	<1		
BH9	1	7.50	13:19:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.3	0.4	<1	<1		
BH9	1	7.50	13:20:00	1025	6	0.00			<0.1	<0.1	<0.1	<0.1	20.3	0.4	<1	<1		

LJG													Ga	is ivioi		y ivec	,or a	
Project No		D5061-15		]					Project		Central S	Somers To	own, Lond	don				Sheet N
Date		17/02/2016		]					State of Gro	ound	Dry							C2-2/1
				_					Wind		Light							
Operator		AG		1					Wind Direct	tion	N/A							
				•					Cloud Cove	er	Overcas	t						
Equipment	Used	LMSx (1463)	/ Dip Meter	(32482)					Precipitation	n	None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	]
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH1	1	24.20	11:05:00	1021	7	0.00	24.64	4.35	-0.3	-0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	1	24.20	11:05:30	1021	7	0.00			-0.2	-0.1	<0.1	<0.1	20.6	<0.1	<1	<1	1	
BH1	1	24.20	11:06:00	1021	7	0.00			-0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH1	1	24.20	11:06:30	1021	7	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH1	1	24.20	11:07:00	1021	7	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		

11:07:30 BH1 24.20 1021 7 0.00 0.0 < 0.1 < 0.1 < 0.1 20.6 < 0.1 <1 <1 BH1 24.20 11:08:00 1021 7 0.00 0.0 < 0.1 < 0.1 < 0.1 20.6 < 0.1 <1 <1 1 11:09:00 7 0.0 BH1 24.20 1021 0.00 < 0.1 < 0.1 < 0.1 20.6 < 0.1 <1 <1 24.20 7 BH1 1 11:10:00 1021 0.00 0.0 < 0.1 < 0.1 < 0.1 20.6 < 0.1 <1 <1 11:15:00 BH1 15.50 1021 7 0.00 15.33 4.33 -0.3 -0.1 < 0.1 < 0.1 20.9 < 0.1 <1 <1 7 BH1 2 15.50 11:15:30 1021 0.00 -0.2 -0.1 < 0.1 < 0.1 20.7 < 0.1 <1 <1 BH1 2 15.50 11:16:00 1021 7 0.00 -0.1 < 0.1 <0.1 <0.1 20.7 < 0.1 <1 <1 BH1 15.50 11:16:30 1021 7 0.00 0.0 < 0.1 < 0.1 < 0.1 20.7 < 0.1 <1 <1 BH1 2 15.50 11:17:00 1021 7 0.00 0.0 < 0.1 < 0.1 < 0.1 20.7 < 0.1 <1 <1 BH1 15.50 11:17:30 1021 7 0.00 0.0 < 0.1 < 0.1 < 0.1 20.7 <1 < 0.1 <1 2 BH1 2 15.50 11:18:00 1021 7 0.0 < 0.1 < 0.1 < 0.1 20.7 < 0.1 <1 0.00 <1 7 BH1 2 15.50 11:19:00 1021 0.00 0.0 < 0.1 < 0.1 < 0.1 20.7 < 0.1 <1 <1 BH1 2 15.50 11:20:00 1021 7 0.00 0.0 < 0.1 < 0.1 < 0.1 20.7 < 0.1 <1 <1

Project No		D5061-15							Project		Central S	Somers To	own, Lond	don				Sheet No
Date		17/02/2016							State of Gro	ound	Dry							C2-2/2
									Wind		Light							
Operator		AG							Wind Direct	ion	N/A							
				<b>-</b>					Cloud Cove	r	Overcas	t						
Equipment	Used	LMSx (1463)	/ Dip Meter	(32482)					Precipitation		None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	1
	D	Depth of	Time of	Barometric	Air temp	Reading	Dip to	Depth to	Differential	FlowRate	CH4	CH4	O2	CO2	СО	H2S	Nitrogen	
Borehole ID	Inst ID	Installation	Reading	Pressure	(°C)	Depth	Base of	Groundwater	Pressure	(l/hr)	(% vol)	(% LEL)	(% vol)	(% vol)	(ppm)	(ppm)	(%vol)	Remarks
	<u> </u>	(m BGL)	hh:mm:ss	(mbars)		(mBGL)	Pipe	(m BGL)	(Pa)		, i		, ,				(7010.)	
BH4	1	16.00	10:30:00	1023	7	0.00	16.15	9.97	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	10:30:30	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	10:31:00	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:31:30	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:32:00	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:32:30	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:33:00	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:34:00	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:35:00	1023	7	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
1																		

Date 17/02/2016 State of Ground Wind Light	C2-2/3
	•
Operator AG Wind Direction N/A	
Cloud Cover Overcast	
Equipment Used LMSx (1463) / Dip Meter (32482)  Precipitation  None	
Detection Limits <0.1 <0.1 <0.1 <1 <1 <0.1	
Borshole ID =   Installation   Peading   Pressure   All terrip   Depth   Base of Groundwater   Pressure   FlowRate   CH4   CH4   CV2   CO2   CO   H25   Nitrogen   Peads	arks
Boreliole ID $\frac{\pi}{2}$ Installation Reading Pressure (mbars) (°C) Depth Base of Groundwater Pressure (mBGL) (I/hr) (% vol) (% LEL) (% vol) (% vol) (ppm) (ppm) (% vol) (% vol)	
BH7 1 30.36 11:40:00 1021 7 0.00 29.28 19.64 0.2 0.1 <0.1 <0.1 20.9 <0.1 <1 <1	
BH7 1 30.36 11:40:30 1021 7 0.00 0.1 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	
BH7 1 30.36 11:41:00 1021 7 0.00 0.0 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	
BH7 1 30.36 11:41:30 1021 7 0.00 0.0 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	
BH7 1 30.36 11:42:00 1021 7 0.00 0.0 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	
BH7 1 30.36 11:42:30 1021 7 0.00 0.0 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	
BH7 1 30.36 11:43:00 1021 7 0.00 0.0 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	
BH7 1 30.36 11:44:00 1021 7 0.00 0.0 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	
BH7 1 30.36 11:45:00 1021 7 0.00 0.0 <0.1 <0.1 <0.1 19.2 0.2 <1 <1	

Project No	D5061-15	Project	Central So	Sheet No						
Date	17/02/2016	State of Ground	Dry	C2-2/4						
		Wind	Light							<u> </u>
Operator	AG	Wind Direction	N/A							
		Cloud Cover	Overcast							
Equipment Used	LMSx (1463) / Dip Meter (32482)	Precipitation	None							
	L	Detection Limits	ts <0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	

									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (I/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH10	1	30.30	12:10:00	1020	7	0.00	30.32	15.31	0.2	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH10	1	30.30	12:10:30	1020	7	0.00			0.1	<0.1	<0.1	<0.1	19.9	<0.1	<1	<1		
BH10	1	30.30	12:11:00	1020	7	0.00			0.0	<0.1	<0.1	<0.1	19.8	<0.1	<1	<1		
BH10	1	30.30	12:11:30	1020	7	0.00			0.0	<0.1	<0.1	<0.1	19.7	<0.1	<1	<1		
BH10	1	30.30	12:12:00	1020	7	0.00			0.0	<0.1	<0.1	<0.1	19.7	<0.1	<1	<1		
BH10	1	30.30	12:12:30	1020	7	0.00			0.0	<0.1	<0.1	<0.1	19.7	<0.1	<1	<1		
BH10	1	30.30	12:13:00	1020	7	0.00			0.0	<0.1	<0.1	<0.1	19.7	<0.1	<1	<1		
BH10	1	30.30	12:14:00	1020	7	0.00			0.0	<0.1	<0.1	<0.1	19.7	<0.1	<1	<1		
BH10	1	30.30	12:15:00	1020	7	0.00			0.0	<0.1	<0.1	<0.1	19.7	<0.1	<1	<1		
BH9	1	7.50	11:55:00	1021	7	0.00	7.33	2.75	0.1	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH9	1	7.50	11:55:30	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	11:56:00	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	11:56:30	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	11:57:00	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	11:57:30	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	11:58:00	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	11:59:00	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	12:00:00	1021	7	0.00			0.1	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		

15.50

BH1

15:00:00

1017

13

0.00

### **Gas Monitoring Record**

Project No		D5061-15		]					Project		Central S	Somers To	own, Lond	don				Sheet No
Date		22/03/2016		]					State of Gro	ound	Dry Light							C2-3/1
Operator		AG		1					Wind Direct	ion	N/A							
Operator				1					Cloud Cove		Slight							
Fauipment	Used	LMSx (1463)	/ Dip Meter	(5303)					Precipitation Precipitation		None							-
			, - 15	()					·									<u> </u>
		_							Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH1	1	24.20	14:45:00	1017	13	0.00	24.64	4.60	0.1	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	1	24.20	14:45:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.6	1.4	<1	<1		
BH1	1	24.20	14:46:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.8	1.1	<1	<1		
BH1	1	24.20	14:46:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.8	<1	<1		
BH1	1	24.20	14:47:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.5	<1	<1		
BH1	1	24.20	14:47:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.5	<1	<1		
BH1	1	24.20	14:48:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.5	<1	<1		
BH1	1	24.20	14:49:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.5	<1	<1		
BH1	1	24.20	14:50:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.5	<1	<1		
BH1	2	15.50	14:55:00	1017	13	0.00	15.33	4.58	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	2	15.50	14:55:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	18.4	0.9	<1	<1		
BH1	2	15.50	14:56:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.0	0.7	<1	<1		
BH1	2	15.50	14:56:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.3	0.6	<1	<1		
BH1	2	15.50	14:57:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.5	0.5	<1	<1		
BH1	2	15.50	14:57:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.5	0.5	<1	<1		
BH1	2	15.50	14:58:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.5	0.5	<1	<1		
BH1	2	15.50	14:59:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	19.5	0.5	<1	<1		

<0.1

0.0

<0.1

<0.1

19.5

0.5

<1

<1

Project No		D5061-15		]					Project		Central S	Somers To	own, Lond	don				Sheet No
Date		22/03/2016		1					State of Gro	ound	Dry							C2-3/2
				1					Wind		Light							
Operator		AG		1					Wind Direct	ion	N/A							1
				4					Cloud Cove	r	Slight							
Equipment	Used	LMSx (1463)	/ Dip Meter	(5303)					Precipitation		None							1
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	- 1
		Depth of	Time of	Barometric		Reading	Dip to	Depth to	Differential									
Borehole ID	Inst ID	Installation	Reading	Pressure	Air temp	Depth	Base of	Groundwater	Pressure	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (nnm)	H2S	Nitrogen (%vol)	Remarks
	드	(m BGL)	hh:mm:ss	(mbars)	(°C)	(mBGL)	Pipe	(m BGL)	(Pa)	(1/111)	( 76 VOI)	( // LEL)	( /6 VOI)	( /6 VOI)	(ppm)	(ppm)	(%۷01)	
BH4	1	16.00	14:20:00	1019	13	0.00	16.15	9.95	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:20:30	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH4	1	16.00	14:21:00	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH4	1	16.00	14:21:30	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH4	1	16.00	14:22:00	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH4	1	16.00	14:22:30	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH4	1	16.00	14:23:00	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH4	1	16.00	14:24:00	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH4	1	16.00	14:25:00	1019	13	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		

Project No		D5061-15							Project		Central S	Somers To	own, Lond	don				Sheet No
Date		22/03/2016		]					State of Gro	ound	Dry							C2-3/3
0		AG		7					Wind		Light N/A							
Operator		AG		<u></u>					Wind Direct Cloud Cove		Slight							1
Fauinment	llsed	LMSx (1463)	/ Din Meter	(5303)					Precipitation		None							1
Equipmont	Ooca	LIVIOX (1400)	77 DIP MOTO	(0000)					i recipitatioi	1								<u>.</u>
			-			_				tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH7	1	30.36	15:10:00	1017	13	0.00	29.28	19.63	0.1	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH7	1	30.36	15:10:30	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:11:00	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:11:30	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:12:00	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:12:30	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:13:00	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:14:00	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:15:00	1017	13	0.00			0.1	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
					1	-		-				1		1	<del>                                     </del>	<del>                                     </del>	1	
																<u> </u>		
								-						1	-	-	1	

Sheet No C2-3/4

Project No	D5061-15	Project	Central Somers Town, London
Date	22/03/2016	State of Ground	Dry
		Wind	Light
Operator	AG	Wind Direction	N/A
	·	Cloud Cover	Slight
<b>Equipment Used</b>	LMSx (1463) / Dip Meter (5303)	Precipitation	None

									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH9	1	7.50	15:20:00	1017	13	0.00	7.33	2.76	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH9	1	7.50	15:20:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:21:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:21:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:22:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:22:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:23:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:24:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:25:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH10	1	30.30	15:35:00	1017	13	0.00	30.32	15.32	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH10	1	30.30	15:35:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH10	1	30.30	15:36:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	0.1	<1	<1		
BH10	1	30.30	15:36:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	0.1	<1	<1		
BH10	1	30.30	15:37:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	0.1	<1	<1		
BH10	1	30.30	15:37:30	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	0.1	<1	<1		
BH10	1	30.30	15:38:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	0.1	<1	<1		
BH10	1	30.30	15:39:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	0.1	<1	<1		
BH10	1	30.30	15:40:00	1017	13	0.00			0.0	<0.1	<0.1	<0.1	20.5	0.1	<1	<1		

								_		
Project No	D5061-15	Project	Central S	Somers To	own, Lond	lon				Sheet No
Date	12/04/2016	State of Ground	Dry							C2-4/1
		Wind	Light							
Operator	AG		N/A							
	-	Cloud Cover	Slight							
Equipment Used	LMSx (1463) / Dip Meter (5303)	<b>1</b>	None							
		] Басажа (12.29. Г	-0.1	-0.4	-0.4	-0.4	-4	-4	-0.4	
		Detection Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	

Berelool December   Personal Property   Pers						•				Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	
BH1   1   24.20   11:15:30   1010   14   0.00   -0.2   -0.1   <0.1   <0.1   <0.1   19.7   1.1   <1   <1   <1	Borehole ID	Inst ID	Installation	Reading	Pressure		Depth	Base of	Groundwater	Pressure									Remarks
BH1   1   24.20   11:16:00   1010   14   0.00   0.02   -0.1   <0.1   <0.1   19.6   1.2   <1   <1   <1   <1   <1   <1   <1   <	BH1	1	24.20	11:15:00	1010	14	0.00	24.64	4.64	-0.3	-0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1   1   24.20   11:16:30   1010   14   0.00   0.02   -0.1   <0.1   <0.1   <0.1   19.6   1.2   <1   <1   <1   <1   <1   <1   <1   <	BH1	1	24.20	11:15:30	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	19.7	1.1	<1	<1		
BH1	BH1	1	24.20	11:16:00	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	19.6	1.2	<1	<1		
BH1         1         24.20         11:17:30         1010         14         0.00         -0.2         -0.1         <0.1	BH1	1	24.20	11:16:30	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	19.6	1.2	<1	<1		
BH1         1         24.20         11:18:00         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         19.6         1.2         <1         <1           BH1         1         24.20         11:19:00         1010         14         0.00         -0.2         -0.1         <0.1	BH1	1	24.20	11:17:00	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	19.6	1.2	<1	<1		
BH1         1         24.20         11:19:00         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         19.6         1.2         <1         <1           BH1         1         24.20         11:20:00         1010         14         0.00         15.33         4.61         -0.2         -0.1         <0.1	BH1	1	24.20	11:17:30	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	19.6	1.2	<1	<1		
BH1         1         24.20         11:20:00         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         19.6         1.2         <1         <1           BH1         2         15.50         11:25:00         1010         14         0.00         15.33         4.61         -0.2         -0.1         <0.1	BH1	1	24.20	11:18:00	1010		0.00			-0.2		<0.1	<0.1	19.6		<1	<1		
BH1         2         15.50         11:25:00         1010         14         0.00         15.33         4.61         -0.2         -0.1         <0.1         <0.1         20.9         <0.1         <1         <1           BH1         2         15.50         11:25:30         1010         14         0.00         -0.2         -0.1         <0.1		1	24.20		1010	14	0.00				-0.1	<0.1	<0.1	19.6		<1	<1		
BH1         2         15.50         11:25:30         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         17.1         2.1         <1         <1           BH1         2         15.50         11:26:00         1010         14         0.00         -0.2         -0.1         <0.1	BH1	1	24.20	11:20:00	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	19.6	1.2	<1	<1		
BH1         2         15.50         11:25:30         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         17.1         2.1         <1         <1           BH1         2         15.50         11:26:00         1010         14         0.00         -0.2         -0.1         <0.1																			
BH1         2         15.50         11:26:00         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         17.8         1.8         <1         <1           BH1         2         15.50         11:26:30         1010         14         0.00         -0.2         -0.1         <0.1	BH1	2	15.50	11:25:00	1010	14	0.00	15.33	4.61	-0.2	-0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1         2         15.50         11:26:30         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         18.2         1.5         <1         <1           BH1         2         15.50         11:27:00         1010         14         0.00         -0.2         -0.1         <0.1		2	15.50		1010	14	0.00			-0.2	-0.1	<0.1	<0.1	17.1	2.1	<1	<1		
BH1         2         15.50         11:27:00         1010         14         0.00         -0.2         -0.1         <0.1         <0.1         18.8         1.0         <1         <1           BH1         2         15.50         11:27:30         1010         14         0.00         -0.2         -0.1         <0.1	BH1	2	15.50	11:26:00	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	17.8	1.8	<1	<1		
BH1     2     15.50     11:27:30     1010     14     0.00     -0.2     -0.1     <0.1	BH1	2	15.50		1010	14	0.00			-0.2	-0.1	<0.1	<0.1	18.2	1.5	<1	<1		
BH1     2     15.50     11:28:00     1010     14     0.00     -0.2     -0.1     <0.1     <0.1     19.1     0.9     <1     <1       BH1     2     15.50     11:29:00     1010     14     0.00     -0.2     -0.1     <0.1	BH1	2	15.50	11:27:00	1010	14	0.00				-0.1	<0.1	<0.1	18.8	1.0	<1	<1		
BH1 2 15.50 11:29:00 1010 14 0.00 -0.2 -0.1 <0.1 <0.1 19.1 0.9 <1 <1		2			1010	14	0.00			-0.2		<0.1	<0.1	19.1	0.9	<1	<1		
		2										<0.1	<0.1			<1			
BH1 2 15.50 11:30:00 1010 14 0.00 -0.2 -0.1 <0.1 19.1 0.9 <1 <1 <		2	15.50	11:29:00	1010		0.00			-0.2		<0.1	<0.1	19.1	0.9	<1	<1		
	BH1	2	15.50	11:30:00	1010	14	0.00			-0.2	-0.1	<0.1	<0.1	19.1	0.9	<1	<1		

Project No		D5061-15							Project		Central S	Somers To	own, Lond	don				Sheet No
Date		12/04/2016		]					State of Gro	ound	Dry Light							C2-4/2
Operator		AG		]					Wind Direct		N/A Slight							1
Equipment	Used	LMSx (1463)	/ Dip Meter	(5303)					Precipitation		None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	]
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH4	1	16.00	10:45:00	1012	14	0.00	16.15	9.94	0.2	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	10:45:30	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:46:00	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:46:30	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:47:00	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:47:30	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:48:00	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:49:00	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	10:50:00	1012	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
BH7	1	30.36	11:45:00	1009	14	0.00	29.28	19.56	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH7	1	30.36	11:45:30	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH7	1	30.36	11:46:00	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH7	1	30.36	11:46:30	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH7	1	30.36	11:47:00	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH7	1	30.36	11:47:30	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH7	1	30.36	11:48:00	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH7	1	30.36	11:49:00	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH7	1	30.36	11:50:00	1009	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		

Project No		D5061-15		]					Project		Central S	Somers To	own, Lond	don				Sheet No
Date		12/04/2016		1					State of Gro	ound	Dry							C2-4/3
				_					Wind		Light							
Operator		AG							Wind Direct	ion	N/A							
									Cloud Cove	r	Slight							
Equipment	Used	LMSx (1463)	/ Dip Meter	(5303)					Precipitation	า	None							
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	]
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH9	1	7.50	12:00:00	1008	14	0.00	7.33	2.72	0.2	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH9	1	7.50	12:00:30	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.7	<0.1	<1	<1		
ВН9	1	7.50	12:01:00	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	12:01:30	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	12:02:00	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
ВН9	1	7.50	12:02:30	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	12:03:00	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	12:04:00	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	12:05:00	1008	14	0.00			0.1	0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH10	1	30.30	12:15:00	1008	14	0.00	30.32	15.28	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH10	1	30.30	12:15:30	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.5	<0.1	<1	<1		
BH10	1	30.30	12:16:00	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.3	<0.1	<1	<1		
BH10	1	30.30	12:16:30	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.3	<0.1	<1	<1		
BH10	1	30.30	12:17:00	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.3	<0.1	<1	<1		
BH10	1	30.30	12:17:30	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.3	<0.1	<1	<1		
BH10	1	30.30	12:18:00	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.3	<0.1	<1	<1		
BH10	1	30.30	12:19:00	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.3	<0.1	<1	<1		
BH10	1	30.30	12:20:00	1008	14	0.00			0.0	<0.1	<0.1	<0.1	20.3	<0.1	<1	<1		

Project No		D5061-15		]					Project		Central S	Somers To	own, Lond	don				Sheet No
Date		23/05/2016							State of Gro	ound	Dry							C2-5/1
				_					Wind		Light							
Operator		AG							Wind Direct	ion	N/A							
				<del>-</del>					Cloud Cove	r	Slight							
Equipment	Used	LMSx (1463)	/ Dip Meter	(5303)					Precipitation	า	None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	1
	ID	Depth of	Time of	Barometric	Air temp	Reading	Dip to	Depth to	Differential	FlowRate	CH4	CH4	O2	CO2	СО	H2S	Nitrogen	_
Borehole ID	Inst ID	Installation (m BGL)	Reading hh:mm:ss	Pressure (mbars)	(°C)	Depth (mBGL)	Base of Pipe	Groundwater (m BGL)	Pressure (Pa)	(l/hr)	(% vol)	(% LEL)	(% vol)	(% vol)	(ppm)	(ppm)	(%vol)	Remarks
BH1	1	24.20	14:35:00	1019	20	0.00	24.64	4.76	0.1	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	1	24.20	14:35:30	1019	20	0.00		*****	0.0	<0.1	<0.1	<0.1	20.2	0.3	<1	<1		
BH1	1	24.20	14:36:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.4	<1	<1		
BH1	1	24.20	14:36:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.4	<1	<1		
BH1	1	24.20	14:37:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.4	<1	<1		
BH1	1	24.20	14:37:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.4	<1	<1		
BH1	1	24.20	14:38:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.4	<1	<1		
BH1	1	24.20	14:39:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.4	<1	<1		
BH1	1	24.20	14:40:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.4	<1	<1		
BH1	2	15.50	14:45:00	1019	20	0.00	15.33	4.74	0.1	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	2	15.50	14:45:30	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.6	0.7	<1	<1		
BH1	2	15.50	14:46:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.5	8.0	<1	<1		
BH1	2	15.50	14:46:30	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.5	8.0	<1	<1		
BH1	2	15.50	14:47:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.5	0.8	<1	<1		
BH1	2	15.50	14:47:30	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.5	8.0	<1	<1		
BH1	2	15.50	14:48:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.5	8.0	<1	<1		
BH1	2	15.50	14:49:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.5	0.8	<1	<1		
BH1	2	15.50	14:50:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	19.5	0.8	<1	<1		
																	<u> </u>	<b></b>
																	<u> </u>	
										•								· ·

Project No		D5061-15							Project		Central S	Somers To	own, Lond	lon				Sheet No
Date		23/05/2016		]					State of Gro	ound	Dry							C2-5/2
				_					Wind		Light							
Operator		AG		1					Wind Direct	ion	N/A							1
				=					Cloud Cove	r	Slight							
Equipment	Used	LMSx (1463)	/ Dip Meter	(5303)					Precipitation	า	None							1
									·			1	T	T	T	T		•
		•	T	•		T	T	_		tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	
	₽	Depth of	Time of	Barometric	Air temp	Reading	Dip to	Depth to	Differential	FlowRate	CH4	CH4	O2	CO2	со	H2S	Nitrogen	
Borehole ID	Inst ID	Installation	Reading	Pressure	(°C)	Depth	Base of	Groundwater	Pressure	(l/hr)	(% vol)	(% LEL)	(% vol)	(% vol)	(ppm)	(ppm)	(%vol)	Remarks
5111		(m BGL)	hh:mm:ss	(mbars)		(mBGL)	Pipe	(m BGL)	(Pa)									
BH4	1	16.00	14:00:00	1019	20	0.00	16.15	9.96	0.0	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH4	1	16.00	14:00:30	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.5	0.1	<1	<1		
BH4	1	16.00	14:01:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.4	0.1	<1	<1		
BH4	1	16.00	14:01:30	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.4	0.1	<1	<1		
BH4	1	16.00	14:02:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.4	0.1	<1	<1		
BH4	1	16.00	14:02:30	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.4	0.1	<1	<1		
BH4	1	16.00	14:03:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.4	0.1	<1	<1		
BH4	1	16.00	14:04:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.4	0.1	<1	<1		
BH4	1	16.00	14:05:00	1019	20	0.00			0.0	0.1	<0.1	<0.1	20.4	0.1	<1	<1		

