APPENDIX B

CGL borehole logs



Project										BOR	EHOLE I	No
Cam	den Lo	ock Villa	ge,	Londo	n			1			BH2	
Job No		Dat	-			Ground Le		Co-Ordinates (m)			DIIZ	
CG/18	067A		2	9-10-1	.4	2	6.16	E 528,836.9 N 18	4,261.6			
Client										Sheet	_	
Wals	sh Gro	ир									L of 4	
SAMPL	ES & TI	ESTS	ŝr					STRATA				ient I
Depth	Type No	Test Result	Water		ed Legenc	ness)		DESCRIPTIO	N			Instrument /Backfill
0.20-0.60 0.20 0.60 1.50-1.95 2.00 2.25 2.50-2.95 2.50 3.00-3.50 3.50-3.95 4.00 4.25 4.50-4.95 4.50 5.50-5.90 6.00-6.45 6.50 7.00-7.50 7.50-7.95 7.50 8.50	B1 D2 D3 U100 D5 D6 D7 B8 U100 D10 D11 D12 D13 U100 D15 B16 D17 D18	14 blows N7 12 blows N10 19 blows N13	ater	25.9 25.5		(8.70)	IMADE GRC Soft dark br coarse subr IMADE GRC Firm dark o [WEATHERE 5.50 - 5.90 I 5.50 - 5.90 I 1. No groun 2. ES= envir value, U100 3. Installatio 1.0-10.0mb	PUND] own sandy gravelly silt. Sand i ounded to subangular of brick UND] range brown occasionally mot ED LONDON CLAY FORMATION	s fine to coarse and flint. tled grey slight J J ole. ed sample, B=	bulk sam	AY.	
Method/							Field Crew		Logged By		necked By	
NUPTOON												



Project											BOF	REHOLE No
Cam	iden Lo	ock Villa	ige,	London	l							BH2
Job No		Dat	e			Ground Le	evel (m)	Co-Ordinates (m	ı)			DIL
CG/18	067A		2	9-10-14		20	6.16	E 528,836.	9 N 184	,261.6		
Client											Sheet	
Wal	sh Gro	up										2 of 4
SAMPL	ES & T	ESTS						STRATA				ent
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)		DE	SCRIPTION			Instrument
9.00-9.45	U100	25 blows	5	16.86		9.30						
9.50	D20			10.00			Stiff dark gre [LONDON CL	y CLAY. Frequent fi AY FORMATION]	ine selenite	crystals note	d.	
10.00	D21					- - - - - -						
- 10.50-10.95 - 10.50 	D22	N23										
11.50	D23					- - - - -						
12.00-12.45	U100	24 blows				+ - - - -						
12.50	D25											
- 13.00	D26											
- 13.50-13.95 - 13.50 - 14.00-15.00		N22										
- - - - - - -												
- 15.00-15.45 - 15.50	U100 D30	29 blows										
16.00	D31				 	- - - - - - -						
- - 16.50-16.95 - 16.50 	D32	N22										
17.50	D33					- - - - - - - -						
Boring Pro	ogress	and W	ate	r Observ	vation	s	General R	emarks			-	
ିଙ୍କୁ Date Co	mment	Strike Depth		Casin Depth ∣D			1. No ground	lwater encountered	d in borehol	e.		
		2000					2. ES= enviro value, U100=	nmental samples, I - U100 sample.	D= disturbe	d sample, B=	bulk san	nple, N= SPT 'N'
Boring Pro Date Co Date Co Date Co Method/ Plant Used							1.0-10.0mbg	n details: 0.0-1.0ml l: slotted pipe with gl: arisings backfill.	gravel back	fill; 10.0-11.0	mbgl: be	entonite backfill;
G math d / math d /						1	Field Crew			Logged By	ſ	Checked By
ਲੂ Plant Used		Cable p	ercu	ission				Wheeler Drilling	Ltd	JJM		DWM



Camden Lock Village, London Ground Level (m) Cc-Ordinates (m) BH2 Cd/18067A 22-10-14 26.16 E 528,836.9 N 184,261.6 Sineet Climit Watch Group 3 of 4 3 of 4 3 of 4 SAMPLES 8. TESTS Peetuce Peetuce Depth DESCRIPTION Peetuce 18:00-18:45 U100 28 blows Stiff dark gray (LVX, Frequent fine selence crystals noted. Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. 19:00 D36 Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. 19:00 D36 Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. 21:00-21:45 U100 38 blows Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. 22:00 D41 Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. Image: Control of the selence crystals noted. 22:00 D41 Image: Control of the selence crystals noted. Im		Project											BO	REHOLE No
John Date Ordinatesymp Occontatesymp		Cam	den Lo	ock Villa	ige,	Londor	า							вцэ
Client Sheet Walsh Group 3 of 4 SAMPLES & TESTS by Depth Type Type Testit 18.00-18.45 U100 18.00-18.45 U100 19.00 D36 19.00 D36 19.00 D36 19.00 D36 120.00-21.45 U100 21.00-21.45 U100 22.00 D41 22.00 D41 22.00 D41 22.00 D43 24.50 D45 25.00 D46 25.00 D46 25.00 D46 25.00 D46 25.00 D46 25.00 D46 25.00 D47 N41 D4		Job No		Da	te			Ground Le	evel (m)	Co-Ordinates (m)				рпζ
Walsh Group 3 of 4 SAMPLES & TESTS average of level egend (Thick ness) DESCRIPTION average of level egend (Thick ness) 18.00-18.45 0100 29 blows average of level egend (Thick ness) DESCRIPTION average of level egend (Thick ness) 19.00 D35 average of level egend (Thick ness) DESCRIPTION average of level egend (Thick ness) 19.00 D36 average of level egend (Thick ness) Itel dark grey CLAY. Frequent fine selenite crystals noted. average of level egend (Thick ness) 19.00 D36 average of level egend (Thick ness) average of level egend (Thick ness) average of level egend (Thick ness) 21.00-21.45 U100 38 blows average of level egend (Thick ness) average of level egend (Thick ness) 22.00 D41 average of level egend (Thick ness) average of level egend (Thick ness) average of level egend (Thick ness) 22.50 D42 N38 average of level egend (Thick ness) average of level egend (Thick ness) 22.50 D43 average of level egend (Thick ness) average of level egend (Thick ness) 22.50 D43 average of level egend (Thick ness)		CG/18	067A		2	9-10-14	1	2	6.16	E 528,836.9	N 184	,261.6		
SAMPLES & TESTS Type Test Result Model Depth Type Test Result Depth Test Result Description Description Description Test Result Test Result <t< td=""><td></td><td>Client</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Sheet</td><td></td></t<>		Client											Sheet	
18.00-18.45 U100 29 blows Stiff dark grey CLAY. Frequent fine selente crystals noted. 18.50 D35		Wals	sh Gro	up										3 of 4
18.00-18.45 U100 29 blows Stiff dark grey CLAY. Frequent fine selente crystals noted. 18.50 D35 Image: Clay of the selente crystals noted. Stiff dark grey CLAY. Frequent fine selente crystals noted. 19.00 D36 Image: Clay of the selente crystals noted. Image: Clay of the selente crystals noted. 19.00-19.95 D37 N28 Image: Clay of the selente crystals noted. 21.00-21.45 U100 38 blows Image: Clay of the selente crystals noted. 21.00-21.45 U100 38 blows Image: Clay of the selente crystals noted. 22.00 D41 Image: Clay of the selente crystals noted. Image: Clay of the selente crystals noted. 22.50-22.95 D42 N38 Image: Clay of the selente crystals noted. Image: Clay of the selente crystals noted. 24.00-24.45 U100 34 blows Image: Clay of the selente crystals noted. Image: Clay of the selente crystals noted. 25.00-25.95 D47 N41 Image: Clay of the selente crystals noted. Image: Clay of the selente crystals noted. 26.00-27.00 B48 Image: Clay of the selente crystals noted. Image: Clay of the selente crystals noted. 26.00-27.00 B48 Image: Clay of the selente crystals n		SAMPLE	S & T	ESTS	L					STRATA				ent
18.00-18.45 U100 29 blows Stiff dark grey CLAY. Frequent fine selente crystals noted. 18.50 D35		Depth	Type No	Test Result	Watei	Reduced Level	Legend	(Thick-		DES	CRIPTION			nstrum. 'Backfill
18.50 035 $-$ 19.00 036 $-$ 19.50-19.95 037 $N28$ 19.50-19.95 037 $N28$ 20.00-21.00 83 $-$ 21.00-21.45 U100 38 blows 21.50 D40 $-$ 22.50 D41 $-$ 22.50-22.95 D42 $N38$ 24.00-24.45 U100 34 blows 24.50 D43 $-$ 25.50-25.95 D47 $-$ 25.50		18.00-18.45	U100	29 blows	5			-	Stiff dark gre	y CLAY. Frequent fin	e selenite	crystals noted	ł.	
19.50-19.55 0.37 $N28$ (21.20) 20.00-21.00 $B38$ (21.20) 21.00-21.45 U100 38 blows (21.20) 21.00 $D40$ (21.20) 21.00 D40 (21.20) 22.00 D41 (21.20) 23.50 D42 (21.20) 24.00-24.45 U100 34 blows 24.50 D45 (21.20) 25.50-25.95 D47 (21.20) 25.50-25.95 D47 (21.20) 26.00-27.00 B48 (21.20)		- 18.50	D35						LONDON CL	AY FORMATION] (<i>co</i>	ntinued)			
19.50 N28 (21.20) 20.00-21.00 B38 (21.20) 21.00-21.45 U100 38 blows 21.50 D40 (21.20) 22.00 D41 (21.20) 22.00 D41 (21.20) 22.50 D42 N38 23.50 D43 (21.20) 24.00-24.45 U100 34 blows 24.00 D45 (21.20) 25.50 D46 (21.20) 25.50 D47 (11.0) 25.50-25.95 D47 (14.1) 25.00-27.00 B48 (21.20)		- 19.00	D36											
20.00-21.00 B38 J J 21.00-21.45 U100 J8 blows J 21.50 D40 J J 22.00 D41 J J 22.00 D41 J J 22.50-22.95 D42 N38 J 23.50 D43 J J 24.00-24.45 U100 J4 blows J 25.00 D46 J J 25.00 D46 J J 25.00 D46 J J 25.00-25.95 D47 N41 J 26.00-27.00 B48 J J			D37	N28				- - - - - - - - - - - - - - - - - - -						
21.50 D40 22.00 D41 22.50-22.95 D42 N38 23.50 D43 24.00-24.45 U100 J40 24.50 D45 25.50 D45 25.50 D47 N41 25.50-27.00 B48		20.00-21.00	B38					(21.20) 		\wedge				
22.00 D41 22.50-22.95 D42 N38 23.50 D43 24.00-24.45 U100 34 blows 24.50 D45 25.00 D46 25.50-25.95 D47 N41 26.00-27.00 B48		 - 21.00-21.45	U100	38 blows	5									
22.50-22.95 D42 N38 23.50 D43 24.00-24.45 U100 34 blows 24.50 D45 25.00 D46 25.50-25.95 D47 26.00-27.00 B48		21.50	D40											
22.50 N38 23.50 D43 24.00-24.45 U100 34 blows 24.50 D45 25.00 D46 25.50-25.95 D47 N41		22.00	D41											
24.00-24.45 U100 34 blows 24.50 D45 25.00 D46 25.50-25.95 D47 N41 26.00-27.00 B48		22.50-22.95 22.50	D42	N38										
24.50 D45 25.00 D46 25.50-25.95 D47 26.00-27.00 B48		23.50	D43											
25.00 D46 25.50-25.95 D47 25.50 D47 26.00-27.00 B48		-		34 blows	5									
25.50-25.95 D47 N41		-						- - - - - - - -						
25.50 N41 26.00-27.00 B48		-												
No general Remarks Boring Progress and Water Observations General Remarks Date Comment Strike Depth Dia. mm Standing Date Comment Strike Depth Dia. mm Standing 1 No groundwater encountered in borehole. 2. ES= environmental samples, D= disturbed sample, B= bulk sample, N= SPT 'N' value, U100= U100 sample. 3. Installation details: 0.0-1.0mbgl: plain pipe with bentonite backfill; 1.0-10.0mbgl: slotted pipe with gravel backfill; 10.0-11.0mbgl: bentonite backfill; 1.0-30.5mbgl: arisings backfill. Gas tap, bung and flush cover installed. Field Crew Method/ Plant Used Cable percussion		25.50 	B48	N41										
Boring Progress and Water Observations General Remarks Date Comment Strike Depth Casing Depth Standing Depth Date Comment Strike Depth Depth Dia. mm Standing Depth 1. No groundwater encountered in borehole. 2. ES= environmental samples, D= disturbed sample, B= bulk sample, N= SPT 'N' value, U100= U100 sample. 3. Installation details: 0.0-1.0mbgl: plain pipe with bentonite backfill; 1.0-10.0mbgl: slotted pipe with gravel backfill, 10.0-11.0mbgl: bentonite backfill 11.0-30.5mbgl: arisings backfill. Gas tap, bung and flush cover installed. Method/ Plant Used Cable percussion Field Crew Gary Wheeler Drilling Ltd Logged By JJM Checked By DWM	DT 15/12/14	- - - - - -												
Date Comment Strike Depth Casing Depth Standing Depth 1. No groundwater encountered in borehole. 2. ES = environmental samples, D = disturbed sample, B = bulk sample, N = SPT 'N' value, U100 = U100 sample. 2. ES = environmental samples, D = disturbed sample, B = bulk sample, N = SPT 'N' value, U100 = U100 sample. 3. Installation details: 0.0-1.0mbgl: plain pipe with bentonite backfill; 1.0-10.0mbgl: slotted pipe with gravel backfill; 10.0-11.0mbgl: bentonite backfill 11.0-30.5mbgl: arisings backfill. Gas tap, bung and flush cover installed. Method/ Plant Used Cable percussion Field Crew Gary Wheeler Drilling Ltd Logged By JJM Checked By DWM	3_1.G	Boring Pro	gress						General R	emarks				
01 101 102 102 102 102 102 102 102 102 1	AGS :	Date Coi	nment	Strike Depth	C	Casir Depth ∣[ig Dia. mm	Standing Depth	1. No ground	water encountered	in borehol	e.		
Answer 3. Installation details: 0.0-1.0mbgl: plain pipe with bentonite backfill; 1.0-10.0mbgl: slotted pipe with gravel backfill; 10.0-11.0mbgl: bentonite backfill 11.0-30.5mbgl: arisings backfill. Gas tap, bung and flush cover installed. Method/ Plant Used Field Crew Cable percussion Field Crew Gary Wheeler Drilling Ltd Logged By JJM Checked By DWM	JINT STD /								2. ES= enviro value, U100=	onmental samples, D: = U100 sample.	= disturbe	d sample, B= b	oulk sar	nple, N= SPT 'N'
Image: Second	G CG18067.GPJ G								1.0-10.0mbg	I: slotted pipe with g	ravel back	fill; 10.0-11.0r	mbgl: b	entonite backfill;
	COL BH LO	Method/ Plant Used		Cable p	ercu	ission		<u> </u>		Wheeler Drilling L	.td		(



Project											BC	REHOLE	No
Cam	den Lo	ock Vil	llage,	Londo	n							CU 1	
Job No		D	ate			Ground Le	evel (m)	Co-Ordinates (m)				BH2	
CG/18	067A		2	9-10-14	4	2	6.16	E 528,836.9	N 184	,261.6			
Client											Shee	t	
Wals	sh Gro	up										4 of 4	
SAMPLE	S & T	ESTS						STRATA					ent
Depth	Type No	Test Resul	Water	Reduce Level	dLegenc	Depth (Thick- ness)			RIPTION				Instrument /Backfill
27.00-27.45	U100	40 blov	ws			-	Stiff dark gre	ey CLAY. Frequent fine	selenite	crystals note	d.		
27.50	D50						LONDON CL	ÁY FORMATION] (cor	itinued)				
28.00	D51												
28.50-28.95 28.50 28.50	D52	N55											
29.50	D53												
- - 30.00-30.45	U100	34 blov	ws	-4.34		- - - - - - - - - - - - - - - - - - -							
30.50	D55						(Borehole te	erminated at 30.5m)					
	nment	Ctuiles		Casir epth			2. ES= enviro value, U100= 3. Installatio 1.0-10.0mbg	dwater encountered in onmental samples, D= = U100 sample. n details: 0.0-1.0mbgl d: slotted pipe with gr gl: arisings backfill. G	disturbe : plain pi avel back	d sample, B= pe with bentc fill; 10.0-11.0	onite ba Imbgl: l	ackfill; bentonite ba	
Method/ Plant Used		Cable	percu	ssion			Field Crew Gary N	Wheeler Drilling Lt	d	Logged By JJM		Checked By DWN	



Project										BOREHOLE	No
	iden Lo	ock Villa	-	Londo	n			1		BH3	
Job No		Dat				Ground Le		Co-Ordinates (m)			
CG/18	067A		28	8-10-1	4	2	6.16				
Client										Sheet	
Wal	sh Gro	up		-						1 of 2	
SAMPL	ES & T	ESTS	L					STRATA			l II
Depth	Type No	Test Result	Water	Reduce Level	ed Legend	Depth (Thick- ness)		DESCRIPTION	l		Instrument /Backfill
- 0.30 - 0.30-0.60 - 0.40 - 0.60	D1 B2 ES115 D3			25.8 25.5	6 6 	0.30 0.60	Soft dark bro fine to coars brick. Occasi [MADE GRO	own very sandy gravelly silt. Sa e subrounded to subangular o onal ash noted.	f brick. Occasior	nal cobble of	
1.20-1.65 1.20 1.80 2.00-2.50	D4 ES116 B5	N9				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	[WEATHERE	D LONDON CLAY FORMATION]	,	
2.50-2.95	U100	16 blows									
3.00 3.25	D7 D8							V Č			
- 3.50-3.95 - 3.50 -	D9	N12									
4.25 4.50-4.95	D10 U100	17 blows									
5.00 5.00-6.00	D12 B13					(9.50)					
6.00-6.45 6.00 6.50-6.80	D14	N14					6.50 Mudsto	ine noted			
7.00	D13						0.30 Mudste	ne noteu.			
7.50-7.95	U100	26 blows				+ - - - - - - - - - -					
8.00	D18					-					
8.50	D19										
Boring Pro	Jorecc	and Wa	ater	· Ohse	rvation	ـــــــــــــــــــــــــــــــــــــ	General R	emarks			18-50
Doring Tro	mment	0.11			ng Dia. mm			dwater encountered in boreho	le.		
		Depth		epth	<u>וע. mm</u>	Depth	2. ES= enviro	onmental samples, D= disturbe = U100 sample.		ulk sample, N= S	PT 'N'
Boring Pro							1.0-5.0mbgl:	n details: 0.0-1.0mbgl: plain pi slotted pipe with gravel backi g and flush cover installed.			fill.
្ទ Method/ ទ្យ Plant Used		Cable pe	ercu	ssion			Field Crew Gary V	Wheeler Drilling Ltd	Logged By JJM	Checked E DWI	



Project										BOREHOLE	No
Cam	den Lo	ock Vill	age,	Londo	n					CUID	
Job No		Da	ate			Ground Le	evel (m)	Co-Ordinates (m)		BH3	
CG/18	067A		2	8-10-1	4	2	6.16				
Client						1		I		Sheet	
Wals	h Gro	up								2 of 2	
SAMPLE	S & T	ESTS						STRATA			ent
Depth	Type No	Test Result	Water	Reduce Level	dLegend	Depth (Thick- ness)		DESCRIPTION	J		Instrument Asckfill
- 9.00-9.45 - 9.00	D20	N26					Firm dark ora [WEATHEREI	ange brown occasionally mott D LONDON CLAY FORMATION	led grey slightly] <i>(continued)</i>	y silty CLAY.	
- 10.00-10.50	B21			16.0	6	- 10.10 	[LONDON CL	y CLAY. Frequent fine selenite AY FORMATION]			
10.50-10.95 - - 11.00	U100 D23	29 blow	/s			 	10.40 Becom noted. 10.50 Claysto	ning stiff dark grey CLAY. Frequence noted.	uent fine seleni [.]	te crystals	
11.50	D24										
 - 12.00-12.45 - 12.00	D25	N29						< Č			
13.00	D26						\mathbf{V}				
- 13.50-13.95 - 14.00	D100	29 blow	/S								
14.50	D29										
- 15.00-15.45 - 15.00 -	D30	N31		10.7	1	- - 15.45	(Borehole te	rminated at 15.45m)			
Boring Pro	gress						General R	emarks			
	nment	Ctrilco			ng Dia. mm		 No ground ES= enviro value, U100= Installation 1.0-5.0mbgl: 	water encountered in boreho nmental samples, D= disturbe U100 sample. n details: 0.0-1.0mbgl: plain p slotted pipe with gravel back g and flush cover installed.	ed sample, B= b ipe with bentor	nite backfill;	
Method/ Plant Used		Cable p	percu	ission			Field Crew Gary V	Vheeler Drilling Ltd	Logged By JJM	Checked B	



Project										BC	DREHOLE	No
	nden Lo	ock Villa	-	Londor	1					-	BH4	
Job No		Dat		7-11-14		Ground Le		Co-Ordinates (m)			DII4	
CG/18	3067A		18	8-11-14	1	2	7.37	E 528,783.9 N 184	1,238.5	Chas	•	
Client	ch Cra									Shee		
	sh Gro	•		1							1 of 3	12
SAMPL	ES&T	ESTS	ter		1	Depth		STRATA				men
Depth	Type No	Test Result	Water	Reduced Level		(Thick- ness)		DESCRIPTION	N			Instrument /Backfill
- 0.20 - 0.20-0.50 - 0.50 - 0.50-1.20	D1 B2 D3 B4			27.12		0.25 	[MADE GRO Soft dark bro	own very sandy gravelly silt. Sa se subrounded to subangular o	and is fine to o f brick. Occas	coarse. ional co	Gravel is obbles of	
- - 1.20-2.95 - 1.20	D5	N6		25.97	/	1.40	Firm dark or	ange brown slightly silty CLAY	Occasional fi	ne sele	nite	
2.25-3.00	D6					┶ <u>┶</u> ┶┼╌┿ ┙	crystals note	ange brown signuy sity CLAY ed. D LONDON CLAY FORMATION		ne sele	mite	
2.23-3.00	_	11 blows			x x	<u>}</u>						
- 3.00	D8	11 DIOWS				* - - - - - - -						
3.00-3.50	B9					*						ΙE
- 3.50-3.95 - 3.50 	D10	N11					$\mathbf{\nabla}$					
4.25	D11											
- 4.50-4.95	U100	16 blows			× × ×	*						
5.00	D13											
5.50-6.00	B14											
- 6.00-6.45 - 6.00	D15	N14				× (9.80)						
- 7.00	D16					+ + + + + + + + + + + + + + + + + + +						
- - 7.50-7.95	U100	21 blows			× – × – × – × – × –							
8.00 Boring Pr	D18				× × ×	<u></u> <u>}</u> - }						
Boring Pr	ogress						General F	Remarks				
Date Co	omment	Strike Depth	D	Casir epth [ng Dia. mm	Standing Depth	1. No ground	dwater encountered in boreho	ble.			
							drilling.	e magnetrometer testing unde				
							3. D= disturi	ped sample, B= bulk sample, N	= SPT 'N' sam	ple, U1	00= U100 sa	mple.
							1.5-9.0mbgl	n details; 0.0-1.5mbgl: plain p : slotted pipe with gravel back ogl: arisings backfill. Gas tap, b	fill; 9.0-10.0m	bgl: be	ntonite back	fill;
Method/							Field Crew		Logged By		Checked By	
Plant Used		Pil	con				Gary	Wheeler Drilling Ltd	JJM		DRAF	Т