Project No		D5061-15		]					Project		Central	Somers To	own, Lond	don				Sheet No
Date		23/05/2016		1					State of Gro	ound	Dry							C2-5/3
				<b>_</b>					Wind		Light							<u> </u>
Operator		AG		]					Wind Direct	ion	N/A							]
				-					Cloud Cove	r	Slight							
Equipment	Used	LMSx (1463)	/ Dip Meter	(5303)					Precipitation	n	None							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1	<0.1	7
Borehole ID	Inst ID	Depth of Installation (m BGL)	Time of Reading hh:mm:ss	Barometric Pressure (mbars)	Air temp (°C)	Reading Depth (mBGL)	Dip to Base of Pipe	Depth to Groundwater (m BGL)	Differential Pressure (Pa)	FlowRate (l/hr)	CH4 (% vol)	CH4 (% LEL)	O2 (% vol)	CO2 (% vol)	CO (ppm)	H2S (ppm)	Nitrogen (%vol)	Remarks
BH7	1	30.36	15:05:00	1019	20	0.00	29.28	19.63	0.1	0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH7	1	30.36	15:05:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.1	0.1	<1	<1		
BH7	1	30.36	15:06:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:06:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:07:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:07:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:08:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:09:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH7	1	30.36	15:10:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.0	0.2	<1	<1		
BH9	1	7.50	15:20:00	1019	20	0.00	7.33	2.73	0.0	<0.1	<0.1	<0.1	20.9	<0.1	<1	<1		
BH9	1	7.50	15:20:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	15:21:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.4	<0.1	<1	<1		
BH9	1	7.50	15:21:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.4	<0.1	<1	<1		
BH9	1	7.50	15:22:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.4	<0.1	<1	<1		
ВН9	1	7.50	15:22:30	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.4	<0.1	<1	<1		
BH9	1	7.50	15:23:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.4	<0.1	<1	<1		
ВН9	1	7.50	15:24:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.4	<0.1	<1	<1		
BH9	1	7.50	15:25:00	1019	20	0.00			0.0	<0.1	<0.1	<0.1	20.4	<0.1	<1	<1		

Project No		D5061-15							Project		Central S	Somers To	wn, Lond	lon				Sheet No
Date		20/06/2016							State of Gro	ound	Damp							C2-6/1
				_					Wind		Light							_
Operator		AG							Wind Direct		N/A							_
									Cloud Cove		Overcas	t						_
Equipment	Used	LMSx 1463							Precipitation	า	Slight							
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1		1
	ID	Depth of	Time of	Barometric	Air temp	Reading	Dip to	Depth to	Differential	FlowRate	CH4	CH4	O2	CO2	СО	H2S	VOCs	
Borehole ID	Inst ID	Installation	Reading	Pressure	(°C)	Depth	Base of	Groundwater	Pressure	(l/hr)	(% vol)	(% LEL)	(% vol)	(% vol)	(ppm)	(ppm)	(ppm)	Remarks
DUIA		(m BGL)	hh:mm:ss	(mbars)		(mBGL)	Pipe	(m BGL)	(Pa)	0.00	0.4	0.4	00.0	0.4		<u> </u>		
BH1	1	24.20	15:10:00	1011	18	0.00	24.64	4.74	0.0	0.00	<0.1	<0.1	20.9	<0.1	<1	<1	<b></b>	_
BH1	1	24.20	15:10:30							0.00	<0.1	<0.1	20.5	0.2	<1	<1	<b></b>	_
BH1	1	24.20	15:11:00							0.00	<0.1	<0.1	20.5	0.2	<1	<1	<b></b>	
BH1	1	24.20	15:11:30							0.00	<0.1	<0.1	20.5	0.2	<1	<1	ļ	
BH1	1	24.20	15:12:00							0.00	<0.1	<0.1	20.5	0.2	<1	<1	<u> </u>	
BH1	1	24.20	15:12:30							0.00	<0.1	<0.1	20.5	0.2	<1	<1		
BH1	1	24.20	15:13:00							0.00	<0.1	<0.1	20.5	0.2	<1	<1		
BH1	1	24.20	15:14:00							0.00	<0.1	<0.1	20.5	0.2	<1	<1		
BH1	1	24.20	15:15:00							0.00	<0.1	<0.1	20.5	0.2	<1	<1		
BH1	2	15.50	15:20:00	1011	18	0.00	16.33	4.74	-0.2	-0.10	<0.1	<0.1	20.9	<0.1	<1	<1		
BH1	2	15.50	15:20:30						-0.1	0.00	<0.1	<0.1	19.6	1.2	<1	<1		
BH1	2	15.50	15:21:00						0.0	0.00	<0.1	<0.1	19.4	1.6	<1	<1		
BH1	2	15.50	15:21:30						0.0	0.00	<0.1	<0.1	19.1	1.9	<1	<1		
BH1	2	15.50	15:22:00						0.0	0.00	<0.1	<0.1	19.1	1.9	<1	<1		
BH1	2	15.50	15:22:30						0.0	0.00	<0.1	<0.1	19.1	1.9	<1	<1		
BH1	2	15.50	15:23:00				1		0.0	0.00	<0.1	<0.1	19.1	1.9	<1	<1		
BH1	2	15.50	15:24:00				1		0.0	0.00	<0.1	<0.1	19.1	1.9	<1	<1		
BH1	2	15.50	15:25:00						0.0	0.00	<0.1	<0.1	19.1	1.9	<1	<1	<u> </u>	+
																	<u> </u>	+
																		+
		<del> </del>	<del> </del>			<del> </del>	<del> </del>			<del> </del>		<u> </u>						+
		<del> </del>	<del> </del>				<del> </del>			<del> </del>		1			<u> </u>	<del>                                     </del>	<del>                                     </del>	
																		+
																		1

Project No		D5061-15							Project		Central S	Somers To	own, Lond	don				Sheet No
Date		20/06/2016							State of Gro	ound	Damp							C2-6/2
									Wind		Light							
Operator		AG							Wind Direct	ion	N/A							
				-1					Cloud Cove	r	Overcas	t						
Equipment	Used	LMSx 1463							Precipitation		Slight							]
									Detec	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1		1
		Depth of	Time of	Barometric	A in to man	Reading	Dip to	Depth to	Differential	EL D.	CH4	0114	00	000	00	1100	1/00	
Borehole ID	Inst ID	Installation	Reading	Pressure	Air temp	Depth	Base of	Groundwater	Pressure	FlowRate		CH4	O2	CO2	CO	H2S	VOCs	Remarks
	≗	(m BGL)	hh:mm:ss	(mbars)	(°C)	(mBGL)	Pipe	(m BGL)	(Pa)	(l/hr)	(% vol)	(% LEL)	(% vol)	(% vol)	(ppm)	(ppm)	(ppm)	
BH4	1	16.00	14:00:00	1012	18	0.00	16.15	9.93	0.4	0.20	<0.1	<0.1	20.0	<0.1	<1	<1		
BH4	1	16.00	14:00:30						0.2	0.10	<0.1	<0.1	20.8	<0.1	<1	<1		
BH4	1	16.00	14:01:00						0.1	0.00	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	14:01:30						0.0	0.00	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	14:02:00						0.0	0.00	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	14:02:30						0.0	0.00	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	14:03:00						0.0	0.00	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	14:04:00						0.0	0.00	<0.1	<0.1	20.7	<0.1	<1	<1		
BH4	1	16.00	14:05:00						0.0	0.00	<0.1	<0.1	20.7	<0.1	<1	<1		
											<u> </u>			<u> </u>				
										]								
i																		

Project No		D5061-15							Project		Central	Somers To	wn, Lond	lon			_	Sheet No
Date		20/06/2016		1					State of Gro	ound	Damp							C2-6/3
				_					Wind		Light							<u> </u>
Operator		AG							Wind Direct	ion	N/A							
				<u> </u>					Cloud Cove	r	Overcas	t						
Equipment	Used	LMSx 1463							Precipitation	า	None							
									_	tion Limits	<0.1	<0.1	<0.1	<0.1	<1	<1		
D	₽	Depth of	Time of	Barometric	Air temp	Reading	Dip to	Depth to	Differential	FlowRate	CH4	CH4	O2	CO2	СО	H2S	VOCs	
Borehole ID	Inst ID	Installation (m BGL)	Reading hh:mm:ss	Pressure (mbars)	(°C)	Depth (mBGL)	Base of Pipe	Groundwater (m BGL)	Pressure (Pa)	(l/hr)	(% vol)	(% LEL)	(% vol)	(% vol)	(ppm)	(ppm)	(ppm)	Remarks
BH7	1	30.36	14:40:00	1010	18	0.00	29.28	19.54	0.1	0.00	<0.1	<0.1	20.9	<0.1	<1	<1		
BH7	1	30.36	14:40:30						0.0	0.00	<0.1	<0.1	16.5	1.2	<1	<1		
BH7	1	30.36	14:41:00						0.0	0.00	<0.1	<0.1	16.4	1.3	<1	<1		
BH7	1	30.36	14:41:30						0.0	0.00	<0.1	<0.1	16.4	1.3	<1	<1		
BH7	1	30.36	14:42:00						0.0	0.00	<0.1	<0.1	16.4	1.3	<1	<1		
BH7	1	30.36	14:42:30						0.0	0.00	<0.1	<0.1	16.4	1.3	<1	<1		
BH7	1	30.36	14:43:00						0.0	0.00	<0.1	<0.1	16.4	1.3	<1	<1		
BH7	1	30.36	14:44:00						0.0	0.00	<0.1	<0.1	16.4	1.3	<1	<1		
BH7	1	30.36	14:45:00						0.0	0.00	<0.1	<0.1	16.4	1.3	<1	<1		
ВН9	1	7.50	14:55:00	1010	18	0.00	7.33	2.67	0.1	0.00	<0.1	<0.1	20.9	<0.1	<1	<1		
BH9	1	7.50	14:55:30						0.0	0.00	<0.1	<0.1	20.6	<0.1	<1	<1		
BH9	1	7.50	14:56:00						0.0	0.00	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	14:56:30						0.0	0.00	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	14:57:00						0.0	0.00	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	14:57:30						0.0	0.00	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	14:58:00						0.0	0.00	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	14:59:00						0.0	0.00	<0.1	<0.1	20.5	<0.1	<1	<1		
BH9	1	7.50	15:00:00						0.0	0.00	<0.1	<0.1	20.5	<0.1	<1	<1		



# APPENDIX D IN SITU TESTING

Dynamic Cone Penetrometer Tests

TRL1, 2, 5 to 10



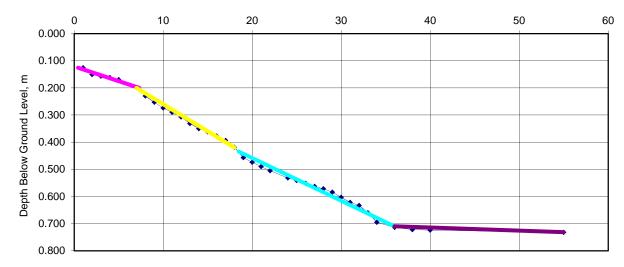
Date of Test: 06/01/2016 Test Depth: 0.000 mBGL

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.126	1	0.584	29				†		
0.151	2	0.603	30						
0.157	3	0.622	31						
0.162	4	0.633	32						
0.170	5	0.660	33						
0.199	7	0.695	34						
0.230	8	0.714	36						
0.253	9	0.722	38						
0.274	10	0.724	40						
0.290	11	0.732	55						
0.307	12								
0.331	13								
0.350	14		1						
0.362	15								
0.378	16								
0.394	17								
0.419	18								
0.457	19								
0.474	20								
0.490	21								
0.505	22								
0.532	24		1						
0.541	25		1						
0.552	26		1						
0.563	27		1						
0.572	28		†						





**CBR Values** 

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>
0.13	0.20	24
0.20	0.42	14
0.44	0.71	18
0.71	0.73	390

Notes:

Calculated using DMRB Vol 7,
Section 3, Part 2, HD29/08 (2008)

Project Central Somers Town, London

Project No. D5061-15 Carried out for AKT II Hole



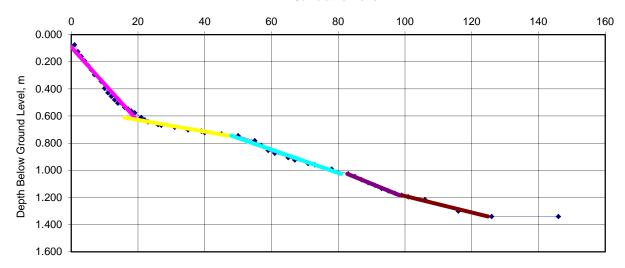
Date of Test: 06/01/2016 Test Depth: 0.000 mBGL

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.075	1	0.732	45						
0.126	2	0.745	50						
0.161	3	0.782	55						
0.194	4	0.817	57						
0.226	5	0.853	59						
0.260	6	0.875	61						
0.296	7	0.907	65						
0.345	9	0.924	67						
0.396	10	0.950	71						
0.429	11	0.960	73						
0.455	12	0.992	78						
0.481	13	1.026	83						
0.506	14	1.046	85						
0.536	16	1.069	87						
0.548	17	1.092	89						
0.564	18	1.111	91						
0.577	19	1.134	93						
0.611	21	1.152	95						
0.628	22	1.169	97						
0.643	23	1.184	99						
0.664	26	1.196	101						
0.668	27	1.216	106						
0.684	31	1.301	116						
0.703	35	1.340	126						
0.712	39	1.341	146						
0.723	40								





**CBR Values** 

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>
0.08	0.61	9.2
0.61	0.75	64
0.75	1.03	31
1.03	1.18	26
1.18	1.34	44

Notes:

Calculated using DMRB Vol 7,
Section 3, Part 2, HD29/08 (2008)

Project

Central Somers Town, London

Project No. D5061-15 Carried out for AKT II Hole



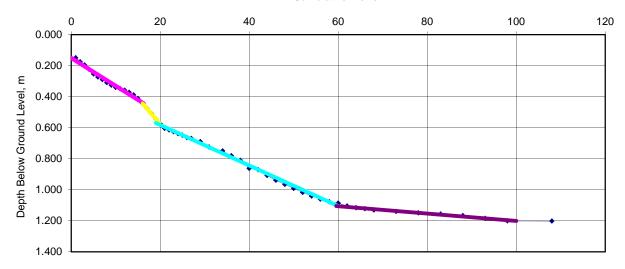
Date of Test: 06/01/2016 Test Depth: 0.000 mBGL

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.149	1	0.669	27	1.201	98				
0.175	2	0.690	29	1.202	108				
0.196	3	0.725	31						
0.224	4	0.750	34						
0.254	5	0.781	36						
0.273	6	0.811	38						
0.290	7	0.862	40						
0.309	8	0.871	42						
0.326	9	0.908	44						
0.340	10	0.939	46						
0.349	11	0.966	48						
0.359	12	0.991	50						
0.372	13	1.017	52						
0.389	14	1.041	54						
0.412	15	1.061	56						
0.444	16	1.078	58						
0.475	17	1.086	60						
0.509	18	1.105	62						
0.544	19	1.116	64						
0.575	20	1.122	66						
0.604	21	1.131	68						
0.615	22	1.140	73						
0.626	23	1.149	78						
0.639	24	1.156	83						
0.649	25	1.167	88						
0.663	26	1.184	93						

#### **Cumulative Blows**



**CBR Values** 

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>
0.15	0.44	14
0.44	0.57	7.4
0.57	1.11	19
1.11	1.20	120

Notes:

Calculated using DMRB Vol 7, Section 3, Part 2, HD29/08 (2008) Project

Central Somers Town, London

Project No. D5061-15 Carried out for AKT II Hole



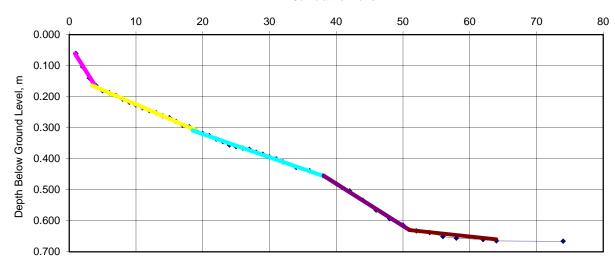
Date of Test: 06/01/2016 Test Depth: 0.000 mBGL

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.061	1	0.370	27		1				
0.104	2	0.379	28		1				
0.140	3	0.386	29						
0.164	4	0.394	30						
0.181	5	0.401	31						
0.187	6	0.410	32						
0.196	7	0.428	34						
0.208	8	0.439	36						
0.218	9	0.455	38						
0.227	10	0.480	40						
0.236	11	0.504	42						
0.245	12	0.534	44						
0.252	13	0.566	46						
0.262	14	0.593	48						
0.268	15	0.614	50						
0.280	16	0.633	52						
0.292	17	0.638	54						
0.297	18	0.651	56						
0.309	19	0.656	58						
0.319	20	0.661	62						
0.326	21	0.665	64						
0.337	22	0.666	74						
0.345	23								
0.356	24								
0.361	25								
0.366	26								





**CBR Values** 

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>
0.06	0.16	7.1
0.16	0.31	28
0.31	0.46	35
0.46	0.63	19
0.63	0.66	67

Notes:

Project

Central Somers Town, London

Calculated using DMRB Vol 7, Section 3, Part 2, HD29/08 (2008) Project No. D5061-15 Carried out for AKT II Hole



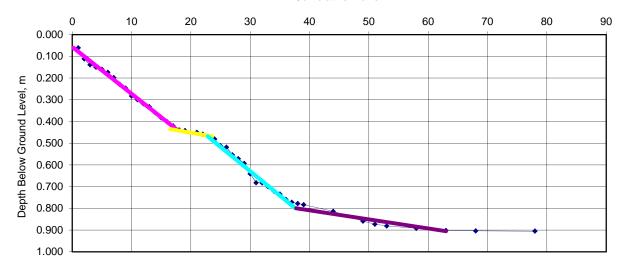
Date of Test: 06/01/2016 Test Depth: 0.000 mBGL

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.061	1	0.572	28						
0.112	2	0.593	29						
0.139	3	0.641	30						
0.150	4	0.682	31						
0.160	5	0.683	32						
0.174	6	0.701	33						
0.198	7	0.721	34						
0.229	8	0.735	35						
0.247	9	0.759	36						
0.283	10	0.772	37						
0.300	11	0.778	38						
0.318	12	0.783	39						
0.332	13	0.814	44						
0.360	14	0.859	49						
0.383	15	0.873	51						
0.402	16	0.881	53						
0.421	17	0.892	58						
0.439	18	0.902	63						
0.442	19	0.904	68						
0.450	21	0.905	78						
0.459	22								
0.469	23								
0.481	24								
0.513	25								
0.519	26								
0.554	27								





**CBR Values** 

Calculated using DMRB Vol 7,

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>		
0.06	0.44	11		
0.44	0.47	47		
0.47	0.80	11		
0.80	0.91	120		
·	· ·	·		

Notes:

Project

Central Somers Town, London

Section 3, Part 2, HD29/08 (2008)

Project No. D5061-15 Carried out for AKT II Hole



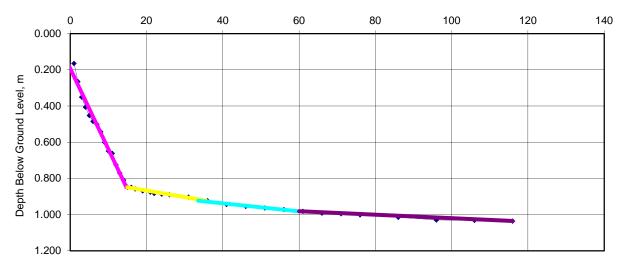
Date of Test: 06/01/2016 Test Depth: 0.000 mBGL

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.165	1	0.964	51						
0.265	2	0.973	56						
0.351	3	0.982	61						
0.407	4	0.992	66						
0.453	5	0.996	71						
0.485	6	1.002	76						
0.501	7	1.015	86						
0.543	8	1.030	96						
0.601	9	1.032	106						
0.649	10	1.036	116						
0.662	11								
0.725	12								
0.771	13								
0.810	14								
0.849	15								
0.850	16								
0.859	17								
0.869	19								
0.876	21								
0.883	22								
0.887	24								
0.890	26								
0.904	31								
0.924	36								
0.944	41								
0.955	46								





**CBR Values** 

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>		
0.17	0.85	5.4		
0.85	0.92	80		
0.92	0.98	130		
0.98	1.04	290		

Notes:

Calculated using DMRB Vol 7,
Section 3, Part 2, HD29/08 (2008)

Project

Central Somers Town, London

Project No. Carried out for D5061-15 AKT II Hole



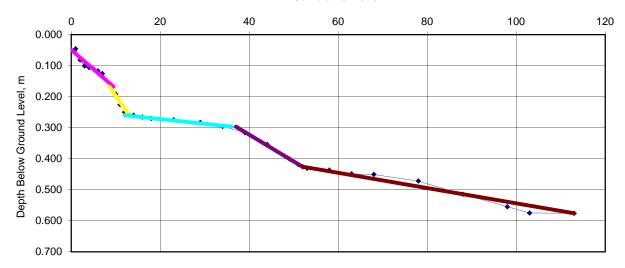
Date of Test: Test Depth: 0.000 mBGL 06/01/2016

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.046	1	0.451	68						
0.082	2	0.472	78						
0.101	3	0.515	88						
0.106	4	0.555	98						
0.111	5	0.575	103						
0.117	6	0.576	113						
0.126	7								
0.168	9								
0.192	10								
0.226	11								
0.250	12								
0.259	13								
0.260	14								
0.266	16								
0.270	18								
0.275	23								
0.283	29								
0.296	34								
0.316	39								
0.354	44								
0.401	49								
0.419	51								
0.426	52								
0.431	53								
0.437	58								
0.449	63					_			





**CBR Values** 

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>
0.05	0.17	20
0.17	0.26	13
0.26	0.30	180
0.30	0.43	30
0.43	0.58	100

Notes:

Central Somers Town, London

Calculated using DMRB Vol 7, Section 3, Part 2, HD29/08 (2008) Project No. D5061-15 Carried out for AKT II

Project

Hole



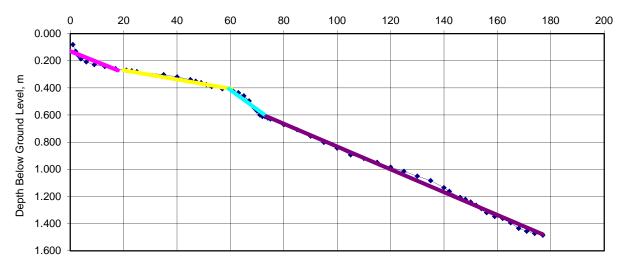
Date of Test: 06/01/2016 Test Depth: 0.000 mBGL

Method: TRRL Probe

Remarks:

Depth, mBGL	Cumulative Blows								
0.081	1	0.611	72	1.394	165				
0.131	2	0.612	73	1.435	168				
0.161	3	0.622	74	1.456	171				
0.186	4	0.630	75	1.472	174				
0.209	6	0.671	80	1.486	177				
0.229	9	0.709	85						
0.243	13	0.756	90						
0.259	17	0.802	95						
0.270	21	0.844	100						
0.275	23	0.894	105						
0.280	25	0.920	110						
0.303	35	0.949	115						
0.319	40	0.985	120						
0.340	45	1.015	125						
0.351	47	1.051	130						
0.362	49	1.083	135						
0.376	51	1.135	140						
0.390	53	1.163	142						
0.407	57	1.207	146						
0.423	61	1.222	148						
0.436	63	1.241	150						
0.458	65	1.265	152						
0.496	67	1.290	154						
0.549	69	1.319	156						
0.571	70	1.348	159						
0.599	71	1.362	162						





**CBR Values** 

Top, mBGL	Base, mBGL	CBR, % <sup>1</sup>		
0.08	0.27	34		
0.27	0.41	75		
0.41	0.61	18		
0.61	1.48	31		

Notes:

Project

Central Somers Town, London

Calculated using DMRB Vol 7, Section 3, Part 2, HD29/08 (2008) Project No. Carried out for D5061-15 AKT II Hole



# APPENDIX E GEOTECHNICAL LABORATORY TEST RESULTS

Index Properties – Summary of Results	INDX1 and 2
Particle Size Distribution Analyses	PSD1 to 4
One Dimensional Consolidation Test	OED1 to 6
Unconsolidated Undrained Triaxial Compression Tests  – Summary of Results	UUSUM1 to 3
Consolidated undrained triaxial compression with measurement of pore pressure (Multistage)	CUTXLM1 and 2
Soil Sample Analysis Test Reports (Chemical Tests)	EFS/160970, 80 and 81

### INDEX PROPERTIES - SUMMARY OF RESULTS

roject No	Project	Name												
D5061-15	Central Somers Town, London													
		Samp	ole			р	$p_d$	W	< 425	$W_{L}$	$W_{P}$	Ι <sub>P</sub>	p <sub>s</sub>	
Hole No.	No.	Dept	h (m)	type	Soil Description				μm sieve					Remarks
	140.	from	to	iypo		Mg	/m³	%	%	%	%		Mg/m <sup>3</sup>	
BH1	16	4.20	4.65	UT	Stiff brown CLAY.								2.79-p	
BH1	17	4.70		D	Light brown slightly sandy CLAY.			30	100 n	73 a	32	41		
BH1	29	12.50	12.95	UT	Very stiff to firm greyish brown slightly sandy silty CLAY			22					2.68-p	
BH1	30	13.00		D	Dark brown slightly sandy CLAY.			24	100 n	70 a	26	44		
BH1	39	20.00		D	Brown slightly sandy slightly gravelly CLAY.			17	98 s	48 a	23	25		
BH1	43	21.80		D	Greyish brown slightly sandy CLAY.			13	100 n	42 a	20	22		
BH1	46	24.00		D	Reddish brown slightly sandy CLAY.			23	100 n	81 a	31	50		
BH2	10	1.20		D	Brown slightly sandy slightly gravelly CLAY.			34	95 s	64 a	30	34		
BH2	12	2.20	2.65	UT	Firm brown CLAY.								2.70-р	
BH2	16	4.70		D	Brown slightly sandy slightly gravelly CLAY.			31	100 n	76 a	32	44		
BH2	23	9.00		D	Brown slightly sandy CLAY.			26	100 n	77 a	31	46		
BH2	24	9.50	9.95	UT	Stiff to very stiff laminated greyish brown slightly sandy CLAY.			25					2.74-p	
BH2	29	13.00		D	Brown slightly sandy CLAY.			23	100 n	75 a	31	44		
BH2	37	19.00		D	Brown slightly sandy silty CLAY.			20	100 n	58 a	24	34		
BH3	10	1.20		D	Dark brown slightly sandy slightly gravelly			31	90 s	53 a	34	19		
BH3	12	2.20	2.65	UT	CLAY. Stiff brown mottled grey slightly gravelly								2.77-p	
BH3	21	7.70		D	CLAY with mudstone.  Dark brown slightly sandy slightly gravelly CLAY.			32	96 n	77 a	34	43		
BH3	32	15.50	15.95	UT	Very stiff greyish brown slightly sandy CLAY			21					2.69-p	
BH3	33	16.00		D	becoming SILT towards base.  Dark brown slightly sandy CLAY.			23	100 n	64 a	27	37		
BH3	41	21.35		D	Brown and grey slightly sandy CLAY.			20	100 n	65 a	30	35		
BH4	20	6.20		D	Brown slightly sandy CLAY.			29	100 n	76 a	30	46		
BH4	27	9.90		D	Brown slightly sandy CLAY.			27	100 n	76 a	35	41		
BH4	33	15.00		D	Brown slightly sandy silty CLAY.			19	100 n	51 a	21	30		
BH4	39	19.00		D	Brown slightly sandy CLAY.			26	100 n	70 a	30	40		
BH5	28	13.00		D	Dark brown slightly sandy CLAY.			25	100 n	78 a	29	49		
BH5	36	19.00		D	Brown slightly sandy CLAY.			26	100 n	78 a	29	49		
BH7	5	1.50	1.95	D	Brown slightly sandy CLAY.			29	100 H	78 a	32	46		
BH7			1.85	D	Brown slightly sandy CLAY.					78 a 74 a	30			
	13	5.00			Brown slightly sandy CLAY.			32	100 n			44		
BH7	19	8.50		D	Brown slightly sandy slightly gravelly CLAY.			21	100 n	64 a	25	39		
BH7	28	14.00		D	Greyish brown slightly sandy silty CLAY.			24	100 n	68 a	28	40		
BH7	36	19.00		D	Brownish grey slightly sandy CLAY.			12	100 n	44 a	17	27		
BH7	45	24.00	24.45	D	- man g. a, angmy amay alim.			26	100 s	89 a	35	54		

General notes: All above tests carried out to BS1377 : 1990 unless annotated otherwise. See individual test reports for further details.

 $\text{Key:} \qquad \qquad p \qquad \text{bulk density, linear} \qquad \qquad W_{\text{L}} \qquad \qquad W_{\text{P}} \qquad \text{Plastic limit} \qquad \qquad <425 \text{um preparation} \qquad \qquad p_{\text{S}} \quad \text{particle density}$ 

 $p_d$  dry density a 4 point cone test NP non - plastic n from natural soil -g = gas jar

moisture content b 1 point cone test  $I_P$  Plasticity Index s sieved specimen -p = small pyknometer

QA Ref

SLR 1
Rev 91
Mar 12
Environmental Scientifics Group

Printed:29/02/2016 11:13

INDX

Table

#### INDEX PROPERTIES - SUMMARY OF RESULTS Project No Project Name D5061-15 Central Somers Town, London Sample $W_{\mathsf{P}}$ $W_{L}$ W р $p_d$ < 425 $p_s$ μm Hole No. Depth (m) Soil Description Remarks sieve No. type from to Mg/m<sup>3</sup> % Greyish brown slightly sandy silty CLAY. BH7 51 28.00 D 21 42 100 n 72 a 30 Brown slightly gravelly silty CLAY. ВН9 12 D 4.00 31 100 n 76 a 34 42 Brown slightly sandy slightly gravelly CLAY. D 20 8.50 25 71 a 28 43 98 n Brown slightly sandy CLAY. ВН9 D 33 16.00 25 100 n 73 a 31 42 Brown slightly sandy CLAY. BH9 47 24.40 D 24 15 100 n 44 a 20 Brown slightly sandy slightly gravelly CLAY. BH10 9 3.00 D 90 n 43 Brown CLAY. BH10 17 7.00 D 31 100 n 78 a 30 48 Brown slightly sandy CLAY. BH10 29 14.00 D 100 n 55 a 34 Brown slightly sandy CLAY. BH10 40 20.50 D 23 100 n 79 a 31 48 Red mottled grey slightly sandy CLAY. BH10 D 54 29.00 22 100 n 75 a 30 45

General notes: All above tests carried out to BS1377 : 1990 unless annotated otherwise. See individual test reports for further details.

Key: p bulk density, linear  $W_{L}$  Liquid limit  $W_{P}$  Plastic limit <425um preparation  $p_{s}$  particle density

 $p_d$  dry density a 4 point cone test NP non - plastic n from natural soil -g = gas jar

w moisture content b 1 point cone test  $I_P$  Plasticity Index s sieved specimen -p = small pyknometer

QA Ref SLR 1

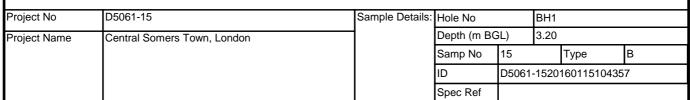
Rev 91
Mar 12

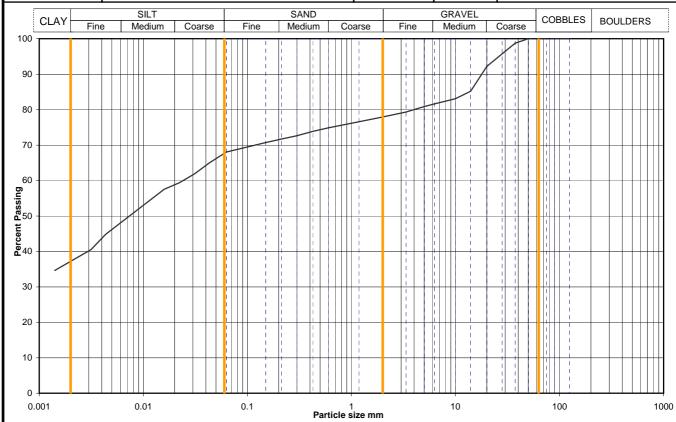
Environmental Scientifics Group

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INDX

Table





Sievin	g	Sedimentation			
Particle Size	%	Particle Size	%		
mm	Passing	mm	Passing		
125	100	0.0630	68		
90	100	0.0431	65		
75	100	0.0310	62		
63	100	0.0222	59		
50	100	0.0159	58		
37.5	99	0.0084	51		
28	96	0.0044	45		
20	92	0.0031	41		
14	85	0.0014	35		
10	83				
6.3	82				
5.0	81				
3.35	79				
2.00	78				
1.18	77	Particle densit	v Ma/m3		
0.600	75	i article derisit	y, Mg/IIIS		
0.425	74	2.65 a	ssumed		
0.300	73	Dry mass of o	ample ka		
0.212	72	Dry mass of sample, kg			
0.150	71	0.4			
0.063	68	9.4			

Soil description	Grey and brown slightly sand CLAY.	dy slightly g	ravelly				
Preparation / Pretreatment	Sieve: natural material Hydro: as BS1377						
Remarks							
		Whole	*<63mm				
Sample	Cobbles / boulders	0	0				
Proportions	Gravel	22	22				
*<60mm values to aid	Sand	10	10				
description only	Silt	31	31				
. ,	Clay	37	37				

Uniformity Coefficient	D <sub>60</sub> / D <sub>10</sub>	Not applicable
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	BS 1377 : Part 2 : 1990			
Test Method	Sieving 9.2 wet sieve			
	Sedimentation	9.5 hydrometer		

QA Ref

SLR 2,9 Rev 88 Aug 11





Figure

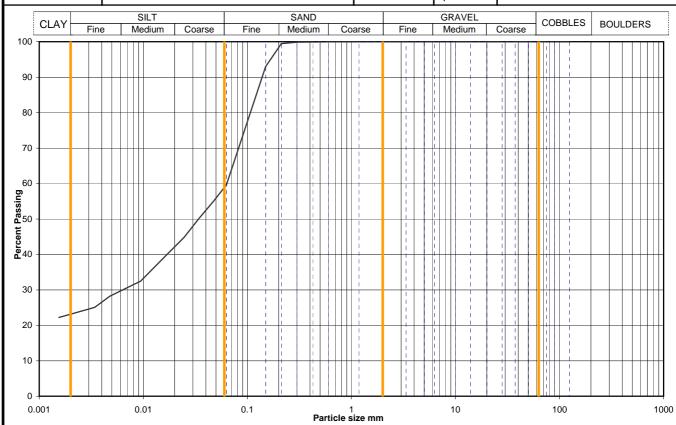
 Project No
 D5061-15
 Sample Details:
 Hole No
 BH3

 Project Name
 Central Somers Town, London
 Depth (m BGL)
 22.00

 Samp No
 42
 Type
 B

 ID
 D5061-1520160115024348

 Spec Ref
 Spec Ref



01	_	0 - 1	
Sievin	g	Sediment	ation
Particle Size	%	Particle Size	%
mm	Passing	mm	Passing
125	100	0.0630	60
90	100	0.0474	55
75	100	0.0342	50
63	100	0.0247	45
50	100	0.0177	41
37.5	100	0.0094	32
28	100	0.0048	28
20	100	0.0034	25
14	100	0.0015	22
10	100		
6.3	100		
5.0	100		
3.35	100		
2.00	100		
1.18	100	Particle density	/ Ma/m3
0.600	100	i article derisit	y, ivig/iiio
0.425	100	2.65 a	ssumed
0.300	100	Dry mass of sa	ample ka
0.212	99	Diy mass or so	ampie, ky
0.150	93	6.5	
0.063	60	0.5	

Soil description	Light greenish grey sandy C	CLAY.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS1	377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	0	0
*<60mm values to aid	Sand	41	41
description only	Silt	36	36
, ,	Clay	23	23

Uniformity Coefficient	D <sub>60</sub> / D <sub>10</sub>	Not applicable
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	BS 1377 : Part 2 : 1990			
Test Method	Sieving 9.2 wet sieve			
	Sedimentation	9.5 hydrometer		

QA Ref

SLR 2,9 Rev 88 Aug 11





Figure

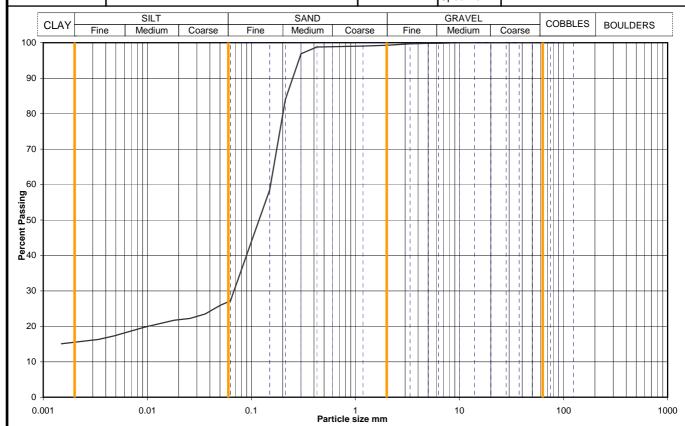
 Project No
 D5061-15
 Sample Details:
 Hole No
 BH7

 Project Name
 Central Somers Town, London
 Depth (m BGL)
 22.75

 Samp No
 44
 Type
 B

 ID
 D5061-1520160118093814

 Spec Ref
 Spec Ref



Sievin	g	Sediment	ation
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0630	27
90	100	0.0502	26
75	100	0.0360	23
63	100	0.0256	22
50	100	0.0181	22
37.5	100	0.0095	20
28	100	0.0048	17
20	100	0.0034	16
14	100	0.0015	15
10	100		
6.3	100		
5.0	100		
3.35	100		
2.00	99		
1.18	99	Particle density	, Ma/m3
0.600	99	Faitible delisity	y, ivig/iiio
0.425	99	2.65 a	ssumed
0.300	97	Dry mass of or	ample ka
0.212	84	Dry mass of sa	ampie, kg
0.150	58	17.2	
0.063	27	17.2	

Soil description	Yellowish brown slightly gra	velly very sa	ndy CLAY.
Preparation / Pretreatment	Sieve: natural material Hy	/dro: as BS1	377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	1	1
*<60mm values to aid	Sand	72	72
description only	Silt	11	11
, ,	Clay	16	16

Uniformity Coefficient	D <sub>60</sub> / D <sub>10</sub>	Not applicable
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	BS 1377 : Part 2 : 1990			
Test Method	Sieving 9.2 wet siev			
	Sedimentation	9.5 hydrometer		

QA Ref

SLR 2,9 Rev 88 Aug 11





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Figure

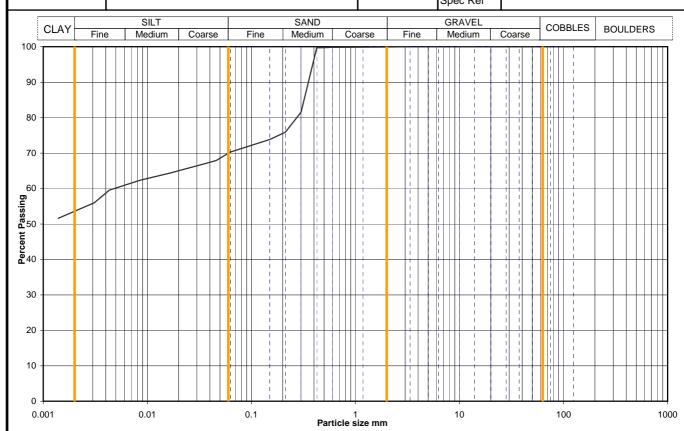
 Project No
 D5061-15
 Sample Details:
 Hole No
 BH7

 Project Name
 Central Somers Town, London
 Depth (m BGL)
 25.30

 Samp No
 47
 Type
 D

 ID
 D5061-1520160118094020

 Spec Ref
 Spec Ref



Sievin	g	Sediment	ation
Particle Size	%	Particle Size	%
mm	Passing	mm	Passing
125	100	0.0630	70
90	100	0.0458	68
75	100	0.0326	67
63	100	0.0231	66
50	100	0.0164	64
37.5	100	0.0085	62
28	100	0.0043	60
20	100	0.0031	56
14	100	0.0014	52
10	100		
6.3	100		
5.0	100		
3.35	100		
2.00	100		
1.18	100	Particle density	/ Ma/m2
0.600	100	i article derisity	y, ivig/iiio
0.425	100	2.65 a	ssumed
0.300	82	Dry mass of or	ample ka
0.212	76	Dry mass of sample, kg	
0.150	74	0.3	
0.063	70	0.3	

Soil description	Green and grey slightly san	dy CLAY.	
Preparation / Pretreatment	Sieve: natural material H	ydro: as BS1	377
Remarks			
		Whole	*<63mm
Sample	Cobbles / boulders	0	0
Proportions	Gravel	0	0
*<60mm values to aid	Sand	30	30
description only	Silt	16	16
	Clay	54	54

Uniformity Coefficient	D <sub>60</sub> / D <sub>10</sub>	Not applicable
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	BS 1377 : Par	t 2 : 1990
Test Method	Sieving	9.2 wet sieve
	Sedimentation	9.5 hydrometer

QA Ref

SLR 2,9 Rev 88 Aug 11





Figure

roject No	D5061-	15								ple		Hole No	)				Вŀ	l1						
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	511	Stiff br	rown C	LAY									Vo	ids		M <sub>v</sub>		C <sub>v</sub>	,		$C_v$			
Preparation	L	Jndist	urbed								F	Pressure		itio		·		( t <sub>50, lo</sub>	g )	( t <sub>90</sub>	0, root	: )		
Index properti	ies	Liqu	ıid limi	t %			Plastic limit 9	%			L	kPa			m	<sup>2</sup> /MN	١	m²/ye	ar	m <sup>2</sup>	²/yea	r		
(if available) Specimen det	taile		Г	In	nitia		Final				F	75 150		526 274	_	.172		3.5			3.9	4	_	_
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Diameter			F			74.		ım				600		237		.104		0.79	1	C	0.82	Į		_
Height Voids ratio			-		9.06 .953		17.87 m 0.830	ım			H	300 600		439 192	_	.037		0.89	,	(	- 0.94	+		
Moisture cont	tent		Į.		31		31 %				L	1200		523		.061		0.53			0.56	士		
Bulk density Dry density			-		.88		2.00 M 1.52 M	lg/m³ lg/m³			H	150	0.8	303	0	.042		-		<u> </u>	-	+		
Saturation			-		92		104 %				-											$\dashv$	_	_
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											$\vdash$				$\vdash$				-			+		_
Specimen taker	n 10 n	nm fro	om bas	se of	sar	nple	<u> </u>				_ <u>L</u>										_	ユ	_	_
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0.700 0.680 0.660 0.620 0.620 0.580 0.580	Central Somers	Town, Lo	andon de la companya		pplied p	oress	Depth (n Samp N ID Spec Re	0	29	61-1	!	1601	rpe 15104a g press		U <sup>-</sup>		tio	_
0.700				Ap	oplied p	oress	Samp No ID Spec Re	0	29	61-1	520°	1601	15104		-		tio	
0.680 — 0.660 — 0.640 — 0.620 — 0.600 — 0.580 —				Aţ	pplied p	oress	ID Spec Re			61-1	520	1601	15104		-		tio	_
0.680 — 0.660 — 0.640 — 0.620 — 0.600 — 0.580 —				Ap	pplied p	oress	Spec Re								void	s ra	tio	_
0.680 — 0.660 — 0.640 — 0.620 — 0.600 — 0.580 —				Ap	pplied p	press						Log	press	ure /	void	s ra	tio	
0.680 — 0.660 — 0.640 — 0.620 — 0.600 — 0.580 —				Ap	pplied p	oress	ure kPa					Log	press	ure /	void	s ra	tio	$\overline{}$
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Soil description	CLAY	firm greyis	sh brown slightly	sandy sii	ity		Applied	Voi	do		Л <sub>v</sub>		$C_{v}$		$C_{\nu}$			
Preparation	Undisturbed	i				Р	ressure	rat		1	VI <sub>V</sub>	(	$t_{50, log}$ )	) ( t	t <sub>90, roo</sub>	t )		
Index propertie	es Liquid lim	it %	Plastic limit	%			kPa			m <sup>2</sup>	/MN	Ι,	m²/year	n	n²/yea	ar		
( if available )							0	0.69			_				_		_	=
Specimen deta Particle density		Initial 2.68	Final measured	Mg/m³		-	150 300	0.67			094 105		30 5.9		32 6.2			
Diameter	y			mm			600	0.60			089		6.1		7			_
Height		19.04		mm			300	0.60	_		016		-		-			_
Voids ratio Moisture conte	ent	0.695 23	0.586	%		$\vdash$	600 1200	0.59			018 053	+	14 2	+	15 2	-	—	
Bulk density		1.95	2.08	Mg/m <sup>3</sup>			150	0.58			023		-		-			
Dry density Saturation		1.58		Mg/m³ %		-												
Average tempe	erature for test	90		% C												+		_
	·					F								Ţ		1	_	_
Swelling pressu	ure	n	ot measured k	Pa		$\vdash$						+		+	—	+	—	
Notes :						F						上		T		士		_
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Specimen taken	10 mm from ba	se of sam	ple			$\vdash$						+		+	—	+	—	—
A Ref			)		do	亡				_								

roject No	D5061-15		Sample	Hole No	)		ВІ	<del>1</del> 2		
roject Name	Central Somers	Town, London	Details:	Depth (r	n BGL	)	2.:	20		
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				Spec Re			020.0			
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0.000			Applied pres	sure kPa				Log pressu	re / voids ra	atio
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0.000										
0.840 -										
0.040										
0.820 -				8						
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			Applied p	essure kF	a a					
Soil description	on Firm brown	CLAY.		Applied				C <sub>v</sub>	C <sub>v</sub>	
Preparation	Undisturbed	d		Pressure	Voids		$M_{v}$	( t <sub>50, log</sub> )	( t <sub>90, root</sub> )	
					ratio		) /B			
Index propert (if available)	ies Liquid lim	III % Plastic III	IIIL %	kPa 30	0.8659		MN	m²/year	m²/year	
Specimen de		Initial Final	] [	60	0.8531	1 0.	230	0.66	0.73	
Particle dens	ity	2.70 measured	Mg/m <sup>3</sup>	120	0.8223		277	0.48	0.5	
Diameter Height		74.95 19.02 18.31	mm mm	240 120	0.7776		204 080	0.37	0.4	
Voids ratio		0.866 0.797	]	240	0.7758		088	0.46	0.5	
Moisture con	tent	32 31	%	480	0.7247		120	0.29	0.31	
Bulk density		1.91 1.97	Mg/m <sup>3</sup>	60	0.7966	6 0.	099	-	-	
Dry density Saturation		1.45 1.50 99 105	Mg/m <sup>3</sup> %			-			+	<b> </b>
	perature for test	20	% °C	+		+			† †	
Swelling pres	sure	>30	kPa	+		+			-	
Notes :			 			士				
Specimen taker	n 10 mm from ba	ase of sample		+		+			<del>                                     </del>	
A Ref			مفم	<u> </u>				Fic	gure	
A NEI '										

0.800	Central Som	ers Tov	wn, Lo	ondo	on		Deta	ails:		Depth Samp		GL)			9.50 T	уре		UT		_
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0.780 — 0.760 — 0.740 — 0.720 — 0.720 — 0.680 — 0.660 — 0.640 — 0.620 —			-   -   -	+ +						liD.		DEC	161	1520	1151	215022	051			
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( if available )		_	L - 101 - 1		Ein al	1				100		968	_	_	4		1		_	_
Specimen detail Particle density			Initial 2.74		Final measured	Mg/m	3		⊢	200 400		762 351		).115 ).116		0.86	+	1.1 0.95	$\vdash$	
Diameter	1	-		75.0		mm			-	800		853		0.072		0.52	_	0.56		
Height			19.01		17.97	mm				400		035		.027		-		-		
Voids ratio			0.797		0.699					800		825		.031		0.7		0.73		
Moisture conter	nt	-	25	_	26	%	3		-	1600		240	_	0.043	_	0.36	+	0.39	<u> </u>	
Bulk density Dry density		-	1.91	+	2.03 1.61	Mg/m Mg/m	3		-	200	0.6	985	(	0.033	-	-	+	-	₩	
Saturation			87		101	//www.			-						+		+			
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Specimen taken	10 mm fro	m base	of san	nple																
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roject No	D5061	-15								ple			Hole No	0				В	НЗ						
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Index propert	ies	Liqu	uid limi	it %			Plastic limit 9	%		_	L		kPa			1	m <sup>2</sup> /ľ	ΜN	m <sup>2</sup>	/year	<u> </u>	m²/ye	ear	<u> </u>	
( if available ) Specimen de	taile		ſ	l.	nitia	al	Final				ŀ		40 80	0.8		┢	0.1	48	<u> </u>	1.4	+	1.4			_
Particle dens			ŀ	_	2.77			lg/m³			ŀ		160	0.82		_	0.1			.54	+	0.6			
Diameter	,		ı			74		ım					320	0.7		_	0.1		_	.44	I	0.47	_		
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Dry density					1.49		1.55 M	lg/m <sup>3</sup>									-								_
Saturation				<u> </u>	99		104 %														1			<u> </u>	
Average tem	perature	tor te	st			2	°C	2			-					╀			-		+			<del>                                     </del>	_
Swelling pres	sure				Γ		>40 kF	Pa			ŀ					t					+				
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A Ref					1				- 1	r n =										151	gur	е			