Project											BO	REHOLE	No
Cam	den Lo	ock Vill	lage,	Londo	n							рци	
Job No		Da	ate 1	7-11-1	4	Ground Le	evel (m)	Co-Ordinates (m)			-	BH4	
CG/18	067A			8-11-1		2	7.37	E 528,783.9	N 184	,238.5			
Client											Sheet	t	
Wals	sh Gro	up										2 of 3	
SAMPLE	S & T	ESTS						STRATA					ent
Depth	Type No	Test Result		Reduce Level	dLegend	Depth (Thick- ness)			RIPTION				Instrument
- 8.50-9.00 -	B19						crystals note	ange brown slightly si ed. D LONDON CLAY FOR	•		ine selei	nite	
- 9.00-9.45 9.00	D20	N33											
- 9.50-9.70	D21					\							
- 10.00	D22					- - - - - - - -							
- - 10.50-10.95	U100	25 blov	vs			╋ <mark>╋</mark>		\sim					
- - 11.00	D24			16.1		* * 11.20	Stiff closely f	issured dark grey slig	htly silty	CLAY. Occasio	onal fine	e selenite	
- 11.50-12.00	B25						crystals note [LONDON CL	ed. AY FORMATION]					
 12.00-12.45 12.00	D26	N28											
13.00	D27												
- - 13.50-13.95	U100	27 blov	vs										
- 14.00	D29												
- 14.50-15.00	B30					- - - - - - - - - - - - - -							
- 15.00 15.00	D31	N31				┑╵╷╷╷╷╷╷╷							
16.00	D32					7 7 7							
- 16.50-16.95	U100	25 blov	vs		× × · · · · · · · · · · · · · · · · · ·								
Boring Pro	ogress						General R	Remarks					
Date Co	mment	Strike Depth		Casii epth	ng Dia. mm	Standing Depth	1. No ground	dwater encountered i	n boreho	le.			
							2. Down hole drilling.	e magnetrometer tes	ting unde	rtaken at 2m	interva	ls for first 5	m of
							3. D= disturb	oed sample, B= bulk sa	ample, N	= SPT 'N' sam	ple, U10	00= U100 sa	mple
Boring Pro Date Con Method/ Plant Used							1.5-9.0mbgl:	n details; 0.0-1.5mbg slotted pipe with gra ogl: arisings backfill. G	vel backt	ill; 9.0-10.0m	ıbgl: ber	ntonite back	cfill;
Method/ Plant Used		Р	Pilcon	1		1	Field Crew Gary \	Wheeler Drilling Lt	:d	Logged By JJM		Checked By DRAF	



	Project									В	OREHOLE	No
	Cam	den Lo	ck Villa	ge,	Londo	n					рци	
	Job No		Dat	e 17	7-11-1	4	Ground Le	evel (m)	Co-Ordinates (m)		BH4	
	CG/18	067A		18	8-11-1	4	2	7.37	E 528,783.9 N 184	l,238.5		
	Client									She	et	
	Wal	sh Grou	Jp								3 of 3	
	SAMPL	ES & TE	STS	<u>د</u>					STRATA			ent
	Depth	Type No	Test Result	Water	Reduce Level	ed Legend	Depth (Thick- ness)		DESCRIPTION			Instrument /Backfill
	- 17.00	D34						crystals note	issured dark grey slightly silty d. AY FORMATION] <i>(continued)</i>	CLAY. Occasional fi	ne selenite	
	- 17.50-18.00 -	B35					≮					
	- 18.00-18.45 18.00	D36	N28				(13.80)					
	- - - 19.00	D37					┼╌ [╷] ┑╵╴╎┑╵╶╢ _{┛╵}					
	- - - 19.50-19.95	U100	27 blows				┶╅╌┝╅╴┼┝					
	20.00	D39							X			
	20.50-21.00	B40						\bigtriangledown				
	21.00-21.45 21.00	D41	N34									
	- 22.00	D42										
	22.50-22.95	U100	28 blows				- - - - - - - - - - - - - - - - - - -					
	23.00	D44 B45					┑╵╵╱╵					
	- 23.50-24.00 		N37				╵╅╵╎┽┼╳╷╵					
5/12/14	_ 24.00 - - - -		1137				, , ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,					
	- 25.00	D47			2.3	7 <u> </u>	≠ 25.00 -	(Borehole te	erminated at 25m)			16620
ا و 	Boring Pro		and Wa	ater	Ohse	rvation	s	General R	-			
AGO.	_	mment	Strike Depth			ng Dia. mm			dwater encountered in boreho	lle.		
GINI SID.			Jepth		eptn	<u>וע. mm</u>	Deptn	_	e magnetrometer testing unde		als for first 5	im of
5								3. D= disturb	ed sample, B= bulk sample, N	= SPT 'N' sample, U	100= U100 sa	ample.
JG CG1800/A.GPJ GINT ST								1.5-9.0mbgl:	n details; 0.0-1.5mbgl: plain pi slotted pipe with gravel back gl: arisings backfill. Gas tap, b	fill; 9.0-10.0mbgl: b	entonite back	kfill;
밀	Method/			<u> </u>			1	Field Crew		Logged By	Checked B	v
20	Plant Used		Pil	con					Wheeler Drilling Ltd	JJM	DRAF	



Project										BO	REHOLE	No
Cam	nden Lo	ock Vill	age,	Londor	1			1			BH5	
Job No		Da	ate 1	0-11-14	1	Ground Le		Co-Ordinates (m)				
CG/18	8067A		1	2-11-14	1	2	7.36	E 528,775.3 N 184	,211.1			
Client										Sheet		
	sh Gro			1							1 of 5	در آ
SAMPL	ES & T	ESTS	er		-			STRATA				nent
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIPTION				Instrument /Backfill
0.15-0.60	B1			26.86 26.72		(0.50) 0.50	[MADE GRO	-				
0.65-1.00	B2			20.72		× 0.64	Gravel is fin	een grey slightly sandy gravelly e to coarse subrounded to sub DUND] range brown slightly silty CLAY.	angular of brid	rie to co ck.		
1.25	D3				E		[WEATHERE	D LONDON CLAY FORMATION]			
- 1.23 - 1.50-1.95	-	16 blow	vs		<u> </u>	-						
	0100	10 5100	• 5			-						
2.00	D5											
2.25	D6				E							
2.50-2.95	D7	NO			<u> </u>							
2.50		N8			<u> </u>	+						
3.00-3.50	B8					-						
					F							
3.50-3.95	0100	16 blow	vs		<u> </u>							
 - 4.00	D10				E=							
4.00	D10											
4.50-4.94	D12											
4.50		N16										
_ ·												
					<u> </u>]	(9.16)						
5.50	D13				E-7							
- - 					F -7-							
6.00-6.45	U100	17 blow	vs									
6 50	D15				<u> </u>							
6.50	D15				E							
- 7.00	D16				<u> </u>	+						
· · · · ·					[
7.50-7.95	D17				<u> </u>							
7.50		N17			F							
-					E=	-						
		l		<u> </u>	<u>+</u>	<u>-</u>						5008
Boring Pro	-						General F					
Date Co	mment	Strike Depth		Casir epth [່ວໍ່ໂa. mm	Standing Depth		dwater encountered in boreho				
							drilling.	le magnetrometer testing unde				
								bed sample, B= bulk sample, N				imple.
							1.0-7.0mbgl	on details; 0.0-1.0mbgl: plain pi I: slotted pipe with gravel back gl: arisings backfill. Gas tap, bu	fill; 7.0-8.0mb	gl: bent	onite backf	ill;
Method/				I		1	Field Crew		Logged By		Checked By	/
Plant Used		Р	ilcon					Wheeler Drilling Ltd	JJM		DRAF	



Project											BC	DREHOLE	No
Cam	den Lo	ock Vill	age,	Londo	n								
Job No		Da	te 1	0-11-1	4	Ground L	evel (m)	Co-Ordinates (m)				BH5	
CG/18	067A		ī	2-11-1	.4	2	7.36	E 528,775.3	N 184	,211.1			
Client		i									Shee	t	
Wals	sh Gro	up										2 of 5	
SAMPLE	ES & T	ESTS						STRATA					ent
Depth	Type No	Test Result	Water	Reduce Level	ed Legend	Depth (Thick- ness)		DES	CRIPTION	I			Instrument /Backfill
- 8.50-9.00	B18						Firm dark or	ange brown slightly s D LONDON CLAY FOR	Silty CLAY.	(continued)			
- 9.00-9.45	U100	28 blow	s			- [-] -] -] -] -] -] -] -] -] -]				(,			
9.50	D20			17.5									
10.00	D21						Stiff closely f noted.	fissured dark grey silt _AY FORMATION]	ty CLAY. F	requent fine s	elenite	e crystals	
- 10.50-10.95 10.50	D22	N24						\sim					
11.50-12.00	B23												
- 12.00-12.45	U100	24 blow	s										
12.50	D25												
- 13.00	D26												
- 13.50-13.95 - 13.50 	D27	N27											
14.50-15.00	B28					רא <u>ר</u> ר אררי, אררי							
- 15.00-15.45	U100	30 blow	s			┍ <mark>┝</mark> ╴┫ _┍ ┝╷┍┓							
- 15.50 - 16.00	D30 D31					<u>, 1, 4, 1, 4, 1</u>							
+ 16.50-16.95						·							
<u>16.50</u>		N28	<u> </u>		×	1							i kast
Boring Pro							General R		in here !				
Date Co	mment	Strike Depth		epth	ing Dia. mm	Standing Depth		dwater encountered e magnetrometer tes			interva	als for first 5	m of
								ped sample, B= bulk s	ample, N	= SPT 'N' samı	ple, U1	00= U100 sa	ample.
16.50-16.95 16.50 16.							4. Installatio 1.0-7.0mbgl:	n details; 0.0-1.0mbg : slotted pipe with gr gl: arisings backfill. Ga	gl: plain pi avel backi	pe with bento ill; 7.0-8.0mb	onite ba gl: ben	ackfill; tonite backf	
Method/ خ Plant Used		Pi	ilcon	I		1	Field Crew Gary \	Wheeler Drilling L	.td	Logged By JJM		Checked By DRAF	



Project											BO	REHOLE No
Cam	den Lo	ock Vil	lage,	Londo	n							DUE
Job No		D	ate 1	0-11-14	4	Ground Le	evel (m)	Co-Ordinates (m)				BH5
CG/18	067A		1	2-11-14	4	2	7.36	E 528,775.3	N 184	,211.1		
Client											Sheet	
Wals	sh Gro	up										3 of 5
SAMPLE	S & T	ESTS						STRATA				ent
Depth	Type No	Test Resul	Water	Reduce Level	dLegend	Depth (Thick- ness)			RIPTION			Instrument
-							noted.	issured dark grey silty AY FORMATION] (con		equent fine s	elenite	crystals
17.50-18.00	B33											
18.00-18.45	U100	31 blov	ws		× × ·	\ + \						
18.50	D35					·+ 						
19.00	D36											
- 19.50-19.95 - 19.50 	D37	N38				* + * + *		\mathbf{X}				
20.50-21.00	B38					· · · · · · · · · · · · · · · · · · ·						
21.00-21.45	U100	28 blov	ws									
21.50	D40											
22.00	D41				× × × ×	1 + + + + + + + + + + + + + + + + + + +						
- 22.50-22.95 - 22.50 - -	D42	N40				<u> </u>						
23.50-24.00	B43					┶┽╌┼╳┤╌┝ ╷┥						
 24.00-24.45	U100	31 blov	ws			<						
24.50	D45					(29.70)						
_ – 24.90-25.20	D46				<u> </u>	Т- Я						
Boring Pro	-						General F	lemarks				
Date Co	mment	Strike Depti	<u> </u>	epth I	ng Dia. mm	Standing Depth	1. No ground	lwater encountered in	borehol	e.		
							drilling.	e magnetrometer testi	-			
24.50 24.90-25.20 Boring Pro Date Con Date Method/ Plant Used							4. Installatio 1.0-7.0mbgl	ed sample, B= bulk sa n details; 0.0-1.0mbgl: slotted pipe with grav l: arisings backfill. Gas	plain pir vel backfi	oe with bento ll; 7.0-8.0mb	nite ba gl: bent	ckfill; onite backfill;
Method/		F	Pilcon				Field Crew Gary V	Wheeler Drilling Lto	d	Logged By JJM	(Checked By DRAFT



Project										BO	REHOLE	No
Cam	den Lo	ock Villa	ge,	Londo	n						BH5	
Job No		Dat	.e 10)-11-1	4	Ground Le	evel (m)	Co-Ordinates (m)			рпр	
CG/18	067A		12	2-11-1	.4	2	7.36	E 528,775.3 N 184	,211.1			
Client										Sheet		
Wals	sh Gro	up									4 of 5	
SAMPLI	ES & TI	ESTS						STRATA				ent
Depth	Type No	Test Result	Water	Reduce Level	ed Legend	Depth (Thick- ness)		DESCRIPTION				Instrument //Backfill
- 25.50-25.95 25.50 -	D47	N49					noted.	fissured dark grey silty CLAY. F AY FORMATION] <i>(continued)</i>	requent fine s	elenite	crystals	
26.50-27.00	B48				× × × × × ×	}						
- 27.00-27.45	U100	47 blows			× × × ×	<u>_</u>						
-					× ×							
27.50	D50				×							
-						- - -						
- 28.00	D51					× *						
- 28.50-28.95	D52					2						
28.50	0.52	N50/ 246 mm				- }						
		240 11111				×						
Ē					× ×							
29.50-30.00	B51a					E) L						
-					× ×							
30.00-30.45	U100	44 blows			×_×-	- +						
- 30.50	D53				× — ××	<u>≯</u> 						
- 31.00					× ×	1 x						
- 51.00	D54											
- 31.50-31.95	D55				× · ·	- -						
31.50		N50/ 279 mm				<u>x</u> x						
-		275 1111				- - 						
						- 						
32.50-33.00	B56					<u>≻</u> 						
±						- }_						BOS
2 - 33.00-33.45	U100	47 blows				- 7 -						
					×	1						
Boring Pro	press	and Wa	ater	Obse	rvation	۱ ۲	General R	Remarks				
2	mment	Strike Depth			ng Dia. mm			dwater encountered in boreho	le.			
		υεριπ			מש. ווווו		_	e magnetrometer testing unde		interval	s for first 5	m of
								oed sample, B= bulk sample, N	= SPT 'N' samp	ole, U10	0= U100 sa	imple.
							1.0-7.0mbgl	n details; 0.0-1.0mbgl: plain pi slotted pipe with gravel backl gl: arisings backfill. Gas tap, bu	fill; 7.0-8.0mb	gl: bento	onite backfi	ill;
Method/						1	Field Crew		Logged By	(Checked By	/
Plant Used		Pil	con					Wheeler Drilling Ltd	JJM		DRAF	



Project										В	OREHOLE No)
Cam	iden Lo	ock Vil	lage,	Londor	า						рце	
Job No		D	ate 1	0-11-14	1	Ground Le	evel (m)	Co-Ordinates (m)			BH5	
CG/18	067A		1	2-11-14	1	2	7.36	E 528,775.3 N	N 184,21	1.1		
Client										She	et	
Wal	sh Gro	up									5 of 5	
SAMPL	ES & T	ESTS						STRATA			ent	
Depth	Type No	Test Resul		Reduced Level	Legend	Depth (Thick- ness)		DESCRI	PTION		Instrum	/Backfill
33.50	D58				× ×	ž	Stiff closely f noted.	issured dark grey silty C	LAY. Frequ	ent fine selenit	e crystals	至
34.00	D59					+ + + + + + + + + + + + + + + + + + + +		AY FORMATION] (contin	nued)			
- 34.50-34.95 34.50	D60	N51			× × · · · · · · · · · · · · · · · · · ·	∧ + + + +						
- - - -						<u>-</u> + + + + + + + + + + + + +						
- 35.50-36.00												
- 36.00-36.45 -	U100	48 blov	NS			* 						
-						- - - - - -		X				
37.00	D63											
- 37.50 - 37.50 -	D64	N50/ 252 m	, m									
-												
- 38.50-39.00 - -												
- 39.00-39.50 - -	U100	56 blov	NS	-12.14	× ×	- 						
- - - -						- - - -	(Borehole te	erminated at 39.5m)				
-												
-						- - - -						
+ + + -						- - - -						
						- - -						
Boring Pro	-						General R					
Date Co	mment	Strike Depti	<u>h</u> D	Casir epth [ig Dia. mm	Standing Depth	1. No ground	lwater encountered in b	orehole.			
							drilling.	e magnetrometer testin	-			
							3. D= disturb	ed sample, B= bulk sam	ple, N= SP1	Γ'N' sample, U	100= U100 samp	ole.
Boring Pro							1.0-7.0mbgl:	n details; 0.0-1.0mbgl: p slotted pipe with grave l: arisings backfill. Gas ta	l backfill; 7	.0-8.0mbgl: be	ntonite backfill;	
المعلم المعلم المعلم المعلم المعلم معلم المعلم ا		F	Pilcon	I		<u> </u>	Field Crew Gary \	Wheeler Drilling Ltd	Log	ged By JJM	Checked By DRAFT	



Project										BOR	EHOLE	No
	den Lo	ock Villa	ge,	Londo	n			1			BH6	
Job No		Dat	1.	3-11-1	4	Ground Le		Co-Ordinates (m)			DIIO	
CG/18	067A		14	4-11-1	4	2	7.96	E 528,747.0 N 184	,197.8			
Client										Sheet		
Wals	sh Gro	ир								-	1 of 3	1
SAMPLE	S & T	ESTS	5					STRATA				Jent
Depth	Type No	Test Result	Water	Reduce Level	d Legend	11633		DESCRIPTION	I			Instrument /Backfill
-				27.7		0.25	Concrete. No MADE GRO	o rebar noted. UND1				
0.25 0.25-1.20 0.30	D1 B2 ES220					(1.15)	Dark brown	silty sandy fine to coarse subreent cobbles of brick noted.	ounded to sub	angular g	ravel of	
1.20-1.65	D3			26.5	5	1.40						
1.20 2.00-2.50 2.20	B4 ES221	N5					crvstals note	ange brown slightly silty CLAY. 2d. D LONDON CLAY FORMATION		ne selenit	e	
2.50-2.95	U100	12 blows										
3.00	D6				× –							
3.25	D7				×							
- 3.50-3.95 - 3.50	D8	N13				1 2 4						
E	50				× *							
- 4.00-4.50	B9											
- - 4.50-4.95	U100	20 blows										
- 5.00	D11					× × ×						
- 5.50 -	D12				* * * *							
- 6.00-6.45 - 6.00 - 6.00	D13	N17				× (9.80)						
- 7.00-7.50	B14					┷ ┝╷╵┥						
7.50-7.95	U100	19 blows										
- 8.00	D16				× × ×	* - *						
Boring Pro							General F					
Date Co	mment	Strike Depth	D	epth	ng Dia. mm	Standing Depth	1. No ground	dwater encountered in boreho	le.			
							drilling.	e magnetrometer testing unde				
							4. Installatio 1.5-8.5mbgl	bed sample, B= bulk sample, N= n details; 0.0-1.5mbgl: plain pi : slotted pipe with gravel backf gl: arisings backfill. Gas tap, bu	pe with bento ill; 8.5-9.5mb	onite back gl: bentor	fill; nite backfi	
Method/	 Method/								Logged By		necked By	,
Boring Pro		Pil	con				Field Crew Gary V	Wheeler Drilling Ltd	JJM		DRAF	



Project											BC	REHOLE	No
Cam	den Lo	ock Vill	age,	Londo	on							вис	
Job No		Da	te 1	3-11-1	Л	Ground L	evel (m)	Co-Ordinates (m)				BH6	
CG/18	067A		1	4-11-1	4	2	7.96	E 528,747.0	N 184	,197.8			
Client											Sheet	t	
Wals	sh Gro	up										2 of 3	
SAMPLE	S & T	ESTS						STRATA					ent
Depth	Type No	Test Result	Water	Reduc Leve	ed Legend	Depth (Thick- ness)			RIPTION	I			Instrument /Backfill
8.50	D17				× ×	, <u>,</u> , , , ,	crystals note				ne sele	nite	
- 9.00-9.45 - 9.00	D18	N21				┙╷┙╵┙╷┙╵┙╷	[WEATHERE	D LONDON CLAY FOR	MATION	(continued)			
- 10.00-10.50	B19					∕×₋₁ ×₁							
- 10.50-10.95	U100	23 blow	rs										
11.00	D21			16.7	76 <u> </u>	11.20	Stiff closely f	fissured dark grey silty	/ CLAY. C	ccasional fine	e selenit	e crystals	
11.50	D22				× × · · · · · · · · · · · · · · · · · ·		noted. [LONDON CL	AY FORMATION]					
12.00-12.45 12.00	D23	N26											
- 13.00-13.50	B24												
- 13.50-13.95	U100	25 blow	's										
- 14.00	D25												
- 14.50	D26												
- 15.00-15.45 15.00	D27	N27				<u>. </u>							
16.00	B28					┶┿ ┶┿							
2 - 16.50-16.95	U100	22 blow	'S		× × · · × · · · · · · · · · · · · · · ·								
Boring Pro	ogress						General R	Remarks					
Date Co	mment	Strike Depth	C	Cas Depth	ing Dia. mm	Standing Depth	1. No ground	dwater encountered i	n boreho	le.			
				-			2. Down hole drilling.	e magnetrometer test	ting unde	rtaken at 2m	interva	ls for first 5	m of
							3. D= disturb	oed sample, B= bulk sa	ample, N	= SPT 'N' sam	ple, U10	00= U100 sa	ample.
Boring Pro								n details; 0.0-1.5mbg : slotted pipe with gra gl: arisings backfill. Ga	vel backt	ill; 8.5-9.5mb	gl: bent	onite backf	ill;
Method/ Plant Used		P	ilcon				Field Crew Gary V	Wheeler Drilling Lt	:d	Logged By JJM		Checked By DRAF	
′ L								0		I			



Proje	ct										BO	REHOLE	No
	Cam	den Lo	ock Villa	ge,	Londo	on						рцс	
Job N			Dat	;	3-11-1	L4	Ground Le	evel (m)	Co-Ordinates (m)			BH6	
	G/18	067A		14	4-11-1	L4	2	7.96	E 528,747.0 N 184	,197.8			
Clien											Sheet		
	Wals	h Gro	ир									3 of 3	
SA	MPLE	S & T	ESTS	<u>ب</u>					STRATA				ient I
Dej	pth	Type No	Test Result	Water	Reduc Leve	ed Legend	Depth (Thick- ness)		DESCRIPTION				Instrument [/Backfill
17.00)	D30					┶ <mark>┶┥┶</mark> ┷┷╸	noted.	fissured dark grey silty CLAY. O .AY FORMATION] (continued)	ccasional fine	e selenite	e crystals	
17.50)	D31					*						
- - 18.00 - 18.00)-18.45)	D32	N30				(13.80)						
-													
19.00)-19.50	B33				× × ····	<u>∽ ⊢×⊢ ×</u>						
19.50)-19.95	U100	26 blows				┺ ┍┥┍ ┙						
- 20.50	1	D35					, , , , , , , , , , , , , , , , , , , 	0					
E E)-21.24												
21.00			N31										
- - 22.00)-22.50	B37				× × × × × ×							
22.50)-22.95	U100	36 blows				 						
23.00)	D39											
23.50)	D41					×1 - ×						
24.00)-24.45)	D42	N37				+ + + + + + + + + + + + + + + + + + +						
		542			2.9		- - - - - - - - - - - - - - - - - - -						
<u>-</u> 25.00		D43	1.1.4				-		erminated at 25m)				
∩⊢	-	-				ervation		General F		1-			
Date	e Cor	nment	Strike Depth	D	epth	ing Dia. mm	Standing Depth	_	dwater encountered in boreho				
								drilling.	e magnetrometer testing unde				
								4. Installatio 1.5-8.5mbgl	bed sample, B= bulk sample, N= n details; 0.0-1.5mbgl: plain pi : slotted pipe with gravel backf gl: arisings backfill. Gas tap, bu	pe with bento ill; 8.5-9.5mb	onite bac gl: bento	ckfill; onite backf	
] 둡 Metho							1	Field Crew		Logged By		Checked B	v
j Plant			Pil	con				Gary V	Wheeler Drilling Ltd	JJM		DRAF	



Project Cam	den Lo	ock Villa	ge,	London	1				В	
Job No CG/18		Dat	e 31	L-10-14 1-11-14		Ground Le	evel (m) 5.79	Co-Ordinates (m)		BH7
Client	0077		0-	, TT TA		2.	5.75		She	et
Wal	sh Gro	up								1 of 4
SAMPL	ES & TI	ESTS	L					STRATA		ent
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIPT	ION	Instrument
0.13	D1			25.66 25.41	PAAR	- 0.13 - 0.38	Paving slab	over light orange brown fin JUND1	e to medium sand.	/
0.38 0.50-1.00	D2 B3			25.41		0.36	Concrete	-		/
0.50 1.00						_ (1.12)	Soft light br [MADE GRC	own grey clayey silt with fr UND]	equent claystone inclus	ions.
1.20-1.65 1.20	D4	N6		24.29		1.50	Firm to stiff	light orange brown slightly	gravelly silty CLAY. Gra	avel is fine
1.70-2.20 1.70	B5 D6						rounded of			
2.20-2.65	U100	12 blows			× × · · · · · · · · · · · · · · · · · ·					
2.70	D8				× × · · ·	+ - +				
3.00 3.20-3.65	D9 D10				× × × ×			X		
3.20		N10								
4.00-4.50	B11									
4.50-4.95	U100	19 blows			×					
						-				
					× × ×	(7.40)				
5.50	D13				× × · · · · · · · · · · · · · · · · · ·					
6.00-6.45	D14	NIC			× ×					
6.00		N16				* - *				
c 00 7 40	045						C 00 7 40 5			
6.90-7.40	B15				× × ×		0.90 - 7.40 (Claystone band and seepag	e	
7.50-7.95	U100	19 blows			× × · · · · · · · · · · · · · · · · · ·					
8.00	D17				× × · · · · · · · · · · · · · · · · · ·					
		and W/	tor				General I	Pemarks		
Boring Pro	mment	Strike Depth		Casin epth D				dwater encountered in bor	ehole.	
						Deptit	2. Down hol drilling.	e magnetrometer testing u	indertaken at 2m inter	vals for first 5m c
							3. D= distur	bed sample, B= bulk sample	e, N= SPT 'N' sample, U	100= U100 samp
							2.0-7.5mbg	on details; 0.0-2.0mbgl: plai : slotted pipe with gravel b gl: arisings backfill. Gas tap	ackfill; 7.5-8.5mbgl: be	ntonite backfill;
Method/ Plant Used		ו:ח	 con			<u> </u>	Field Crew	Wheeler Drilling Ltd	Logged By TOP	Checked By DRAFT



Project									B	OREHOLE No
	den Lo	ock Villa		London	1					BH7
Job No		Dat	3.	1-10-14	.	Ground Le		Co-Ordinates (m)		DIT
CG/18	067A		04	4-11-14	-	2	5.79			
Client									She	
	sh Gro	-		1						2 of 4
SAMPLE	ES & T	ESTS	er					STRATA		ment
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIPTI	-	Instrument Backfill
8.50-9.00	B18			16.89		8.90	rounded of	light orange brown slightly flint. ED LONDON CLAY FORMATIO		avel is fine
9.00-9.45 9.00	D19	N23					Stiff closely [LONDON (fissured dark grey silty CLAY LAY FORMATION]	<i>.</i>	
10.00	D20					+ + + + + + + + + + + +				
10.50-10.95	U100	24 blows								
11.00	D22									
11.50-12.00	B23									
12.00-12.45 12.00	D24	N22								
13.00	D25									
13.50-13.95	U100	31 blows			× × × × ×					
14.00	D27									
14.50-15.00	B28				× × · · · · · · · · · · · · · · · · · ·					
15.00-15.45 15.00	D29	N29			× × · · · · · · · · · · · · · · · · · ·					
16.00	D30					2 - - - -				
16.50-16.95	U100	30 blows			× × ÷	⊁ - }-				
Boring Pro	ogress						General	Remarks		
Date Coi	mment	Strike Depth	D	Casin epth D	g via. mm	Standing Depth	_	dwater encountered in bore le magnetrometer testing ur		vals for first 5m of
							drilling.	bed sample, B= bulk sample		
10.00 D30 16.50-16.95 U100 30 blows Date Comment Strike Depth Dia. mm Depth							4. Installati 2.0-7.5mbg	on details; 0.0-2.0mbgl: plair l: slotted pipe with gravel ba gl: arisings backfill. Gas tap,	n pipe with bentonite ickfill; 7.5-8.5mbgl: be	backfill; entonite backfill;
Method/ Plant Used		Pile	con	I		I	Field Crew Gary	Wheeler Drilling Ltd	Logged By TOP	Checked By DRAFT



ſ	Project										BC	DREHOLE No
	Carr	iden Lo	ock Vi	illage	e, Lo	ondor	า					5117
Ī	Job No		1	Date	21-	10-14	1	Ground Le	evel (m)	Co-Ordinates (m)		BH7
	CG/18	067A			04-1	11-14	ļ	2	5.79			
ľ	Client										Shee	t
	Wal	sh Gro	up									3 of 4
ſ	SAMPL	ES & T	ESTS							STRATA		ent
	Depth	Type No	Tes Resu	st st	Re	educeo Level	Legend	Depth (Thick- ness)		DESCRIPTION	I	Instrument /Backfill
	17.00	D32					× × × × × ×		Stiff closely [LONDON CI	fissured dark grey silty CLAY. AY FORMATION] (continued)		
	17.50-18.00	B33						*				
	18.00-18.45 18.00	D34	N3(0								
	19.00	D41								\wedge		
	19.50-19.95	U100	31 blo	ows				2 2 2 2 2 2 2 2 2 2 3 2 3 2 3 2 3 2 3 2				
	20.00	D43					× × × · · · · · · · · · · · · · · · · ·	↓ ★ + ★ + +				
	20.50-21.00											
	21.00-21.45	040	N3!	5								
	22.00	D47					× × × × × × × ×					
	22.50-22.95	U100	34 blo	ows								
	23.00	D49					× × ×					
	23.50-24.00						×× ×× ××	· , · , 				
2/ 14	24.00	001	N3(6								
	25.00	D52					× ××	x				
	Boring Pr	ogress							General F	Remarks		
	-	mment	0. 11				ig Dia. mm		1. No ground	dwater encountered in boreho	le.	
									2. Down hol drilling.	e magnetrometer testing unde	ertaken at 2m interva	als for first 5m of
									3. D= disturb	oed sample, B= bulk sample, N	= SPT 'N' sample, U1	.00= U100 sample.
									2.0-7.5mbgl	n details; 0.0-2.0mbgl: plain pi : slotted pipe with gravel backi gl: arisings backfill. Gas tap, bu	fill; 7.5-8.5mbgl: ben	tonite backfill;
	Method/ Plant Used			Pilco	n	1			Field Crew Gary	Wheeler Drilling Ltd	Logged By TOP	Checked By DRAFT



Project									B	OREHOLE No
Cam	den Lo	ock Villa	ge,	Londo	n					DU7
Job No		Dat	e 3	1-10-1	4	Ground Le	evel (m)	Co-Ordinates (m)		BH7
CG/18	067A		04	4-11-1	4	2	5.79			
Client									Shee	et
Wals	sh Gro	ир								4 of 4
SAMPLE	ES & T	ESTS	L					STRATA		l
Depth	Type No	Test Result	Water	Reduce Level	d Legend	Depth (Thick- ness)		DESCRIPTION	I	Instrument Backfill
- - 25.50-25.95 -	U100	31 blows					Stiff closely f [LONDON CL	issured dark grey silty CLAY. AY FORMATION] <i>(continued)</i>		
 - 26.00	D54									
26.50-27.00	B55									
27.00-27.45	D56	N34						$\boldsymbol{\wedge}$		
28.00	D57					- 				
28.50-28.95	U100	34 blows			× × · · × · · · ×	* 				
29.00	D59									
29.50	D60				× × ·					
- 30.00-30.45 30.00 -	D61	N44		-4.7		30.50		rminated at 30.5m)		
- - - - -						- - - - - -				
						-				
jE										
Boring Pro	-	and Wa					General R			
Date Co	mment	Strike Depth	D	epth	ng Dia. mm	Standing Depth	1. No ground	lwater encountered in boreho	le.	
							drilling.	e magnetrometer testing unde		
Boring Pro								ed sample, B= bulk sample, N n details; 0.0-2.0mbgl: plain pi slotted pipe with gravel back l: arisings backfill. Gas tap, bu	pe with bentonite b fill; 7.5-8.5mbgl: ber	ackfill; htonite backfill;
Method/							Field Crew		Logged By	Checked By
Method/ Plant Used		Pil	con					Wheeler Drilling Ltd	TOP	DRAFT



Project										BOREHOLE N	lo
Ca	mden Lo	ock Villa	ge,	Londo	n					BH8	
Job No		Dat				Ground Le	evel (m)	Co-Ordinates (m)		БПО	
	.8067A		0	1-12-1	4						
Client										Sheet	
Wa	alsh Gro	ир								1 of 3	
SAMP	LES & TI	ESTS	L					STRATA			ient I
Depth	Type No	Test Result	Wate	Reduce Level		110337		DESCRIPTION	1		Instrument /Backfill
Boring P Date	Depth Type No Test Result Press Reduced Level Dep Depth Level 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						IMADE GRO Concrete. 60 IMADE GRO Soft dark brr fine to coars Frequent co IMADE GRO Firm to stiff [WEATHERE Stiff dark gre [LONDON CI	240 aggregate to cement. No i UND] Down very gravelly sandy silt. Sa e subrounded to subangular of bbles of brick. UND] dark grey brown silty CLAY. D LONDON CLAY FORMATION FORMATION ey silty CLAY. AY FORMATION]	and is fine to coa f brick and occa	arse. Gravel is	
Boring P Date 0 Date 0 Method/ Plant Used							2. This is a d installation o	raft log and further informatic letails, will be added once the	on, including san driller's logs are	nples and monitori e recieved.	ng
Method/									Logged By	Checked By	
Plant Used	I	Com	acch	110				TOR drilling	JJM	DRAFT	



Project									BC	OREHOLE I	No
	nden Lo		-	Londo	n			1		BH8	
Job No		Dat				Ground Le	evel (m)	Co-Ordinates (m)		DHO	
	8067A		0	1-12-1	4						
Client									Shee		
	lsh Grou	-		1						2 of 3	
SAMPL	.ES & TE	STS	er					STRATA			nen
Depth	Type No	Test Result	Water	Reduce Level	Legenc	Depth (Thick- ness)		DESCRIPTION	l		Instrument /Backfill
Boring Pt	ogress	and Wa	ater	Obse		(19.00)	Stiff dark gre [LONDON CI	ey silty CLAY. LAY FORMATION] (continued)			
Date C	omment	Strike Depth			ng Dia. mm			ing rotary open hole.			
Boring Pr Date C	omment	Depth	D	epth	<u>Dĩa. mm</u>	Depth	2. This is a d	ng rotary open hole. raft log and further informatio Jetails, will be added once the	n, including samples driller's logs are rec	and moniton	ring
Method/	hod/ t Used Comacchio						Field Crew		Logged By	Checked By	, -
Plant Used		Coma	acch	10				TOR drilling	JJM	DRAF	ſ



	Project									B	OREHOLE	No
	Ca	nden Lo	ock Villa	ge,	Londo	n					0110	
	Job No		Dat	e			Ground Le	evel (m)	Co-Ordinates (m)		BH8	
	CG/1	8067A		0	1-12-14	4						
	Client		1						1	Shee	et	
	Wa	lsh Gro	up								3 of 3	
Γ		LES & T	-						STRATA			ut
F	57 (1411			Water		-1	Depth		5110(1)(Instrument /Backfill
	Depth	Type No	Test Result	Š	Level	d Legend	(Thick- ness)		DESCRIPTION			Bacl
F						<u> </u>	-	Stiff dark gre	ey silty CLAY.			= \
E							1	[LONDON CI	AY FORMATION] (continued)			
F						[- - -					
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F							- -					
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4												
Ē						<u> </u> -	25.00	(Borehole +	erminated at 25m)			-
CGL BH LOG CG18067B.GPJ GINT STD AGS 3 1.GDT 17/12/14 파그기	oring Progress and Water Observations							General F				
		1	Strike									
	Date C	omment	Strike Depth		epth	ng Dia. mm	Standing Depth		ng rotary open hole.			
								2. This is a d installation of	raft log and further informatio details, will be added once the	n, including samples driller's logs are rec	s and monito ieved.	ring
اق اح									,	- 0		
5												
1806/												
90												
3										1	1	
ר ה ה ה	Method/ Plant Usec	nod/ t Used Comacchio						Field Crew	TOR drilling	Logged By JJM	Checked By DRAF	/ T
5Ľ			Com	ucci						11111	DIAF	•



Project										BOREHOL	E No
	den Lo	ck Villa	-	Londo	n					BH9	
Job No		Date	_ Z4	4-11-14		Ground Le	evel (m)	Co-Ordinates (m)		DIIJ	
CG/18	067A		17	7-12-14	4					Cheat	
Client	sh Grou	2								Sheet 1 of 4	,
										1 01 2	
SAMPLE	<u>-S & TE</u>	STS	ter			Depth		STRATA			men fill
Depth	Type No	Test Result	Water	Reduce Level	d Legend	(Thick- ness)	_	DESCRIPTION	1		Instrument /Backfill
						 0.20 0.30 (0.90) 1.20 (0.60) 1.80 (7.20) 	[MADE GRO] Concrete. 60 [MADE GRO] Dark brown flint and bric concrete. [MADE GRO] Soft to firm of to medium s [MADE GRO]	:40 aggregate to cement. No r JND] silty sandy fine to coarse subro k. Sand is fine to coarse. Frequ JND] Jark grey black to grey brown j ubangular to subrounded of b	ounded to sub uent cobbles o gravelly silty o rick. Organic o	of brick and	
	ogress a	and Wa Strike Depth					2. This is a di installation c	emarks ng rotary open hole. raft log and further informatio letails, will be added once the	driller's logs a	ire recieved.	
Method/ Plant Used		Coma	ncch	io			Field Crew	TOR drilling	Logged By JJM	Checked DRA	



Project										BOREHOLE	No
	nden Lo	ock Villa	-	Londo	n			1		BH9	
Job No		Dat	'	4-11-14	4	Ground Le	evel (m)	Co-Ordinates (m)			
CG/1 Client	8067A		1	7-12-14	4					Sheet	
	lsh Gro	un								2 of 4	
		-		1						2 01 4	
SAMP	.ES & T		Water			Depth		STRATA			mer
Depth	Type No	Test Result	Wa	Reduce Level	Legenc	Depth (Thick- ness)	Fine to stiff	DESCRIPTION			Instrument /Backfill
						- - - - 9.00	[WEATHERE	dark grey brown silty CLAY. D LONDON CLAY FORMATION]	(continued)		
							Stiff dark gre [LONDON CI	y silty CLAY. AY FORMATION]			
							V				
						· · · · · · · · · · · · · · ·					
Boring P							General R				
Date C	omment	Strike Depth	D	epth	ng Dia. mm	Standing Depth	2. This is a d	ng rotary open hole. raft log and further informatio letails, will be added once the	n, including sar driller's logs ar	mples and monit e recieved.	oring
Boring P Date C											
Method/ Plant Used		Com	acch	nio			Field Crew	TOR drilling	Logged By JJM	Checked I DRA	Зу FT



Cervice Lock Village, London CG/18067A Date 24-11-14 24-12-14 Ground Level (m) Co-Ordinates (m) Cilent Sheet Sheet Sheet Walsh Group STRATA Sheet Depth Type Test Staff dark prevails/CLAY. ILONDON CLAY FORMATION (continued) DESCRIPTION Depth Type Test Staff dark prevails/CLAY. ILONDON CLAY FORMATION (continued) ILONDON CLAY FORMATION (continued) Sofige Progress and Water Observations Date Staff dark prevails/CLAY. ILONDON CLAY FORMATION (continued) ILONDON CLAY FORMATION (continued) Sofige Progress and Water Observations Date Depth Staff dark prevails/CLAY. ILONDON CLAY FORMATION (continued) Corting Progress and Water Observations Date Depth Depth Depth Date Comment Depth Depth Staff dark prevails/CLAY. ILONDON CLAY FORMATION (continued) Method// Easth Depth Depth Depth Depth	Project									BC	DREHOLE I	No
ONDO OPER 24-11-14 OPORTURE (III) OPORTURE (III) CG/18067A T7-12-14 Steel 3 of 4 SAMPLES & TESTS B Heduced used (Theorem Control of the control		den Lo		-	London	1					RH9	
Sheet Sheet Sheet STRATA Depth Type Test. 2 2 Reduced Legend Depth 1 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 2 1 1 1 3 0 f 4 Stiff dark grey sity CLX: 1.DNDON CLAY FORMATION (continued) 1.DNDON CLAY FORMATION (continued) Boring Progress and Water Observations Date Comment Stiff Data Manual Science Boring Progress and Water Observations Date Comment Stiff Data Manual Science 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. 1. Dilled using rotary open hole. <p< td=""><td></td><td></td><td>Dat</td><td> <u>′</u></td><td>4-11-14</td><td>Ļ</td><td>Ground Le</td><td>evel (m)</td><td>Co-Ordinates (m)</td><td></td><td>DIIJ</td><td></td></p<>			Dat	<u>′</u>	4-11-14	Ļ	Ground Le	evel (m)	Co-Ordinates (m)		DIIJ	
Walsh Group 3 of 4 SAMPLES & TESTS Depth Type Tests Reduced Legend (Thick. Level Level (Thick. Level Level (Thick. Level Level Level (Thick. Level Level Level Level (Thick. Level Level Le		067A		1	/-12-14	•				Shor	+	
STRATA Depth Type Test Result Test Result Depth Result Depth Result Depth Result DESCRIPTION Image: Strate in the image: Strate		sh Grou	m							51100		
Boring Progress and Water Observations Date Comment Strike Date Comment Strike Lange by Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Date Comment Strike Date Comment Strike Date Comment Strike Date Comment Strike Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Depth Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Depth Depth D	[-		1				CTDATA		5 01 4	17
Boring Progress and Water Observations Date Comment Strike Date Comment Strike Lange by Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Date Comment Strike Date Comment Strike Date Comment Strike Date Comment Strike Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Depth Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Depth Depth D	SAIVIPLI			ater			Depth		SIRATA			lill
Boring Progress and Water Observations Date Comment Strike Date Comment Strike Lange by Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Date Comment Strike Date Comment Strike Date Comment Strike Date Comment Strike Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Depth Depth Depth Depth Depth Depth Dia.mm Standing Date Comment Strike Depth Depth D	Depth	No	Result	Ň	Level	Legend	(Thick-		DESCRIPTION	I		nstru Back
		pgress	and Wa	ater	Obsert	vation	(21.00)	[LONDON CL	AY FORMATION] (continued)	n, including samples driller's logs are rec	s and monitor ieved.	
	Method/ Plant Used							Field Crew	TOR drilling	Logged By JJM	Checked By DRAF	, , T



Project										BOF	REHOLE	No
Car	nden Lo	ock Villa									BH9	
Job No		Dat	e 24	4-11-14	4	Ground Le	evel (m)	Co-Ordinates (m)			БЦЭ	
	8067A		17	7-12-14	4							
Client										Sheet		
Wa	lsh Gro	ир									4 of 4	
SAMPI	.ES & T	ESTS	<u>ب</u>					STRATA				ent
Depth	Type No	Test Result	Water	Reduce Level	d Legend	Depth (Thick-		DESCRIPTION	I			Instrument
							(Borehole to	erminated at 30m)				
Boring Pi		and Wa				S	General F					
Date C	omment	Strike Depth	D	Casir epth I	ng Dia. mm	Standing Depth	1. Drilled us	ing rotary open hole.				
Boring Pr Date C							2. This is a d installation	Iraft log and further informatio details, will be added once the	n, including sa driller's logs aı	mples a re reciev	ind monitor ved.	ring
Method/			<u> </u>	I_		1	Field Crew		Logged By	C	Checked By	,
Plant Used		Coma	acch	io				TOR drilling	JJM		DRAF	Г



Project										BORE	HOLE No	0
Cam	den Lo	ck Villa	ge,	Londo	n					D	H10	
Job No		Dat				Ground Le	evel (m)	Co-Ordinates (m)		D	0110	
CG/18	067A		0	1-12-1	4							
Client										Sheet		
Wal	sh Grou	ıp								1	of 3	
SAMPL	ES & TE	STS	5					STRATA			ant	_ ופוור
Depth	Type No	Test Result	Water	Reduce Level	d Legend	110337		DESCRIPTION	I		Instrum	Instrument /Backfill
						(0.97) (0.97) (4.60) 6.00	noted at 0.4 [MADE GRO Soft to firm coarse subro [MADE GRO Firm dark or [WEATHERE Stiff dark gro [LONDON CI	D:60 aggregate to cement. 8mr mbgl. Day joint at 0.3mbgl. UND] dark orange brown slightly gra bunded to subangular of brick i UND] range brown slightly silty CLAY. D LONDON CLAY FORMATION CLAY FORMATION]	velly clay. Gra and tarmac.		bar	
Boring Pro	-						General F					
Boring Pro	mment	Strike Depth	D	Casii epth	ng Dia. mm	Standing Depth	2. This is a d	ing rotary open hole. raft log and further informatio details, will be added once the	n, including sa driller's logs a	amples and re recieve	d monitorin d.	ıg
5 Method/		Com	acch	iio		<u> </u>	Field Crew	TOR drilling	Logged By JJM	Ch	ecked By DRAFT	



Project									BC	DREHOLE I	No
Car	nden Lo	ock Villa	ige,	London	l .						
Job No		Dat				Ground Le	evel (m)	Co-Ordinates (m)		BH10	
	8067A		0	1-12-14							
Client									Shee		
Wa	lsh Gro	ир								2 of 3	
SAMP	LES & TI	ESTS	2					STRATA			lent I
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIPTION	I		Instrument /Backfill
Boring P		and W				(19.00)	Stiff dark gre [LONDON CL	ey silty CLAY. AY FORMATION] (continued)			
Boring P		Strike				s Standing					
Date C	omment	Strike Depth	D	Casing epth D	lia. mm	Standing Depth		ng rotary open hole.			
Boring P Date C Date C Method/ Plant Used							2. This is a d installation c	raft log and further informatio letails, will be added once the	n, including samples driller's logs are rec	and monitor ieved.	ring
E Method/				I			Field Crew		Logged By	Checked By	,
g Plant Used		Com	acch	nio				TOR drilling	MIL	DRAF	Г



Project									BC	DREHOLE I	No
	nden Lo	ck Villa	-	Londo	n			1		BH10	
Job No		Dat				Ground Le	evel (m)	Co-Ordinates (m)		DIIIO	
CG/18	3067A		01	1-12-1	4						
Client									Shee		
	sh Grou	-								3 of 3	
SAMPL	ES & TE	STS	er					STRATA			nent
Depth	Type No	Test Result	Water	Reduce Level	ed Legenc	Depth (Thick- ness)		DESCRIPTION	I		Instrument
								ey silty CLAY. LAY FORMATION] (continued)			
Boring Pr	ogress	and Wa	ater	Obse	rvation	S	General F	Remarks			
Date Co	omment	Strike Depth			ng Dia. mm		1. Drilled usi	ing rotary open hole.			
Boring Pr Date Co Method/ Plant Used							2. This is a d	raft log and further informatio details, will be added once the	n, including samples driller's logs are rec	and monitor ieved.	ring
Method/ Plant Used		Coma	acch	io			Field Crew	TOR drilling	Logged By JJM	Checked By DRAF	, Г
		Come							JJIVI		•