Project No	D5061-15		Sample	Hole No		Bl	<del>-1</del> 3		
Project Name	Central Somers	Town London	Details:	Depth (n	n BGI \		5.50		
roject maille	Joennal Sulliers	TOWIT, LUTICUIT		Samp N			Туре	UT	
				ID		061-152016			
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0.640 ¬				Spec Re	,1				
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<sub>ਰ</sub> 40.00 −				1			LC	g pressure	/ CV
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1		10	Applied p	100 ressure kP	а	10	00		1000
Cail description	Very stiff or	eyish brown slightly san				1	1	1	
Soil description		SILT towards base.		Applied	Voids	M <sub>v</sub>	$C_{v}$	$C_{v}$	
Preparation	Undisturbed	d		Pressure	ratio	v	( t <sub>50, log</sub> )	( t <sub>90, root</sub> )	
Index propert	es Liquid lim	nit % Plastic li	mit %	kPa		m <sup>2</sup> /MN	m²/year	m²/year	
( if available )		Initial Final	- ·	0 200	0.6245	0.121		48	
Specimen de Particle densi		2.69 measured	Mg/m <sup>3</sup>	400	0.5850 0.5629	0.121	45 8.9	9.7	
Diameter		74.99	mm	800	0.5306	0.052	6.2	6.3	
Height Voids ratio		18.99 17.78 0.624 0.521	mm	400 800	0.5381 0.5298	0.012 0.013	- 16	- 18	
Moisture cont	ent	23 20	%	1600	0.4877	0.034	5.9	5.8	
Bulk density		2.03 2.13	Mg/m <sup>3</sup>	200	0.5214	0.016	-	-	
Dry density Saturation		1.66 1.77 98 105	Mg/m <sup>3</sup> %	+					
	perature for test	20	°C						
Swelling pres	sure	not measured	kPa	+					
	= =: <del>V</del>		→ <sup></sup>						
Notes :			-						
			}	+					
Specimen taker	n 10 mm from ba	ase of sample							
QA Ref			<u>ab</u>				Fig	gure	
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## UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS WITHOUT MEASUREMENT OF PORE PRESSURE - SUMMARY OF RESULTS

D5061-15	Centr	al Som	ers To	own,	London											
		Sam	ple			Den	sity	w	Test	Dia.	Ó <sub>3</sub>		ure / er	nd of s	tage	
Hole No.	No.	Dept	. ,	type	Soil Description	bulk	dry		type			Axial strain	ó <sub>1</sub> - ó <sub>3</sub>	$c_{u}$	М О D	Remarks
		from	to		Very stiff laminated brown slightly	Mg	/m³	%		mm	kPa	%	kPa	kPa	E	
BH1	20	6.50	6.95	UT	sandy slightly gravelly CLAY.	1.92	1.45	33	UU	103.7	130	5.4	236	118	В	
BH1	25	9.50	9.95	UT	Very stiff to hard laminated greyish brown slightly sandy CLAY.	2.01	1.60	26	UU	104.3	190	6.0	438	219	В	
BH1	29	12.50	12.95	UT	Very stiff to firm greyish brown slightly sandy silty CLAY	2.07	1.70	22	UU	103.5	250	7.9	475	238	В	
BH1	33	15.50	15.95	UT	Very stiff greyish brown slightly sandy CLAY.	2.06	1.70	22	UU	104.1	310	5.4	603	301	В	
BH1	37	18.50	18.95	UT	Stiff to very stiff greyish brown slightly sandy CLAY.	2.03	1.64	24	UU	103.8	370	6.4	608	304	В	
BH1	42	21.50	21.75	UT	Hard brown mottled grey CLAY.	2.25	1.99	13	UU	103.6	430	8.4	1,563	781	В	
BH2	15	4.20	4.65	UT	Stiff to very stiff laminated brown slightly sandy CLAY.	1.96	1.49	31	UU	103.8	90	3.0	206	103	В	
BH2	19	6.50	6.95	UT	Very stiff laminated brown slightly sandy CLAY.	1.92	1.47	31	UU	103.3	130	4.5	277	139	В	
BH2	24	9.50	9.95	UT	Stiff to very stiff laminated greyish brown slightly sandy CLAY.	2.03	1.62	25	UU	102.1	190	3.0	233	116	В	
BH2	28	12.50	12.95	UT	Very stiff greyish brown slightly sandy CLAY.	2.01	1.60	26	UU	103.8	250	3.0	289	144	В	
BH2	32	15.50	15.95	UT	Very stiff to hard laminated greyish brown slightly sandy CLAY.	2.01	1.61	25	UU	103.2	310	5.5	432	216	В	
BH2	36	18.50	18.95	UT	Very stiff greyish brown slightly sandy CLAY.	2.08	1.73	20	UU	103.6	370	5.9	767	383	В	
ВН3	15	4.20	4.65	UT	Stiff to very stiff laminated greyish brown slightly sandy CLAY with occasional gypsum.	2.03	1.57	29	UU	101.9	85	4.5	272	136	В	
ВН3	19	6.50	6.95	UT	Stiff to very stiff laminated brown slightly sandy CLAY.	1.89	1.43	32	UU	103.7	130	3.5	196	98	В	
ВН3	24	9.50	9.95	UT	Very stiff laminated greyish brown slightly sandy CLAY.	2.00	1.59	26	UU	103.4	200	2.5	258	129	В	
ВН3	28	12.50	12.95	UT	Very stiff greyish brown slightly sandy CLAY.	2.04	1.67	22	UU	102.4	250	12.4	565	283	С	
ВН3	32	15.50	15.95	UT	Very stiff greyish brown slightly sandy CLAY becoming SILT towards base.	2.08	1.72	21	UU	101.9	310	6.4	645	322	В	
ВН3	36	18.50	18.85	UT	Very stiff to hard laminated greyish brown slightly sandy CLAY.	1.97	1.57	25	UU	104.7	370	5.5	534	267	В	
ВН3	40	21.00	21.30	UT	Hard brown and grey slightly sandy CLAY.	2.10	1.76	19	UU	104.2	420	4.5	773	387	В	
BH4	13	2.20	2.65	UT	Firm brown slightly sandy CLAY.	1.94	1.47	32	UU	103.6	45	17.3	99	49	Р	
BH4	17	4.20	4.60	UT	Stiff to very stiff brown slightly sandy slightly gravelly CLAY.	1.91	1.45	32	UU	102.0	85	6.4	220	110	В	
BH4	21	6.50	6.95	UT	Gravel is gypsum. Stiff to very stiff greyish brown slightly sandy CLAY.	1.96	1.50	30	UU	103.2	130	4.0	180	90	В	

Legend UU - single stage test ( may be in sets of specimens )

suffix R - remoulded or recompacted

 $\acute{o}_3$  cell pressure

undrained shear strength

Mode of failure P plastic

UUM - multistage test on a single specimen

 $\acute{o}_1$  -  $\acute{o}_3$  deviator stress

 $c_{\mathsf{u}}$ 

B brittle

compound

QA Ref

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Table UUSUM

### UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS WITHOUT MEASUREMENT OF PORE **PRESSURE - SUMMARY OF RESULTS**

D5061-15	Centr	al Som	ners To	own,	London											
		Sam	nlo									At fail	ure / er	nd of s	tago	
Hole No.		Dept			Soil Description		sity	w	Test type	Dia.	Ó <sub>3</sub>	Axial			М	Remarks
	No.	from	to	type		bulk Mg	dry /m <sup>3</sup>	%		mm	kPa	strain %	ó₁-ó₃ kPa	С <sub>и</sub> кРа	0 D E	
BH4	26	9.50	9.85	UT	Very stiff greyish brown slightly sandy CLAY.	1.98	1.55	28	UU	103.5	190	4.5	316	158	В	
BH4	34	15.50	15.95	UT	Very stiff laminated greyish brown slightly sandy CLAY.	1.99	1.59	25	UU	103.7	310	4.5	410	205	В	
BH4	38	18.00	18.95	UT	Very stiff laminated greyish brown slightly sandy CLAY.	2.02	1.60	27	UU	103.4	370	4.5	503	252	В	
BH5	12	2.20	2.65	UT	Firm to stiff brown slightly sandy CLAY.	1.97	1.50	31	UU	102.8	45	7.4	176	88	В	
BH5	15	4.20	4.65		Very stiff laminated brown slightly sandy CLAY.	1.98	1.51	31	UU	102.8	85	5.4	279	140	В	
BH5	19	6.50	6.95	UT	Firm to stiff laminated greyish brown silty CLAY with gypsum.	1.97	1.49	32	UU	102.8	130	4.5	253	126	В	
BH5	23	9.50	9.95		Stiff laminated brownish grey slightly sandy CLAY.	1.98	1.55	27	UU	103.4	190	5.9	379	189	В	
BH5	27	12.50	12.95	UT	Very stiff greyish brown slightly sandy CLAY.	2.04	1.66	22	UU	103.0	250	7.4	425	213	В	
BH5	31	15.50	15.95	UT	Very stiff greyish brown slightly sandy CLAY.	2.06	1.70	21	UU	103.0	310	5.9	524	262	В	
BH5	35	18.50	18.95	UT	Very stiff to hard laminated greyish brown slightly sandy CLAY.	2.00	1.58	27	UU	103.5	370	5.0	582	291	В	
BH7	7	2.50	2.95		Very still laminated brown slightly sandy CLAY.	1.95	1.51	29	UU	104.0	50	3.0	309	154	В	
BH7	12	4.50	4.95		Stiff to very stiff laminated slightly sandy CLAY	1.90	1.44	32	UU	103.7	90	7.4	160	80	В	
BH7	17	7.50	7.95	U	Very stiff laminated greyish brown slightly sandy CLAY.	1.98	1.57	26	UU	103.8	150	3.5	376	188	В	
BH7	22	10.50	10.95	U	Very stiff greyish brown slightly sandy CLAY.	2.06	1.69	22	UU	103.6	210	7.9	446	223	В	
BH7	27	13.50	13.95	U	Very stiff greyish brown slightly sandy CLAY.	2.05	1.67	23	UU	103.9	270	5.4	608	304	В	
BH7	32	16.50	16.95		Very stiff greyish brown slightly sandy CLAY.	2.06	1.69	22	UU	103.9	330	19.8	372	186	С	
BH7	37	19.50	19.95		Hard grey mottled reddish brown slightly sandy CLAY.	2.06	1.67	23	UU	104.1	390	19.3	303	151	В	
BH8	8	2.50	2.95		Stiff laminated brown slightly sandy CLAY.		1.46	31	UU	103.3	50	4.9	162	81	В	
BH8	13	4.50	4.95	U	Stiff to very stiff brown slightly sandy CLAY with rare gypsum.	1.93	1.46	32	UU	103.6	90	3.5	160	80	В	
BH8	28	13.50	13.95	U	Very stiff greyish brown slightly sandy CLAY.	2.06	1.69	22	UU	103.9	270	7.9	499	250	В	
BH8	43	22.50	22.95		Hard brown mottled grey slightly sandy CLAY.	2.15	1.88	15	UU	103.8	450	4.9	1,441	720	В	
ВН9	16	6.00	6.45	U	Very stiff greyish brown slightly sandy CLAY.	1.93	1.47	31	UU	103.7	120	3.5	167	83	В	

Legend UU - single stage test ( may be in sets of specimens )  $\acute{o}_3$ cell pressure Mode of failure P plastic

UUM - multistage test on a single specimen

 $\acute{o}_1$  -  $\acute{o}_3$ deviator stress B brittle

suffix R - remoulded or recompacted

undrained shear strength

 $c_{\mathsf{u}}$ 

compound

Table

QA Ref

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**UUSUM** 

### UNCONSOLIDATED UNDRAINED TRIAXIAL COMPRESSION TESTS WITHOUT MEASUREMENT OF PORE **PRESSURE - SUMMARY OF RESULTS**

		Sam	ple			Der	nsity	w	Test	Dia.	Ó <sub>3</sub>	At fail	ure / er	nd of st	tage	
Hole No.	No.	Dept	h (m)	type	Soil Description	bulk	dry		type			Axial strain	ó <sub>1</sub> - ó <sub>3</sub>	$c_{u}$	МО	Remarks
		from	to	.,,,,,		Mg	ı/m³	%		mm	kPa	%	kPa	kPa	D E	
ВН9	21	9.00	9.45	U	Very stiff laminated greyish brown slightly sandy CLAY.	1.96	1.53	28	UU	103.7	180	5.4	203	102	В	
ВН9	26	12.00	12.45	U	Very stiff to hard laminated greyish brown slightly sandy CLAY.	2.00	1.57	27	UU	103.6	240	3.0	362	181	В	
BH9	36	18.00	18.45	U	Very stiff greyish brown slightly sandy CLAY.	2.10	1.75	19	UU	103.9	360	8.4	711	356	Р	
ВН9	41	21.00	21.45	U	Hard reddish brown mottled grey slightly sandy CLAY.	2.09	1.69	23	UU	103.8	420	2.0	226	113	В	
BH9	46	24.00	24.35	U	Very stiff light brown and grey slightly sandy slightly gravelly CLAY.	2.15	1.87	15	UU	104.8	480	10.4	730	365	В	
BH10	8	2.50	2.95	U	Very stiff laminated brown CLAY.	1.96	1.50	31	UU	103.3	50	4.0	227	113	В	
BH10	13	4.50	4.95	U	Very stiff laminated brown and light brown slightly sandy CLAY.	1.93	1.47	32	UU	103.5	90	3.5	197	99	В	
BH10	18	7.50	7.95	U	Very stiff laminated greyish brown slightly sandy CLAY.	1.96	1.50	31	UU	103.3	150	3.0	185	92	В	
BH10	23	10.50	10.95	U	Very stiff greyish brown slightly sandy CLAY.	2.02	1.62	25	UU	103.3	210	5.9	380	190	В	
BH10	28	13.50	13.95	U	Stiff to very stiff greyish brown slightly sandy CLAY.	2.02	1.74	16	UU	103.7	270	4.4	463	231	В	
BH10	33	16.50	16.95	U	Very stiff laminated greyish brown slightly sandy CLAY.	2.04	1.59	29	UU	103.8	330	6.0	613	307	В	
BH10	38	19.50	19.95	U	Very stiff dark brown slightly sandy CLAY.	2.08	1.72	21	UU	103.2	390	5.4	565	283	В	
BH10	43	22.50	22.95	U	Hard reddish brown mottled grey CLAY.	2.15	1.79	20	UU	103.3	450	1.5	374	187	В	
BH10	48	25.50	25.95	U	Hard dark grey CLAY.	1.93	1.47	32	UU	103.4	310	3.0	341	170	В	

General notes: Tests carried out in accordance with BS1377: Part 7: 1990, clause 8 for single stage, clause 9 for multistage tests. Specimens nominally 2:1 height

diameter ratio and tested at a rate of strain of 2%/minute, unless annotated otherwise. See individual test reports for further details.

 $\acute{o}_3$ Mode of failure plastic UU - single stage test ( may be in sets of specimens ) cell pressure Ó<sub>1</sub> - Ó<sub>3</sub> deviator stress UUM - multistage test on a single specimen B brittle  $c_{\mathsf{u}}$ 

suffix R - remoulded or recompacted

Environmental Scientifics Group

compound Table

undrained shear strength

Legend

Project No

Project Name

#### Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377: Part 8: 1990) - Multistage test on a single specimen Sample Details: Project No Hole No BH1 D5061-15 4.20 - 4.65 Depth (m BGL) Project Name UT No 16 Туре Central Somers Town, London ID Spec Ref **Specimen Details** Soil Description Stiff brown CLAY Initial Specimen Type UNDISTURBED 203.11 /Preparation Length mm Diameter 103.62 mm Method of Saturation **Bulk Density** 1.99 Mg/m<sup>3</sup> Saturation Details Water Content 32 Dry density 1.50 Mg/m³ 50 Cell pressure increments kPa After test Differential Pressure kPa 10 **Bulk Density** 2.01 560 Final Cell Pressure kPa Mg/m3 Water Content 548.9 31 Final pore water pressure kPa Dry density Mg/m<sup>3</sup> 1.53 Final B Value 0.96 1.0 0.8 o.0 m 0.4 0.2 0.0 100 200 300 400 500 600 700 800 Applied cell pressure kPa From radial boundary and one end **Drainage Conditions** Stage No. 2 3 Cell Pressure applied 590 630 710 kPa Consolidation 550 550 kPa Back Pressure applied 550 **Details** Effective Pressure 40 80 160 kPa Pore pressure at start of consolidation 584 593 638 kPa 552 kPa Pore pressure at end of consolidation 551 605 Pore pressure dissipation at end of consolidation 96 95 38 % Consolidation Coefficient of Consolidation $C_{vi}$ 0.55 0.15 0.01 m<sup>2</sup>/year parameters Coefficient of Compressibility $M_{vi}$ 0.62 0.34 0.37 $m^2/MN$ see note to BS1377 : Coefficient of Permeability ( calculated ) 1.1E-10 1.6E-11 1.5E-12 m/s pt 8, clause 6.3.4) $k_{vi}$ Root time minutes 20 40 60 80 100 120 140 160 mL (5-ve if swell ) **A** 3 Volume change 50 Ref **Figure**

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sheet 1 of 3

Project No	D5061	-15					S	ample D	etails:	Hole	No		BH1			
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### Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377: Part 8: 1990) - Multistage test on a single specimen Sample Details: Project No Hole No **BH1** D5061-15 Depth (m BGL) 4.20 - 4.65 Project Name UT No 16 Туре Central Somers Town, London ID Spec Ref **Mohr Circles** 80 Shear stress kPa 60 40 20 0 120 320 Effective stresses kPa MIT Stress field 100 Compression stages 2 3 Stage Cell pressure 590 630 710 kPa 80 550 555 551 Initial pwp kPa Initial $\sigma_3$ ' 40 75 159 kPa 60 $(\sigma_{1}' - \sigma_{3}')/2$ 0.39 0.39 0.39 Rate of strain %/hr 40 Failure conditions Maximum effective principal Criterion stress ratio 20 1.47 3.79 7.63 Axial strain % 6.850 5.216 3.360 ( $\sigma_1{}^{\prime}\,/\,\sigma_3{}^{\prime}$ ) $_f$ ( $\sigma_1$ ' - $\sigma_3$ ' ) <sub>f</sub> 70.2 101.6 153.6 kPa 40 60 100 120 140 160 180 200 578 606 645 kPa s' $(\sigma_1' + \sigma_3') / 2 \text{ kPa}$ Cambridge stress field $\sigma_3{'}_f$ 12 24 65 kPa 82 126 219 $\sigma_1'_f$ kPa 0.40 0.50 0.61 160 Time to failure 3.8 9.7 19.4 **Shear Strength Parameters** 120 ( $\sigma_1' - \sigma_3'$ ) at peak stress ratio Linear regression 80 с' kPa 18.1 Ø' degrees Manual re-assessment 40 kPa с' ø' degrees 0 240 320 400 $p' \ \, (\, \sigma_{_1}{}' + 2\, \sigma_{_3}{}' \,) \, / \, 3 \ \ \, kPa$ Mode of failure Notes: Deviator stresses corrected for area change, vertical side drains and 0.616 mm thick rubber membrane(s) Ref **Figure SLR8.1** Printed:18/03/2016 12:13 **CUM** Rev 85 May 09 sheet 3 of 3

#### Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377: Part 8: 1990) - Multistage test on a single specimen Sample Details: Project No Hole No BH2 D5061-15 2.20 - 2.65 Depth (m BGL) Project Name UT No 12 Туре Central Somers Town, London ID Spec Ref **Specimen Details** Soil Description Firm brown CLAY Initial Specimen Type UNDISTURBED 203.90 /Preparation Length mm Diameter 103.25 mm Method of Saturation **Bulk Density** 1.93 Mg/m3 Saturation Details Water Content 32 Increments of cell and back pressure Dry density 1.47 Mg/m³ kPa 50 Cell pressure increments After test Differential Pressure kPa 10 **Bulk Density** 1.94 kPa 310 Final Cell Pressure Mg/m3 Water Content 292 32 Final pore water pressure kPa Dry density Mg/m<sup>3</sup> 1.47 Final B Value 0.96 1.0 0.8 o.0 m 0.4 0.2 0.0 100 150 200 250 300 350 400 Applied cell pressure kPa From radial boundary and one end **Drainage Conditions** Stage No. 2 3 Cell Pressure applied 325 350 400 kPa Consolidation 300 300 kPa Back Pressure applied 300 Details Effective Pressure 25 50 100 kPa Pore pressure at start of consolidation 313 326 352 kPa 300 kPa Pore pressure at end of consolidation 300 302 Pore pressure dissipation at end of consolidation 100 100 % Consolidation 0.52 Coefficient of Consolidation $C_{vi}$ 0.52 0.33 m<sup>2</sup>/year parameters Coefficient of Compressibility $M_{vi}$ 0.41 0.39 0.29 $m^2/MN$ see note to BS1377 : Coefficient of Permeability ( calculated ) 6.5E-11 6.2E-11 3.0E-11 m/s $\boldsymbol{k}_{vi}$ pt 8, clause 6.3.4) Root time minutes 5 10 15 25 30 35 40 mL (-ve if swell Volume change 50 Ref **Figure** SLR8.1 **CUM** Printed:29/02/2016 11:16

sheet 1 of 3

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### Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377: Part 8: 1990) - Multistage test on a single specimen Sample Details: Project No Hole No BH2 D5061-15 2.20 - 2.65 Depth (m BGL) Project Name UT No 12 Туре Central Somers Town, London ID Spec Ref **Mohr Circles** 40 Shear stress kPa 30 20 10 160 Effective stresses kPa MIT Stress field Compression stages 2 3 Stage Cell pressure 325 350 400 kPa 40 Initial pwp 300 300 302 kPa Initial $\sigma_3$ ' 25 50 98 kPa 30 $(\sigma_{1}' - \sigma_{3}')/2$ 0.38 0.38 0.38 Rate of strain %/hr 20 Failure conditions Maximum effective principal Criterion stress ratio 10 2.28 4.77 Axial strain % 5.991 4.873 3 581 ( $\sigma_1{}^{\prime}\,/\,\sigma_3{}^{\prime}$ ) $_f$ ( $\sigma_1$ ' - $\sigma_3$ ' ) <sub>f</sub> 39.9 58.1 95.5 kPa 10 40 20 50 70 80 90 100 317 335 363 kPa s' $(\sigma_1' + \sigma_3') / 2 \text{ kPa}$ Cambridge stress field $\sigma_3{'}_f$ 8 15 37 kPa 48 73 $\sigma_1'_f$ kPa 0.43 0.60 0.64 80 Time to failure 6.0 8.4 12.6 **Shear Strength Parameters** 60 at peak stress ratio $(\sigma_1' - \sigma_3')$ Linear regression 40 с' kPa 8.0 Ø' 28.9 degrees 20 Manual re-assessment kPa с' ø' degrees 0 20 40 200 p' $(\sigma_1' + 2 \sigma_3')/3$ kPa Mode of failure Notes: Deviator stresses corrected for area change, vertical side drains and 0.308 mm thick rubber membrane(s)

Ref

**SLR8.1** Rev 85 May 09





**Figure** 

**CUM** sheet 3 of 3

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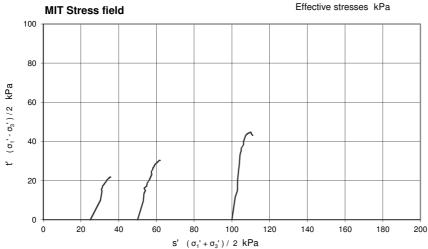
#### Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377: Part 8: 1990) - Multistage test on a single specimen Sample Details: Project No Hole No BH3 D5061-15 2.20 - 2.65 Depth (m BGL) Project Name UT No 12 Туре Central Somers Town, London ID Spec Ref **Specimen Details** Soil Description Soft brown mottled grey CLAY. Initial Specimen Type UNDISTURBED 203.75 /Preparation Length mm Diameter 103.21 mm Method of Saturation **Bulk Density** 1.93 Mg/m3 Saturation Details Water Content 30 Dry density 1.49 Mg/m³ 50 Cell pressure increments kPa After test Differential Pressure kPa 10 **Bulk Density** 1.92 160 Final Cell Pressure kPa Mg/m3 Water Content 151.6 30 Final pore water pressure kPa Dry density Mg/m<sup>3</sup> 1.47 Final B Value 1.0 0.8 o.0 m 0.4 0.2 0.0 100 150 200 250 300 350 400 Applied cell pressure kPa From radial boundary and one end **Drainage Conditions** Stage No. 2 3 Cell Pressure applied 325 350 400 kPa Consolidation 300 300 kPa Back Pressure applied 300 Details Effective Pressure 25 50 100 kPa Pore pressure at start of consolidation 310 332 361 kPa 300 kPa Pore pressure at end of consolidation 300 303 Pore pressure dissipation at end of consolidation 100 100 % Consolidation Coefficient of Consolidation $C_{vi}$ 8.88 0.33 0.43 m<sup>2</sup>/year parameters Coefficient of Compressibility $M_{vi}$ 0.10 0.42 0.18 $m^2/MN$ see note to BS1377 : Coefficient of Permeability ( calculated ) 2.7E-10 4.3E-11 2.5E-11 m/s $\boldsymbol{k}_{vi}$ pt 8, clause 6.3.4) Root time minutes 10 20 30 50 60 70 80 0 mL (-ve if swell) Volume change 3 25 Ref **Figure** SLR8.1 **CUM** Printed:29/02/2016 11:18 Rev 85

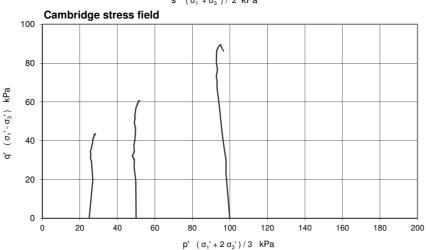
sheet 1 of 3

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### Consolidated Undrained Triaxial Compression test with Measurement of Pore Water Pressure (BS1377 : Part 8 : 1990) - Multistage test on a single specimen Sample Details: Project No Hole No вн3 D5061-15 2.20 - 2.65 Depth (m BGL) Project Name UT No 12 Туре Central Somers Town, London ID Spec Ref **Mohr Circles** 40 Shear stress kPa 30 20 160





### Compression stages

Stage	1	2	3	
Cell pressure	325	350	400	kPa
Initial pwp	300	300	300	kPa
Initial $\sigma_3$ '	25	50	100	kPa
Rate of strain	2.00	2.00	2.00	%/hr

### Failure conditions

Tallare conditions											
Criterion		n effective stress ratio									
Axial strain	3.53	5.71	7.97	%							
$(\sigma_1'/\sigma_3')_f$	4.246	2.942	2.375								
( $\sigma_1$ ' - $\sigma_3$ ' ) <sub>f</sub>	43.2	60.6	89.5	kPa							
u <sub>f</sub>	312	319	335	kPa							
σ <sub>3</sub> ' <sub>f</sub>	13	31	65	kPa							
$\sigma_1'_f$	56	92	155	kPa							
$A_f$	0.27	0.31	0.39								
Time to failure	1.8	2.9	4.0	hrs							

### **Shear Strength Parameters**

at peak stress ratio

		Linear regression
c'	kPa	11.6
Ø'	degrees	17.9
`		Manual re-assessment
c'	kPa	-
Ø'	degrees	-

Deviator stresses corrected for area change, vertical side drains and 0.616 mm thick rubber membrane(s)

Mode of failure



Ref

Notes:

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Figure

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### **TEST REPORT**



Report No. EFS/160979 (Ver. 1)

ESG Wokingham Glossop House Hogwood Lane Industrial Estate Finchamstead Wokingham Berkshire RG40 4QW

### Site: Central Somers Town, London

The 19 samples described in this report were registered for analysis by ESG on 08-Feb-2016. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 12-Feb-2016

Tests where the accreditation is set to N or No, and any individual data items marked with a \* are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2)
Analytical and Deviating Sample Overview (Pages 3 to 4)
Table of Method Descriptions (Page 5)
Table of Report Notes (Page 6)
Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of ESG :

Declan Burns

Managing Director
Multi-Sector Services

Tests marked '^' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected.