Project Carr	nden Lo	ock Villa	ge.	Londor	า					HOLE No	
Job No		Dat	-			Ground Le	evel (m)	Co-Ordinates (m)		WS4	
CG/18	3067A		2	2-10-14	1 I	20	5.29	E 528,852.3 N 1	84,236.6		
Client					I					Sheet	
Wal	sh Gro	up								1 of 1	
SAMPL	ES & TI	ESTS	r					STRATA			lent
Depth	Type No	Test Result (N/kPa/ppm)	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIPTIO	ON		Instrument
							Paving slab [MADE GR	over fine to medium orange	sand.		
0.30	ES109			26.14		(0.95)	-	lack brown slightly sandy clay	. Moderate hy	drocarbon odour	
				25.19			Firm to stif	f dark orange brown silty CLA ED LONDON CLAY FORMATIC	Y. IN]		AND NO NO NO NO NO NO NO
2.00	ES112					(2.10)	2.50 Becon	ning stiff mottled grey.			
				23.09	<u> </u>	3.20	(Window s	ample terminated at 3.2m)			_KOC
						[
Boring Pr	ogress		ater	. Obser	vation		General	Remarks			_
Date	Strike depth	Casing depth	Co	mment r	Time neasured	Standing Depth	1. No grou	ndwater encountered in bore	hole.		
							3. Installati	ronmental samples, D= distur 0= U100 sample. on details: 0.0-0.2mbgl: plain gl: slotted pipe with gravel ba nd flush cover installed.	pipe with bent	tonite backfill;	
Method/ Plant Used	Hand	held wi	ndo	w samp	ler		Field Crew	RP Drilling	Logged By JJM		



Project												HOLE No	
	den Lo		-	London)							WS5	
Job No	0074	Dat	-			Ground Le		Co-Ordinates (m)	N 404	200.4			
CG/18 Client	067A		2	1-10-14	-	20	6.14	E 528,824.0	N 184	,288.4	Sheet		
	sh Gro	un									Sheet	1 of 1	
SAMPLE		•						STRATA				1011	۲
SAIVIPLE		Test	Water			Depth		SIRAIA					Instrument /Backfill
Depth	Type No	Result (N/kPa/ppm)	Ň	Reduced Level	Legend	(Thick- ness)		DESC	RIPTION				Instrume /Backfill
- 0.20 - -	ES105			25.64		(0.50)	Sand is fine of brick, cera [MADE GRO Firm dark or	over soft dark brown s to coarse. Gravel is fin amic and occasional fl UND] ange brown slightly si D LONDON CLAY FOR	e to coar int. Ity CLAY.	se subrounde	ravelly ed to su	silty clay. bangular	
- 1.20 	ES106					(2.20)	1.50 Becom	ing stiff.					
- - - - - - Boring Prc	ngress	and W/	ate	23.44	vation	2.70 - - - - -	(Window so	ample terminated at 2	7m)				
Date S	Strike	Casing		mment	Time	Standing		dwater encountered in	borehol	е.			
	lepth	depth		n n	neasured		2. ES= enviro value, U100 3. Installatio 1.0-2.5mbgl	onmental samples, D= = U100 sample. on details: 0.0-1.0mbgl : slotted pipe with gra ad flush cover installed	disturbe : plain pij vel backf	d sample, B= pe with bento	onite ba	ckfill;	
Method/ Plant Used	Hand	l held wi	ndo	w sampl	ler		Field Crew	RP Drilling		Logged By JJM		Checked By DWN	



Project Carr	nden Lo	ock Villa	ge,	London						HOLE No	
Job No		Dat	e			Ground Le		Co-Ordinates (m)		VV 30	
CG/18	3067A		10	0-11-14		2	7.06	E 528,815.0 N	N 184,232.7		
Client										Sheet	
	sh Gro			1						1 of 1	
SAMPL	ES & TI	r	er					STRATA			nent
Depth	Type No	Test Result (N/kPa/ppm)	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRI	PTION		Instrument
				26.86		0.20	Concrete. N [MADE GRO	Io rebar noted. DUND]			
0.40	ES1					(0.70)	Loose dark to coarse a ceramic. [MADE GR0	brown silty gravelly sand ngular to subrounded of I DUND]	. Sand is fine to coa orick, concrete, gla	arse. Gravel is fine ss, slate and	
0.70	ES2			26.16		0.90					
1.20		N4					Firm dark g [REWORKE	reen grey silty CLAY with D WEATHERED LONDON	frequent organic n CLAY FORMATION	natter.]	
1.40	ES3			25.25		(0.90)		$\langle \rangle$	>		
2.00		N8		25.26		1.80	selenite cry	f light orange brown moti stals. ED LONDON CLAY FORM/		with frequent	
3.00		N7				(3.20)	S				
4.00		N11									
5.00		N10		22.06	* * * *	5.00	(Window s	ample terminated at 5m)	1		
Boring Pr	ogress	and Wa	ater	Observ	vation	s	General	Remarks			
Data	Strike depth	Casing depth		mmont	Time leasured	Standing	U U	ndwater encountered in b			
							3. Installati	onmental sample, N= SP on details; 0.0-1.0mbgl: p l: slotted pipe with grave nd flush cover installed.	lain pipe with bent	tonite backfill; bgl: arisings backfill. C	Gas
Method/ Plant Used				sample			Field Crew	RP Drilling	Logged By TOP		



Project Car	nden Lo	ock Villa	ige,	London					HOLE	-
Job No		Dat				Ground Le	evel (m)	Co-Ordinates (m)	WS	7
CG/1	8067A		1(0-11-14		27	7.06			
Client									Sheet	
Wa	lsh Gro	up							1 of	
SAMPI	LES & T	ESTS	<u> </u>					STRATA		ent
Depth	Type No	Test Result (N/kPa/ppm)	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIPT	ION	Instrument
				27.01		0.05/	Concrete. N	o rebar noted. JUNDI		/
0.20	215			26.56		- . (0.45) - 0.50	Soft dark br	own gravelly very sandy cla se subrounded to subangul	ay. Sand is fine to coarse. Gravel ar of brick.	is
0.60	216					(0.50)	Soft to firm [MADE GRC	grey clay. Occasional fine t UND]	o coarse gravel of brick.	
				26.06		1.00				
1.20 1.20	217	N6			× × · · · · · · · · · · · · · · · · · ·	-	crystals not		silty CLAY. Occasional fine seleni ION]	te
						-				te
					× × ×	-	1.80 - 1.90 (Occasional fine to medium	gravel of mudstone.	
2.00		N9			<u> </u>	-				
					× ×	-				
					×					
					- ×- → ×- ×-					
					× ×					
					^^ 	- - (4.00)				
3.00		N12			× × · · · · · · · · · · · · · · · · · ·					
					× × →	-				
					× ×					
					x _ x _ _ x _ →	-				
					× × ×	-				
4.00		N16			× —> ××					
					× ×	-				
						-				
					- ×- → ××	-				
					×					
				22.06	 ××	5.00				
5.00		N17				-	(Window so	ample terminated at 5m)		
Boring Pi	rogress	and W	ater	Observ	vations	5	General I	Remarks		I
Date	Strike depth	Casing depth		mment	Time leasured	Standing Depth		dwater encountered in bor	ehole.	
							2. ES= envir	onmental sample, N= SPT '	N' value.	
							0.5-2.0mbg	on details; 0.0-0.5mbgl: plai I: slotted pipe with gravel b nd flush cover installed.	in pipe with bentonite backfill; ackfill; 2.0-5.0mbgl: arisings bac	kfill. Ga
Method/				_			Field Crew		Logged By Checke	
Plant Used	Track	ked wind	low	sample	rıg			RP Drilling	JJM DI	RAFT

WINDOW SAMPLE LOG



Project	nden La	ck Villa	a 0	London						HOLE No	
Job No		Dat		LUNUUN		Ground Le	evel (m)	Co-Ordinates (m)		- WS8	
CG/18	3067A		10)-11-14			6.99	E 528,807.0 N	184,206.8		
Client								,	,	Sheet	
Wa	lsh Gro	up								1 of 1	
SAMPL	ES & TI	ESTS	<u>ـ</u>					STRATA			ent
Depth	Type No	Test Result (N/kPa/ppm)	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIP	TION		Instrument
				26.84			Concrete. 5	imm rebar noted at 0.1mb נסאווכ	ogl		
0.20	210			26.59		(0.25) 0.40		rown sandy very gravelly s se subrounded to subang	ilt. Sand is fine to ular of brick and s	coarse. Gravel is hell.	
0.60	211					(0.60)	Soft dark g	rey slightly gravelly silty cla d to subangular of brick.	ay. Gravel is fine t	o medium	
				25.99		1.00					
1.20		N5					crystals not	orange brown mottled grey ted. ED LONDON CLAY FORMA	•	sional fine selenite	
								$\langle \cdot \rangle$			
2.00		N11								-	
2.50	214										
3.00		N16				(4.00)					
4.00		N18									
5.00		N18		21.99		5.00	(Window s	ample terminated at 5m)			
	<u> </u>										_
Boring Pr	Strike	Casing depth		Observ	vation: Time	Standing		Remarks	arehole		
Date	depth	depth		ment	easured			ndwater encountered in bo			
							3. Installati 0.5-2.0mb	ronmental sample, N= SPT on details; 0.0-0.5mbgl: pl l: slotted pipe with gravel nd flush cover installed.	ain pipe with ben	tonite backfill; bgl: arisings backfill. G	Sas
							Field Crew		Logged By	Checked By	_
Plant Used	Track	ed wind	ow	sample i	rig			RP Drilling	JJM		

WINDOW SAMPLE LOG



Project Can	nden Lo	ock Villa	ge,	London					HOL	
Job No		Dat	<u> </u>			Ground Le	evel (m)	Co-Ordinates (m)		29
CG/18	3067A		1()-11-14		2	5.79			
Client									Sheet	
Wa	sh Gro	ир							1 0	
SAMPL	ES & T		er					STRATA		Jent
Depth	Type No	Test Result (N/kPa/ppm)	Water	Reduced Level	Legend	Depth (Thick- ness)		DESCRIPT		Instrument
				25.59		0.20		over light orange brown fir DUND]	ne to medium sand.	
0.30	201					- - - (0.80) -	Soft dark br	own slightly gravelly very s to coarse subrounded to prick noted.	andy silt. Sand is fine to coarse subangular of brick. Occasiona	i
			Ţ	24.79		1.00				
1.20		NO	-			-	subrounded	to subangular of mudston D WEATHERED LONDON CL	SILT. Gravel is fine to coarse e. AY FORMATION]	
2.00 2.00	202	N1				- - (2.00) - -	0			
3.00		N7		22.79		3.00	Firm dark o [WEATHER	range brown silty CLAY. ED LONDON CLAY FORMAT	ION]	
4.00		N11				- - (2.00) -				
5.00		N12		20.79		- 5.00	(Window s	ample terminated at 5m)		
Boring Pr	ograss	and \.			ation		General	Pomarka		
Data	Strike	Casing		nment	Time	Standing		refiler KS	gl to 3.0mbgl.	
	depth 1	depth		m	easured	Depth	2. ES= envir 3. Installatio	onmental sample, N= SPT ' on details: 0.0-1.0m: plain p with gravel backfill; 3.0-5.1)-3.0mbg), bung ai
Method/ Plant Used	Track	rad wind		sample r	·iσ		Field Crew	RP Drilling		ced By DRAFT

APPENDIX C

Ground gas and groundwater monitoring records

	x
Time: am Client Walsh Group METEOROLOGICAL & SITE INFORMATION State of ground: Dry X Moist Wet Wind: Calm Light X Moderate Strong Cloud cover: None Slight Cloudy Overcast Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to GW (mbgl) 0 NR NR NR NR NR NR NR	
METEOROLOGICAL & SITE INFORMATION State of ground: Dry X Moist Wet	
State of ground: Dry X Moist Wet Wind: Calm Light X Moderate Strong Cloud cover: None Slight Cloudy Overcast Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Bord	
State of ground: Dry X Moist Wet Wind: Calm Light X Moderate Strong Cloud cover: None Slight Cloudy Overcast Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Bord	
Wind: Calm Light X Moderate Strong Cloud cover: None Slight Cloudy Overcast Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Bord	
Wind: Calm Light X Moderate Strong Cloud cover: None Slight Cloudy Overcast Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Bord	
Cloud cover: None Slight Cloudy Overcast Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (l/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Bord	x
Cloud cover: None Slight Cloudy Overcast Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (l/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Bord	x
Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Box	x
Precipitation: None X Slight Moderate Heavy Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Boil	
Barometric pressure (mb): 999 to 1004 Local pressure system*: Rising Air temperature (°C): 7 Well No. Time (s) Flow (l/hr) dA (PA) O2 CO2 CH4 PID Depth to GW (mbgl) 0 NR NR NR NR NR NR Box	
Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR Bot	
Well No. Time (s) Flow (I/hr) dA (PA) O2 CO2 CH4 PID Depth to 0 NR NR NR NR NR NR NR Bot	
Well No. Time (s) Flow (l/hr) dA (PA) (% vol. in air) (% vol. in air) (% vol. in air) (ppm) GW (mbgl) 0 NR NR NR NR NR NR Bol	
Well No. Time (s) Flow (l/hr) dA (PA) (% vol. in air) (% vol. in air) (% vol. in air) (ppm) GW (mbgl) 0 NR NR NR NR NR NR Bol	
Well No. Time (s) Flow (l/hr) dA (PA) (% vol. in air) (% vol. in air) (% vol. in air) (ppm) GW (mbgl) 0 NR NR NR NR NR NR Bol	
O NR NR NR NR NR NR NR NR BO	Comments
	prehole covered by
	ked cars - unable to
30	monitor
45	
60	
BH2 90	
120	
150	
180 240	
300	
0 2.2 8.0 13.7 1.6 <0.1 NR 4.10 Ba	ase of borehole at
15 0.4 1.0 13.6 1.6 <0.1	5.10mbgl
	ible flow on opening
45 0.3 1.0 13.7 1.6 <0.1	as tap (hiss of gas)
60 0.2 0.0 13.9 1.6 <0.1	33 tap (1133 01 gas)
BH3 90 0.1 0.0 14.5 1.4 <0.1	
120 0.3 0.0 15.1 1.2 <0.1 150 16.3 0.8 <0.1	
150 16.3 0.8 <0.1 180 16.7 0.7 <0.1	
240 17.2 0.6 <0.1	
300 18.2 0.2 <0.1	
	ehole not completed
	at time of visit
30	
45	
60 60 BH4 90	
150	
180	
240	
300	
	ehole not completed
15 30	at time of visit
45	
60	
BH5 90	
150	
180	
240	
300	

Notes:

JOB DETAIL	S								
Site:		Village, London				Job No:	CG/18067A		
Date:	05/11/2014					Engineer:	ТОР		
Time:	am					Client	Walsh Group		
METEODOL		INFORMATION							
IVIETEOROL	UGICAL & SITE	INFORMATION							
State of grou	nd:	Dry	Х	Moist		Wet			
Wind:		Calm		Light	Х	Moderate		Strong	
Cloud cover:		None		Slight		Cloudy		Overcast	X
Precipitation	:	None	Х	Slight		Moderate		Heavy	
Barometric p	ressure (mb):	999 to 1004		Local press	ure system*:	Rising	Air temp	erature (°C):	
	1	1				a 11			
Well No.	Time (s)	Flow (l/hr)	dA (PA)	O ₂ (% vol. in air)	CO ₂ (% vol. in air)	CH ₄ (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Comments
	0	NR	NR	NR	NR	NR	NR	NR	Borehole not completed
	15								at time of visit
	30								
	45 60						K		
BH6	90								
5110	120								
	150								
	180								
	240								
	300								
	-								
	0	NR	NR	NR	NR	NR	NR	NR	Borehole not completed
	15						-		at time of visit
	30								
	45 60								
BH7	90	-						-	
DIT	120								
	150								
	180								
	240								
	300								
							•		
	0	<0.1	0.0	16.0	2.3	<0.1	NR	0.92	Base of borehole at
	15	<0.1	0.0	15.6	2.4	<0.1			1.30mbgl
	30	<0.1	0.0	15.5	2.4	<0.1			
	45	<0.1	0.0	15.4	2.5	<0.1			
WS4	60 90	<0.1 <0.1	0.0	15.3 15.3	2.5 2.6	<0.1 <0.1		-	
**34	120	<0.1	0.0	15.3	2.6	<0.1			
	150	(0.1	0.0	15.3	2.6	<0.1			
	180			15.3	2.6	<0.1			
	240			15.4	2.5	<0.1			
	300			15.5	2.4	<0.1			
	0	<0.1	0.0	18.7	2.0	<0.1	NR	2.15	Base of borehole at
	15	<0.1	0.0	18.5	2.0	<0.1			2.67mbgl
	30	<0.1	0.0	18.4	2.1	<0.1	 		
	45	<0.1	0.0	18.3	2.2	<0.1			
WS5	60 90	<0.1	0.0	18.3	2.2	<0.1 <0.1			
VV 55	90	<0.1 <0.1	0.0	18.1 18.0	2.3	<0.1	<u> </u>		
	120	\U.1	0.0	18.0	2.6 2.6	<0.1	1		
	130			18.0	2.6	<0.1			
	240	1		18.1	2.0	<0.1	1		
	300	1		18.5	2.0	<0.1			
			•		-	-			•

Notes:

Date: 05/11/2014 Engineer: TOP Time: am Client Walsh Group METEOROLOGICAL & SITE INFORMATION State of ground: Dry X Moist Wet	JOB DETAIL	s								
Image Clevent Watch Group METCOROSIGL & SITE INFORMATION State of ground: Dry X Moist Wet State of ground: Strong Strong <t< td=""><td>Site:</td><td>Camden Lock</td><td>Village, London</td><td></td><td></td><td></td><td>Job No:</td><td></td><td></td><td></td></t<>	Site:	Camden Lock	Village, London				Job No:			
MTECROLOGICAL & SITE INFORMATION State of ground: Dy X Moist Wet	Date:	05/11/2014								
State of ground: Dry X Moist Wet	Time:	am					Client	Walsh Group		
State of ground: Dry X Moist Wet	METEOROL									
Wind: Calm Light X Moderate Strong Image: Constraint of the second of the	IVIETEOROL	UGICAL & SITE	INFORMATION							
Cloud cover: None Slight Cloudy Overcast X Precipitation: None X Slight Moderate Heavy	State of grou	nd:	Dry	Х	Moist		Wet			
None X Slight Moderate Heavy	Wind:		Calm		Light	Х	Moderate		Strong	
Anometric presure (m): 99 to 1004 Local pressure system*: Rising Air temperature ("C): 7 Well No. Time (a) Row (/hr) db (PA) (% vol. in al) (% vol. in al) (% vol. in al) PD Oeth to Comments	Cloud cover:		None		Slight		Cloudy		Overcast	Х
Well No. Time (s) Flow (l/hr) dA (PA) (% vol. in air) (%	Precipitation	:	None	Х	Slight		Moderate		Heavy	
Weil No. Imme (s) How (hrmf) Gav (hrmf) (by col. in air) (by col. in	Barometric p	ressure (mb):	999 to 1004		Local press	ure system*:	Rising	Air temp	erature (°C):	
Weil No. Imme (s) How (hrmf) Gav (hrmf) (by col. in air) (by col. in					<u> </u>		<u>.</u>	212	D 111	
15 Image: state of with the state of	Well No.	Time (s)		dA (PA)						
30 Image: state of the state o			NR	NR	NR	NR	NR	NR	NR	
45 -										at time of visit
MV56 60 Image: constraint of the second sec										
WS6 90 Image: state of the										
120 Image: state of the sta	MICC									
150 Image: constraint of the second	VV 50									
180 Image: constraint of the second sec										
240 Image: constraint of the second										
300 NR NR NR NR NR NR NR 15 Image: constraint of the second sec									-	
0 NR NR NR NR NR NR NR NR Borehole not completed at time of visit 30										
NS7 15 Image: constraint of the second of t		500				_				
NS7 15 Image: constraint of the second of t		0	NR	NR	NR	NIR	NR	NR	NR	Borehole not completed
30 Image: state of the state o			INIX	INIX	INIX					+
45 -										
W57 60 Image: constraint of the second seco										
WS7 90 Image: constraint of the second										
120 Image: constraint of the second sec	WS7									
150 Image: constraint of the second sec										
180 Image: constraint of the second sec										
240 Image: Constraint of the second sec										
300 NR NR NR NR NR NR NR Borehole not completed at time of visit 30 15 0 0 1 0 1 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
15 1										
15 1		•					•	•		•
30 0 0 0 0 0 45 0			NR	NR	NR	NR	NR	NR	NR	
45 1 1 1 1 1 1 60 0										
60 60<										
WS890Image: second secon										
150 Image: style sty	WS8									
180 Image: state sta		120								
240 Image: Second		150								
300 Image: Second s		180								
0 NR NR NR NR NR NR NR NR NR MR Borehole not completed at time of visit 30 15 1 <		240								
15 Image: Constraint of the second seco		300								
15 Image: Constraint of the second seco										
30 I			NR	NR	NR	NR	NR	NR	NR	-
45 Image: Constraint of the system Image: Constand on the system			1							at time of visit
60 Image: Constraint of the system Image: Constand or the system								ļ		
WS9 90 Image: Constraint of the system Image: Constraited of the system Image: Consthe system								ļ		
120 Image: Constraint of the second seco										
150 180 240 180	WS9							ļ		
180								ļ		
240			l					l		
			l					 		ļ
300								<u> </u>		
		300	1			1	1			

Notes:

JOB DETAIL	S								
Site:	Camden Lock	Village, London				Job No:	CG/18067A		
Date:	19/11/2014					Engineer:	TOP		
Time:	08:30					Client	Walsh Group		
METEOROL	OGICAL & SITE	INFORMATION							
		_		1		1	r	I	
State of grou	nd:	Dry		Moist	Х	Wet			
Marcine al.		Calm	Y	Linht		Madarata		Chuona	
Wind:		Calm	Х	Light		Moderate	<u> </u>	Strong	LI
Cloud cover:		None		Slight		Cloudy	х	Overcast	
cioud covern		Hone		Sugar		eloud,		orerease	
Precipitation	:	None	Х	Slight		Moderate		Heavy	
				-		_			
Barometric p	ressure (mb):	1016-1019		Local press	ure system*:	Rising	Air temp	erature (°C):	8
				-					
Well No.	Time (s)	Flow (l/hr)	dA (PA)	O ₂	CO ₂	CH ₄	PID (ppm)	Depth to	Comments
	0	NR	NR	(% vol. in air) NR	(% vol. in air) NR	(% vol. in air) NR	NR	GW (mbgl) NR	Unable to access
	15								borehole
	30								
	45								
	60								
BH2	90								
	120								
	150								
	180								
	240 300								
	500				-				
	0	1.3	2.0	13.8	1.8	<0.1	NR	3.31	Base of borehole at
	15	<0.1	0.0	13.5	1.9	<0.1)	0.01	5.06mbgl
	30	<0.1	0.0	13.3	1.9	<0.1			
	45	<0.1	0.0	13.6	1.6	<0.1			
	60	<0.1	0.0	14.6	1.5	<0.1			
BH3	90	<0.1	0.0	14.4	1.5	<0.1			
	120	<0.1	0.0	15.6	1.2	<0.1			
	150			16.6	0.9	<0.1			
	180 240	-		16.8 17.5	0.9	<0.1 <0.1	-		
	300			17.9	0.7	<0.1			
	500			17.5	0.7	40.1	Į		
	0	NR	NR	NR	NR	NR	NR	NR	Unable to access
	15								borehole
	30								
	45								
BH4	60 90								
рп4	90	1					<u> </u>		
	120								
	180								
	240								
	300								
	0	NR	NR	NR	NR	NR	NR	NR	Unable to access
	15	<u> </u>							borehole
	30						<u> </u>		
	45	<u> </u>		<u> </u>					
BH5	60 90	1				1	+		
5115	120								
	120	1					1		
	180							-	
	240								
	300								

Notes:

JOB DETAIL									
Site:		Village, London				Job No:	CG/18067A		
Date:	19/11/2014					Engineer:	ТОР		
Time:	08:30					Client	Walsh Group		
METEOROL		INFORMATION							
	O GICAL & SITE								
State of grou	ınd:	Dry		Moist	Х	Wet]	
Wind:		Calm	Х	Light		Moderate		Strong	
Cloud cover:		None		Slight		Cloudy	Х	Overcast	
Precipitation	:	None	Х	Slight		Moderate		Heavy	
Barometric p	pressure (mb):	1016-1019		Local press	ure system*:	Rising	Air temp	erature (°C):	8
							-		
		1		02	CO2	CH₄	PID	Danth ta	
Well No.	Time (s)	Flow (l/hr)	dA (PA)	(% vol. in air)	(% vol. in air)	(% vol. in air)	(ppm)	Depth to GW (mbgl)	Comments
	0	NR	NR	NR	NR	NR	NR	NR	Unable to access
	15								borehole
	30								
	45								
DUIC	60								
BH6	90								
	120								
	150								
	180								
	240								
	300								
		-0.1	0.0	47.0		-0.4	ND	7.45	Deep of houshold at
	0	<0.1	0.0	17.0	1.0	<0.1	NR	7.45	Base of borehole at
	15 30	<0.1	0.0	16.8 16.0	1.3	<0.1			7.5mbgl
	45	<0.1 <0.1	0.0	15.6	1.6 1.7	<0.1 <0.1			
	60	<0.1	0.0	15.4	1.7	<0.1			
BH7	90	<0.1	0.0	15.2	1.7	<0.1			
5117	120	<0.1	0.0	15.1	1.8	<0.1			
	150	\0.1	0.0	15.1	1.8	<0.1			
	180			15.0	1.8	<0.1			
	240			15.0	1.8	<0.1			
	300			15.0	1.8	<0.1			
	500			10.0	1.0	-012		Į	
	0	<0.1	0.0	15.9	2.3	<0.1	NR	0.65	Base of borehole at
	15	<0.1	0.0	15.7	2.3	<0.1			1.30mbgl
	30	<0.1	0.0	15.6	2.3	<0.1			
	45	< 0.1	0.0	15.5	2.3	<0.1			
	60	< 0.1	0.0	15.5	2.3	<0.1			
WS4	90	<0.1	0.0	15.5	2.3	<0.1			
	120	<0.1	0.0	15.5	2.3	<0.1			
	150			15.5	2.3	<0.1			
	180			15.6	2.3	<0.1			
	240			15.8	2.3	<0.1			
	300			15.9	2.3	<0.1			
								-	
	0	<0.1	0.0	18.0	0.2	<0.1	NR	2.26	Base of borehole at
	15	<0.1	0.0	17.9	0.2	<0.1			2.59mbgl
	30	<0.1	0.0	17.8	0.2	<0.1			
	45	<0.1	0.0	17.8	0.2	<0.1			
	60	<0.1	0.0	17.8	0.2	<0.1			
WS5	90	<0.1	0.0	7.7	0.3	<0.1			
	120	<0.1	0.0	17.7	0.4	<0.1			
	150			17.7	0.4	<0.1			
	180			17.8	0.4	<0.1			
	240	1		18.0	0.4	<0.1			
	300			18.4	0.4	<0.1			L

Notes:

JOB DETAIL						-			
Site:		Village, London				Job No:	CG/18067A		
Date:	19/11/2014					Engineer:	ТОР		
Time:	08:30					Client	Walsh Group		
METEODOL									
METEOROL	UGICAL & SITE	INFORMATION							
State of grou	ınd:	Dry		Moist	Х	Wet			
14/in de		Calm	х	Light		Moderate		Strong	
Wind:		Cdilli	^	Light		wouerate	<u></u>	Strong	
Cloud cover:		None		Slight		Cloudy	Х	Overcast	
Precipitation	:	None	Х	Slight		Moderate		Heavy	
Barometric p	oressure (mb):	1016-1019		Local press	ure system*:	Rising	Air temp	erature (°C):	8
				- ·					
				_					
Well No.	Time (s)	Flow (l/hr)	dA (PA)	O ₂ (% vol. in air)	CO ₂ (% vol. in air)	CH₄ (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Comments
	0	<0.1	0.0	18.2	3.1	<0.1	NR	0.62	Base of borehole at
	15	<0.1	0.0	17.9	3.6	<0.1			2.06mbgl
	30	<0.1	0.0	17.7	4.0	<0.1			
	45	<0.1	0.0	17.7	4.2	<0.1			
	60	<0.1	0.0	17.4	4.4	<0.1			
WS6	90	<0.1	0.0	17.3	4.4	<0.1			
	120	<0.1	0.0	17.4	4.2	<0.1			
	150			17.5	4.1	<0.1			
	180			17.4	4.3	<0.1			
	240			18.1	2.1	<0.1			
	300			19.3	0.0	<0.1			
	0	NR	NR	NR	NR	NR	NR	NR	Unable to access
	15								borehole
	30								
	45								
	60								
WS7	90								
	120								
	150								
	180								
	240								
	300								
				10.0				0.46	Deep of houshold at
	0	<0.1	0.0	19.2	0.1	<0.1	NR	0.46	Base of borehole at
	15	<0.1	0.0	19.5	<0.1	<0.1			2.06mbgl
	30	<0.1	0.0	19.6	<0.1	<0.1			
	45	<0.1	0.0	19.6	<0.1	<0.1			
WS8	60 90	<0.1 <0.1	0.0	19.8 19.7	<0.1 <0.1	<0.1 <0.1	-		
VV 30	120	<0.1	0.0	19.7	<0.1	<0.1			
	120	<0.1	0.0	19.7	<0.1	<0.1	-		
	130			19.7	<0.1	<0.1			
	240			19.7	<0.1	<0.1			
	300			19.7	<0.1	<0.1			
	500	Į		13.7	<0.1	NO.1			
	0	<0.1	0.0	19.9	<0.1	<0.1	NR	1.20	Base of borehole at
	15	<0.1	0.0	19.9	<0.1	<0.1		1.20	2.93mbgl
	30	<0.1	0.0	19.9	<0.1	<0.1	1		
	45	<0.1	0.0	19.9	<0.1	<0.1			
	60	<0.1	0.0	19.9	<0.1	<0.1			
WS9	90	<0.1	0.0	19.9	<0.1	<0.1	1		
	120	<0.1	0.0	19.9	<0.1	<0.1	1		
	120	-0.1	0.0	19.9	<0.1	<0.1	1		
	180	1		19.7	0.1	<0.1	1		
	240	1		19.5	0.1	<0.1	1		
	300	1	1	19.7	0.3	<0.1	1		
	500	1	1	10.7	0.5				

Notes:

JOB DETAIL									
Site:		Village, London				Job No:	CG/18067A		
Date:	01/12/2014					Engineer:	ТОР		
Time:	06:30					Client	Walsh Group		
METEOROL		INFORMATION							
	O GICAL & SITE								
State of grou	ind:	Dry	Х	Moist		Wet			
Wind:		Calm		Light		Moderate	Х	Strong	
Cloud cover:		None		Slight		Cloudy		Overcast	Х
Precipitation	:	None	X	Slight		Moderate		Heavy	
Barometric p	ressure (mb):	1014		Local press	ure system*:	Rising	Air temp	erature (°C):	8
				0,	CO ₂	CH₄	PID	Depth to	
Well No.	Time (s)	Flow (l/hr)	dA (PA)	(% vol. in air)	(% vol. in air)	(% vol. in air)	(ppm)	GW (mbgl)	Comments
	0	<0.1	0.0	12.3	2.2	<0.1	NR	7.60	Base of borehole at
	15	<0.1	0.0	12.6	2.1	<0.1			9.93mbgl
	30	<0.1	0.0	13.1	1.6	<0.1			
	45	<0.1	0.0	16.3	0.9	<0.1	K		
	60	<0.1	0.0	16.4	0.8	<0.1			
BH2	90	<0.1	0.0	17.2	0.4	<0.1			
	120	<0.1	0.0	17.6	0.7	<0.1			
	150			17.9	0.6	<0.1			
	180			18.0	0.6	<0.1			
	240			18.8	0.4	<0.1			
	300			18.8	0.4	<0.1			
				10.0					
	0	<0.1	0.0	16.6	1.7	<0.1	NR	2.80	Base of borehole at
	15	<0.1	0.0	16.3	1.7	<0.1	,		5.05mbgl
	30	<0.1	0.0	16.3	1.7	<0.1			
	45	<0.1	0.0	16.4	1.7	<0.1			
BH3	60	<0.1	0.0	16.3	1.7	<0.1	-		
впэ	90 120	<0.1 <0.1	0.0	16.3 16.2	1.8 1.8	<0.1 <0.1	-		
	120	\0.1	0.0	16.2	1.8	<0.1			
	130			16.2	1.9	<0.1			
	240			16.1	2.0	<0.1			
	300			16.0	2.0	<0.1			
	500	-		10.0	2.1	40.1	Į		<u> </u>
	0	<0.1	0.0	18.9	0.3	<0.1	NR	1.18	Base of borehole at
	15	<0.1	0.0	18.9	0.2	<0.1			8.98mbgl
	30	<0.1	0.0	18.9	0.2	<0.1			
	45	<0.1	0.0	19.0	0.2	< 0.1			
	60	<0.1	0.0	19.0	0.2	<0.1			
BH4	90	<0.1	0.0	19.1	0.2	<0.1			
	120	<0.1	0.0	19.2	0.2	<0.1			
	150			19.2	0.1	<0.1			
	180			19.3	0.1	<0.1			
	240			19.3	0.1	<0.1			
	300			19.3	0.1	<0.1			
		•					•		
	0	<0.1	0.0	18.5	0.9	<0.1	NR	4.79	Base of borehole at
	15	<0.1	0.0	17.1	1.3	<0.1			7.56mbgl
	30	<0.1	0.0	16.1	1.7	<0.1	ļ		
	45	<0.1	0.0	15.0	2.3	<0.1	+		
D/15	60	<0.1	0.0	14.2	2.7	<0.1	 		
BH5	90	<0.1	0.0	13.7	2.9	<0.1	 		
	120	<0.1	0.0	13.5	3.0	<0.1			
	150			13.4	3.0	<0.1			
	180	+		13.4	3.1	<0.1			
	240			13.4	3.1	<0.1	<u> </u>		
	300			13.4	3.1	<0.1	I		L

Notes:

JOB DETAIL									
Site:		Village, London				Job No:	CG/18067A		
Date:	01/12/2014					Engineer:	ТОР		
Time:	06:30					Client	Walsh Group		
METEOROL	OGICAL & SITE	INFORMATION							
	OUICAL & SITL								
State of grou	ind:	Dry	Х	Moist		Wet			
Wind:		Calm		Light		Moderate	Х	Strong	
Cloud cover:		None		Slight		Cloudy		Overcast	Х
Precipitation	:	None	Х	Slight		Moderate		Heavy	
Barometric p	ressure (mb):	1014		Local press	ure system*:	Rising	Air temp	erature (°C):	8
				02	CO ₂	CH₄	PID	Depth to	
Well No.	Time (s)	Flow (l/hr)	dA (PA)	(% vol. in air)	(% vol. in air)	(% vol. in air)	(ppm)	GW (mbgl)	Comments
	0	NR	NR	NR	NR	NR	NR	NR	Unable to access
	15								borehole
	30								
	45						K		
BH6	60								
БПО	90 120	-			-			-	
	120								
	130	-							
	240								
	300								
	500				_				
	0	<0.1	0.0	14.9	2.3	<0.1	NR	7.24	Base of borehole at
	15	<0.1	0.0	14.5	2.3	<0.1		7.24	7.52mbgl
	30	<0.1	0.0	14.6	2.4	<0.1			7.321110g1
	45	<0.1	0.0	14.0	2.4	<0.1			
	60	<0.1	0.0	14.5	2.4	<0.1			
BH7	90	<0.1	0.0	14.5	2.4	<0.1			
	120	<0.1	0.0	14.5	2.4	<0.1			
	150			14.5	2.4	<0.1			
	180			14.5	2.4	<0.1			
	240			14.4	2.4	<0.1			
	300			14.4	2.4	<0.1			
	•					•	•		•
	0	<0.1	0.0	15.5	2.3	<0.1	NR	0.67	Base of borehole at
	15	<0.1	0.0	15.4	2.3	<0.1			1.3mbgl
	30	<0.1	0.0	15.4	2.3	<0.1			
	45	<0.1	0.0	15.4	2.3	<0.1			
	60	<0.1	0.0	15.3	2.3	<0.1			
WS4	90	<0.1	0.0	15.3	2.3	<0.1			
	120	<0.1	0.0	15.3	2.3	<0.1			
	150			15.4	2.2	<0.1			
	180	-		15.4	2.2	<0.1	-		
	240			15.6	2.1	<0.1			
	300			15.8	2.1	<0.1			
	0	-0.1	0.0	10.0	2.2	-0.1	ND	2.02	Base of borehole at
	0 15	<0.1 <0.1	0.0	18.8	2.3	<0.1 <0.1	NR	2.03	2.67mbgl
	30	<0.1	0.0	18.9 18.4	2.4 2.4	<0.1	ł		2.0711081
	45	<0.1	0.0	18.4	2.4	<0.1	<u> </u>		+
	45 60	<0.1	0.0	17.9	2.5	<0.1		<u> </u>	
WS5	90	<0.1	0.0	17.9	2.5	<0.1		<u> </u>	
	120	<0.1	0.0	17.9	2.5	<0.1		<u> </u>	
	120	-0.1	0.0	17.9	2.3	<0.1	1		
	130	1		18.0	2.3	<0.1	1		
	240	1		18.5	1.9	<0.1	1		1
	300	1	1	18.9	1.5	<0.1	İ		1
		1	1			5.2			1

Notes:

JOB DETAI									
Site:		Village, London				Job No:	CG/18067A		
Date:	01/12/2014					Engineer:	ТОР		
Time:	06:30					Client	Walsh Group		
METEORO		INFORMATION							
IVIETEORO	LUGICAL & SITE	INFORMATION							
State of gro	und:	Dry	Х	Moist		Wet			
Wind:		Calm		Light		Moderate	Х	Strong	
Cloud cover	:	None		Slight		Cloudy		Overcast	X
Precipitation	n:	None	Х	Slight		Moderate		Heavy	
Barometric	pressure (mb):	1014		Local press	ure system*:	Rising	Air temp	erature (°C):	8
Well No.	Time (s)	Flow (l/hr)	dA (PA)	O ₂ (% vol. in air)	CO ₂ (% vol. in air)	CH₄ (% vol. in air)	PID (ppm)	Depth to GW (mbgl)	Comments
	0	<0.1	0.0	16.6	5.4	<0.1	NR	0.65	Base of borehole at
	15	<0.1	0.0	16.5	5.3	<0.1			2.09mbgl
	30	<0.1	0.0	16.8	4.7	<0.1			<u> </u>
	45	<0.1	0.0	17.2	4.2	<0.1			
	60	<0.1	0.0	17.4	3.9	<0.1			
WS6	90	<0.1	0.0	18.0	3.1	<0.1			
	120	<0.1	0.0	18.4	2.2	<0.1			
	150			18.7	1.8	<0.1			
	180			18.9	1.5	<0.1			
	240			19.3	0.9	<0.1			
	300			19.5	0.6	<0.1			
				-					
	0	<0.1	0.0	16.9	2.6	<0.1	NR	1.27	Base of borehole at
	15	<0.1	0.0	17.9	1.0	<0.1			2.08mbgl
	30	<0.1	0.0	18.5	1.0	<0.1			
	45	<0.1	0.0	18.5	1.0	<0.1			
	60	<0.1	0.0	18.5	1.0	<0.1			
WS7	90	<0.1	0.0	18.5	1.0	<0.1			
	120	<0.1	0.0	18.5	1.0	<0.1			
	150								
	180						-		
	240								
	300								
	0	<0.1	0.0	19.0	<0.1	<0.1	NR	0.51	Base of borehole at
	15	<0.1	0.0	19.0	<0.1	<0.1	INK	0.51	2.06mbgl
	30	<0.1	0.0	19.0	<0.1	<0.1			2.0011081
	45	<0.1	0.0	13.0	<0.1	<0.1			
	60	<0.1	0.0	18.9	<0.1	<0.1			
WS8	90	<0.1	0.0	18.9	<0.1	<0.1			
	120	<0.1	0.0	18.9	<0.1	<0.1			
	150			18.9	<0.1	<0.1			
	180			18.9	<0.1	<0.1			
	240			18.9	<0.1	<0.1			
	300			18.9	<0.1	<0.1			
		4				-	<u>.</u>		
	0	< 0.1	0.0	19.4	0.1	< 0.1	NR	1.25	Base of borehole at
	15	<0.1	0.0	19.7	0.1	<0.1			2.78mbgl
	30	<0.1	0.0	19.7	0.1	<0.1			
	45	<0.1	0.0	19.8	0.1	<0.1			
	60	<0.1	0.0	19.8	0.1	<0.1			
WS9	90	<0.1	0.0	19.8	<0.1	<0.1			
	120	<0.1	0.0	19.8	<0.1	<0.1			
	150			19.8	<0.1	<0.1			
	180			19.8	<0.1	<0.1			
	240			19.8	<0.1	<0.1	-		
	300			19.8	<0.1	<0.1			

Notes:

APPENDIX D

Results of chemical analysis



James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-61909

Project / Site name:	CLV P1 - Building B	Samples received on:	23/10/2014
Your job number:	CG-18067	Samples instructed on:	23/10/2014
Your order number:	1431	Analysis completed by:	03/11/2014
Report Issue Number:		Report issued on:	03/11/2014
Samples Analysed:	2 soil samples		
		0	
^^ ^		QV	
Signed:	_	Signed:	
Dr Claire Stone		Rexona Rahman	

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd. Rexona Rahman Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 14-61909 Project / Site name: CLV P1 - Building B Your Order No: 1431

Lab Sample Number Sample Reference Sample Number Depth (m) Date Sampled				384775 WS5	384776 WS4			L
Sample Number Depth (m) Date Sampled				MCE	14/64			
Depth (m) Date Sampled		•						
Date Sampled					109			
				0.20	0.30			
				21/10/2014	22/10/2014			
Time Taken				None Supplied	None Supplied			
			Þ					
		유니	Accreditation Status					
Analytical Parameter	Units	Limit of detection	Stat					
(Soil Analysis)	5	tio	:us tat					
		3	i gi					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	11	27			
Total mass of sample received	kg	0.001	NONE	0.92	1.1			
			1				1	T
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected			
General Inorganics							1	
pH	pH Units	N/A	MCERTS	7.3	7.6			L
Total Cyanide	mg/kg	1	MCERTS	< 1	<1			<u> </u>
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	2300	820			
Organic Matter	%	0.1	MCERTS	3.2	2.3		<u> </u>	<u> </u>
Total Phenols			-				-	
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	0.34	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	2.5	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	0.73	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	11	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	9.4	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	6.0	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	5.1	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	6.8	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	3.2	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	5.8	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	2.8	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	0.41	< 0.10		1	1
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	3.1	< 0.05	1	ł	t
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05	1	ł	t
	mig/ Ng	0.05		× 0.05	× 0.05			
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	57	< 1.6			r
	mg/Kg	1.0	NONE	57	< 1.0	1		<u>.</u>
Heavy Metals / Metalloids								
	mg/kg	1	MCERTS	22	12			r
Arsenic (aqua regia extractable)	0. 0			340	12			ł
Barium (aqua regia extractable)	mg/kg	1	MCERTS					ł
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.3	1.3			ł
Boron (water soluble)	mg/kg	0.2	MCERTS	3.3	3.3			ł
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.5	< 0.2			<u> </u>
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	30			ł
Copper (aqua regia extractable)	mg/kg	1	MCERTS	130	82			l
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1100	190			l
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	1.2	< 0.3			l
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	22	18			l
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	51	64			
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	370	72			





Analytical Report Number: 14-61909 Project / Site name: CLV P1 - Building B Your Order No: 1431

Lab Sample Number				384775	384776		
Sample Reference				WS5	WS4		
Sample Number			105	109			
Depth (m)		0.20	0.30				
Date Sampled		21/10/2014	22/10/2014				
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics	-		-		-		-
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0		
Petroleum Hydrocarbons							

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	0.4		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	0.3		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	20		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	64		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	14		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	34	22		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	34	120		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	2.9		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	2.6	14		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	36	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	83	17		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	120	34		





Project / Site name: CLV P1 - Building B

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
384775	WS5	105	0.20	Brown sandy topsoil with gravel.
384776	WS4	109	0.30	Brown clay and topsoil with brick.





Project / Site name: CLV P1 - Building B

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	w	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	w	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-62846

Project / Site name:	CLV P2	Samples received on:	11/11/2014
Your job number:	CG-18067A	Samples instructed on:	12/11/2014
Your order number:	1499	Analysis completed by:	20/11/2014
Report Issue Number:		Report issued on:	20/11/2014
Samples Analysed:	6 soil samples		
		6)	

Signed:

Thurstan Plummer Organics Technical Manager For & on behalf of i2 Analytical Ltd.

TPO

Rehner ..