ESG accepts no responsibility for any sampling not carried out by our personnel.

Date of Issue: 12-Feb-2016

	Units :	mg/kg	mg/l	%	pH Units								
	Method Codes :	ICPACIDS	ICPWSS	TSBRE1	WSLM50								
	Method Reporting Limits :	20	10	0.005									
	UKAS Accredited :	Yes	Yes	No	No								
LAB ID Number CL/	Client Sample Description Sample Description	SO4 (acid sol)	SO4 (H2O sol) mg/l	Total Sulphur.	рН (ВЅ1377)								
1604388	BH1 D 5 0.50	1620	77	0.085	8.2								
1604389	BH1 D 19 6.20	15700	2440	0.631	7.6								
1604390	BH1 D 32 15.00	1890	753	0.418	8.3								
1604391	BH1 D 40 21.00	2500	720	0.743	8.0								
1604392	BH1 D 44 22.50	688	267	0.082	8.8								
1604393	BH10 D 5 1.40	1290	525	0.076	8.1								
1604394	BH10 D 12 4.25	10800	2440	0.366	7.8								
1604395	BH10 D 30 14.50	1440	638	0.556	8.3								
1604396	BH10 D 42 22.00	430	146	0.071	9.2								
1604397	BH10 D 52 28.00	238	99	0.045	9.6								
1604398	BH2 D 2 0.20	7100	1490	0.299	8.0								
1604399	BH2 D 13 2.70	35500	1760	1.05	7.8								
1604400	BH2 D 18 6.00	17500	2730	0.799	7.9								
1604401	BH2 D 27 12.00	3530	1510	0.565	7.6								
1604402	BH2 D 35 18.00	1350	511	0.564	8.7								
1604403	BH3 D 5 0.50	1610	157	0.152	8.4								
1604404	BH3 D 13 2.70	1800	543	0.169	7.6								
1604405	BH3 D 18 6.20	11000	2380	0.522	7.9								
1604406	BH3 D 29 13.00	2470	938	0.583	8.5								
'	Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ				ESG Wokingham  Andrea Capon  Central Somers Town, London					Sample Analysis  Date Printed 12- Report Number EF- Table Number			
								I able N	AITIDEI		1		
	Fax +44 (0) 1283 554422	]											

### **ESG Environmental Chemistry Analytical and Deviating Sample Overview**

**ESG Wokingham** Customer Site **Central Somers Town, London**  Consignment No S53458 Date Logged 08-Feb-2016

**Report No** S160979

Report Due 15-Feb-2016

							керс	ort Du	e 15-	Feb-2	2016		
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	рН (BS1377)
		-					✓		<b>\</b>				
CL/1604388	BH1 0.50	D	D	D	D	D	D	D	D	D	D	D	D
CL/1604389	BH1 6.20	D	D				D	D	D	D	D	D	D
CL/1604390	BH1 15.00	D	D				D	D	D	D	D	D	D
CL/1604391	BH1 21.00	D	D				D	D	D	D	D	D	D
CL/1604392	BH1 22.50	D	D				D	D	D	D	D	D	D
CL/1604393	BH10 1.40	D	D				D	D	D	D	D	D	D
CL/1604394	BH10 4.25	D	D				D	D	D	D	D	D	D
CL/1604395	BH10 14.50	D	D				D	D	D	D	D	D	D
CL/1604396	BH10 22.00	D	D				D	D	D	D	D	D	D
CL/1604397	BH10 28.00	D	D				D	D	D	D	D	D	D
CL/1604398	BH2 0.20	D	D				D	D	D	D	D	D	D
CL/1604399	BH2 2.70	D	D				D	D	D	D	D	D	D
CL/1604400	BH2 6.00	D	D				D	D	D	D	D	D	D
CL/1604401	BH2 12.00	D	D				D	D	D	D	D	D	D
CL/1604402	BH2 18.00	D	D				D	D	D	D	D	D	D

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

### Deviating Sample Key

- The sample was received in an inappropriate container for this analysis
- В The sample was received without the correct preservation for this analysis
- Headspace present in the sample container
- The sampling date was not supplied so holding time may be compromised applicable to all analysis
- Sample processing did not commence within the appropriate holding time
- Sample processing did not commence within the appropriate handling time

### Requested Analysis Key

Analysis Required

Analysis dependant upon trigger result - Note: due date may be affected if triggered

No analysis scheduled

Analysis Subcontracted - Note: due date may vary

### **ESG Environmental Chemistry Analytical and Deviating Sample Overview**

**ESG Wokingham** Customer Site **Central Somers Town, London** 

Consignment No S53458 Date Logged 08-Feb-2016

**Report No** S160979

Report Due 15-Feb-2016

							repu	טע זונ	e 15-	reb-z	.010		
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	рН (BS1377)
	I=	1_					✓		✓				
CL/1604403	BH3 0.50	D	D				D	D	D	D	D	D	D
CL/1604404	BH3 2.70	D	D				D	D	D	D	D	D	D
CL/1604405	BH3 6.20	D	D				D	D	D	D	D	D	D
CL/1604406	BH3 13.00	D	D				D	D	D	D	D	D	D

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

### Deviating Sample Key

- The sample was received in an inappropriate container for this analysis
- В The sample was received without the correct preservation for this analysis
- Headspace present in the sample container
- The sampling date was not supplied so holding time may be compromised applicable to all analysis
- Sample processing did not commence within the appropriate holding time
- Sample processing did not commence within the appropriate handling time

### Requested Analysis Key

Analysis Required

Analysis dependant upon trigger result - Note: due date may be affected if triggered

No analysis scheduled

Analysis Subcontracted - Note: due date may vary

Report Number: EFS/160979

# **Method Descriptions**

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

## **Report Notes**

### **Generic Notes**

### Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.
   All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

### **Waters Analysis**

Unless stated otherwise results are expressed as mg/l

**Nil**: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

### Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm<sup>3</sup>@ 15°C

### Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

### **Asbestos Analysis**

CH Denotes Chrysotile
CR Denotes Crocidolite
AM Denotes Amosite
TR Denotes Tremolite
AC Denotes Actinolite
AN Denotes Anthophylite

**NAIIS** No Asbestos Identified in Sample **NADIS** No Asbestos Detected In Sample

### **Symbol Reference**

- ^ Sub-contracted analysis.
- \$\$ Unable to analyse due to the nature of the sample
- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.

This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

- ¥ Results for guidance only due to possible interference
- & Blank corrected result
- I.S Insufficient sample to complete requested analysis
- I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

**NS** Information Not Supplied

Req Analysis requested, see attached sheets for results

- **Þ** Raised detection limit due to nature of the sample
- \* All accreditation has been removed by the laboratory for this result
- # MCERTS accreditation has been removed for this result
- § accreditation has been removed for this result as it is a non-accredited matrix

**Note:** The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Page 6 of 6 EFS/160979 Ver. 1

### **Sample Descriptions**

Client : ESG Wokingham

Site : Central Somers Town, London

Report Number: \$16\_0979

Note: major constituent in upper case

		Note: major constituent in upper case
Lab ID Number	Client ID	Description
CL/1604388	BH1 D 5 0.50	SILT
CL/1604389	BH1 D 19 6.20	CLAY
OL/1004309		
CL/1604390	BH1 D 32 15.00	CLAY
CL/1604391	BH1 D 40 21.00	CLAY
CL/1604392	BH1 D 44 22.50	CLAY
CL/1604393	BH10 D 5 1.40	CLAY
CL/1604394	BH10 D 12 4.25	CLAY
CL/1604395	BH10 D 30 14.50	CLAY
	B1110 B 30 14.30	
CL/1604396	BH10 D 42 22.00	CLAY
CL/1604397	BH10 D 52 28.00	CLAY
CL/1604398	BH2 D 2 0.20	MADE GROUND
		WALL GROOMS
CL/1604399	BH2 D 13 2.70	CLAY
CL/1604400	BH2 D 18 6.00	CLAY
CL/1604401	BH2 D 27 12.00	CLAY
	BH2 D 35 18.00	CLAY
CL/1604402		
CL/1604403	BH3 D 5 0.50	MADE GROUND
CL/1604404	BH3 D 13 2.70	MADE GROUND
CL/1604405	BH3 D 18 6.20	CLAY
CL/1604406	BH3 D 29 13.00	CLAY
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Appendix A Page 1 of 1 12/02/2016EFS/160979 Ver. 1

### **TEST REPORT**



Report No. EFS/160980 (Ver. 1)

ESG Wokingham Glossop House Hogwood Lane Industrial Estate Finchamstead Wokingham Berkshire RG40 4QW

### Site: Central Somers Town, London

The 19 samples described in this report were registered for analysis by ESG on 08-Feb-2016. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 15-Feb-2016

Tests where the accreditation is set to N or No, and any individual data items marked with a \* are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2)
Analytical and Deviating Sample Overview (Pages 3 to 4)
Table of Method Descriptions (Page 5)
Table of Report Notes (Page 6)
Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of ESG:

Declan Burns

Managing Director
Multi-Sector Services

Tests marked 'A' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected.

ESG accepts no responsibility for any sampling not carried out by our personnel.

Date of Issue: 15-Feb-2016

	Units :	mg/kg	mg/l	%	pH Units								
	Method Codes :	ICPACIDS	ICPWSS	TSBRE1	WSLM50								
	Method Reporting Limits :	20	10	0.005									
	UKAS Accredited :	Yes	Yes	No	No								
LAB ID Number CL/	Client Sample Description Bate	SO4 (acid sol)	SO4 (H2O sol) mg/l	Total Sulphur.	pH (BS1377)								
1604407	BH3 D 37 18.90	1760	416	0.611	8.6								
1604408	BH3 D 39 20.80	1280	463	0.248	8.7								
1604409	BH4 D 10 1.20	633	226	0.090	8.0								
1604410	BH4 D 14 2.70	572	233	0.052	8.2								
1604411	BH4 D 22 7.00	1910	721	0.385	8.2								
1604412	BH4 D 31 13.00	2200	1050	0.515	8.3								
1604413	BH4 D 40 20.00	1680	514	0.903	8.5								
1604414	BH5 D 4 0.50	1850	208	0.162	8.8								
1604415	BH5 D 14 3.20	22100	1990	0.631	7.9								
1604416	BH5 D 18 6.20	9810	2540	0.429	8.0								
1604417	BH5 D 26 12.00	3310	1070	0.588	7.9								
1604418	BH5 D 34 18.00	1280	550	0.565	8.7								
1604419	BH7 D 6 2.25	5990	2310	0.303	8.0								
1604420	BH7 D 14 5.50	5770	2780	0.300	8.0								
1604421	BH7 D 23 11.00	2820	1070	0.490	7.6								
1604422	BH7 D 33 17.00	2250	630	0.704	8.0								
1604423	BH7 D 40 21.00	342	99	0.082	9.1								
1604424	BH7 D 46 25.00	830	66	0.212	8.8								
1604425	BH7 D 53 29.50	228	317	0.055	9.4								
	Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ	Client N		Andrea C	•				Date Pri	nted	ple Ana	15-Feb-2016 EFS/160980	
	Tel +44 (0) 1283 554400		C	entral	Somers T	own,	Lond	on	Table No			1	
	Fax +44 (0) 1283 554422								Table N			· ·	
	(7)	l							I				

### **ESG Environmental Chemistry Analytical and Deviating Sample Overview**

**ESG Wokingham** Customer Site **Central Somers Town, London**  Consignment No S53458 Date Logged 08-Feb-2016

**Report No** S160980

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							Repo	ort Du	e 15-	Feb-2	:016		
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	рН (BS1377)
		•					✓		<b>\</b>				
CL/1604407	BH3 18.90	D	D	D	D	D	D	D	D	D	D	D	D
CL/1604408	BH3 20.80	D	D				D	D	D	D	D	D	D
CL/1604409	BH4 1.20	D	D				D	D	D	D	D	D	D
CL/1604410	BH4 2.70	D	D				D	D	D	D	D	D	D
CL/1604411	BH4 7.00	D	D				D	D	D	D	D	D	D
CL/1604412	BH4 13.00	D	D				D	D	D	D	D	D	D
CL/1604413	BH4 20.00	D	D				D	D	D	D	D	D	D
CL/1604414	BH5 0.50	D	D				D	D	D	D	D	D	D
CL/1604415	BH5 3.20	D	D				D	D	D	D	D	D	D
CL/1604416	BH5 6.20	D	D				D	D	D	D	D	D	D
CL/1604417	BH5 12.00	D	D				D	D	D	D	D	D	D
CL/1604418	BH5 18.00	D	D				D	D	D	D	D	D	D
CL/1604419	BH7 2.25	D	D				D	D	D	D	D	D	D
CL/1604420	BH7 5.50	D	D				D	D	D	D	D	D	D
CL/1604421	BH7 11.00	D	D				D	D	D	D	D	D	D

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

### Deviating Sample Key

- The sample was received in an inappropriate container for this analysis
- В The sample was received without the correct preservation for this analysis
- Headspace present in the sample container
- The sampling date was not supplied so holding time may be compromised applicable to all analysis
- Sample processing did not commence within the appropriate holding time
- Sample processing did not commence within the appropriate handling time

### Requested Analysis Key

Analysis Required

Analysis dependant upon trigger result - Note: due date may be affected if triggered

No analysis scheduled

Analysis Subcontracted - Note: due date may vary

### **ESG Environmental Chemistry Analytical and Deviating Sample Overview**

**ESG Wokingham** Customer Site **Central Somers Town, London**  Consignment No S53458 Date Logged 08-Feb-2016

**Report No** S160980

Poport Duo 15 Ech 2016

							Repo	ort Du	ie 15-	Feb-2	:016		
		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	рН (BS1377)
							✓		✓				
CL/1604422	BH7 17.00	D	D				D	D	D	D	D	D	D
CL/1604423	BH7 21.00	D	D				D	D	D	D	D	D	D
CL/1604424	BH7 25.00	D	D				D	D	D	D	D	D	D
CL/1604425	BH7 29.50	D	D				D	D	D	D	D	D	D

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

### Deviating Sample Key

- The sample was received in an inappropriate container for this analysis
- В The sample was received without the correct preservation for this analysis
- Headspace present in the sample container
- The sampling date was not supplied so holding time may be compromised applicable to all analysis
- Sample processing did not commence within the appropriate holding time
- Sample processing did not commence within the appropriate handling time

### Requested Analysis Key

Analysis Required

Analysis dependant upon trigger result - Note: due date may be affected if triggered

No analysis scheduled

Analysis Subcontracted - Note: due date may vary

Report Number: EFS/160980

# **Method Descriptions**

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

## **Report Notes**

### **Generic Notes**

### Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.

  All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

### **Waters Analysis**

Unless stated otherwise results are expressed as mg/l

**Nil**: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

### Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm<sup>3</sup>@ 15°C

### Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

### **Asbestos Analysis**

CH Denotes Chrysotile
CR Denotes Crocidolite
AM Denotes Amosite
TR Denotes Tremolite
AC Denotes Actinolite
AN Denotes Anthophylite

**NAIIS** No Asbestos Identified in Sample **NADIS** No Asbestos Detected In Sample

### **Symbol Reference**

- ^ Sub-contracted analysis.
- \$\$ Unable to analyse due to the nature of the sample
- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.

This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

- ¥ Results for guidance only due to possible interference
- & Blank corrected result
- I.S Insufficient sample to complete requested analysis

I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

**NS** Information Not Supplied

Req Analysis requested, see attached sheets for results

- **Þ** Raised detection limit due to nature of the sample
- \* All accreditation has been removed by the laboratory for this result
- # MCERTS accreditation has been removed for this result
- § accreditation has been removed for this result as it is a non-accredited matrix

**Note:** The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

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### **Sample Descriptions**

Client : ESG Wokingham

Site : Central Somers Town, London

Report Number: \$16\_0980

Note: major constituent in upper case

		Note: major constituent in upper case
Lab ID Number	Client ID	Description
CL/1604407	BH3 D 37 18.90	CLAY
CL/1604408	BH3 D 39 20.80	CLAY
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CL/1604409	BH4 D 10 1.20	CLAY
CL/1604410	BH4 D 14 2.70	CLAY
CL/1604411	BH4 D 22 7.00	CLAY
CL/1604412	BH4 D 31 13.00	CLAY
CL/1604413	BH4 D 40 20.00	CLAY
CL/1604414	BH5 D 4 0.50	MADE GROUND
	DI 6 D 4 6.00	
CL/1604415	BH5 D 14 3.20	CLAY
CL/1604416	BH5 D 18 6.20	CLAY
CL/1604417	BH5 D 26 12.00	CLAY
CL/1604418	BH5 D 34 18.00	CLAY
CL/1604419	BH7 D 6 2.25	CLAY
CL/1604420	BH7 D 14 5.50	CLAY
CL/1604421	BH7 D 23 11.00	CLAY
	DH/ D 23 11.00	
CL/1604422	BH7 D 33 17.00	CLAY
CL/1604423	BH7 D 40 21.00	CLAY
CL/1604424		CLAY
	BH7 D 46 25.00	CLAT
CL/1604425	BH7 D 53 29.50	CLAY
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Appendix A Page 1 of 1 15/02/2016EFS/160980 Ver. 1

### **TEST REPORT**



Report No. EFS/160981 (Ver. 1)

ESG Wokingham Glossop House Hogwood Lane Industrial Estate Finchamstead Wokingham Berkshire RG40 4QW

### Site: Central Somers Town, London

The 5 samples described in this report were registered for analysis by ESG on 08-Feb-2016. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 15-Feb-2016

Tests where the accreditation is set to N or No, and any individual data items marked with a \* are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Page 2)
Analytical and Deviating Sample Overview (Page 3)
Table of Method Descriptions (Page 4)
Table of Report Notes (Page 5)
Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of ESG:

Declan Burns

Managing Director Multi-Sector Services

Tests marked 'A' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected.

ESG accepts no responsibility for any sampling not carried out by our personnel.

Date of Issue: 15-Feb-2016

		Units :	mg/kg	mg/l	%	pH Units									
	Method		ICPACIDS	ICPWSS	TSBRE1	WSLM50									
	Method Reporting	Limits :	20	10	0.005										
	UKAS Acc	redited :	Yes	Yes	No	No									
LABID Number CL/	Client Sample Description	Sample Date	SO4 (acid sol)	SO4 (H2O sol) mg/l	Total Sulphur.	рн (BS1377)									
1604426	BH9 D 6 1.50		2380	554	0.192	9.1									
1604427	BH9 D 9 2.70		7530	1930	0.172	8.2									
1604428	BH9 D 22 9.50		1600	541	0.507	8.5									
1604429	BH9 D 32 15.50		1060	484	0.899	8.7									
1604430	BH9 D 48 25.00		1300	224	0.180	8.9									
	ESG &		Client Na	ıme	ESG W	okingham					Sam	ple Ana	alysis		
			Contact		Andrea C	apon									
	Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ Tel +44 (0) 1283 554400			C	entral	Some	rs Town,	Lond	on	Date Prin Report N Table Nu	lumber			5-Feb-2016 FS/160981	
	Fax +44 (0) 1283 554422														

### \$160981

### **ESG Environmental Chemistry Analytical and Deviating Sample Overview**

**ESG Wokingham** Customer

**Central Somers Town, London** 

Consignment No S53458.01

**Report No** S160981

Site

Date Logged 08-Feb-2016

Poport Duo 15 Ech 2016

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		MethodID	CustServ	Dep.Opt			ICPACIDS	ICPBRE	ICPWSS	KONECL	KoneNO3	TSBRE1	WSLM50
ID Number	Description	Sampled	REPORT A	DO CI if pH<5.5	DO Mg if SO4(W)>3000	DO NO3 if pH<5.5	SO4 (acid sol)	Magnesium (BRE)	SO4 (H2O sol) mg/l	Chloride:(2:1)	Nitrate (BRE 2:1): mg/l	Total Sulphur.	рН (BS1377)
2	I=	1_					✓		✓				
CL/1604426	BH9 1.50	D	D	D	D	D	D	D	D	D	D	D	D
CL/1604427	BH9 2.70	D	D				D	D	D	D	D	D	D
CL/1604428	BH9 9.50	D	D				D	D	D	D	D	D	D
CL/1604429	BH9 15.50	D	D				D	D	D	D	D	D	D
CL/1604430	BH9 25.00	D	D				D	D	D	D	D	D	D

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

### Deviating Sample Key

- The sample was received in an inappropriate container for this analysis
- В The sample was received without the correct preservation for this analysis
- Headspace present in the sample container
- The sampling date was not supplied so holding time may be compromised applicable to all analysis
- Sample processing did not commence within the appropriate holding time
- Sample processing did not commence within the appropriate handling time

### Requested Analysis Key

Analysis Required

Analysis dependant upon trigger result - Note: due date may be affected if triggered

No analysis scheduled

Analysis Subcontracted - Note: due date may vary

Report Number: EFS/160981

# **Method Descriptions**

Matrix	MethodID	Analysis	Method Description
		Basis	
Soil	ICPACIDS	Oven Dried	Determination of Total Sulphate in soil samples by Hydrochloric
		@ < 35°C	Acid extraction followed by ICPOES detection
Soil	ICPWSS	Oven Dried	Determination of Water Soluble Sulphate in soil samples by water
		@ < 35°C	extraction followed by ICPOES detection
Soil	TSBRE1	Oven Dried	Determination of Total Carbon and/or Total Sulphur in solid
		@ < 35°C	samples by high temperature combustion/infrared detection
Soil	WSLM50	Oven Dried	Determination of pH of 2.5:1 deionised water to soil extracts using
		@ < 35°C	pH probe.

## **Report Notes**

### **Generic Notes**

### Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.

  All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

### **Waters Analysis**

Unless stated otherwise results are expressed as mg/l

**Nil**: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

### Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm<sup>3</sup>@ 15°C

### Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

### **Asbestos Analysis**

CH Denotes Chrysotile
CR Denotes Crocidolite
AM Denotes Amosite
TR Denotes Tremolite
AC Denotes Actinolite
AN Denotes Anthophylite

**NAIIS** No Asbestos Identified in Sample **NADIS** No Asbestos Detected In Sample

### **Symbol Reference**

- ^ Sub-contracted analysis.
- \$\$ Unable to analyse due to the nature of the sample
- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.