Signed:

Rexona Rahman Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting	-
leachates - 2 weeks from reporting	g
waters - 2 weeks from reporting	g
asbestos - 6 months from reporti	ng

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Project / Site name: CLV P2 Your Order No: 1499

				200740	200740	200750	200754	200752	200752
Lab Sample Number				390748	390749	390750	390751	390752	390753
Sample Reference				WS9 201	WS6 204	WS8 210	WS8 211	WS7 215	WS7 217
Sample Number				0.30	0.70	0.20	0.60	0.20	1.20
Depth (m) Date Sampled				10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	1.20
Time Taken				None Supplied					
		e L	Acci	None Supplied					
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status						
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	12	5.7	7.5	24	27	22
Total mass of sample received	kg	0.001	NONE	1.4	2.0	1.3	1.3	1.4	1.1
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	-	Not-detected	-
General Inorganics									
pH	pH Units	N/A	MCERTS	5.7	11.7	8.0	7.8	7.9	7.9
Total Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1 1400	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	1600	4000		550	490	220
Organic Matter Total Phenols	%	0.1	MCERTS	< 0.1	0.2	< 0.1	0.1	< 0.1	0.1
Total Phenois Total Phenois (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	mq/Kq	1	MCCK15	< 1.U	1.0	× 1.0	< 1.U	× 1.0	< 1.U
Speciated PAHs									
Naphthalene	mg/kg	0.05	MCERTS	1.6	< 0.05	0.30	< 0.05	< 0.05	0.45
Acenaphthylene	mg/kg	0.1	MCERTS	6.7	0.36	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	mg/kg	0.1	MCERTS	2.7	0.31	0.20	< 0.10	< 0.10	0.18
Fluorene	mg/kg	0.1	MCERTS	7.6	0.29	0.22	0.23	< 0.10	0.20
Phenanthrene	mg/kg	0.1	MCERTS	57	4.9	2.8	0.82	< 0.10	0.30
Anthracene	mg/kg	0.1	MCERTS	16	1.3	0.34	0.14	< 0.10	< 0.10
Fluoranthene	mg/kg	0.1	MCERTS	74	9.0	3.0	0.60	< 0.10	< 0.10
Pyrene	mg/kg	0.1	MCERTS	60	8.4	2.5	0.61	< 0.10	< 0.10
Benzo(a)anthracene	mg/kg	0.1	MCERTS	29	4.7	1.6	0.29	< 0.10	< 0.10
Chrysene	mg/kg	0.05	MCERTS	26	3.3	1.6	0.28	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	28	4.6	1.8	0.27	< 0.10	< 0.10
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	14 26	1.6	0.78	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	mg/kg	0.1	MCERTS		3.7	1.3	0.24	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS MCERTS	15 3.4	2.1 0.50	0.65	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	mg/kg mg/kg	0.05	MCERTS	15	2.3	0.72	< 0.05	< 0.05	< 0.05
Coronene	mg/kg	0.05	NONE	5.2	1.1	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH	- mg/ng	0105		512		10105	10105	10105	10100
Total WAC-17 PAHs	mg/kg	1.6	NONE	390	48	18	3.5	< 1.6	< 1.6
Heavy Metals / Metalloids									
Arsenic (agua regia extractable)	mg/kg	1	MCERTS	19	17	9.2	12	7.4	14
Barium (aqua regia extractable)	mg/kg	1	MCERTS	180	120	53	66	69	78
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.3	0.3	0.4	1.8	0.8	1.7
Boron (water soluble)	mg/kg	0.2	MCERTS	3.1	1.3	< 0.2	0.9	0.3	0.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.6
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	-	-	< 1.2	-	< 1.2
Chromium (III)	mg/kg	1	NONE	-	-	-	44	-	47
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	20	15	13	44	21	47
Copper (aqua regia extractable)	mg/kg	1	MCERTS	62	30	34	30	35	25
Lead (aqua regia extractable)	mg/kg	1	MCERTS	140	230	100	29	87	17
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	25	11	17	33	16	44
Selenium (aqua regia extractable) Vanadium (aqua regia extractable)	mg/kg	1	MCERTS MCERTS	< 1.0 57	< 1.0	< 1.0 28	< 1.0 77	< 1.0 41	< 1.0 82
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	110	150	43	69	50	65
LING (aqua regid exilaciable)	mg/kg	1	MULERIS	110	100	40	69	50	CO





Analytical Report Number: 14-62846 Project / Site name: CLV P2 Your Order No: 1499

Lab Sample Number				390748	390749	390750	390751	390752	390753
Sample Reference				WS9	WS6	WS8	WS8	WS7	WS7
Sample Number				201	204	210	211	215	217
Depth (m)				0.30	0.70	0.20	0.60	0.20	1.20
Date Sampled				10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014	10/11/2014
Time Taken		None Supplied	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status						
Monoaromatics									
Benzene	µq/kq	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µq/kq	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons									

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0	< 8.0
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	< 10	< 10
						•			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0,1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	2.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	27	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	210	24	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	190	36	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	430	60	< 10	< 10	< 10	< 10





Analytical Report Number: 14-62846 Project / Site name: CLV P2 Your Order No: 1499

Sample Reference							
Sample Number							
Depth (m)							
Date Sampled							
Time Taken							
			A				
Analytical Devenuetor	-	Limit of detection	Accreditation Status				
Analytical Parameter (Soil Analysis)	Units	bect	tat				
(Soli Alidiysis)	N N	igi ef	us ati				
			S S				
Stone Content	%	0.1	NONE				
Moisture Content	%	N/A	NONE				
Total mass of sample received	kg	0.001	NONE				
Asbestos in Soil	Туре	N/A	ISO 17025				
General Inorganics							-
pH	pH Units	N/A	MCERTS				ļ
Total Cyanide	mg/kg	1	MCERTS				
Total Sulphate as SO ₄	mg/kg	50	ISO 17025				
Organic Matter	%	0.1	MCERTS				
Total Phenols	-		-	(
Total Phenols (monohydric)	mg/kg	1	MCERTS				
Speciated PAHs							
Naphthalene	mg/kg	0.05	MCERTS			1	T
Acenaphthylene	mg/kg	0.05	MCERTS				
Acenaphthene	mg/kg	0.1	MCERTS				1
Fluorene	ma/ka	0.1	MCERTS				1
Phenanthrene	mg/kg	0.1	MCERTS				1
Anthracene	mg/kg	0.1	MCERTS				1
Fluoranthene	mg/kg	0.1	MCERTS		7		1
Pyrene	mg/kg	0.1	MCERTS				
Benzo(a)anthracene	mg/kg	0.1	MCERTS				
Chrysene	mg/kg	0.05	MCERTS				1
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS				1
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS				
Benzo(a)pyrene	mg/kg	0.1	MCERTS				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS				
Coronene	mg/kg	0.05	NONE				
Total PAH							
Total WAC-17 PAHs	mg/kg	1.6	NONE			1	r
	1 marky	1	HONE				
Heavy Metals / Metalloids							
Arsenic (agua regia extractable)	mg/kg	1	MCERTS				1

Heavy Metals / Metalloids						
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS			
Barium (aqua regia extractable)	mg/kg	1	MCERTS			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS			
Boron (water soluble)	mg/kg	0.2	MCERTS			
Cadmium (agua regia extractable)	mg/kg	0.2	MCERTS			
Chromium (hexavalent)	mg/kg	1.2	MCERTS			
Chromium (III)	mg/kg	1	NONE			
Chromium (aqua regia extractable)	mg/kg	1	MCERTS			
Copper (aqua regia extractable)	mg/kg	1	MCERTS			
Lead (aqua regia extractable)	mg/kg	1	MCERTS			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS			
Zinc (agua regia extractable)	mg/kg	1	MCERTS	1		

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Analytical Report Number: 14-62846 Project / Site name: CLV P2 Your Order No: 1499

Lab Sample Number					
Sample Reference					
Sample Number					
Depth (m)					
Date Sampled					
Time Taken					
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Monoaromatics					
Benzene	µq/kq	1	MCERTS		
Toluene	µg/kg	1	MCERTS		
Ethylbenzene	µq/kq	1	MCERTS		
p & m-xylene	µg/kg	1	MCERTS		
o-xylene	µg/kg	1	MCERTS		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS		
Petroleum Hydrocarbons					
			1		

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS			
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS			
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS			
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS			
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS			
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS			
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS			
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS			
					-	
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS			
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS			
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS			
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS			
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS			
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS			
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS			
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS			





Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
390748	WS9	201	0.30	Light brown clay and sand.
390749	WS6	204	0.70	Non Soil **
390750	WS8	210	0.20	Non Soil **
390751	WS8	211	0.60	Non Soil **
390752	WS7	215	0.20	Non Soil **
390753	WS7	217	1.20	Non Soil **

** Non MCerts Matrix

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Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	W	MCERTS
chromium III in soil	In-house method by calculation from total Cr and Cr VI.	In-house method	L068-PL	D	NONE
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	w	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-62807

Project / Site name:	CLV P1 Building W	Samples received on:	07/11/2014
Your job number:	CG-18067	Samples instructed on:	07/11/2014
Your order number:	1432	Analysis completed by:	18/11/2014
Report Issue Number:	1	Report issued on:	18/11/2014
Samples Analysed:	1 soil sample		
		62	
000		K	

Signed: ((State

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Wohner . Signed:

Rexona Rahman Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

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soils	-	4 weeks f	from rep	orting
leach	ates -	2 weeks f	from rep	orting
water	rs -	2 weeks f	from rep	orting
asbes	stos -	6 months	from re	porting

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Analytical Report Number: 14-62807 Project / Site name: CLV P1 Building W Your Order No: 1432

Lak Camala Namban				200517	1		1	,
Lab Sample Number		390517						
Sample Reference				BH2	l		l	
Sample Number				None Supplied				
Depth (m)				0.20-0.60				
Date Sampled				05/11/2014				
Time Taken		r		None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1				
Moisture Content	%	N/A	NONE	9.8				
Total mass of sample received	kg	0.001	NONE	0.52				
		-				-	-	-
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected				
General Inorganics								
pH	pH Units	N/A	MCERTS	8.0				
Total Cyanide	mg/kg	1	MCERTS	< 1				
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	1600				
Organic Matter	%	0.1	MCERTS	2.0				
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0				
	ing/kg			1.0			8	
Speciated PAHs							1	
Naphthalene	mg/kg	0.05	MCERTS	< 0.05				
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10				
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10				
Fluorene	mg/kg	0.1	MCERTS	< 0.10				
Phenanthrene	mg/kg	0.1	MCERTS	1.1				
Anthracene	mg/kg	0.1	MCERTS	0.22				
Fluoranthene	mg/kg	0.1	MCERTS	2.2		-		
Pyrene	mg/kg	0.1	MCERTS	ŀ				
Benzo(a)anthracene	mg/kg mg/kg	0.1	MCERTS MCERTS	1.0 1.2		-		
Chrysene Benzo(b)fluoranthene	mg/kg mg/kg	0.05	MCERTS	1.2				
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	0.76				
Benzo(a)pyrene	mg/kg	0.1	MCERTS	1.1				
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	0.67				
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	0.18				
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.18				
Coronene	mg/kg	0.05	NONE	< 0.05	l .		1	
	mg/ng		HUNE		8		8	
Total PAH Total WAC-17 PAHs	meller.	1.0	NONE	13	1		1	
TULAI WAC-17 PAITS	mg/kg	1.6	NUNE	13	1		1	
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	23				
Barium (aqua regia extractable)	mg/kg	1	MCERTS	240				
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.5	1		1	
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	1		1	
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.3				
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30				
Copper (aqua regia extractable)	mg/kg	1	MCERTS	110				
Lead (aqua regia extractable)	mg/kg	1	MCERTS	570				
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	8.5				
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24				
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0				
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	58				
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	300				
- /	1							

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Analytical Report Number: 14-62807 Project / Site name: CLV P1 Building W Your Order No: 1432

Lab Sample Number				390517				
Sample Reference				BH2				
Sample Number				None Supplied				
Depth (m)				0.20-0.60				
Date Sampled				05/11/2014				
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics	-		-		-	-	-	
Benzene	µg/kg	1	MCERTS	< 1.0				
Toluene	µg/kg	1	MCERTS	< 1.0		9 		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0				
p & m-xylene	µg/kg	1	MCERTS	< 1.0				
o-xylene	µg/kg	1	MCERTS	< 1.0				
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0				
Petroleum Hydrocarbons								

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0				
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10				
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1				
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0				
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0				
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10				
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	29				
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	29				





Project / Site name: CLV P1 Building W

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
390517	BH2	None Supplied	0.20-0.60	Brown topsoil and sand with gravel.







Project / Site name: CLV P1 Building W

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	w	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	w	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-63102

Project / Site name:	CLV P2	Samples received on:	17/11/2014
Your job number:	CG-18067A	Samples instructed on:	17/11/2014
Your order number:	1499	Analysis completed by:	26/11/2014
Report Issue Number:		Report issued on:	26/11/2014
Samples Analysed:	2 soil samples	Signed:	
Dr Claire Stone Quality Manager For & on behalf of i2 Ana	lytical Ltd.	Rexona Rahman Reporting Manager For & on behalf of i2 Analy	rtical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Project / Site name: CLV P2 Your Order No: 1499

Tour Order No: 1499

Lab Sample Number		392525	392526					
Lab Sample Number Sample Reference		392525 BH6	392526 BH6		1			
Sample Number	220	221		1				
Depth (m)	0.30	2.20						
Date Sampled	14/11/2014	14/11/2014						
Time Taken	None Supplied	None Supplied						
				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	8.8	18			
Total mass of sample received	kg	0.001	NONE	1.3	1.1			
Asbestos in Soil Screen / Identification Name	Туре	N/A	ISO 17025	Chrysotile- Loose fibres				
Asbestos in Soil	Туре	N/A	ISO 17025	Detected				
General Inorganics								
pH	pH Units	N/A	MCERTS	10.3	7.6			
Total Cyanide	mg/kg	1 50	MCERTS	< 1 1500	< 1 6000	-		
Total Sulphate as SO ₄ Organic Matter	mg/kg		ISO 17025					
Organic Matter	%	0.1	MCERTS	3.0	0.2		1	
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
	iiig/kg		PICERTS	1.0	× 1.0			
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	2.4	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	8.4	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	11	< 0.10			
Phenanthrene	mg/kg	0.1	MCERTS	100	0.61			
Anthracene	mg/kg	0.1	MCERTS	30	0.17			
Fluoranthene	mg/kg	0.1	MCERTS	160	0.87			
Pyrene	mg/kg	0.1	MCERTS	130	0.69			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	78	0.33			
Chrysene	mg/kg	0.05	MCERTS	54	0.36			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	73	0.30			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	31	0.21			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	64	0.30			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	28	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1 0.05	MCERTS	5.5 29	< 0.10		1	
Benzo(ghi)perylene Coronene	mg/kg mg/kg	0.05	MCERTS NONE	7.1	< 0.05		1	
coronene	шу/ку	0.03	NUNL	/.1	< 0.05		1	1
Total PAH								
Total WAC-17 PAHs	mg/kg	1.6	NONE	810	3.8		1	1
		-	-		-	-	-	-
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	24	14			
Barium (aqua regia extractable)	mg/kg	1	MCERTS	230	35			
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.8	1.7			
Boron (water soluble)	mg/kg	0.2	MCERTS	1.2	1.6			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2			
Chromium (hexavalent)	mg/kg	1.2	MCERTS	-	< 1.2			
Chromium (III)	mg/kg	1	NONE	-	46		I	
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	36	46			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	160	31			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	340	14			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	47	45			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS MCERTS	67 430	87 87		1	
Zinc (aqua regia extractable)	mg/kg	1	PICERTS	ענד	0/		1	1





Project / Site name: CLV P2 Your Order No: 1499

Lab Sample Number				392525	392526		
Sample Reference	BH6	BH6					
Sample Number				220	221		-
Depth (m)				0.30	2.20		
Date Sampled				14/11/2014	14/11/2014		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Monoaromatics						-	
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0		
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0		
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0		
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0		
Petroleum Hydrocarbons							

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	3.8	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	22	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	19	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	45	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	51	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	490	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	650	< 10		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	1200	< 10		





Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
392525	BH6	220	0.30	Brown sandy topsoil with rubble and brick.
392526	BH6	221	2.20	Light brown clay.



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Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	w	MCERTS
chromium III in soil	In-house method by calculation from total Cr and Cr VI.	In-house method	L068-PL	D	NONE
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
TPHCWG (Soil)	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS
		1			

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-62702

Project / Site name:	CLV P2	Samples received on:	07/11/2014
Your job number:	CG/18067A	Samples instructed on:	07/11/2014
Your order number:	1499	Analysis completed by:	18/11/2014
Report Issue Number:	1	Report issued on:	18/11/2014
Samples Analysed:	2 soil samples		
		60	
Signed: (GState		Signed:	
Dr Claire Stone		Rexona Rahman	

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

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soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 14-62702 Project / Site name: CLV P2 Your Order No: 1499

Lab Sample Number				389798	389799			
Sample Reference		BH7	BH7					
Sample Number	None Supplied	None Supplied						
Depth (m)	0.50-1.00	1.70-2.20						
Date Sampled				05/11/2014	05/11/2014			
Time Taken		-		None Supplied	None Supplied			
			Accreditation Status					
Analytical Parameter	c	Limit of detection	st de					
(Soil Analysis)	Units	ä.≓	dita					
(001111111010)		g ¥	s itio					
Stone Content	%	0.1	NONE	< 0.1	< 0.1			
Moisture Content	%	N/A	NONE	25	21			
Total mass of sample received	kg	0.001	NONE	1.4	1.5			
Asbestos in Soil	Туре	N/A	ISO 17025	Not-detected	Not-detected			
Concerned Amountaine								
General Inorganics pH	pH Units	N/A	MCERTS	7.4	7.9			1
		N/A 1		< 1				
Total Cyanide Total Sulphate as SO ₄	mg/kg mg/kg	1 50	MCERTS ISO 17025	< 1 1600	< 1 430			
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	0.76	430			
Water Soluble Sulphate as SO ₄ (2:1)	g/l mg/kg	2.5	MCERTS	760				
Water Soluble Sulphate as 304 (2:1) Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.38	-			
Total Sulphur	g/i mg/kg	50	NONE	1300				
Organic Matter	111g/ kg %	0.1	MCERTS	0.5	< 0.1			
	70		- HOLKID	5.5				
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0			
		·						·ı
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Acenaphthylene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Acenaphthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluorene	mg/kg	0.1	MCERTS	< 0.10	< 0.10	8		
Phenanthrene	mq/kq	0.1	MCERTS	< 0.10	< 0.10			
Anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(a)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Benzo(b)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(k)fluoranthene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(a)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Indeno(1,2,3-cd)pyrene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Dibenz(a,h)anthracene	mg/kg	0.1	MCERTS	< 0.10	< 0.10			
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05			
Coronene	mg/kg	0.05	NONE	< 0.05	< 0.05			1
Total RAH								
Total PAH Total WAC-17 PAHs	mg/kg	1.6	NONE	< 1.6	< 1.6	r	r	,
TULAL WAL-17 PARS	mg/kg	1.0	NONE	< 1.0	< 1.0			1
Heavy Metals / Metalloids								
Heavy Metals / Metalloids Arsenic (agua regia extractable)	mg/kg	1	MCERTS	48	13			1
Arsenic (aqua regia extractable) Barium (aqua regia extractable)	mg/kg mg/kg	1	MCERTS	370	13			
Barium (aqua regia extractable) Beryllium (aqua regia extractable)	mg/kg mg/kg	0.06	MCERTS	4.7	1.4			
Boron (water soluble)	mg/kg mg/kg	0.06	MCERTS	4.7	4.4			
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	0.6	< 0.2			
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2			
Chromium (III)	mg/kg	1.2	NONE	52	37			1
Chromium (agua regia extractable)	mg/kg	1	MCERTS	52	37			
Copper (aqua regia extractable)	mg/kg	1	MCERTS	120	22			
Lead (aqua regia extractable)	mg/kg	1	MCERTS	87	20			
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3			
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	77	30			
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0			
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	200	69			
Zinc (agua regia extractable)	mg/kg	1	MCERTS	170	59			
				270		-	-	





Analytical Report Number: 14-62702 Project / Site name: CLV P2 Your Order No: 1499

Lab Sample Number				389798	389799			
Sample Reference				BH7	BH7			
Sample Number			None Supplied	None Supplied				
Depth (m)			0.50-1.00	1.70-2.20				
Date Sampled			05/11/2014	05/11/2014				
Time Taken				None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Monoaromatics						-	-	-
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
Toluene	µq/kq	1	MCERTS	< 1.0	< 1.0			
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0			
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0			

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1	4	
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	< 8.0		
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8 <u>.0</u>	< 8.0		
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.1	MCERTS	< 0.1	< 0.1		
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0		
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	< 2.0		
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	< 10		
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	20		
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	< 10	20		

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Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
389798	BH7	None Supplied	0.50-1.00	Grey sandy clay.
389799	BH7	None Supplied	1.70-2.20	Light brown clay.







Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
BTEX and MTBE in soil	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073S-PL	w	MCERTS
chromium III in soil	In-house method by calculation from total Cr and Cr VI.	In-house method	L068-PL	D	NONE
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	MCERTS
Organic matter in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	w	MCERTS
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by extraction with water followed by ICP-OES. Results reported corrected for extraction ratio (soil equivalent) as g/l and mg/kg; and upon the 2:1 leachate (a/l).	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	w	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	NONE





Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
	Determination of pentane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method	L076-PL	W	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-61911

Project / Site name:	CLV P1 - Building B	Samples received on:	23/10/2014
Your job number:	CG-18067	Samples instructed on:	23/10/2014
Your order number:	1431	Analysis completed by:	03/11/2014
Report Issue Number:		Report issued on:	03/11/2014
Samples Analysed:	1 wac multi sample	Signed:	
Dr Claire Stone Quality Manager For & on behalf of i2 Ana	lytical Ltd.	Rexona Rahman Reporting Manager For & on behalf of i2 Analy	rtical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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i2 Analytical

Report No:		14-6	1911				
					Client:	CARDGEO	
					enenti-	0.002020	
Location		CLV P1 -	Building B				
Lab Reference (Sample Number)		384782				Waste Acceptane Limits	e Criteria
Sampling Date		22/10)/2014			Stable Non-	
Sample ID		W	/S4		Inert Waste	reactive HAZARDOUS	Hazardous
Depth (m)		0.	30	Landfill	waste in non- hazardous Landfill	Waste Landf	
Solid Waste Analysis							
OC (%)**	1.3				3%	5%	6%
oss on Ignition (%) **	8.7						10%
3TEX (µg/kg) **	< 10				6000		
Sum of PCBs (mg/kg)	< 0.30				1	-	
Mineral Oil (mg/kg)	120		`		500		
Fotal PAH (WAC-17) (mg/kg)	< 1.6				100		
oH (units)**	7.6					>6	
cid Neutralisation Capacity (mol / kg)	3.4				-	To be evaluated	To be evaluated
luate Analysis	2:1	8:1		Cumulative 10:1	Limit value	es for compliance le	eaching test
BS EN 12457 - 3 preparation utilising end over end leaching procedure)	mg/l mg/kg				using BS EN	l 12457-3 at L/S 10	l/kg (mg/kg)
Arsenic *	0.012	< 0.010		0.082	0.5	2	25
Barium *	0.065	0.064		0.64	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	< 0.0010	< 0.0010		< 0.0050	0.5	10	70
Copper *	0.0042	0.0038		0.039	2	50	100
Mercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Nolybdenum *	0.024	0.012		0.13	0.5	10	30
Nickel *	0.0016	< 0.0010		< 0.0050	0.4	10	40
.ead *	0.0066	< 0.0050		0.033	0.5	10	50
Antimony *	0.0059	0.0054		0.054	0.06	0.7	5
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5	7
linc *	0.0011	< 0.0010		< 0.020	4	50	200
Chloride *	< 4.0	< 4.0		< 15	800	4000	25000
Fluoride	0.33	0.30		3.0	10	150	500
Sulphate *	38	27		280	1000	20000	50000
TDS	240	170		1800	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
00C	45	20		230	500	800	1000
each Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.1			ļ		ļ	
Dry Matter (%)	73					ļ	
Noisture (%)	27			├ ───┤		l	
Stage 1	0.20					<u> </u>	
/olume Eluate L2 (litres)	0.30					<u> </u>	ļ
iltered Eluate VE1 (litres)	0.16						
			<u> </u>				

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Telephone: 01923 225404 Fax: 01923 237404 email:reception@i2analytical.com









Project / Site name: CLV P1 - Building B

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
384782	WS4	109	0.30	Brown clay and topsoil with brick.



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Project / Site name: CLV P1 - Building B

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	w	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	w	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of chloride in leachate by Gallery discrete analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L082-PL	W	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	W	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	w	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457- 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	w	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	w	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

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Project / Site name: CLV P1 - Building B

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status	
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For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as received the results obtained are multiplied by a moisture

correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.





James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-62703

Project / Site name:	CLV P2	Samples received on:	07/11/2014
Your job number:	CG/18067A	Samples instructed on:	07/11/2014
Your order number:	1499	Analysis completed by:	18/11/2014
Report Issue Number:	1	Report issued on:	18/11/2014
Samples Analysed:	1 wac multi sample		
signed: (C.State		Signed:	
Dr Claire Stone Quality Manager For & on behalf of i2 Ana	lytical Ltd.	Rexona Rahman Reporting Manager For & on behalf of i2 Analy	rtical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Report No:		14-6	52703				
					Client:	CARDGEO	
					chefft.	CANDOLO	
Location		CL	V P2				
Lab Reference (Sample Number)	389800				Landfill	Waste Acceptano Limits	e Criteria
Sampling Date	05/11/2014				Stable Non-		
Sample ID			H7			reactive	
Depth (m)		0.50)-1.00		Inert Waste Landfill	HAZARDOUS waste in non- hazardous Landfill	Hazardous Waste Landf
Solid Waste Analysis							
FOC (%)**	0.3				3%	5%	6%
oss on Ignition (%) **	2.9						10%
3TEX (µg/kg) **	< 10				6000		
Sum of PCBs (mg/kg)	< 0.30				1	-	
Mineral Oil (mg/kg)	< 10		`		500		
Fotal PAH (WAC-17) (mg/kg)	< 1.6				100		
oH (units)**	7.4					>6	
Acid Neutralisation Capacity (mol / kg)	1.3				-	To be evaluated	To be evaluat
luate Analysis	2:1	8:1		Cumulative 10:1		es for compliance le	
BS EN 12457 - 3 preparation utilising end over end leaching procedure)	mg/l	mg/l		mg/kg	using BS EN	l 12457-3 at L/S 10	l/kg (mg/kg)
rsenic *	< 0.010	< 0.010		0.081	0.5	2	25
arium *	0.20	0.14		1.5	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	0.0023	< 0.0010		< 0.0050	0.5	10	70
Copper *	< 0.0010	< 0.0030		< 0.020	2	50	100
Aercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
Nolybdenum *	0.076	0.013		0.19	0.5	10	30
Nickel *	0.0019	0.0015		0.016	0.4	10	40
.ead *	< 0.0050	< 0.0050		< 0.020	0.5	10	50
Antimony *	0.011	0.010		0.10	0.06	0.7	5
Selenium *	0.16	0.037		0.48	0.1	0.5	7
linc *	0.0022	< 0.0010		< 0.020	4	50	200
Chloride *	21	< 4.0		41	800	4000	25000
Fluoride	1.2	0.93		9.5	10	150	500
Sulphate *	370	110		1400	1000	20000	50000
TDS	600	280		3100	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
00C	1.8	1.2		12	500	800	1000
each Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.4						
Dry Matter (%)	75						
Noisture (%)	25		I	<u> </u>			
Stage 1			+	+		ł	
/olume Eluate L2 (litres)	0.31					ļ	
iltered Eluate VE1 (litres)	0.16						

Telephone: 01923 225404 Fax: 01923 237404 email:reception@i2analytical.com









Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

	Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
L	389800	BH7	None Supplied	0.50-1.00	Grey sandy clay.







Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

			1	1	
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	W	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	W	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of chloride in leachate by Gallery discrete analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L082-PL	w	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	w	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457- 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	W	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	w	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE

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Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-62848

Project / Site name:	CLV P2	Samples received on:	11/11/2014
Your job number:	CG-18067A	Samples instructed on:	12/11/2014
Your order number:	1499	Analysis completed by:	20/11/2014
Report Issue Number:	1	Report issued on:	20/11/2014
Samples Analysed:	1 wac multi sample		
		\cap	

Signed:

TPL

Thurstan Plummer Organics Technical Manager For & on behalf of i2 Analytical Ltd.

Signed:

Rexona Rahman Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	 2 weeks from reporting
asbestos	- 6 months from reporting

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Report No:		14-6	2848				
					Clicente	CARDOTO	
					Client:	CARDGEO	
Location		CL	V P2				
					Landfill	Waste Acceptanc	e Criteria
Lab Reference (Sample Number)		390	0756			Limits	
Sampling Date			1/2014			Stable Non-	
Sample ID		WS	5 204		Inert Waste	reactive HAZARDOUS	Hazardous
Depth (m)		0.	.70		Landfill	waste in non- hazardous Landfill	Waste Land
Solid Waste Analysis							
FOC (%)**	0.1				3%	5%	6%
oss on Ignition (%) **	8.5				1		10%
3TEX (μg/kg) **	< 10				6000		
Sum of PCBs (mg/kg)	< 0.30				1		
Mineral Oil (mg/kg)	< 10				500		
Total PAH (WAC-17) (mg/kg)	45				100		-
oH (units)**	11.7					>6	
Acid Neutralisation Capacity (mol / kg)	30				-	To be evaluated	To be evalua
luate Analysis	2:1	8:1		Cumulative 10:1	Limit value	s for compliance le	eaching test
					using BS EN	12457-3 at L/S 10	l/ka (ma/ka)
BS EN 12457 - 3 preparation utilising end over end leaching procedure)	mg/l	mg/l		mg/kg			1.19 (
Arsenic *	< 0.010	< 0.010		< 0.050	0.5	2	25
Barium *	0.61	0.24		3.0	20	100	300
Cadmium *	< 0.0005	< 0.0005		< 0.0020	0.04	1	5
Chromium *	0.0018	0.0016		0.016	0.5	10	70
Copper *	0.026	0.0076		0.10	2	50	100
fercury *	< 0.0015	< 0.0015		< 0.010	0.01	0.2	2
1olybdenum *	< 0.0030	< 0.0030		< 0.020	0.5	10	30
Nickel *	0.0049	0.0011		0.016	0.4	10	40
.ead *	< 0.0050	< 0.0050		0.034	0.5	10	50
Antimony *	< 0.0050	< 0.0050		0.027	0.06	0.7	5
Selenium *	< 0.010	< 0.010		< 0.040	0.1	0.5	7
Zinc *	< 0.0010	< 0.0010		< 0.020	4	50	200
Chloride *	63	17		240	800	4000	25000
luoride	0.97	0.94		9.4	10	150	500
Sulphate *	8.2	7.5		76	1000	20000	50000
TDS .	1700	900		10000	4000	60000	100000
Phenol Index (Monhydric Phenols) *	< 0.13	< 0.13		< 0.50	1	-	-
DOC	42	7.8		130	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1		}				
Sample Mass (kg)	2.0		1	1			
Dry Matter (%)	94		1	1			
foisture (%)	5.7			1			
Stage 1			1	1			
/olume Eluate L2 (litres)	0.34						
iltered Eluate VE1 (litres)	0.26		1	1			
esults are expressed on a dry weight basis, after correction for moisture content of							

Telephone: 01923 225404 Fax: 01923 237404 email:reception@i2analytical.com









Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
390756	WS6	204	0.70	Light brown clay and sand.







Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

			1		1
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance	L046-PL	w	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited	In-house method based on USEPA8260	L073S-PL	w	MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of chloride in leachate by Gallery discrete analyser.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L082-PL	w	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	w	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457- 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	w	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	w	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	w	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE

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Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-62897

Project / Site name:	CLV P1 Building B	Samples received on:	12/11/2014
Your job number:	CG-18067	Samples instructed on:	12/11/2014
Your order number:	1432	Analysis completed by:	20/11/2014
Report Issue Number:	1	Report issued on:	20/11/2014
Samples Analysed:	8 soil samples		
		6.)	

Signed:

: THI

Thurstan Plummer Organics Technical Manager For & on behalf of i2 Analytical Ltd.

Kehner.

Signed:

Rexona Rahman Reporting Manager For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	 2 weeks from reporting
asbestos	- 6 months from reporting

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Analytical Report Number: 14-62897 Project / Site name: CLV P1 Building B Your Order No: 1432

Lab Sample Number		391089	391090	391091	391092	391093		
Sample Reference		BH3	BH3	BH3	BH3	BH2		
Sample Number		6	11	17	27	4		
Depth (m)		2.50	4.50	7.50	13.50	1.50		
Date Sampled	05/11/2014	05/11/2014	05/11/2014	05/11/2014	05/11/2014			
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	20	21	20	21	15
Total mass of sample received	kg	0.001	NONE	0.37	0.42	0.39	0.32	0.47
General Inorganics								

General Inorganics

pН	pH Units	N/A	MCERTS	7.5	7.5	7.6	7.7	7.7
Total Sulphate as SO₄	mg/kg	50	ISO 17025	29000	15000	1800	1500	1100
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	4.6	4.8	1.4	1.3	0.22
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4600	4800	1400	1300	220
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.3	2 <u>.4</u>	0.72	0.65	0.11
Total Sulphur	mg/kg	50	NONE	10000	5900	1400	6400	390







Analytical Report Number: 14-62897 Project / Site name: CLV P1 Building B Your Order No: 1432

Lab Sample Number				391094	391095	391096	
Sample Reference		BH2	BH2	BH2			
Sample Number				9	14	29	
Depth (m)				3.50	6.00	15.00	
Date Sampled	Date Sampled				05/11/2014	05/11/2014	
Time Taken				None Supplied	None Supplied	None Supplied	
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	
Moisture Content	%	N/A	NONE	22	20	18	
Total mass of sample received	kg	0.001	NONE	0.34	0.33	0.56	
General Inorganics							

General Inorganics

pН	pH Units	N/A	MCERTS	7.6	7.6	7.7	
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	6400	11000	860	
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	4.8	5.4	0.81	
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	4800	5400	810	
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.4	2 <u>.7</u>	0.40	
Total Sulphur	mg/kg	50	NONE	2700	4100	3200	







Project / Site name: CLV P1 Building B

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
391089	BH3	6	2.50	Light brown clay.
391090	BH3	11	4.50	Light brown clay.
391091	BH3	17	7.50	Light brown clay.
391092	BH3	27	13.50	Brown clay.
391093	BH2	4	1.50	Light brown clay and sand.
391094	BH2	9	3.50	Light brown clay.
391095	BH2	14	6.00	Light brown clay.
391096	BH2	29	15.00	Brown clay.





Project / Site name: CLV P1 Building B

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by extraction with water followed by ICP-OES. Results reported corrected for extraction ratio (soil equivalent) as g/l and mg/kg; and upon the 2:1	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-63013

Project / Site name:	CLV P2	Samples received on:	14/11/2014
Your job number:	CG18067A	Samples instructed on:	14/11/2014
Your order number:	1499	Analysis completed by:	25/11/2014
Report Issue Number:	1	Report issued on:	25/11/2014
Samples Analysed:	2 soil samples		
(A Star		Police .	
Signed: Morale		Signed:	
Dr Claira Stopa		Poyona Pahman	

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Rexona Rahman Reporting Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

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soils	-	4 weeks f	from rep	orting
leach	ates -	2 weeks f	from rep	orting
water	rs -	2 weeks f	from rep	orting
asbes	stos -	6 months	from re	porting

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Project / Site name: CLV P2 Your Order No: 1499

Your	Order	No:	1499	

Lab Sample Number				391950	391951		
Sample Reference	BH7	BH7					
Sample Number				None Supplied	None Supplied		
Depth (m)				4.50-4.95	22.50-22.95		
Date Sampled				06/11/2014	06/11/2014		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	19	14		
Total mass of sample received	kg	0.001	NONE	0.38	0.53		

General Inorganics

pН	pH Units	N/A	MCERTS	7.2	8.3		
Total Sulphate as SO₄	mg/kg	50	ISO 17025	1600	560		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	1.5	0.55		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	1500	550		
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.77	0.28		
Total Sulphur	mg/kg	50	NONE	710	8500		







Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
391950	BH7	None Supplied	4.50-4.95	Light brown clay.
391951	BH7	None Supplied	22.50-22.95	Grey clay.







Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	w	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample results are not corrected for the stone content of the sample.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by extraction with water followed by ICP-OES. Results reported corrected for extraction ratio (soil equivalent) as g/l and mg/kg; and upon the 2:1 leachate (a/l)	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



i2 Analytical Ltd. 7 Woodshots Meadow, Croxley Green Business Park, Watford, Herts, WD18 8YS

t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-63103

Project / Site name:	CLV P2	Samples received on:	17/11/2014
Your job number:	CG-18067A	Samples instructed on:	17/11/2014
Your order number:	1499	Analysis completed by:	26/11/2014
Report Issue Number:	1	Report issued on:	26/11/2014
Samples Analysed:	1 wac multi sample	Char	
Signed: (CState		Signed:	
Dr Claire Stone Quality Manager For & on behalf of i2 Ana	lytical Ltd.	Rexona Rahman Reporting Manager For & on behalf of i2 Analy	vtical Ltd.
Other office located at: ul. Pionier	ów 39, 41 -711 Ruda Śląska, Poland		

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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i2 Analytical

7 Woodshots Meadow Croxley Green Business Park Watford, WD18 8YS

Waste Acceptance Criteria Analytical Results Report No:

				Client:	CARDGEO	
	CLV	/ P2		Landfill	Wasto Accoutan	o Critorio
	392	527				
	14/11	/2014			1	
					reactive	
	0.	30		Inert Waste Landfill	HAZARDOUS waste in non- hazardous Landfill	Hazardous Waste Landfi
1.7				3%	5%	6%
5.7				-		10%
< 10				6000		
< 0.30				1		
45				500		
810				100		
10.3					>6	
14				-	To be evaluated	To be evaluat
2:1	8:1		Cumulative 10:1	Limit valu	es for compliance le	eaching test
mg/l	mg/l		mg/kg	using BS EN	I 12457-3 at L/S 10) l/kg (mg/kg)
< 0.010	< 0.010		0.068	0.5	2	25
						300
						5
						70
						100
						2
						30
						40
						50
						5
< 0.010	< 0.010		< 0.040	0.1	0.5	7
0.023				4	50	200
			19	800	4000	25000
0.43	0.18		2.2	10	150	500
19	3.9		65	1000	20000	50000
60	20		270	4000	60000	100000
< 0.13	< 0.13		< 0.50	1	-	-
11	6.4		71	500	800	1000
-						
-						
8.8						
0.30					l	
		1	1		1	1
	5.7 < 10 < 0.30 45 810 10.3 14 2:1 mg/l < 0.048 < 0.005 0.015 0.0056 0.0017 0.025 < 0.0050 < 0.010 0.025 < 0.0050 < 0.010 0.025 < 0.0050 < 0.010 0.023 < 4.0 0.43 19 60 < 0.13	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	5.7 <	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	CLV P2 Landfill 392527 Imert Waste 0.30 0.30 1.7 0.30 1.7 - < 10	CLV P2 Landfill Waste Acceptance 392527 Imits 14/11/2014 Stable Non- 0.30 Imits 0.30 Imits 1.7 3% 5.7 - < 10

14-63103

Telephone: 01923 225404 Fax: 01923 237404 email:reception@i2analytical.com





*= UKAS accredited (liquid eluate analysis only) **= MCERTS accredited





Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

L	ab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
	392527	BH6	220	0.30	Brown sandy topsoil with rubble and brick.







Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

			1		1
Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Acid neutralisation capacity of soil	id neutralisation capacity of soil Determination of acid neutralisation capacity by In-h addition of acid or alkali followed by electronic Sam probe. Land		L046-PL	w	NONE
BTEX (Sum of BTEX compounds) in soil	Determination of BTEX in soil by headspace GC-MS. Individual components MCERTS accredited				MCERTS
Chloride in WAC leachate (BS EN 12457-3 Prep)	Determination of chloride in leachate by Gallery discrete analyser.	Methods for the Examination of Water and Waste Water, 21st Ed.		w	ISO 17025
DOC in WAC leachate (BS EN 12457-3 Prep)	Determination of dissolved organic carbon in leachate by the measurement on a non-dispersive infrared analyser of carbon dioxide released by acidification.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L037-PL	w	NONE
Fluoride in WAC leachate (BS EN 12457-3 Prep)	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L033-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L047-PL	D	MCERTS
Metals in WAC leachate (BS EN 12457- 3 Prep)	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	w	ISO 17025
Mineral Oil in Soil	Determination of dichloromethane/hexane extractable hydrocarbons in soil by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	w	NONE
PCB's by GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	w	MCERTS
Phenol Index in WAC leachate (BS EN 12457-3 Prep)	Determination of monohydric phenols in leachate by continuous flow analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	w	ISO 17025
Seciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	NONE
Stones content of soil	by GC-MS with the use of surrogate and internal standards.		L019-UK/PL	D	NONE
Sulphate in WAC leachate (BS EN 12457-3 Prep)	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L039-PL	w	ISO 17025
TDS in WAC leachate (BS EN 12457-3 Prep)	Determination of total dissolved solids in leachate by electrometric measurement.	In-house method based on Standard Methods for the Examination of Water and Waste Water, 21st Ed.	L004-PL	W	NONE

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Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total organic carbon in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L023-PL	D	MCERTS

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

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James Morrice Card Geotechnics Ltd 4 Godalming Business Centre Woolsack Way Godalming Surrey GU7 1XW

t: 01483 310600 f: 01483 527285 e:



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t: 01923 225404 f: 01923 237404 e: reception@i2analytical.com

Analytical Report Number : 14-63590

Project / Site name:	CLV P2	Samples received on:	25/11/2014
Your job number:	CG-18067A	Samples instructed on:	26/11/2014
Your order number:	1500	Analysis completed by:	05/12/2014
Report Issue Number:		Report issued on:	05/12/2014
Samples Analysed:	7 soil samples		
Signed: Costate		Signed: TPL	\supset

Dr Claire Stone Quality Manager For & on behalf of i2 Analytical Ltd.

Thurstan Plummer Organics Technical Manager

For & on behalf of i2 Analytical Ltd.

Other office located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

 soils
 - 4 weeks from reporting

 leachates
 - 2 weeks from reporting

 waters
 - 2 weeks from reporting

 asbestos
 - 6 months from reporting

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Project / Site name: CLV P2 Your Order No: 1500

Lab Sample Number				395404	395405	395406	395407	395408
Sample Reference				BH4	BH4	BH5	BH5	BH5
Sample Number				None Supplied				
Depth (m)				4.50	19.50	3.50	9.00	18.00
Date Sampled				18/11/2014	18/11/2014	12/11/2014	12/11/2014	12/11/2014
Time Taken				None Supplied				
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	N/A	NONE	22	18	22	20	19
Total mass of sample received	kg	0.001	NONE	0.48	0.60	0.40	0.47	0.40
General Inorganics		-	-					

General Inorganics

pН	pH Units	N/A	MCERTS	7.5	7.9	7.9	7.8	8.1
Total Sulphate as SO₄	mg/kg	50	ISO 17025	1800	870	490	2100	860
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	1.7	0.85	0.12	1.6	0.72
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	1700	850	120	1600	720
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.85	0. <u>43</u>	0.061	0.81	0.36
Total Sulphur	mg/kg	50	NONE	710	4300	170	4200	7200







Analytical Report Number: 14-63590

Project / Site name: CLV P2 Your Order No: 1500

Lab Sample Number				395409	395410		
Sample Reference				BH6	BH6		
Sample Number				None Supplied	None Supplied		
Depth (m)				4.50	16.50		
Date Sampled				14/11/2014	14/11/2014		
Time Taken				None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1		
Moisture Content	%	N/A	NONE	20	17		
Total mass of sample received	kg	0.001	NONE	0.35	0.50	<i>v</i>	
General Inorganics							

General Inorganics

pH	pH Units	N/A	MCERTS	7.9	8.1		
Total Sulphate as SO ₄	mg/kg	50	ISO 17025	19000	940		
Water Soluble Sulphate (Soil Equivalent)	g/l	0.0025	MCERTS	5.6	0.84		
Water Soluble Sulphate as SO ₄ (2:1)	mg/kg	2.5	MCERTS	5600	840		
Water Soluble Sulphate (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	2.8	0. <u>42</u>		
Total Sulphur	mg/kg	50	NONE	6200	4400		







Analytical Report Number : 14-63590

Project / Site name: CLV P2

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and topsoil/loam soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
395404	BH4	None Supplied	4.50	Light brown clay.
395405	BH4	None Supplied	19.50	Light grey clay.
395406	BH5	None Supplied	3.50	Light brown clay.
395407	BH5	None Supplied	9.00	Light grey clay.
395408	BH5	None Supplied	18.00	Light grey clay.
395409	BH6	None Supplied	4.50	Light brown clay.
395410	BH6	None Supplied	16.50	Light grey clay.

This certificate should not be reproduced, except in full, without the express permission of the laboratory. The results included within the report are representative of the samples submitted for analysis.





Analytical Report Number : 14-63590

Project / Site name: CLV P2

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
pH in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Stones not passing through a 10 mm sieve is determined gravimetrically and reported as a percentage of the dry weight. Sample	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Sulphate, water soluble, in soil	Determination of water soluble sulphate by extraction with water followed by ICP-OES. Results reported corrected for extraction ratio (soil equivalent) as g/l and mg/kg; and upon the 2:1	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, Chemical and Electrochemical Tests	L038-PL	D	ISO 17025
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In-house method based on BS1377 Part 3, 1990, and MEWAM 2006 Methods for the Determination of Metals in Soil	L038-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom. For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland. Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

APPENDIX E

Results of geotechnical analysis

SUMMARY OF GEOTECHNICAL TESTING

			Sample	details		Class	ificatio	n Tests	6	Densi	y Tests	Undraine	d Triaxial Co	mpression	С	hemical Te	ests	
Borehole / Trial Pit	Sample Ref	Depth (m)	Туре	Description	MC (%)		PL (%)	PI (%)	<425 • m (%)	Bulk Mg/m³	Dry Mg/m³	Cell Pressure kPa	Deviator Stress kPa	Shear Stress kPa	рН	2:1 W/S SO4 (g/L)	W/S Mg (mg/L)	Other tests and comments
BH2	4	1.50-1.95	U	Stiff yellowish brown silty CLAY with occasional fine to medium gravel	21	61	23	38	43	2.03	1.68	29	121	61				
BH2	9	3.50-3.95	U	Mottled brown and grey silty CLAY with occasional gypsum	33	75	27	48	100									
BH2	14	6.00-6.45	U	Stiff fissured brown silty CLAY with rare gypsum	31	73	28	45	99	1.95	1.49	114	222	111				
BH2	19	9.00-9.45	U	Brown mottled orange-brown silty CLAY	29	77	27	50	100									
BH2	24	12.00-12.45	U	Stiff fissured brownish grey silty CLAY	29	75	25	50	100	1.96	1.52	228	174	87				
BH2	29	15.00-15.45	U	Brown fine sandy silty CLAY	24	62	24	38	100									
BH2	34	18.00-18.45	U	Stiff fissured dark brownish grey silty CLAY	25	67	25	42	100	1.99	1.59	342	165	83				
BH2	44	24.00-24.45	U	Very stiff fissured brownish grey silty CLAY	26	79	28	51	100	1.88	1.49	456	598	299				
BH2	54	30.00-30.45	U	Stiff fissured brownish grey silty CLAY	25	75	29	46	99	1.91	1.53	570	434	217				
BH3	6	2.50-2.95	U	Stiff fissured brown silty CLAY	34	76	29	47	99	1.92	1.43	48	140	70				
BH3	11	4.50-4.95	U	Brown mottled grey silty CLAY with rare gypsum	32	73	27	46	99									
BH3	17	7.50-7.95	U	Stiff fissured brown silty CLAY	30	72	25	47	97	1.95	1.50	143	277	138				

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by	Project Number:	
ro h	GEO / 21947-2	®
5 Dure	Project Name:	GEOLABS
<i>U</i> U	CAMDEN LOCK VILLAGE PHASE 1	
Senior Technician 26/11/2014	CG/18067	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX

Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

SUMMARY OF GEOTECHNICAL TESTING

			Sample	dataila		Classi	ification	Toot		Density	Teete	Undrained	Triaxial Cor	mpropolon		hemical Te	ete	
			Sample			Ciassi	mcauon	rest	>	DenSity	18515	Unurained		npression			1313	
Borehole / Trial Pit	Sample Ref	Depth (m)	Туре	Description	мс		PL	PI	<425 • m	Bulk	Dry	Cell Pressure	Deviator Stress	Shear Stress	рН	2:1 W/S SO4	W/S Mg	Other tests and comments
					(%)	(%)	(%)	(%)	(%)	Mg/m ³	Mg/m ³	kPa	kPa	kPa		(g/L)	(mg/L)	
BH3	22	10.50-10.95	U	Brown silty CLAY	31	77	27	50	100									
BH3	27	13.50-13.95	U	Stiff fissured greyish brown silty CLAY	30	83	28	55	100	1.94	1.49	257	168	84				

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by	Project Number:	
GRL	GEO / 21947-2	®
2 Durke		GEOLABS
Senior Technician	CAMDEN LOCK VILLAGE PHASE 1	
26/11/2014	CG/18067	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX

Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH2 4 1.50-1.95 U

Description: Stiff yellowish brown gravelly silty CLAY. Gravel is fine to medium.