This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

- ¥ Results for guidance only due to possible interference
- & Blank corrected result
- I.S Insufficient sample to complete requested analysis
- I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

**NS** Information Not Supplied

Req Analysis requested, see attached sheets for results

- **Þ** Raised detection limit due to nature of the sample
- \* All accreditation has been removed by the laboratory for this result
- # MCERTS accreditation has been removed for this result
- § accreditation has been removed for this result as it is a non-accredited matrix

**Note:** The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

Page 5 of 5 EFS/160981 Ver. 1

### **Sample Descriptions**

Client : ESG Wokingham

Site : Central Somers Town, London

Report Number: S16\_0981

Note: major constituent in upper case

Liab D Number Clered De 190 0	1.1.15		Note: major constituent in upper case
CL/1604426         BH9 D 6 1.50         MADE GROUND           CL/1604427         BH9 D 9 2.70         CLAY           CL/1604428         BH9 D 22 9.50         CLAY	Lab ID Number	Client ID	Description
CL1004427 Bit D p 2 70 CLW CU1504428 Bit D 2 2 55 CLW CU1504420 Bit D 2 2 55 CLW CU1504430 Bit D 48 2 3 .00 Bit T	CI /1604426	BH9 D 6 1 50	MADE GROLIND
CLY-004-459  BHD D 29 15:50  CLY-004-490  BHD D 48 23:00  SILT  SI	OL/1004420	DI 10 D 0 1.30	CLAY
CU-1004429 BHI D 22 15.00 CLAY CU-1004429 BHI D 22 15.00 SILT	CL/1604427	BH9 D 9 2.70	CLAY
C/1964429 BHS D 22 (5.50 C/1964430 BHS D 24 (2.50) BHT D 44 (2	CL/1604428	BH9 D 22 9.50	CLAY
CU1604430 BH9 D 46 25.00 SILT	CL/1604429	BH9 D 32 15.50	CLAY
	CL/1604430	BH9 D 48 25.00	SILT
		1	
		1	
		1	

Appendix A Page 1 of 1 15/02/2016EFS/160981 Ver. 1



## APPENDIX F GEOENVIRONMENTAL LABORATORY TEST RESULTS

Soil Sample Analysis Test Report

EFS/160820 v.2

### **TEST REPORT**



Report No. EFS/160820 (Ver. 2)

ESG Wokingham Glossop House Hogwood Lane Industrial Estate Finchamstead Wokingham Berkshire RG40 4QW

### Site: Central Somers Town, London

The 15 samples described in this report were registered for analysis by ESG on 03-Feb-2016. This report supersedes any versions previously issued by the laboratory.

The analysis was completed by: 22-Feb-2016

Tests where the accreditation is set to N or No, and any individual data items marked with a \* are not UKAS accredited. Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

The following tables are contained in this report:

Table 1 Main Analysis Results (Pages 2 to 3)
Table of PAH (MS-SIM) (80) Results (Pages 4 to 18)
Table of PCB Congener Results (Page 19)
Table of TPH Texas banding (std) (Page 20)
GC-FID Chromatograms (Pages 21 to 35)
Table of Asbestos Results (Pages 36 to 37)
Analytical and Deviating Sample Overview (Pages 38 to 39)
Table of Method Descriptions (Page 40)
Table of Report Notes (Page 41)
Table of Sample Descriptions (Appendix A Page 1 of 1)

On behalf of ESG:

Declan Burns

Managing Director Multi-Sector Services Date of Issue: 22-Feb-2016

Tests marked 'A' have been subcontracted to another laboratory.

Where samples have been flagged as deviant on the Analytical and Deviating Sample Overview, for any reason, the data may not be representative of the sample at the point of sampling and the validity of the data may be affected.

ESG accepts no responsibility for any sampling not carried out by our personnel.

		Units :	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	pH Units	mg/kg	mg/kg	%	
		d Codes :	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPMSS	ICPSOIL	ICPSOIL	PHSOIL	SFAPI	SFAPI	Sub002	Sub002a
	Method Reportin	credited :	0.3 Yes	0.1 Yes	0.5 Yes	0.5 Yes	0.5 Yes	0.1 Yes	0.5 Yes	0.5 Yes	3 Yes	1 Yes	0.1 Yes	Yes	0.5 Yes	0.5 Yes	Yes	Yes
	UKAS AL	credited .	res	165	Tes	165	162	res	res	162	res	res	res	Tes	162	Tes		162
LABID Number CL/	Client Sample Description	Sample Date	Arsenic (MS)	Cadmium (MS)	Chromium (MS)	Copper (MS)	Lead (MS)	Mercury (MS)	Nickel (MS)	Selenium (MS)	Zinc (MS)	Barium.	Beryllium.	pH units (AR)	Cyanide(Total) (AR)	Phenol Index.(AR)	^Asbestos ID and Quantification	^Asbestos Screen
1603723	BH1A ES 4 0.50		32.8	0.36	24	36.4	33.3	0.2	28.1	<0.5	97.5	953	0.781	8.2	<0.5	<0.5		NAIIS
1603724	BH4 ES 8 1.00		17	0.32	32.4	29.9	72	0.4	24.4	0.5	77.2	163	1.05	7.5	<0.5	<0.5		NAIIS
1603725	BH5 ES 5 0.50		16.6	0.25	26.4	51.6	276.8	0.86	29.5	<0.5	92.8	157	0.882	9.0	<0.5	<0.5		NAIIS
1603726	BH6 ES 6 1.00		15.5	0.43	26.7	50	319.6	0.63	24.3	<0.5	167.7	162	0.805	8.2	<0.5	<0.5		NAIIS
1603727	BH7 ES 1 0.30		7.9	0.48	21.5	58	89.8	0.21	29.4	0.8	106.6	231	1.06	7.9	<0.5	<0.5		NAIIS
1603728	WS3 ES 10 3.00		11.4	0.32	43.9	27.4	79.6	0.24	41.2	0.8	75.1	77	1.07	8.4	<0.5	<0.5		NAIIS
1603729	WS5 ES 2 1.50		11.8	0.18	48.1	31.1	32.5	0.11	43.7	0.6	86.4	62.5	1.3	7.9	<0.5	<0.5		NAIIS
1603730	WS8 ES 9 2.60		19.5	0.21	43.7	45.8	98.2	0.18	45.4	0.9	105.8	110	1.24	7.9	<0.5	<0.5		NAIIS
1603731	WS16 ES 2 0.30		7	0.43	39.8	25.9	50.4	0.13	15.4	0.8	59.4	71	0.328	8.7	<0.5	<0.5		NAIIS
1603732	WS26A ES 4 0.90		12	0.23	35.6	29.4	142.8	0.37	28.9	0.7	69.2	102	0.817	8.4	<0.5	<0.5		NAIIS
1603733	WS27 ES 3 1.00		13.6	10.64	78.5	115.1	121	1.52	38.3	6	270.9	547	1.5	8.0	<0.5	<0.5		NAIIS
1603734	WS28 ES 3 1.00		11.7	0.62	33	37.6	178.6	0.44	25.3	0.6	112.7	144	0.797	8.5	<0.5	<0.5		NAIIS
1603735	WS29 ES 1 0.30		12.3	0.2	26.7	22.2	123.6	0.48	24.4	0.5	65	94.7	0.631	8.7	<0.5	<0.5	0.005	AM
1603736	TP2 ES 1 0.30		15.6	3.04	38.8	68.5	221.9	1.4	26.3	1.1	239.6	229	0.904	8.0	<0.5	<0.5	NADIS	СН
1603737	HP5 ES 3 1.00		10.9	0.24	44.9	28.9	157.1	0.22	29	1.1	101.7	229	2.41	8.7	<0.5	<0.5	0.047	CH AM
	ESG @		Client N	ame	ESG W	okinghai	m						Sam	ple Ana	ılysis			
	<b>E3</b> (16)		Contact		Sean Wh	eeliker								- -				
	Bretby Business Park, Ashby Road Burton-on-Trent, Staffordshire, DE15 0YZ			C	ontral	Som	ore T	214/P	lond	on		Date Prin				2-Feb-2016 FS/160820		
	Tel +44 (0) 1283 554400 Fax +44 (0) 1283 554422			C	entral	30111	CI2 I	, wii,	LUNU	J11		Table Nu	ımber			1		

	Units : Method Codes :	mg/kg TPHFIDUS	mg/kg TPHFIDUS	% M/M FOCS	mg/kg ICPMSS	mg/kg KONECR	µg/kg PCBUSECDAR	% M/M WSLM59	mg/kg PAHMSUS			
	Method Reporting Limits :	10	10	0.04	0.6	0.1		0.04				
	UKAS Accredited :	Yes	Yes	No	No	No	No	No	Yes			
LABID Number CL/	Sample Description Date	TPH by GCFID (AR)	TPH Carbon Banding.	S.O.M. % (Calc)	Vanadium (MS)	Chromium vi:	PCB-7 Congeners Analysis	Total Organic Carbon	PAH (16) by GCMS			
1603723	BH1A ES 4 0.50	55	Req	0.66	42.9	<0.1	Req	0.38	Req			
1603724	BH4 ES 8 1.00	23	Req	2.43	57.4	<0.1	Req	1.41	Req			
1603725	BH5 ES 5 0.50	135	Req	2.64	50.4	<0.1	Req	1.53	Req			
1603726	BH6 ES 6 1.00	36	Req	4.29	41.9	0.2	Req	2.49	Req			
1603727	BH7 ES 1 0.30	122	Req	6.50	34.8	<0.1	Req	3.77	Req			
1603728	WS3 ES 10 3.00	23	Req	0.64	69.4	<0.1	Req	0.37	Req			
1603729	WS5 ES 2 1.50	54	Req	0.67	75.5	<0.1	Req	0.39	Req			
1603730	WS8 ES 9 2.60	196	Req	0.71	71.4	<0.1	Req	0.41	Req			
1603731	WS16 ES 2 0.30	2160	Req	6.88	51.7	0.1	Req	3.99	Req			
1603732	WS26A ES 4 0.90	76	Req	2.31	46.1	<0.1	Req	1.34	Req			
1603733	WS27 ES 3 1.00	219	Req	4.29	48.9	<0.1	Req	2.49	Req			
1603734	WS28 ES 3 1.00	427	Req	2.05	38.6	<0.1	Req	1.19	Req			
1603735	WS29 ES 1 0.30	57	Req	0.98	37	<0.1	Req	0.57	Req			
1603736	TP2 ES 1 0.30	90	Req	4.69	47.8	<0.1	Req	2.72	Req			
1603737	HP5 ES 3 1.00	111	Req	1.55	95.9	<0.1	Req	0.90	Req			
	ESG @	Client N	ame	ESG W	okingha	m				Samı	ple Analysis	
"		Contact		Sean Wh	eeliker							
E	Bretby Business Park, Ashby Road									Date Printed	22-Feb-2016	
E	Burton-on-Trent, Staffordshire, DE15 0YZ		C	antral	Som	ers T	own	l ond	on	Report Number	EFS/160820	
	Tel +44 (0) 1283 554400		C	51111 al	JUIII	C 3 1	O <b>VV</b> 11,	LUIIU		Table Number	1	
	Fax +44 (0) 1283 554422											

# Polycyclic Aromatic Hydrocarbons GC/MS (SIM)

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 BH1A ES 4 0.50 LIMS ID Number: CL1603723 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	4.15	0.12	96
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	-	< 0.08	-
Anthracene	120-12-7	5.51	0.12	100
Fluoranthene	206-44-0	6.76	0.21	94
Pyrene	129-00-0	7.04	0.23	95
Benzo[a]anthracene	56-55-3	8.71	0.13	83
Chrysene	218-01-9	8.76	0.22	87
Benzo[b]fluoranthene	205-99-2	10.24	0.31	74
Benzo[k]fluoranthene	207-08-9	10.28	0.15	74
Benzo[a]pyrene	50-32-8	10.67	0.27	97
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	0.24	91
Dibenzo[a,h]anthracene	53-70-3	-	< 0.08	-
Benzo[g,h,i]perylene	191-24-2	12.33	0.24	95
Total (USEPA16) PAHs	-	-	< 2.64	-

### "M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	97
Acenaphthene-d10	95
Phenanthrene-d10	94
Chrysene-d12	98
Perylene-d12	101

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	87
Terphenyl-d14	77

Concentrations are reported on a wet weight basis.

The Total PAH result is the sum of non-rounded individual PAH results and therefore may differ to the sum of the rounded individual PAH results printed above. By convention, where any one or more result is a "less than", the total is expressed as a "less than" and includes the "less than" concentration within the total.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 BH4 ES 8 1.00 LIMS ID Number: CL1603724 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	-	< 0.08	-
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	-	< 0.08	-
Anthracene	120-12-7	-	< 0.08	-
Fluoranthene	206-44-0	-	< 0.08	-
Pyrene	129-00-0	_	< 0.08	-
Benzo[a]anthracene	56-55-3	-	< 0.08	-
Chrysene	218-01-9	-	< 0.08	-
Benzo[b]fluoranthene	205-99-2	-	< 0.08	-
Benzo[k]fluoranthene	207-08-9	-	< 0.08	-
Benzo[a]pyrene	50-32-8	-	< 0.08	-
Indeno[1,2,3-cd]pyrene	193-39-5	-	< 0.08	-
Dibenzo[a,h]anthracene	53-70-3	-	< 0.08	-
Benzo[g,h,i]perylene	191-24-2	-	< 0.08	-
Total (USEPA16) PAHs	-	-	< 1.28	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	94
Acenaphthene-d10	93
Phenanthrene-d10	93
Chrysene-d12	94
Perylene-d12	95

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	102
Terphenyl-d14	88

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 BH5 ES 5 0.50 LIMS ID Number: CL1603725 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: Ext Method: Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	3.11	0.09	94
Acenaphthylene	208-96-8	4.16	0.20	96
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	5.45	0.75	98
Anthracene	120-12-7	5.50	0.31	94
Fluoranthene	206-44-0	6.76	2.50	95
Pyrene	129-00-0	7.04	2.19	96
Benzo[a]anthracene	56-55-3	8.71	1.52	91
Chrysene	218-01-9	8.76	1.70	97
Benzo[b]fluoranthene	205-99-2	10.24	2.62	99
Benzo[k]fluoranthene	207-08-9	10.27	0.84	99
Benzo[a]pyrene	50-32-8	10.66	1.93	96
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	1.76	100
Dibenzo[a,h]anthracene	53-70-3	12.08	0.29	92
Benzo[g,h,i]perylene	191-24-2	12.33	1.55	96
Total (USEPA16) PAHs	-	-	< 18.41	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	97
Acenaphthene-d10	95
Phenanthrene-d10	97
Chrysene-d12	103
Perylene-d12	115

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	100
Terphenyl-d14	86

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 BH6 ES 6 1.00 LIMS ID Number: CL1603726 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	-	< 0.08	-
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	-	< 0.08	-
Anthracene	120-12-7	-	< 0.08	-
Fluoranthene	206-44-0	-	< 0.08	-
Pyrene	129-00-0	_	< 0.08	-
Benzo[a]anthracene	56-55-3	-	< 0.08	-
Chrysene	218-01-9	-	< 0.08	-
Benzo[b]fluoranthene	205-99-2	-	< 0.08	-
Benzo[k]fluoranthene	207-08-9	-	< 0.08	-
Benzo[a]pyrene	50-32-8	-	< 0.08	-
Indeno[1,2,3-cd]pyrene	193-39-5	-	< 0.08	-
Dibenzo[a,h]anthracene	53-70-3	-	< 0.08	-
Benzo[g,h,i]perylene	191-24-2	-	< 0.08	-
Total (USEPA16) PAHs	-	-	< 1.28	-

#### "M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	98
Acenaphthene-d10	97
Phenanthrene-d10	98
Chrysene-d12	101
Perylene-d12	102

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	94
Terphenyl-d14	82

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 BH7 ES 1 0.30 LIMS ID Number: CL1603727 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: Ext Method: Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	3.11	0.09	94
Acenaphthylene	208-96-8	4.15	0.12	94
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	5.45	0.30	98
Anthracene	120-12-7	5.50	0.14	91
Fluoranthene	206-44-0	6.76	0.67	79
Pyrene	129-00-0	7.04	0.62	96
Benzo[a]anthracene	56-55-3	8.71	0.37	92
Chrysene	218-01-9	8.76	0.40	96
Benzo[b]fluoranthene	205-99-2	10.24	0.48	95
Benzo[k]fluoranthene	207-08-9	10.27	0.24	95
Benzo[a]pyrene	50-32-8	10.66	0.38	98
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	0.39	90
Dibenzo[a,h]anthracene	53-70-3	-	< 0.08	-
Benzo[g,h,i]perylene	191-24-2	12.33	0.37	94
Total (USEPA16) PAHs	-	-	< 4.81	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	99
Acenaphthene-d10	98
Phenanthrene-d10	99
Chrysene-d12	106
Perylene-d12	113

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	94
Terphenyl-d14	81

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS3 ES 10 3.00 LIMS ID Number: CL1603728 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	-	< 0.08	-
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	-	< 0.08	-
Anthracene	120-12-7	-	< 0.08	-
Fluoranthene	206-44-0	6.77	0.09	98
Pyrene	129-00-0	7.05	0.09	77
Benzo[a]anthracene	56-55-3	-	< 0.08	-
Chrysene	218-01-9	-	< 0.08	-
Benzo[b]fluoranthene	205-99-2	-	< 0.08	-
Benzo[k]fluoranthene	207-08-9	-	< 0.08	-
Benzo[a]pyrene	50-32-8	-	< 0.08	-
Indeno[1,2,3-cd]pyrene	193-39-5	-	< 0.08	-
Dibenzo[a,h]anthracene	53-70-3	-	< 0.08	-
Benzo[g,h,i]perylene	191-24-2	-	< 0.08	-
Total (USEPA16) PAHs	-	-	< 1.30	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	99
Acenaphthene-d10	99
Phenanthrene-d10	101
Chrysene-d12	105
Perylene-d12	105

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	101
Terphenyl-d14	88

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS5 ES 2 1.50 LIMS ID Number: CL1603729 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	-	< 0.08	-
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	-	< 0.08	-
Anthracene	120-12-7	-	< 0.08	-
Fluoranthene	206-44-0	6.76	0.38	92
Pyrene	129-00-0	7.04	0.41	96
Benzo[a]anthracene	56-55-3	8.71	0.31	93
Chrysene	218-01-9	8.77	0.30	96
Benzo[b]fluoranthene	205-99-2	10.24	0.48	71
Benzo[k]fluoranthene	207-08-9	10.27	0.20	71
Benzo[a]pyrene	50-32-8	10.67	0.38	98
Indeno[1,2,3-cd]pyrene	193-39-5	12.05	0.27	95
Dibenzo[a,h]anthracene	53-70-3	-	< 0.08	-
Benzo[g,h,i]perylene	191-24-2	12.33	0.25	96
Total (USEPA16) PAHs	-	-	< 3.54	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	102
Acenaphthene-d10	99
Phenanthrene-d10	99
Chrysene-d12	106
Perylene-d12	109

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	91
Terphenyl-d14	81

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS8 ES 9 2.60 LIMS ID Number: CL1603730 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: Ext Method: Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	3.11	0.33	91
Acenaphthylene	208-96-8	4.15	0.26	97
Acenaphthene	83-32-9	4.26	0.26	95
Fluorene	86-73-7	4.64	0.16	99
Phenanthrene	85-01-8	5.45	2.33	99
Anthracene	120-12-7	5.50	0.62	95
Fluoranthene	206-44-0	6.76	4.62	95
Pyrene	129-00-0	7.04	3.96	96
Benzo[a]anthracene	56-55-3	8.71	2.20	93
Chrysene	218-01-9	8.76	2.30	96
Benzo[b]fluoranthene	205-99-2	10.24	2.51	100
Benzo[k]fluoranthene	207-08-9	10.27	1.08	100
Benzo[a]pyrene	50-32-8	10.66	2.05	98
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	1.45	99
Dibenzo[a,h]anthracene	53-70-3	12.08	0.26	95
Benzo[g,h,i]perylene	191-24-2	12.33	1.31	97
Total (USEPA16) PAHs	-	-	25.70	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	95
Acenaphthene-d10	94
Phenanthrene-d10	97
Chrysene-d12	103
Perylene-d12	113

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	92
Terphenyl-d14	79

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS16 ES 2 0.30 LIMS ID Number: CL1603731 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: Ext Method: Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	4.15	0.41	97
Acenaphthene	83-32-9	4.26	0.25	88
Fluorene	86-73-7	4.64	0.20	95
Phenanthrene	85-01-8	5.45	2.20	99
Anthracene	120-12-7	5.50	0.83	95
Fluoranthene	206-44-0	6.76	4.57	95
Pyrene	129-00-0	7.04	3.96	97
Benzo[a]anthracene	56-55-3	8.71	2.14	92
Chrysene	218-01-9	8.76	2.04	94
Benzo[b]fluoranthene	205-99-2	10.24	2.93	86
Benzo[k]fluoranthene	207-08-9	10.27	1.01	86
Benzo[a]pyrene	50-32-8	10.66	3.01	95
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	2.61	95
Dibenzo[a,h]anthracene	53-70-3	12.07	0.47	92
Benzo[g,h,i]perylene	191-24-2	12.33	2.34	95
Total (USEPA16) PAHs	-	-	< 29.05	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	99
Acenaphthene-d10	101
Phenanthrene-d10	104
Chrysene-d12	117
Perylene-d12	138

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	86
Terphenyl-d14	80

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS26A ES 4 0.90 LIMS ID Number: CL1603732 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	3.11	0.10	96
Acenaphthylene	208-96-8	-	< 0.08	-
Acenaphthene	83-32-9	4.26	0.12	91
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	5.45	0.78	100
Anthracene	120-12-7	5.50	0.22	96
Fluoranthene	206-44-0	6.76	1.49	80
Pyrene	129-00-0	7.04	1.29	97
Benzo[a]anthracene	56-55-3	8.71	0.88	95
Chrysene	218-01-9	8.76	0.90	97
Benzo[b]fluoranthene	205-99-2	10.24	1.18	99
Benzo[k]fluoranthene	207-08-9	10.27	0.40	99
Benzo[a]pyrene	50-32-8	10.66	0.88	97
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	0.70	95
Dibenzo[a,h]anthracene	53-70-3	12.07	0.13	81
Benzo[g,h,i]perylene	191-24-2	12.33	0.60	97
Total (USEPA16) PAHs	-	-	< 9.83	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	96
Acenaphthene-d10	96
Phenanthrene-d10	96
Chrysene-d12	104
Perylene-d12	121

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	98
Terphenyl-d14	84

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS27 ES 3 1.00 LIMS ID Number: CL1603733 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	4.15	0.09	96
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	5.45	0.31	97
Anthracene	120-12-7	5.50	0.11	97
Fluoranthene	206-44-0	6.76	0.95	95
Pyrene	129-00-0	7.04	0.91	97
Benzo[a]anthracene	56-55-3	8.71	0.59	90
Chrysene	218-01-9	8.76	0.63	91
Benzo[b]fluoranthene	205-99-2	10.24	0.77	96
Benzo[k]fluoranthene	207-08-9	10.27	0.32	96
Benzo[a]pyrene	50-32-8	10.67	0.59	96
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	0.49	93
Dibenzo[a,h]anthracene	53-70-3	12.08	0.09	35
Benzo[g,h,i]perylene	191-24-2	12.33	0.41	95
Total (USEPA16) PAHs	-	-	< 6.50	-

#### "M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	100
Acenaphthene-d10	99
Phenanthrene-d10	101
Chrysene-d12	108
Perylene-d12	122

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	99
Terphenyl-d14	84

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS28 ES 3 1.00 LIMS ID Number: CL1603734 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: Ext Method: Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	3.11	0.32	94
Acenaphthylene	208-96-8	4.15	1.72	99
Acenaphthene	83-32-9	4.26	0.29	85
Fluorene	86-73-7	4.64	0.20	97
Phenanthrene	85-01-8	5.45	3.23	99
Anthracene	120-12-7	5.50	1.88	95
Fluoranthene	206-44-0	6.76	12.30	95
Pyrene	129-00-0	7.04	11.90	96
Benzo[a]anthracene	56-55-3	8.71	7.74	93
Chrysene	218-01-9	8.76	7.05	97
Benzo[b]fluoranthene	205-99-2	10.24	9.29	100
Benzo[k]fluoranthene	207-08-9	10.27	3.67	100
Benzo[a]pyrene	50-32-8	10.66	8.31	96
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	6.36	94
Dibenzo[a,h]anthracene	53-70-3	12.07	1.09	94
Benzo[g,h,i]perylene	191-24-2	12.33	5.25	96
Total (USEPA16) PAHs	-	-	80.60	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	95
Acenaphthene-d10	96
Phenanthrene-d10	98
Chrysene-d12	113
Perylene-d12	133

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	100
Terphenyl-d14	87

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 WS29 ES 1 0.30 LIMS ID Number: CL1603735 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	-	< 0.08	-
Acenaphthene	83-32-9	-	< 0.08	-
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	5.45	0.22	98
Anthracene	120-12-7	-	< 0.08	-
Fluoranthene	206-44-0	6.76	0.45	95
Pyrene	129-00-0	7.04	0.41	97
Benzo[a]anthracene	56-55-3	8.71	0.25	96
Chrysene	218-01-9	8.76	0.26	96
Benzo[b]fluoranthene	205-99-2	10.24	0.30	94
Benzo[k]fluoranthene	207-08-9	10.28	0.15	95
Benzo[a]pyrene	50-32-8	10.66	0.26	98
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	0.23	95
Dibenzo[a,h]anthracene	53-70-3	-	< 0.08	-
Benzo[g,h,i]perylene	191-24-2	12.33	0.20	98
Total (USEPA16) PAHs	-	-	< 3.21	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	97
Acenaphthene-d10	99
Phenanthrene-d10	99
Chrysene-d12	108
Perylene-d12	120

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	91
Terphenyl-d14	81

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 TP2 ES 1 0.30 LIMS ID Number: CL1603736 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	4.15	0.09	95
Acenaphthene	83-32-9	4.26	0.09	87
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	5.45	0.74	99
Anthracene	120-12-7	5.50	0.22	93
Fluoranthene	206-44-0	6.76	1.51	96
Pyrene	129-00-0	7.04	1.32	97
Benzo[a]anthracene	56-55-3	8.71	0.75	91
Chrysene	218-01-9	8.76	0.73	95
Benzo[b]fluoranthene	205-99-2	10.24	0.90	99
Benzo[k]fluoranthene	207-08-9	10.27	0.39	98
Benzo[a]pyrene	50-32-8	10.67	0.74	92
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	0.60	99
Dibenzo[a,h]anthracene	53-70-3	12.08	0.10	93
Benzo[g,h,i]perylene	191-24-2	12.33	0.54	96
Total (USEPA16) PAHs	-	-	< 8.88	-

"M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	96
Acenaphthene-d10	98
Phenanthrene-d10	100
Chrysene-d12	107
Perylene-d12	122

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	98
Terphenyl-d14	85

Concentrations are reported on a wet weight basis.

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Sample Details: Job Number: S16\_0820 HP5 ES 3 1.00 LIMS ID Number: CL1603737 Date Booked in: 03-Feb-16 QC Batch Number: 160140B **Date Extracted:** 05-Feb-16 **Quantitation File: Initial Calibration** Date Analysed: 06-Feb-16 Directory: 6\020516GC5\ Matrix: Soil Dilution: **Ext Method:** Ultrasonic 1.0

**UKAS** accredited?: Yes

Target Compounds	CAS#	R.T.	Concentration	% Fit
		(min)	mg/kg	
Naphthalene	91-20-3	-	< 0.08	-
Acenaphthylene	208-96-8	4.15	0.33	98
Acenaphthene	83-32-9	4.26	0.10	89
Fluorene	86-73-7	-	< 0.08	-
Phenanthrene	85-01-8	5.45	1.06	99
Anthracene	120-12-7	5.50	0.46	95
Fluoranthene	206-44-0	6.76	3.52	95
Pyrene	129-00-0	7.04	3.24	96
Benzo[a]anthracene	56-55-3	8.71	2.00	93
Chrysene	218-01-9	8.76	1.77	97
Benzo[b]fluoranthene	205-99-2	10.24	2.31	100
Benzo[k]fluoranthene	207-08-9	10.27	1.12	100
Benzo[a]pyrene	50-32-8	10.66	2.07	96
Indeno[1,2,3-cd]pyrene	193-39-5	12.04	1.58	100
Dibenzo[a,h]anthracene	53-70-3	12.07	0.26	92
Benzo[g,h,i]perylene	191-24-2	12.33	1.39	96
Total (USEPA16) PAHs	-	-	< 21.37	-

#### "M" denotes that % fit has been manually interpreted

Internal Standards	% Area
1,4-Dichlorobenzene-d4	NA
Naphthalene-d8	99
Acenaphthene-d10	100
Phenanthrene-d10	101
Chrysene-d12	109
Perylene-d12	129

Surrogates	% Rec
Nitrobenzene-d5	NA
2-Fluorobiphenyl	95
Terphenyl-d14	84

Concentrations are reported on a wet weight basis.

### **Polychlorinated Biphenyls (congeners)**

Customer and Site Details: ESG Wokingham: Central Somers Town, London

Job Number:S16\_0820Date Booked in:03-Feb-16QC Batch Number:160141ADate Extracted:05-Feb-16Directory:0205PCB.GC8Date Analysed:10-Feb-16Method:Ultrasonic

\* This sample data is not UKAS accredited.

Matrix:

			Concentration, (µg/kg)								
Sample ID	Customer ID	PCB28	PCB52	PCB101	PCB118	PCB153	PCB138	PCB180			
* CL1603723	BH1A ES 4 0.50	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603724	BH4 ES 8 1.00	<5.0	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603725	BH5 ES 5 0.50	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603726	BH6 ES 6 1.00	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603727	BH7 ES 1 0.30	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603728	WS3 ES 10 3.00	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603729	WS5 ES 2 1.50	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603730	WS8 ES 9 2.60	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603731	WS16 ES 2 0.30	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603732	WS26A ES 4 0.90	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603733	WS27 ES 3 1.00	<5.0	24.4	26.6	10.0	9.3	10.6	<5.0			
* CL1603734	WS28 ES 3 1.00	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603735	WS29 ES 1 0.30	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603736	TP2 ES 1 0.30	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			
* CL1603737	HP5 ES 3 1.00	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			

SOIL

### **Total Petroleum Hydrocarbons (TPH) Carbon Ranges**

Customer and Site Details: ESG Wokingham : Central Somers Town, London

Job Number: \$16\_0820 QC Batch Number: 160141

**Directory:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\026F7201.D

Method: Ultra Sonic

\* Sample data with an asterisk are not UKAS accredited.

			Concentration, (mg/kg) - as wet weight										
Sample ID	Client ID	>C8 - C10	>C10 - C12	>C12 - C16	>C16 - C21	>C21 - C35							
CL1603723	BH1A ES 4 0.50	<2	<2	<2	4.88	43							
CL1603724	BH4 ES 8 1.00	<2	<2	<2	3.2	16.5							
CL1603725	BH5 ES 5 0.50	<2	<2	2.07	19.9	106							
CL1603726	BH6 ES 6 1.00	<2	<2	<2	4.81	25.9							
CL1603727	BH7 ES 1 0.30	<2	<2	2.64	19	91.7							
CL1603728	WS3 ES 10 3.00	<2	<2	<2	2.96	16.9							
CL1603729	WS5 ES 2 1.50	<2	<2	<2	6.83	42.1							
CL1603730	WS8 ES 9 2.60	<2	2.19	4.74	39.5	142							
CL1603731	WS16 ES 2 0.30	<2	8.54	5.8	85	1660							
CL1603732	WS26A ES 4 0.90	<2	<2	<2	13.3	49.6							
CL1603733	WS27 ES 3 1.00	<2	<2	<2	25.2	169							
CL1603734	WS28 ES 3 1.00	<2	<2	7.72	91.3	306							
CL1603735	WS29 ES 1 0.30	<2	<2	<2	8.65	37							
CL1603736	TP2 ES 1 0.30	<2	<2	<2	13	67.4							
CL1603737	HP5 ES 3 1.00	<2	<2	<2	21.8	79.7							

Soil

03-Feb-16

05-Feb-16

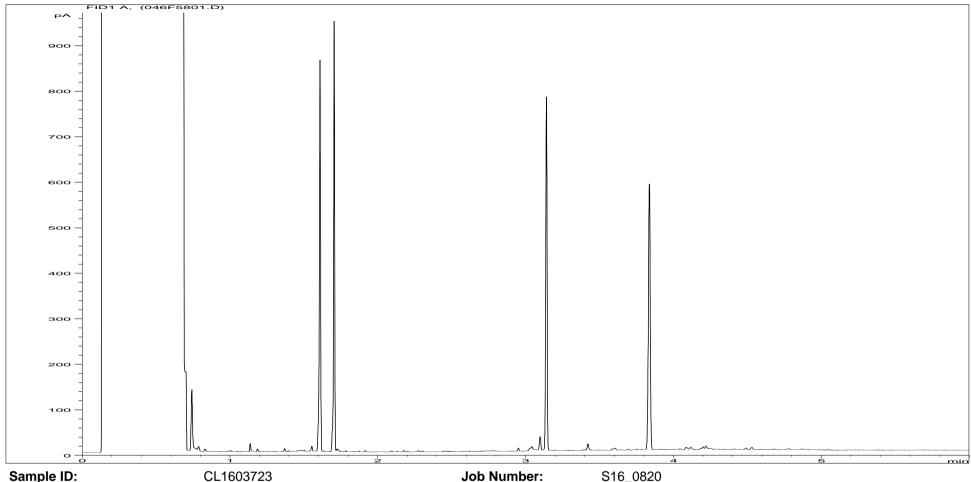
06-Feb-16, 02:57:57

Matrix:

Date Booked in:

**Date Extracted:** 

Date Analysed:



Sample ID: CL1603723 Job Number: Multiplier: Client: 8

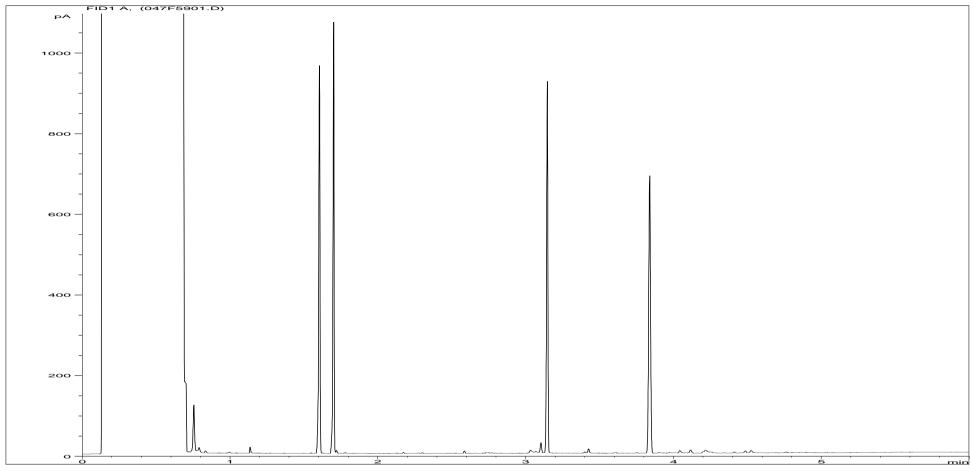
ESG Wokingham Dilution: Site: Central Somers Town, London

**Acquisition Method:** 5UL\_RUNFA.M **Client Sample Ref:** BH1A ES 4 0.50

**Acquisition Date/Time:** 05-Feb-16, 23:32:49

Datafile: D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\046F5801.D

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Sample ID:CL1603724Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

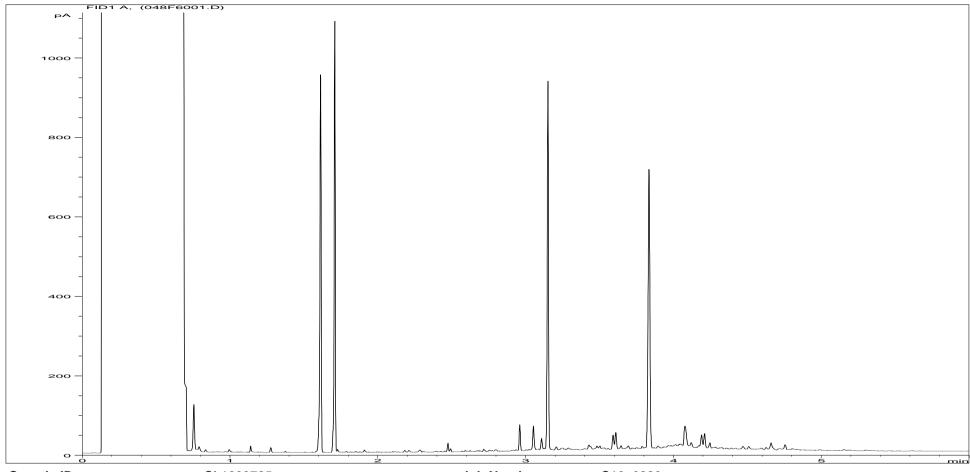
**Dilution:** 1 **Site:** Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: BH4 ES 8 1.00

Acquisition Date/Time: 05-Feb-16, 23:47:42

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\047F5901.D

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Sample ID:CL1603725Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

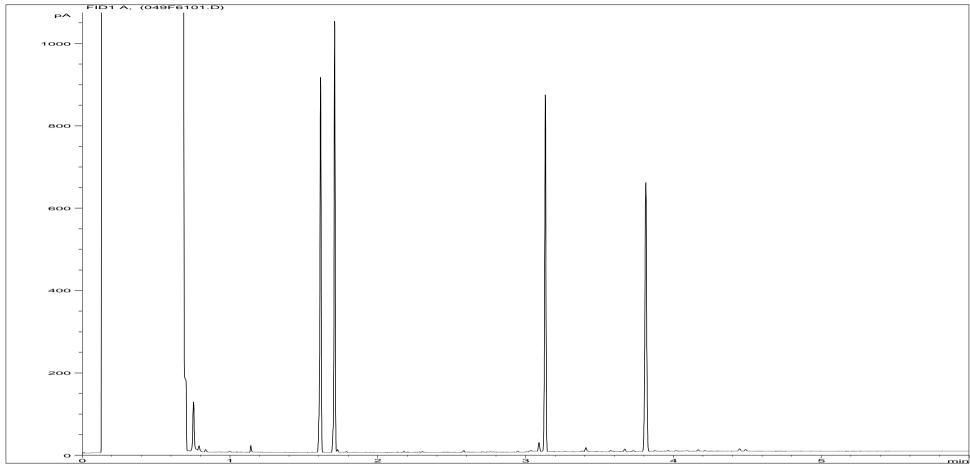
Dilution:1Site:Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: BH5 ES 5 0.50

Acquisition Date/Time: 06-Feb-16, 00:02:35

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\048F6001.D

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Sample ID:CL1603726Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

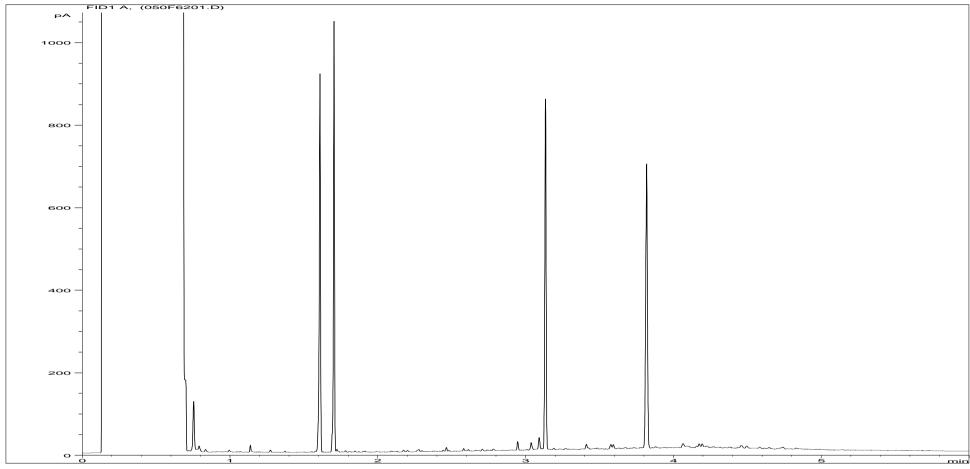
**Dilution:** 1 **Site:** Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: BH6 ES 6 1.00

Acquisition Date/Time: 06-Feb-16, 00:17:27

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\049F6101.D

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Sample ID:CL1603727Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

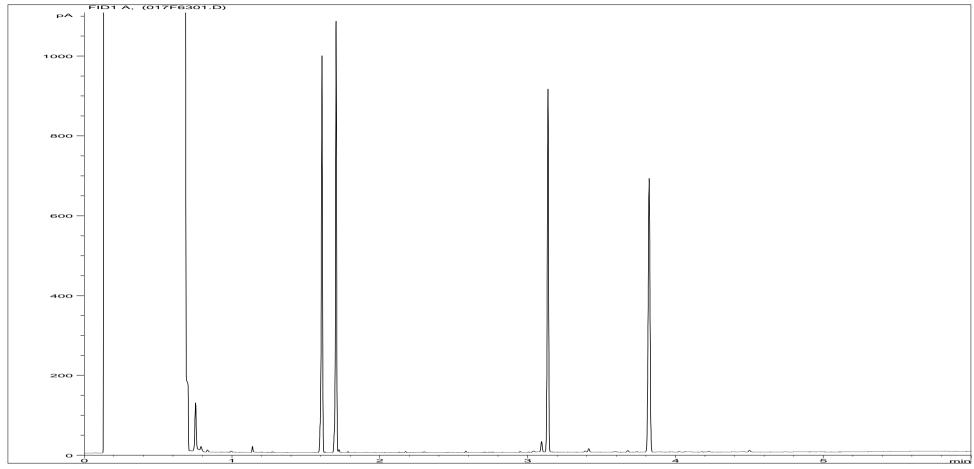
**Dilution:** 1 **Site:** Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: BH7 ES 1 0.30

**Acquisition Date/Time:** 06-Feb-16, 00:32:19

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\050F6201.D

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Sample ID:CL1603728Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

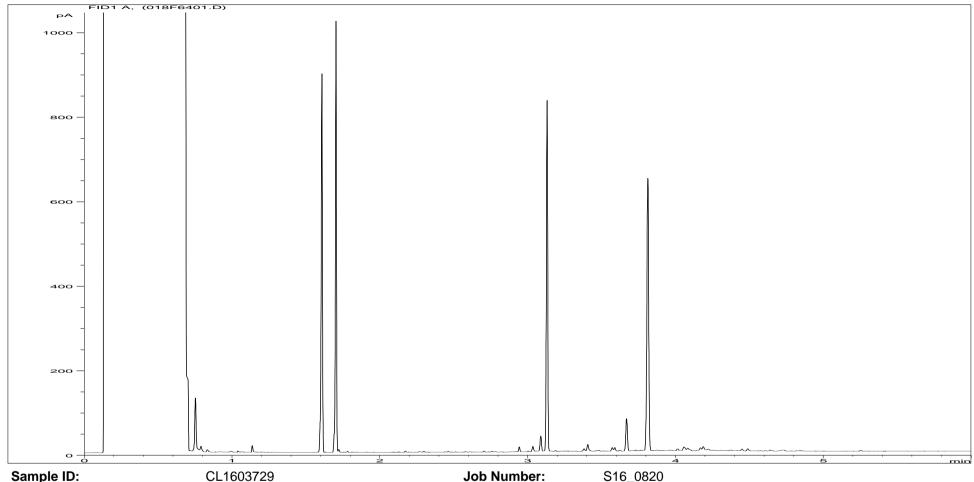
Dilution:1Site:Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS3 ES 10 3.00

Acquisition Date/Time: 06-Feb-16, 00:47:11

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\017F6301.D

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Sample ID: CL1603729 Job Number: Multiplier: 8 Client:

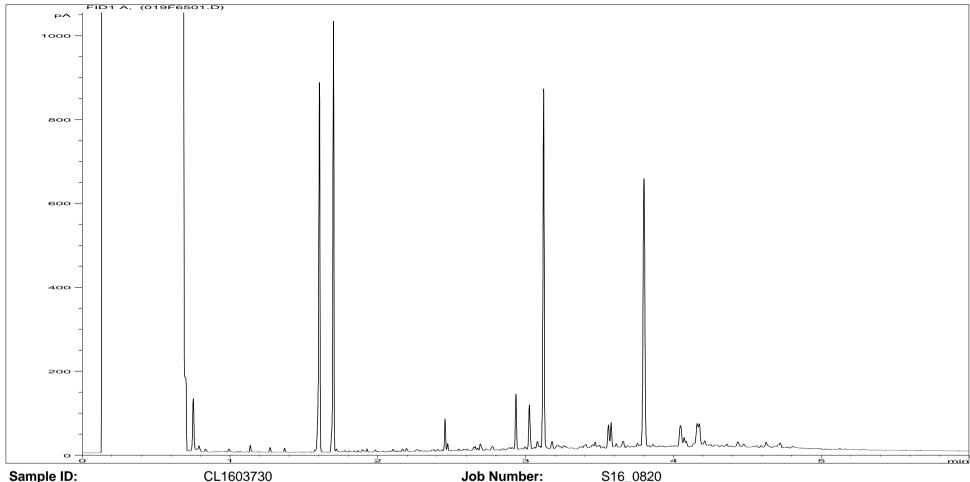
Multiplier:8Client:ESG WokinghamDilution:1Site:Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS5 ES 2 1.50

Acquisition Date/Time: 06-Feb-16, 01:02:05

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\018F6401.D

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Sample ID: CL1603730 Job Number: Multiplier: 8 Client:

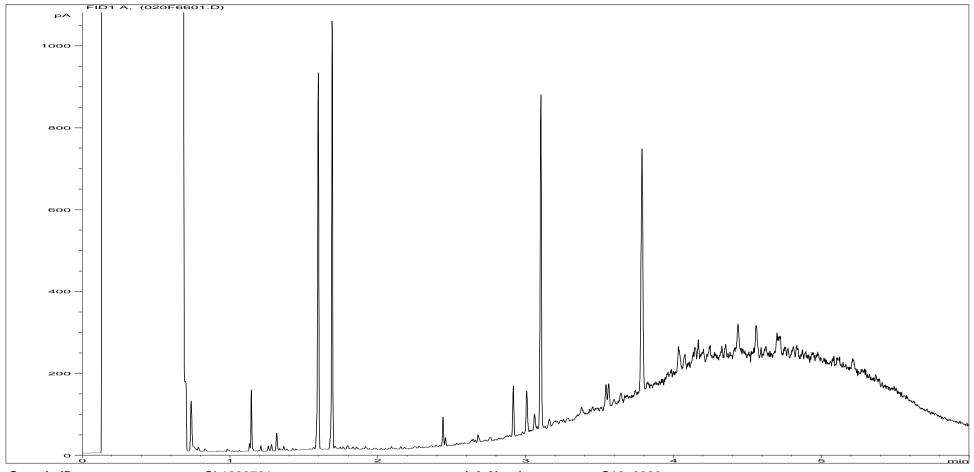
Multiplier:8Client:ESG WokinghamDilution:1Site:Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS8 ES 9 2.60

Acquisition Date/Time: 06-Feb-16, 01:16:34

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\019F6501.D

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Sample ID:CL1603731Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

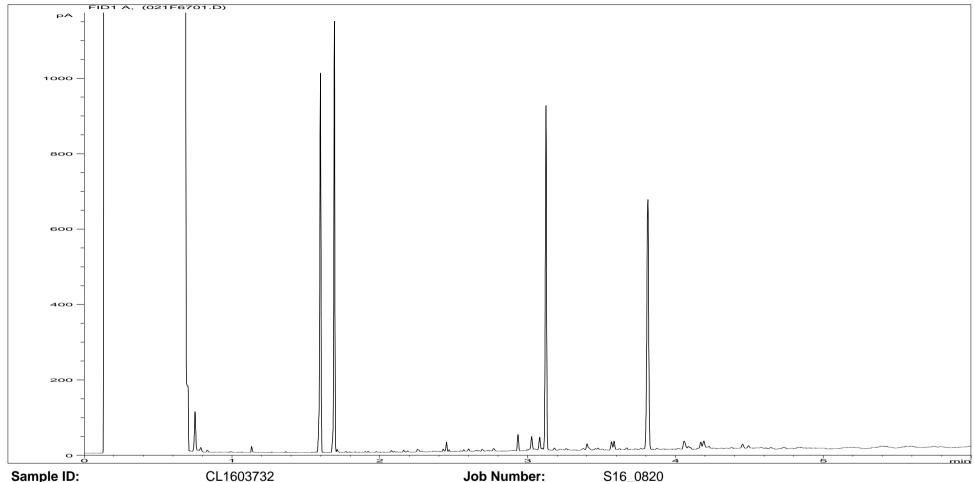
**Dilution:** 1 **Site:** Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS16 ES 2 0.30

Acquisition Date/Time: 06-Feb-16, 01:31:03

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\020F6601.D

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Sample ID:CL1603732Job Number:Multiplier:8Client:

**Dilution:** 1 **Site:** Central Somers Town, London

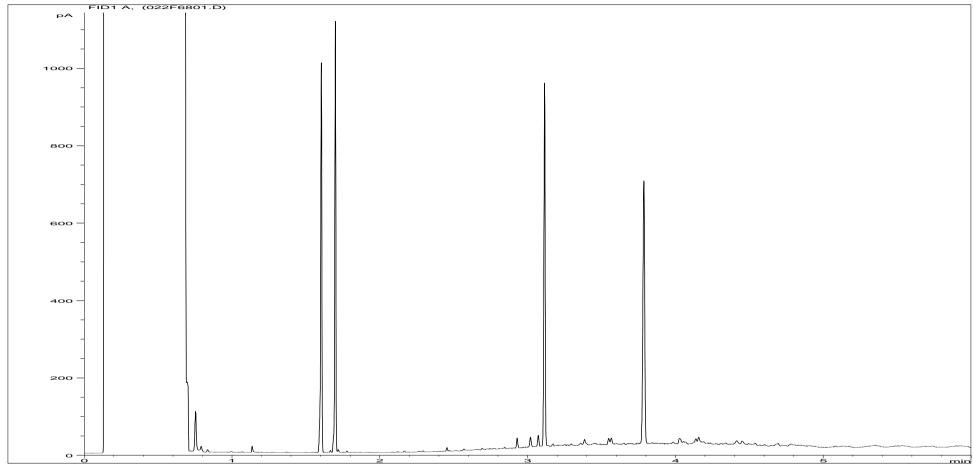
Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS26A ES 4 0.90

**Acquisition Date/Time:** 06-Feb-16, 01:45:34

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\021F6701.D

ESG Wokingham

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Sample ID:CL1603733Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

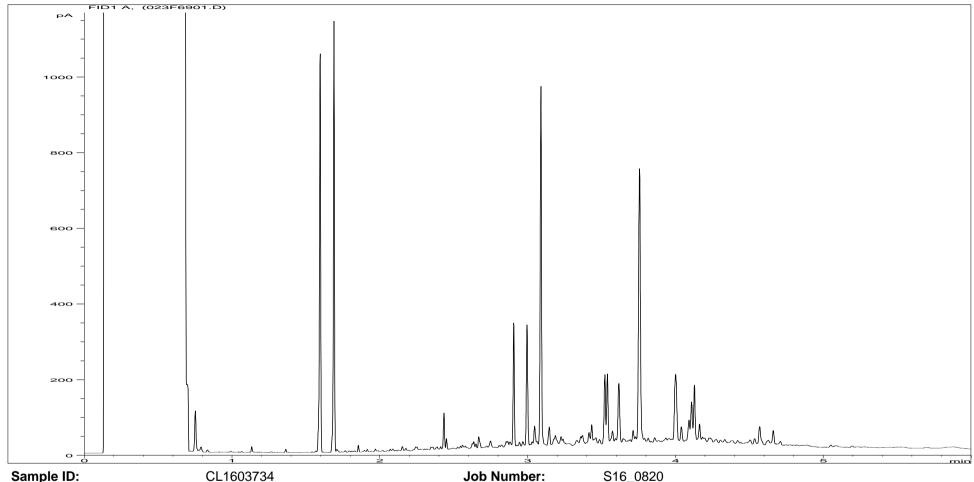
**Dilution:** 1 **Site:** Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS27 ES 3 1.00

Acquisition Date/Time: 06-Feb-16, 02:00:02

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\022F6801.D

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Sample ID:CL1603734Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

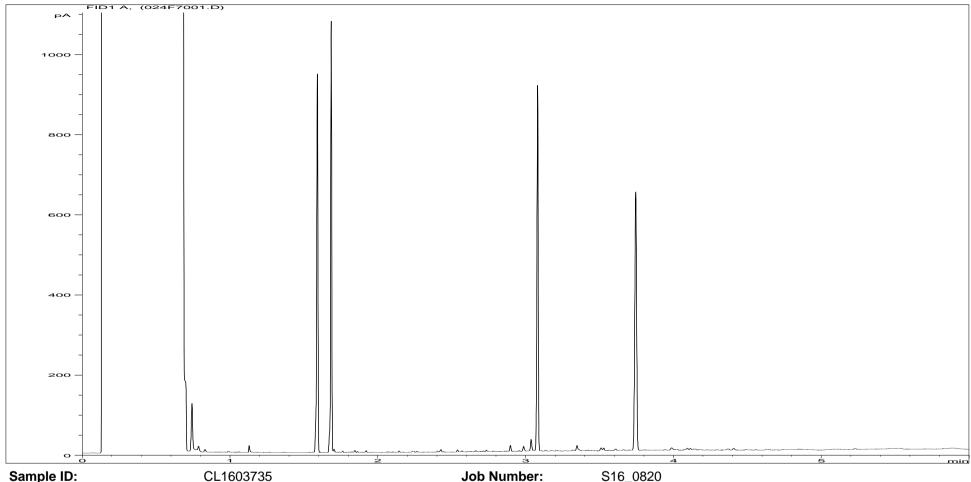
**Dilution:** 1 **Site:** Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS28 ES 3 1.00

Acquisition Date/Time: 06-Feb-16, 02:14:30

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\023F6901.D

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Sample ID: CL1603735
Multiplier: 8

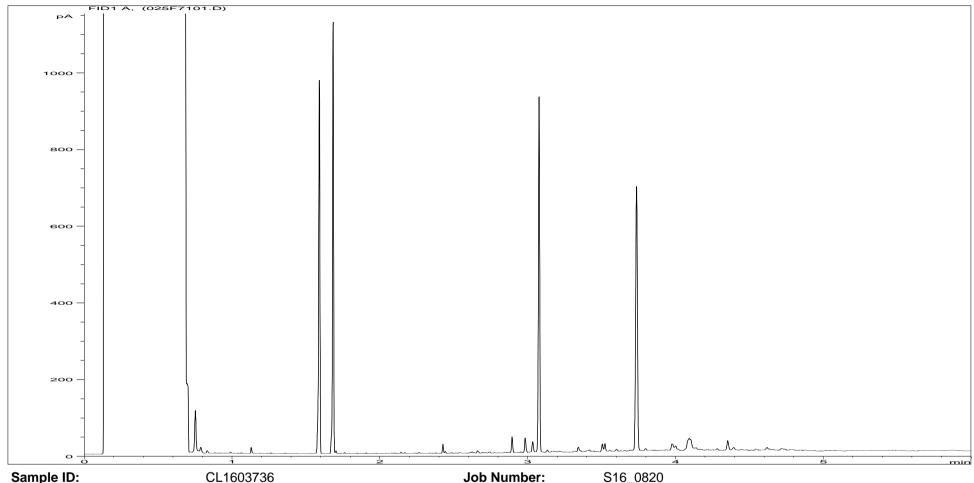
Multiplier:8Client:ESG WokinghamDilution:1Site:Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: WS29 ES 1 0.30

Acquisition Date/Time: 06-Feb-16, 02:28:59

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\024F7001.D

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Sample ID:CL1603736Job Number:Multiplier:8Client:

Dilution:1Site:Central Somers Town, London

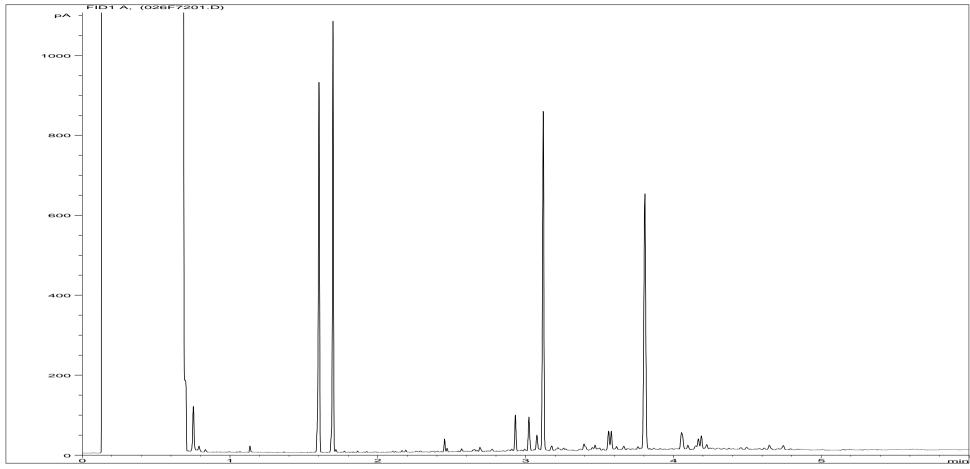
Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: TP2 ES 1 0.30

**Acquisition Date/Time:** 06-Feb-16, 02:43:29

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\025F7101.D

ESG Wokingham

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Sample ID:CL1603737Job Number:S16\_0820Multiplier:8Client:ESG Wokingham

**Dilution:** 1 **Site:** Central Somers Town, London

Acquisition Method: 5UL\_RUNFA.M Client Sample Ref: HP5 ES 3 1.00

Acquisition Date/Time: 06-Feb-16, 02:57:57

**Datafile:** D:\TES\DATA\Y2016\020516TPH\_GC3\020516 2016-02-05 09-10-55\026F7201.D

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WS3 3.00

WS5 1.50

WS8 2.60

WS16 0.30

WS26A 0.90

WS27 1.00

WS28 1.00

WS29 0.30

TP2 0.30

HP5 1.00

05/02/2016

05/02/2016

05/02/2016

05/02/2016

05/02/2016

05/02/2016

05/02/2016

05/02/2016

05/02/2016

05/02/2016

#### **ASBESTOS ANALYSIS RESULTS - SOIL ANALYSIS**

ESG Asbestos Limited Certificate of Analysis for Asbestos in Soils



Screen Only

Screen & ID

Screen & ID

Screen & ID

Detection limit of Method SCI-ASB-020 is 0.001%

Sampling has been carried out by a third party

NAIIS

NAIIS NAIIS

NAIIS NAIIS

NAIIS

NAIIS

Amosite(Free Fibres)

Chrysotile(Free Fibres)

Amosite, Chrysotile (Free Fibres)

									1089							
Client:			ESG Enviro	nmental Cher	nistry				Page 1 of 1							
Address:			Etwall Hous	e, Bretby Bus	iness Park, A	shby Road, Bur	Report No:	ANO-0488-11904								
For the atten	ntion of:		ESG Wokin	gham			Report Date:	05/02/2016								
Site Address	s:		Central Son	ners Town, Lo	ndon				Project Number:	S160820						
Sample Number	Sample Date	Sample Location	Test Date	Total Sample Dry Weight (g)		Asbestos(g) in >8mm+>2mm	Asbestos(g) in <2mm	% Asbestos by weight of Total Dried Sample		Asbestos Fibre Types Identified						
CL/1603723		BH1A 0.50	05/02/2016					Screen Only		NAIIS						
CL/1603724		BH4 1.00	05/02/2016					Screen Only		NAIIS						
CL/1603725		BH5 0.50	05/02/2016					Screen Only		NAIIS						
CL/1603726		BH6 1.00	05/02/2016					Screen Only		NAIIS						
CL/1603727		BH7 0.30	05/02/2016					Screen Only		NAIIS						

Ke	N/C	NAACR = Not Analysed at	Clients Request		NAIIS = No Asbe	stos Identified in Sa	mple (Screens Only	r)	Name:	Stacey Innes	Authorise	d Signatory:
Ne	:ys	* visible to naked eye			NADIS =	No Asbestos Detec	ted in Sample (ID &	Quant Only)	Position:	Lab Analyst	[6] The field maps controlled displayed. The distinct just intern travels; covering or distinct. Varily that the loss points to the control for and location.	
The sample ana	alysis for the abo	ove results was carried out using the proceed	dures detailed i	n ESG Asbestos	Limited in house	method (SCI-ASB	-020) based on HS	E document MDHS	90 - Asbestos Contam	inated Land - Draft 5 - N	November '	1997 (withdrawn). Fibre

identification was carried out using ESG Asbestos Limited in house method of transmitted/polarised light microscopy and centre stop dispersion staining (SCI-ASB-007), based on HSE's HSG 248. The analysis of fine fraction for asbestos content only includes fibres and does not discriminate non-asbestos fibres. All fibres are assumed, unless specified, to be amphiboles. All tests were carried out at ESG Asbestos Laboratory, Ashbourne House, Bretby Business Park, Ashby Road, Burton-upon-Trent, Staffordshire. DE15 0XD, UKAS Laboratory Number 1089.

CL/1603728

CL/1603729

CL/1603730

CL/1603731

CL/1603732

CL/1603733

CL/1603734

CL/1603735

CL/1603736

CL/1603737



\* visible to naked eye

#### **ASBESTOS ANALYSIS RESULTS - SOIL ANALYSIS**

ESG Asbestos Limited Certificate of Analysis for Asbestos in Soils



Position:

Lab Technician

Detection limit of Method SCI-ASB-020 is 0.001%

Sampling has been carried out by a third party

							TESTING								
	•		•		1089										
Client:			ESG Enviro	nmental Cher	mistry				Page 1 of 1						
Address:			Etwall Hous	se, Bretby Bus	iness Park, A	shby Road, Bur	ton upon Trent		Report No:	ANO-0503-11980					
For the atten	ntion of:		ESG Wokin	igham			Report Date:	ate: 19/02/2016							
Site Address	3:		Central Sor	ners Town, Lo	ndon	•	Project Number:	S160820							
Sample Number	Sample Date	Sample Location	Test Date	Total Sample Dry Weight (g)		Asbestos(g) in >8mm+>2mm	Asbestos(g) in <2mm	% Asbestos by weight of Total Dried Sample		Asbestos Fibre Types Id					
CL/1603735		WS29 0.30	18/02/2016	402	217	0.0001	0.0187	0.005	Ch	rysotile(Free Fibres) A	Amphiboles in Fines				
CL/1603736		TP2 0.30	18/02/2016	812	724	0.0000	0.0000			NADIS	3				
CL/1603737		HP5 1.00	18/02/2016	519	348	0.1483	0.0940	0.047	Chrys	sotile(Insulating Board	) Amphiboles in Fines				
											Authorised Signatory:				
Ke	ys	NAACR = Not Analysed	NAIIS = No Asbe	estos Identified in Sa	ample (Screens Only	)	Name:	Tom Pratt	Authorised digitatory.						
	-									1					

The sample analysis for the above results was carried out using the procedures detailed in ESG Asbestos Limited in house method (SCI-ASB-020) based on HSE document MDHS 90 - Asbestos Contaminated Land - Draft 5 - November 1997 (withdrawn). Fibre identification was carried out using ESG Asbestos Limited in house method of transmitted/polarised light microscopy and centre stop dispersion staining (SCI-ASB-007), based on HSE's HSG 248. The analysis of fine fraction for asbestos content only includes fibres and does not discriminate non-asbestos fibres. All fibres are assumed, unless specified, to be amphiboles. All tests were carried out at ESG Asbestos Laboratory, Ashbourne House, Bretby Business Park, Ashby Road, Burton-upon-Trent, Staffordshire. DE15 0XD, UKAS Laboratory Number 1089.

NADIS = No Asbestos Detected in Sample (ID & Quant Only)

#### S160820

#### **ESG Environmental Chemistry Analytical and Deviating Sample Overview**

**ESG Wokingham** Customer Site

Consignment No S52293 **Central Somers Town, London** Date Logged 03-Feb-2016

Report No S160820

Report Due 19-Feb-2016

		MethodID	CustServ	Dep.Opt	FOCS	ICPMSS	,		13-							ICPSOIL		KONECR	PAHMSUS	PCBUSECDAR	PHSOIL	SFAPI		Sub002	Sub002a	TPHFIDUS		WSLM59
ID Number	Description	Sampled	REPORT A	DO ID & Quant if ASB found	S.O.M. % (Calc)	Arsenic (MS)	Cadmium (MS)	Chromium (MS)	Copper (MS)	Lead (MS)	Mercury (MS)	Nickel (MS)	Selenium (MS)	Vanadium (MS)	Zinc (MS)	Barium.	Beryllium.	Chromium vi:	PAH (16) by GCMS	PCB-7 Congeners Analysis	pH units (AR)	Cyanide(Total) (AR)	Phenol Index.(AR)	^Asbestos ID and Quantification	^Asbestos Screen	TPH by GCFID (AR)	TPH Carbon Banding.	Total Organic Carbon
	Test Method Accredited	to ISO17025				✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓		✓	✓	✓	✓	✓	✓	✓	
CL/1603723	BH1A 0.50																											
CL/1603724	BH4 1.00																											
CL/1603725	BH5 0.50																											
CL/1603726	BH6 1.00																											
CL/1603727	BH7 0.30																											
CL/1603728	WS3 3.00																											
CL/1603729	WS5 1.50																											
CL/1603730	WS8 2.60																											
CL/1603731	WS16 0.30																											
CL/1603732	WS26A 0.90																											
CL/1603733	WS27 1.00																											
CL/1603734	WS28 1.00																											
CL/1603735	WS29 0.30																											
CL/1603736	TP2 0.30																											
CL/1603737																												

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

#### Deviating Sample Key

- The sample was received in an inappropriate container for this analysis
- В The sample was received without the correct preservation for this analysis
- Headspace present in the sample container
- The sampling date was not supplied so holding time may be compromised applicable to all analysis
- Sample processing did not commence within the appropriate holding time
- Sample processing did not commence within the appropriate handling time

#### Requested Analysis Key

- Analysis Required
- Analysis dependant upon trigger result Note: due date may be affected if triggered
- No analysis scheduled
- Analysis Subcontracted Note: due date may vary

#### **ESG Environmental Chemistry Analytical and Deviating Sample Overview**

Customer Site

**ESG Wokingham** 

**Central Somers Town, London** 

Report No S160820 Consignment No S52293 Date Logged 03-Feb-2016

Report Due 19-Feb-2016

ID Number	Description	MethodID	wsLM59 Total Organic Carbon
	Test Method Accredited	to ISO17025	
CL/1603723	BH1A 0.50		
CL/1603724	BH4 1.00		
CL/1603725	BH5 0.50		
CL/1603726	BH6 1.00		
CL/1603727	BH7 0.30		
CL/1603728	WS3 3.00		
CL/1603729	WS5 1.50		
CL/1603730	WS8 2.60		
CL/1603731	WS16 0.30		
CL/1603732	WS26A 0.90		
CL/1603733	WS27 1.00		
CL/1603734	WS28 1.00		
CL/1603735	WS29 0.30		
CL/1603736	TP2 0.30		
CL/1603737	HP5 1.00		

Note: For analysis where the scheduled turnaround is greater than the holding time we will do our utmost to prioritise these samples. However, it is possible that samples could become deviant whilst being processed in the laboratory.

In this instance please contact the laboratory immediately should you wish to discuss how you would like us to proceed. If you do not respond within 24 hours, we will proceed as originally requested.

#### Deviating Sample Key

- The sample was received in an inappropriate container for this analysis
  - The sample was received without the correct preservation for this analysis
- Headspace present in the sample container
- The sampling date was not supplied so holding time may be compromised applicable to all analysis
- Sample processing did not commence within the appropriate holding time
- Sample processing did not commence within the appropriate handling time

#### Requested Analysis Key

Analysis Required

Analysis dependant upon trigger result - Note: due date may be affected if triggered

No analysis scheduled

Analysis Subcontracted - Note: due date may vary

Report Number: EFS/160820

### **Method Descriptions**

Matrix	MethodID	Analysis Basis	Method Description	
Soil	FOCS	Oven Dried @ < 35°C	Calculation of Soil Organic Matter content from Organic Carbon content of soil samples	
Soil	ICPMSS	Oven Dried @ < 35°C	Determination of Metals in soil samples by aqua regia digestion followed by ICPMS	
Soil	ICPSOIL	Oven Dried @ < 35°C	Determination of Metals in soil samples by aqua regia digestion followed by ICPOES detection	
Soil	KONECR	Oven Dried @ < 35°C	Determination of Chromium vi in soil samples by water extraction followed by colorimetric detection	
Soil	PAHMSUS	As Received	Determination of Polycyclic Aromatic Hydrocarbons (PAH) by hexane/acetone extraction followed by GCMS detection	
Soil	PCBUSECDAR	As Received	Determination of Polychlorinated Biphenyl (PCB) congeners/aroclors by hexane/acetone extraction followed by GCECD detection	
Soil	PHSOIL	As Received	Determination of pH of 2.5:1 deionised water to soil extracts using pH probe.	
Soil	SFAPI	As Received	Segmented flow analysis with colorimetric detection	
Soil	SubCon*	*	Contact Laboratory for details of the methodology used by the sub- contractor.	
Soil	TPHFIDUS	As Received	Determination of hexane/acetone extractable Hydrocarbons in soil with GCFID detection.	
Soil	WSLM59	Oven Dried @ < 35°C	Determination of Organic Carbon in soil using sulphurous Acid digestion followed by high temperature combustion and IR detection	

### **Report Notes**

#### **Generic Notes**

#### Soil/Solid Analysis

Unless stated otherwise,

- Results expressed as mg/kg have been calculated on the basis indicated in the Method Description table.

  All results on MCERTS reports are reported on a 105°C dry weight basis with the exception of pH and conductivity.
- Sulphate analysis not conducted in accordance with BS1377
- Water Soluble Sulphate is on a 2:1 water:soil extract

#### **Waters Analysis**

Unless stated otherwise results are expressed as mg/l

**Nil**: Where "Nil" has been entered against Total Alkalinity or Total Acidity this indicates that a measurement was not required due to the inherent pH of the sample.

#### Oil analysis specific

Unless stated otherwise,

- Results are expressed as mg/kg
- SG is expressed as g/cm<sup>3</sup>@ 15°C

#### Gas (Tedlar bag) Analysis

Unless stated otherwise, results are expressed as ug/l

#### **Asbestos Analysis**

CH Denotes Chrysotile
CR Denotes Crocidolite
AM Denotes Amosite

TR Denotes Tremolite
AC Denotes Actinolite
AN Denotes Anthophylite

**NAIIS** No Asbestos Identified in Sample **NADIS** No Asbestos Detected In Sample

#### **Symbol Reference**

- ^ Sub-contracted analysis.
- \$\$ Unable to analyse due to the nature of the sample
- ¶ Samples submitted for this analyte were not preserved on site in accordance with laboratory protocols.

This may have resulted in deterioration of the sample(s) during transit to the laboratory.

Consequently the reported data may not represent the concentration of the target analyte present in the sample at the time of sampling

- ¥ Results for guidance only due to possible interference
- & Blank corrected result
- I.S Insufficient sample to complete requested analysis
- I.S(g) Insufficient sample to re-analyse, results for guidance only

Intf Unable to analyse due to interferences

N.D Not determined N.Det Not detected

N.F No Flow

**NS** Information Not Supplied

Req Analysis requested, see attached sheets for results

- **Þ** Raised detection limit due to nature of the sample
- \* All accreditation has been removed by the laboratory for this result
- # MCERTS accreditation has been removed for this result
- § accreditation has been removed for this result as it is a non-accredited matrix

**Note:** The Laboratory may only claim that data is accredited when all of the requirements of our Quality System have been met. Where these requirements have not been met the laboratory may elect to include the data in its final report and remove the accreditation from individual data items if it believes that the validity of the data has not been affected. If further details are required of the circumstances which have led to the removal of accreditation then please do not hesitate to contact the laboratory.

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#### **Sample Descriptions**

Client : ESG Wokingham

Site : Central Somers Town, London

Report Number: \$16\_0820

Note: major constituent in upper case

CL/1607292 BH 6 S 8 1.00 SUT CL/1607272 BH 6 S 8 1.00 MADE DROUND CL/1607277 BH 7 S 1.00 MADE DROUND CL/1607279 BH 7 S 1.00 MADE DROUND CL/1607279 WS 5 S 3 1.00 CLAY CL/1607279 WS 6 S 3 1.00 SUT CL/1607373 WS 16 S 1.00 SUT CL/1607373 WS 17 S 1.00 SUT CL/1607376 WS 17 S 1.00 SUT CL/1607377 WS 18 S 1.00 SUT CL/1607378 WS 18 S 1.00 SUT CL/1607379 WS 18 S 1.00 SUT CL/	Lab ID Number	Client ID	Description
CL/1603724         BH4 ES 8 1.00         SILT           CL/1603725         BH5 ES 5 0.50         MADE GROUND           CL/1603726         BH6 ES 6 1.00         MADE GROUND           CL/1603727         BH7 ES 1 0.30         SILT           CL/1603728         WS3 ES 10 3.00         CLAY           CL/1603729         WS5 ES 2 1.50         CLAY           CL/1603730         WS8 ES 9 2.60         MADE GROUND           CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT		BH1A ES 4 0.50	
CL/1603725         BH5 ES 5 0.50         MADE GROUND           CL/1603726         BH6 ES 6 1.00         MADE GROUND           CL/1603727         BH7 ES 1 0.30         SILT           CL/1603728         WS3 ES 10 3.00         CLAY           CL/1603729         WS5 ES 2 1.50         CLAY           CL/1603730         WS8 ES 9 2.60         MADE GROUND           CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT			SILT
CL/1603726         BH6 ES 6 1.00         MADE GROUND           CL/1603727         BH7 ES 1 0.30         SILT           CL/1603728         WS3 ES 10 3.00         CLAY           CL/1603729         WS5 ES 2 1.50         CLAY           CL/1603730         WS8 ES 9 2.60         MADE GROUND           CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT	CL/1603725	BH5 ES 5.0.50	MADE GROUND
CL/1603727         BH7 ES 1 0.30         SILT           CL/1603728         WS3 ES 10 3.00         CLAY           CL/1603729         WS5 ES 2 1.50         CLAY           CL/1603730         WS8 ES 9 2.60         MADE GROUND           CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT			
CL/1603728         WS3 ES 10 3.00         CLAY           CL/1603729         WS5 ES 2 1.50         CLAY           CL/1603730         WS8 ES 9 2.60         MADE GROUND           CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT			WADE GROUND
CL/1603729         WS5 ES 2 1.50         CLAY           CL/1603730         WS8 ES 9 2.60         MADE GROUND           CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT	CL/1603727	BH7 ES 1 0.30	
CL/1603730         WS8 ES 9 2.60         MADE GROUND           CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT		WS3 ES 10 3.00	
CL/1603731         WS16 ES 2 0.30         SILT           CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT			CLAY
CL/1603732         WS26A ES 4 0.90         MADE GROUND           CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT		WS8 ES 9 2.60	MADE GROUND
CL/1603733         WS27 ES 3 1.00         SILT           CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT			SILT
CL/1603734         WS28 ES 3 1.00         MADE GROUND           CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT			MADE GROUND
CL/1603735         WS29 ES 1 0.30         MADE GROUND           CL/1603736         TP2 ES 1 0.30         SILT			SILT
CL/1603736 TP2 ES 1 0.30 SILT	CL/1603734	WS28 ES 3 1.00	MADE GROUND
CL/1603736 TP2 ES 1 0.30 SILT	CL/1603735	WS29 ES 1 0.30	MADE GROUND
CU1603737 HP5 ES 3 1.00 MADE GROUND	CL/1603736	TP2 ES 1 0.30	SILT
		HP5 ES 3 1.00	MADE GROUND
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### APPENDIX G PHOTOGRAPHS

Trial Pit Photographs

TP4, TP5 and HP3