Specimen Details

	Undisturbed
	Undisturbed
(mm)	201.4
(mm)	102.5
(%)	21
(Mg/m³)	2.03
(Mg/m³)	1.68
(mm)	0.30
(kPa)	0.83
(%/min)	1.99
(kPa)	29
(%)	13.4
(kPa)	121
(kPa)	61
	(mm) (%) (Mg/m ³) (Mg/m ³) (mm) (kPa) (%/min) (kPa) (%) (kPa)

Mode of failure		Orientation of the sample	Vertical
		Distance from top of tube mm	50
checked and Approved by: 5 Burke	G Project Name:	EO / 21947-2	GEOLAB
Senior Technician 26/11/2014	CAMDEN LC	OCK VILLAGE PHASE 1 CG/18067	UKAS

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GL:Version 036 - 12/11/2014

Test Report By GEOLABS Limited Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH2 14 6.00-6.45 U

Description:

Stiff fissured brown silty CLAY with rare gypsum

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.4
Diameter	(mm)	102.5
Moisture Content	(%)	31
Bulk Density	(Mg/m³)	1.95
Dry Density	(Mg/m³)	1.48
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.55
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	114
Strain at failure	(%)	7.9
Maximum Deviator Stress	(kPa)	222
Shear Stress Cu	(kPa)	111

Mode of failure		Orientation of the sample Distance from top of tube mm	Vertical 30
Checked and Approved by: 5 Bucker Senior Technician 26/11/2014 Test Report By GEOLABS Limite	Project Name: CAMDEN LC	SEO / 21947-2 DCK VILLAGE PHASE 1 CG/18067	

Test Report By GEOLABS Limited Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

GL:Version 036 - 12/11/2014

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH2 24 12.00-12.45 U

Description:

Stiff fissured brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	202.5
Diameter	(mm)	102.7
Moisture Content	(%)	29
Bulk Density	(Mg/m³)	1.96
Dry Density	(Mg/m³)	1.52
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.52
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	228
Strain at failure	(%)	7.4
Maximum Deviator Stress	(kPa)	174
Shear Stress Cu	(kPa)	87

Mode of failure		Orientation of the sample	Vertical
		Distance from top of tube mm	90
ed and Approved by:	Project Number:	GEO / 21947-2	GEOLA
Senior Technician 26/11/2014	Project Name: CAMDEI	N LOCK VILLAGE PHASE 1 CG/18067	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH2 34 18.00-18.45 U

Description:

Stiff fissured dark brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.7
Diameter	(mm)	102.4
Moisture Content	(%)	25
Bulk Density	(Mg/m³)	1.99
Dry Density	(Mg/m³)	1.59
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.16
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	342
Strain at failure	(%)	2.0
Maximum Deviator Stress	(kPa)	165
Shear Stress Cu	(kPa)	83

Mode of failure		Orientation of the sample Distance from top of tube mm	Vertical 160
cked and Approved by:		EO / 21947-2	GEOLABS
Senior Technician 26/11/2014	CAMDEN LC	OCK VILLAGE PHASE 1 CG/18067	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH2 44 24.00-24.45 U Description:

Very stiff fissured brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.7
Diameter	(mm)	103.4
Moisture Content	(%)	26
Bulk Density	(Mg/m³)	1.88
Dry Density	(Mg/m³)	1.49
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.55
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	456
Strain at failure	(%)	7.9
Maximum Deviator Stress	(kPa)	598
Shear Stress Cu	(kPa)	299

	Distance from top of tube mm	110

 Test Report By GEOLABS Limited
 Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX

 Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH2 54 30.00-30.45 U

Description:

Stiff fissured brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.4
Diameter	(mm)	102.6
Moisture Content	(%)	25
Bulk Density	(Mg/m³)	1.91
Dry Density	(Mg/m³)	1.53
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.34
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	570
Strain at failure	(%)	4.5
Maximum Deviator Stress	(kPa)	434
Shear Stress Cu	(kPa)	217

		Vertical
	Distance from top of tube mm	120
Project Number:	FΩ / 21947-2	GEOLAB
Project Name:		
	G Project Name:	Project Number: GEO / 21947-2 Project Name: CAMDEN LOCK VILLAGE PHASE 1

Test Report By GEOLABS Limited Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type BH3 6 2.50-2.95 U

Description:

Stiff fissured brown silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	188.5
Diameter	(mm)	102.4
Moisture Content	(%)	34
Bulk Density	(Mg/m³)	1.92
Dry Density	(Mg/m³)	1.43
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.55
Axial displacement rate	(%/min)	2.12
Cell pressure	(kPa)	48
Strain at failure	(%)	8.0
Maximum Deviator Stress	(kPa)	140
Shear Stress Cu	(kPa)	70

Mode of failure	\bigcirc	Orientation of the sample	Vertical]
		Distance from top of tube mm	50]
	1			
ed and Approved by:	Project Number:	GEO / 21947-2	G	GEOLAE

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> Test F Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

of 1 (Ref 38369.45869)

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH3 17 7.50-7.95 U

Description:

Stiff fissured brown silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.4
Diameter	(mm)	103.4
Moisture Content	(%)	30
Bulk Density	(Mg/m³)	1.95
Dry Density	(Mg/m³)	1.50
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.05
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	143
Strain at failure	(%)	0.5
Maximum Deviator Stress	(kPa)	277
Shear Stress Cu	(kPa)	138

Mode of failure	\sim	Orientation of the sample	Vertical
		Distance from top of tube mm	120
ked and Approved by:	Project Number:		GEOLA
RI	Project Name:	GEO / 21947-2	

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Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH3 27 13.50-13.95 U

Description:

Stiff fissured greyish brown silty CLAY

Specimen Details

Specimen conditions		Undisturbed
	()	
Length	(mm)	201.3
Diameter	(mm)	102.6
Moisture Content	(%)	30
Bulk Density	(Mg/m³)	1.94
Dry Density	(Mg/m³)	1.50
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.24
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	257
Strain at failure	(%)	3.0
Maximum Deviator Stress	(kPa)	168
Shear Stress Cu	(kPa)	84

Mode of failure		Orientation of the sample Distance from top of tube mm	Vertical 30
ecked and Approved by:	G	EO / 21947-2	GEOLABS
Senior Technician 26/11/2014	Project Name: CAMDEN LC	OCK VILLAGE PHASE 1 CG/18067	
t Report By GEOLABS Limited	Bucknalls Lane, Garston, Watford, Hert		Page 1 g

Test Report By GEOLABS Limited Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

SUMMARY OF GEOTECHNICAL TESTING

			Sample d	letails		Class	ificatio	n Test	ts	Densi	y Tests	Undraine	d Triaxial Co	mpression	Cł	hemical Te	ests	
Borehole / Trial Pit	Sample Ref	Depth (m)	Туре	Description	MC (%)	LL (%)	PL (%)	PI (%)	• m	Bulk Mg/m³	Dry Mg/m³	Cell Pressure kPa	Deviator Stress kPa	Shear Stress kPa	рН	2:1 W/S SO4 (g/L)	W/S Mg (mg/L)	Other tests and comments
BH7	7	2.20-2.65	U	Firm to stiff yellow-brown silty CLAY	32	67	25	42	100	1.93	1.46	42	127	64				
BH7	12	4.50-4.95	U	Stiff fissured brown mottled grey silty CLAY	30					1.94	1.49	86	220	110				
BH7	16	7.50-7.95	U	Stiff fissured brown silty CLAY	34	79	29	50	100	1.94	1.45	143	208	104				
BH7	21	10.50-10.95	U	Stiff fissured brownish grey silty CLAY	25					2.03	1.62	200	291	146				
BH7	26	13.50-13.95	U	Dark grey-brown silty CLAY	26	65	27	38	100									
BH7	31	16.50-16.95	U	Very stiff fissured brownish grey silty CLAY	27					2.01	1.58	314	277	139				
BH7	42	19.50-19.95	U	Dark grey-brown silty CLAY	28	73	29	44	100									
BH7	48	22.50-22.95	U	Very stiff fissured brownish grey silty CLAY	24					2.08	1.68	428	688	344				
BH7	58	28.50-28.95	U	Very stiff fissured brownish grey silty CLAY	25		K			1.97	1.58	542	630	315				

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by	Project Number:	
CQL	GEO / 21953	@
5 Durke	Project Name:	GEOLABS
	CAMDEN LOCK VILLAGE PHASE 2	
Senior Technician 20/11/2014	CG/18067a	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX

Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH7 7 2.20-2.65 U

Description:

Firm to stiff yellow-brown silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.4
Diameter	(mm)	102.6
Moisture Content	(%)	32
Bulk Density	(Mg/m³)	1.93
Dry Density	(Mg/m³)	1.46
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	1.03
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	42
Strain at failure	(%)	17.9
Maximum Deviator Stress	(kPa)	127
Shear Stress Cu	(kPa)	64

Mode of failure	\bigcirc	Orientation of the sample	Vertical
		Distance from top of tube mm	120
cked and Approved by:	Project Number:	GEO / 21953	GEOLAB
Durke	Project Name:	OCK VILLAGE PHASE 2	B →

Test Report By GEOLABS Limited Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

GL:Version 036 - 12/11/2014

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH7 12 4.50-4.95 U

Description:

Stiff fissured brown mottled grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	188.2
Diameter	(mm)	103.7
Moisture Content	(%)	30
Bulk Density	(Mg/m³)	1.94
Dry Density	(Mg/m³)	1.50
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.58
Axial displacement rate	(%/min)	2.12
Cell pressure	(kPa)	86
Strain at failure	(%)	8.5
Maximum Deviator Stress	(kPa)	220
Shear Stress Cu	(kPa)	110

Mode of failure	\bigcirc	Orientation of the sample	Vertical
		Distance from top of tube mm	210
ecked and Approved by:	Project Number:		GEOLABS
SAL	0	GEO / 21953	GEOLABS
Dure	Project Name:		
Senior Technician		CK VILLAGE PHASE 2	
Senior Technician 20/11/2014		CG/18067a	U KA S HERING 1987
t Report By GEOLABS Limited	Bucknalls Lane Garston Watford Hert	fordshire WD25 9XX	Page 1

Test Report By GEOLABS Limited ston, Watford, Hertfor nre, w Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

GL:Version 036 - 12/11/2014

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH7 16 7.50-7.95 U

Description:

Stiff fissured brown silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.0
Diameter	(mm)	103.7
Moisture Content	(%)	34
Bulk Density	(Mg/m³)	1.94
Dry Density	(Mg/m³)	1.45
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.22
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	143
Strain at failure	(%)	2.7
Maximum Deviator Stress	(kPa)	208
Shear Stress Cu	(kPa)	104

	Distance from top of tube mm	110
1		

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH7 21 10.50-10.95 U

Description:

Stiff fissured brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.5
Diameter	(mm)	103.6
Moisture Content	(%)	25
Bulk Density	(Mg/m³)	2.03
Dry Density	(Mg/m³)	1.62
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.46
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	200
Strain at failure	(%)	6.5
Maximum Deviator Stress	(kPa)	291
Shear Stress Cu	(kPa)	146

ecked and Approved by:	GEO / 21953	GEOLAB

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH7 31 16.50-16.95 U

Description:

Very stiff fissured brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	202.3
Diameter	(mm)	103.3
Moisture Content	(%)	27
Bulk Density	(Mg/m³)	2.01
Dry Density	(Mg/m³)	1.58
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.22
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	314
Strain at failure	(%)	2.7
Maximum Deviator Stress	(kPa)	277
Shear Stress Cu	(kPa)	139

Mode of failure	\bigcirc	Orientation of the sample	Vertical
		Distance from top of tube mm	80
Checked and Approved by:			GEOLABS
SR.b.		GEO / 21953	do ato
Senior Technician		OCK VILLAGE PHASE 2 CG/18067a	
20/11/2014		00/1000/a	1982

Test Re port By GEOLABS Limited ton, Wattord, Hertfor nre, w Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

GL:Version 036 - 12/11/2014

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH7 48 22.50-22.95 U

Description:

Very stiff fissured brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	188.7
Diameter	(mm)	102.0
Moisture Content	(%)	24
Bulk Density	(Mg/m³)	2.08
Dry Density	(Mg/m³)	1.68
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.31
Axial displacement rate	(%/min)	2.12
Cell pressure	(kPa)	428
Strain at failure	(%)	4.0
Maximum Deviator Stress	(kPa)	688
Shear Stress Cu	(kPa)	344

Mode of failure	\bigcirc	Orientation of the sample	Vertical
		Distance from top of tube mm	160
			1
ked and Approved by:			GEOLAB
Rh	(GEO / 21953	GEOLAB
Rh	roject Name:		GEOLAB
Rh	roject Name: CAMDEN LO	GEO / 21953 OCK VILLAGE PHASE 2 CG/18067a	

Test Report By GEOLABS Limited Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH7 58 28.50-28.95 U Description:

Very stiff fissured brownish grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.7
Diameter	(mm)	103.3
Moisture Content	(%)	25
Bulk Density	(Mg/m³)	1.97
Dry Density	(Mg/m³)	1.58
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.24
Axial displacement rate	(%/min)	0.99
Cell pressure	(kPa)	542
Strain at failure	(%)	3.0
Maximum Deviator Stress	(kPa)	630
Shear Stress Cu	(kPa)	315

Mode of failure	\bigcirc	Orientation of the sample	Vertical
		Distance from top of tube mm	120
Checked and Approved by:	Project Number:	GEO / 21953	GEOLABS
S Burke Senior Technician 20/11/2014	Project Name: CAMDEN LC	OCK VILLAGE PHASE 2 CG/18067a	
Z0/11/2014 Test Report By GEOLABS Limite			Page 1

 Test Report By GEOLABS Limited
 Bucknalls Lane, Garston, Watford, Hertfordshire, WD25

 Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

SUMMARY OF GEOTECHNICAL TESTING

			Sample of	letails		Class	sificatio	on Test	ts		Densit	Tests	Undraine	d Triaxial Co	mpression	0	Chemical Te	sts	
Borehole / Trial Pit	Sample Ref	Depth (m)	Туре	Description	MC (%)	LL (%)	PL (%)		• m	n	Bulk Mg/m³	Dry Mg/m³	Cell Pressure kPa	Deviator Stress kPa	Shear Stress kPa	рН	2:1 W/S SO4 (g/L)	W/S Mg (mg/L)	Other tests and comments
					(78)	(70)	(78)	(70)) (/0	<u>_</u>	Mg/III-	Wg/III-	кга	кга	кга		(g/L)	(IIIg/L)	
BH4	7	2.50-2.95	U	Firm fissured brown mottled grey CLAY	31	71	27	44	10	0	1.92	1.47	48	95	47				
BH4	12	4.50-4.95	U	Brown mottled grey silty CLAY with rare gypsum	31	75	26	49	10	0									
BH4	23	10.50-10.95	U	Very fissured dark grey CLAY	29						1.90	1.47	200	200	100				
BH4	38	19.50-19.95	U	Brown grey silty CLAY	25	62	26	36	10	0									
BH4	43	22.50-22.95	U	Very stiff fissured dark grey CLAY	26	63	25	38	10	0	2.08	1.65	428	312	156				
BH5	4	1.50-1.95	U	Stiff fissured brown CLAY	31	71	27	44	10	0	1.96	1.50	29	135	67				
BH5	9	3.50-3.95	U	Brown mottled orange silty CLAY with rare fine siltstone	28	67	25	42	98	3									
BH5	19	9.00-9.45	U	Brown silty CLAY	30	77	31	46	10	0									
BH5	24	12.00-12.45	U	Very stiff fissured dark grey CLAY	28	71	27	44	10	0	1.96	1.53	228	210	105				
BH5	34	18.00-18.45	U	Greyish brown slightly fine sandy silty CLAY	26	60	28	32	10	0									
BH5	39	21.00-21.45	U	Very stiff fissured dark grey silty CLAY	27	63	26	37	10	0	1.98	1.56	399	324	162				
BH5	49	27.00-27.45	U	Very stiff fissured dark grey silty CLAY	24	68	27	41	10	0	2.01	1.62	513	1,067	533				

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

necked and Approved by Project Number:	
GEO / 21995	®
Project Name:	GEOLABS
CAMDEN LOCK VILLAGE PHASE II	
Senior Technician 09/12/2014 CG/18067A	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX

Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

SUMMARY OF GEOTECHNICAL TESTING

			Sample	details		Class	ificatio	n Test	s	Densi	y Tests	Undraine	d Triaxial Cor	npression	C	nemical Te	ests	
Borehole / Trial Pit	Sample Ref	Depth (m)	Туре	Description	MC (%)	LL (%)	PL (%)	PI (%)	<425 • m (%)	Bulk Mg/m³	Dry Mg/m³	Cell Pressure kPa	Deviator Stress kPa	Shear Stress kPa	рН	2:1 W/S SO4 (g/L)	W/S Mg (mg/L)	Other tests and comments
BH5	62	36.00-36.50	U	Brown silty CLAY	20	48	20											
BH6	5	2.50-2.95	U	Firm to stiff fissured brown CLAY	33	72	26	46	100	1.95	1.47	48	147	73				
BH6	10	4.50-4.95	U	Brown silty CLAY with rare gypsum	31	73	27	46	100									
BH6	20	10.50-10.95	U	Very stiff fissured dark brown CLAY	30					1.95	1.50	200	160	80				
BH6	29	16.50-16.95	U	Brownish grey silty CLAY	25	59	28	31	100									
BH6	34	19.50-19.95	U	Very stiff fissured dark grey CLAY	24	64	25	39	100	1.97	1.59	371	478	239				

Sample type: B (Bulk disturb.) BLK (Block) C (Core) D (Disturbed) LB (Large Bulk dist.) U (Undisturbed)

Checked and Approved by	Project Number:	
58 h	GEO / 21995	(®
Joure		GEOLABS
Senior Technician	CAMDEN LOCK VILLAGE PHASE II	
09/12/2014	CG/18067A	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX

Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH4 7 2.50-2.95 U

Description:

Firm fissured brown mottled grey CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.6
Diameter	(mm)	103.2
Moisture Content	(%)	31
Bulk Density	(Mg/m³)	1.92
Dry Density	(Mg/m³)	1.46
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.80
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	48
Strain at failure	(%)	12.9
Maximum Deviator Stress	(kPa)	95
Shear Stress Cu	(kPa)	47

Mode of failure	\bigcirc	Orientation of the sample	Vertical
		Distance from top of tube mm	60
ked and Approved by:	Project Number:	GEO / 21995	GEOLA

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH4 23 10.50-10.95 U

Description:

Very fissured dark grey CLAY

Specimen Details

(mm) (mm) (%)	202.1 104.4 29
(%)	
. ,	29
(1 4 a) (mm 2)	
(Mg/m³)	1.90
(Mg/m³)	1.47
(mm)	0.30
(kPa)	0.27
(%/min)	1.98
(kPa)	200
(%)	3.5
(kPa)	200
(kPa)	100
-	(Mg/m ³) (mm) (kPa) (%/min) (kPa) (%) (kPa)

	Orientation of the sample Distance from top of tube mm	30
ked and Approved by:	GEO / 21995	GEO

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH4 43 22.50-22.95 U

Description:

Very stiff fissured dark grey CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	202.3
Diameter	(mm)	100.6
Moisture Content	(%)	26
Bulk Density	(Mg/m³)	2.08
Dry Density	(Mg/m³)	1.64
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.41
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	428
Strain at failure	(%)	5.4
Maximum Deviator Stress	(kPa)	312
Shear Stress Cu	(kPa)	156

Mode of failure		Orientation of the sample Distance from top of tube mm	Vertical 50
ked and Approved by: Burke Senior Technician 09/12/2014	Project Name:	GEO / 21995 OCK VILLAGE PHASE II CG/18067A	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

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GL:Version 036 - 12/11/2014

BH/TP No Sample Ref Depth (m) Sample Type

BH5 4 1.50-1.95 U

Description:

Stiff fissured brown CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.3
Diameter	(mm)	102.6
Moisture Content	(%)	31
Bulk Density	(Mg/m³)	1.96
Dry Density	(Mg/m³)	1.49
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.16
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	29
Strain at failure	(%)	2.0
Maximum Deviator Stress	(kPa)	135
Shear Stress Cu	(kPa)	67

Mode of failure		Orientation of the sample	Vertical
		Distance from top of tube mm	50
ked and Approved by:	Project Number:		GEOLAB
R.b.		GEO / 21995	CLOLAD.
Senior Technician 09/12/2014		OCK VILLAGE PHASE II CG/18067A	
00/12/2014			

Test Report By GEOLABS Limited ston, Watford, Hertfor cknalls ane, hire, WL Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH5 24 12.00-12.45 U

Description:

Very stiff fissured dark grey CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.2
Diameter	(mm)	103.3
Moisture Content	(%)	28
Bulk Density	(Mg/m³)	1.96
Dry Density	(Mg/m³)	1.54
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.12
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	228
Strain at failure	(%)	1.5
Maximum Deviator Stress	(kPa)	210
Shear Stress Cu	(kPa)	105

hecked and Approved by: Project Number:	Mode of failure	Orientation of the sample Distance from top of tube mm	Vertical 50
5 Bucker Project Name:	hecked and Approved by:	GEO / 21995	GEOLA

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH5 39 21.00-21.45 U Description:

Very stiff fissured dark grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.5
Diameter	(mm)	103.7
Moisture Content	(%)	27
Bulk Density	(Mg/m³)	1.98
Dry Density	(Mg/m³)	1.56
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.22
Axial displacement rate	(%/min)	1.98
Cell pressure	(kPa)	399
Strain at failure	(%)	2.7
Maximum Deviator Stress	(kPa)	324
Shear Stress Cu	(kPa)	162

	Distance from top of tube mm	60

 Test Report By GEOLABS Limited
 Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX

 Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH5 49 27.00-27.45 U

Description:

Very stiff fissured dark grey silty CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	185.2
Diameter	(mm)	103.6
Moisture Content	(%)	24
Bulk Density	(Mg/m³)	2.01
Dry Density	(Mg/m³)	1.62
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.25
Axial displacement rate	(%/min)	2.16
Cell pressure	(kPa)	513
Strain at failure	(%)	3.2
Maximum Deviator Stress	(kPa)	1067
Shear Stress Cu	(kPa)	533

Mode of failure		Orientation of the sample Distance from top of tube mm	Vertical 10
ked and Approved by:	Project Number:		GEOL
Q h	Project Name:	GEO / 21995 LOCK VILLAGE PHASE II CG/18067A	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH6 5 2.50-2.95 U

Description:

Firm to stiff fissured brown CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	200.7
Diameter	(mm)	102.8
Moisture Content	(%)	33
Bulk Density	(Mg/m³)	1.95
Dry Density	(Mg/m³)	1.47
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.53
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	48
Strain at failure	(%)	7.5
Maximum Deviator Stress	(kPa)	147
Shear Stress Cu	(kPa)	73

Mode of failure		Orientation of the sample Distance from top of tube mm	Vertical 20
Checked and Approved by:		GEO / 21005	GEOLABS
5 Burke Senior Technician 09/12/2014	Project Name: CAMDEN LC	GEO / 21995 DCK VILLAGE PHASE II CG/18067A	

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

GL:Version 036 - 12/11/2014

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH6 20 10.50-10.95 U

Description:

Very stiff fissured dark brown CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	201.1
Diameter	(mm)	103.6
Moisture Content	(%)	30
Bulk Density	(Mg/m³)	1.95
Dry Density	(Mg/m³)	1.50
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.16
Axial displacement rate	(%/min)	1.99
Cell pressure	(kPa)	200
Strain at failure	(%)	2.0
Maximum Deviator Stress	(kPa)	160
Shear Stress Cu	(kPa)	80

	Orientation of the sample Distance from top of tube mm	Vertical 20

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,

QUICK UNDRAINED TRIAXIAL COMPRESSION TEST

BH/TP No Sample Ref Depth (m) Sample Type

BH6 34 19.50-19.95 U

Description:

Very stiff fissured dark grey CLAY

Specimen Details

Specimen conditions		Undisturbed
Length	(mm)	200.3
Diameter	(mm)	104.6
Moisture Content	(%)	24
Bulk Density	(Mg/m³)	1.97
Dry Density	(Mg/m³)	1.58
Test Details		
Latex membrane thickness	(mm)	0.30
Membrane correction	(kPa)	0.29
Axial displacement rate	(%/min)	2.00
Cell pressure	(kPa)	371
Strain at failure	(%)	3.7
Maximum Deviator Stress	(kPa)	478
Shear Stress Cu	(kPa)	239

	Distance from top of tube mm	60

Test Report By GEOLABS Limited Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX Client : Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey,