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		STRATA					WATER		SPT T	ESTING		OTHER IN SI	TU TESTING		SAMPLING	
WELL	DESCRIPTION			DEPTH (m)	REDUCED LVL (m OD		STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	at 115mm depth. Appr (MADE GROUND)	DNCRETE comprised of aggregates of flint up to 20mm nominal size. 10mm reinforcement ba oximately 0.5% air voids. Blue membrane at base.		0.20	24.50									0.30		D
	Brown gravelly SAND w and concrete. \ (MADE GROUND)	ith frequent cobbles of angular brick and concrete. Gravel consists of fine to coarse sub-angu	ular brick	0.70	24.00									0.60		D
		elly fine to coarse SAND. Gravel consists of fine to coarse sub-angular brick, concrete, asphalt t TPH odour observed.	tic concrete	1.10	23.60									0.90		ES
	Very dense dark browr asphaltic concrete, clin (MADE GROUND)	blackish grey fine to coarse SAND. Gravel consists of fine to coarse sub-angular brick, concre ker and fabric.	ete,					C 1.50-1.66	(8) then 25 blows for 10mm penetration		DRY			1.50	1.95	В
														2.50		D
								C 3.00-3.33	(15) then 40 blows for 180mm penetration	1.50	DRY			3.00	3.45	D
							-	C 4.00-4.34	(21) then 50 blows for 195mm penetration	1.50	DRY			4.00	4.45	D
				- - - - -										5.00		D
				5.70	19.00									5.74		w
		CONTINUED ON NEXT SHEET			I											
	Disturbed Sample listurbed Sample	Notes Borehole remained upright and stable upon completion. Inspection pit excavated D		ing details Duration (hh:m	nm) ^{Bo}	le rehole rec	ord									
ES Enviro W Water C Core s	onmental Sample r Sample	from 0.0m to 1.2m depth. UXO Specialist in attendance. Level is approximate only. 4.	.50 - 4.80 .50 - 5.70	00:45 00:30		Casing	g details Base dept	Cal	thod ble tool percu	ssion	Logged by DN	,	Dat 27/	e(s) 02/2019	- 28/02/2	2019
S Standa	rd Penetration Test	Groundwater observations	Water a	ded details			base dept	Lev	el (m OD)		Compiled	by		et numb	er	
PP Pocke SV Shear	ird Penetration Test (solid cone) t Penetrometer test Vane test ɔ Ionisation Detector test	Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at 4.11m.	Depth (m)	Water Added	(I)			24. ⁻	70 ordinates		JJ Checked k KB	ру	She	et 1 of 5 Bl	-101	

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	STRATA DEPTH REDUCED					SPT T	ESTING		OTHER IN SI	TU TESTING		SAMPLING	i
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff very high strength brown slightly sandy slightly gravelly CLAY. Gravel consists of fine to medium angular gypsum crystals. (LONDON CLAY FORMATION)	-		-						UT=55	6.00	6.45	UT
				_					PP 6.50	PP=163	6.50		D
		-		_	S 7.00-7.45	(4) 19	6.00	DRY	PP 7.00	PP=196	7.00	7.45	D
		-		_									
				-									
	Very stiff very high strength blue grey slightly sandy CLAY. (LONDON CLAY FORMATION)	8.20	16.50	-									
				_							9.00	9.45	UT
				-					PP 9.50	PP=225	9.50		D
		- - - -		-	S 10.00-10.4	(5) 19	6.00	DRY	PP 10.00	PP=225	10.00	10.45	D
		- - - -		-	5								
		- - 									11.00	11.45	UT
									PP 11.50	PP=225	11.50		D
	CONTINUED ON NEXT SHEET						1						
Key	Notes Chisellin	g details	Title										

Кеу	Notes	Chise	elling details	Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. Inspection pit excavated from 0.0m to 1.2m depth. UXO Specialist in attendance. Level is approximate only.	Depth (m)	Duration (hh:mm)	Borehole rec	cord		1	
ES Environmental Sample W Water Sample	nom o.om to 1.2m depth. Oxo specialist in attendance. Leven's approximate only.			Casin	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 28/02/2019
S Standard Penetration Test	Groundwater observations	Water	added details	150	6.00	Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at	Depth (m)	Water Added (I)			24.70	JJ	Sheet 2 of 5
PP Pocket Penetrometer test SV Shear Vane test	4.11m.					Co-ordinates	Checked by	PU01
PID Photo Ionisation Detector test						-	КВ	BH01
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	STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	i
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very stiff very high strength blue grey slightly sandy CLAY. (LONDON CLAY FORMATION)	-				S	(5) 21	6.00	DRY	PP 12.00	PP=225	12.00	12 45	D
		-				12.00-12.4 5	(5) 21	0.00	DI	11 12.00	11-225	12.00	12.45	
		 - - -												
		- 								PP 13.00	PP=225	13.00		D
		- - -												
		- - 									UT=65	14.00	14.45	UT
										PP 14.50	PP=225	14.50		D
		- - -												
		 - -												
		- -		 										
		- 									UT=60	16.00	16.45	UT
		- - -		 						PP 16.50	PP=225	16.50		D
		- - -												
	CONTINUED ON NEXT SHEET	•												

Кеу	Notes	Chise	elling details	Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. Inspection pit excavated	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	from 0.0m to 1.2m depth. UXO Specialist in attendance. Level is approximate only.			Casing	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 28/02/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at	Depth (m)	Water Added (I)			24.70	11	Sheet 3 of 5
PP Pocket Penetrometer test SV Shear Vane test	4.11m.					Co-ordinates	Checked by	BH01
PID Photo Ionisation Detector test						-	КВ	DHUI
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	STRATA				WATER		SPT TI	ESTING		OTHER IN SI	TU TESTING		SAMPLING	
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very stiff very high strength blue grey slightly sandy CLAY. (LONDON CLAY FORMATION)													
				 							UT=65	18.00	18.45	UT
				 						PP 18.50	PP=225	18.50		D
										PP 19.00	PP=188 UT=100	19.00 19.00 19.00	19.45 19.45	B D UT
		- - - -		 							UT=80	20.00	20.45	UT
										PP 20.50	PP=225	20.50		D
						S 22.00-22.4 5	(10) 38	6.00	DRY	PP 22.00	PP=225	22.00	22.45	D
	CONTINUED ON NEXT SHEET	- - - -		 						PP 23.00	PP=225	23.00		D

Кеу	Notes	Chise	elling details	Title]
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. Inspection pit excavated	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	from 0.0m to 1.2m depth. UXO Specialist in attendance. Level is approximate only.			Casin	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 28/02/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at	Depth (m)	Water Added (I)			24.70	11	Sheet 4 of 5
PP Pocket Penetrometer test	4.11m.					Co-ordinates	Checked by	DU01
SV Shear Vane test PID Photo Ionisation Detector test						-	КВ	BH01
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	STRATA		WATER		SPT T	ESTING		OTHER IN SI	TU TESTING		SAMPLING			
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
WELL		25.00	-0.30					CASING		TYPE /	RESULT UT=85	FROM	TO (m) 24.45	
Kev	Notes	Chiselling details	Titl											

Key	Notes	Chise	elling details	Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. Inspection pit excavated	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	from 0.0m to 1.2m depth. UXO Specialist in attendance. Level is approximate only.			Casing	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 28/02/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at	Depth (m)	Water Added (I)			24.70	11	Sheet 5 of 5
PP Pocket Penetrometer test	4.11m.					Co-ordinates	Checked by	DU 01
SV Shear Vane test PID Photo Ionisation Detector test						-	КВ	BH01
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	STRATA DEPTH REDUCED				WATER		SPT TE	STING		OTHER IN SI	TU TESTING	1	SAMPLING	i
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass onto dark brown gravelly SAND with frequent cobbles of angular brick and rare concrete. Gravel consists of fine to coarse sub-angular brick, plastic, concrete, glass and slag. (MADE GROUND)	_			5 5 5							0.20		D
		-										0.50		D
		_										0.80		D
		-										1.10	1	D
		-				C 1.50-1.95	(7) 21	1.50	DRY					
		-											ļ	
		- 											1	
		-												
	BOREHOLE TERMINATED AT 2.60m	2.60	20.30										1	
		- - 												
		-												
		-											1	
		-											1	
		_											1	
		-												
		-											1	
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		-												

Кеу	Notes	Chise	lling details	Title							
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole terminated due to presence of suspected concrete obstruction and reading	Depth (m)	Duration (hh:mm)	Borehole rec	ord						
ES Environmental Sample W Water Sample	on UXO magnetometer. Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.	2.20 - 2.60	01:00	Casing	g details	Method	Logged by	Date(s)			
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	26/02/2019			
S Standard Penetration Test	Groundwater observations	Water	added details	150	2.50	Level (m OD)	Compiled by	Sheet number			
C Standard Penetration Test (solid cone)	No groundwater encountered.	Depth (m)	Water Added (I)			22.90	11	Sheet 1 of 1			
PP Pocket Penetrometer test						Co-ordinates	Checked by	BUOD			
SV Shear Vane test PID Photo Ionisation Detector test						-	КВ	BH02			
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	STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	i
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	DESCRIPTION Grass onto dark brown gravelly SAND with frequent cobbles of angular brick and rare concrete. Gravel consists of fine to coarse sub-angular brick, plastic, concrete, glass and slag. (MADE GROUND) BOREHOLE TERMINATED AT 2.00m	2.00	20.90	LEGEND		DEPTH (m)	RESULT	DEPTH (m)		DEPTH (m)	RESULT	(m)		TYPE

Кеу	Notes	Chise	elling details	Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole terminated due to presence of suspected concrete obstruction and reading	Depth (m)	Duration (hh:mm)	Borehole rec	cord			
ES Environmental Sample W Water Sample	on UXO magnetometer. Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.	0.00 - 1.20	01:00	Casing	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample		1.40 - 2.00	01:30	Diameter (mm)	Base depth (m)	Cable tool percussion	DN	26/02/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	No groundwater encountered.	Depth (m)	Water Added (I)			22.90	11	Sheet 1 of 1
PP Pocket Penetrometer test SV Shear Vane test						Co-ordinates	Checked by	BH02A
PID Photo Ionisation Detector test						-	КВ	σπυΖΑ
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	STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	i
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Grass onto dark brown gravelly SAND with frequent cobbles of angular brick and rare concrete. Gravel consists of fine to coarse sub-angular brick, plastic, concrete, glass and slag. (MADE GROUND) BOREHOLE TERMINATED AT 3.00m	3.00	19.90											

Кеу	Notes	Chiselling details		Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole terminated due to presence of suspected concrete obstruction. Borehole	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.	0.00 - 1.20	01:00	Casing	g details	Date(s)		
C Core sample UT Undisturbed Sample	approximate only.	1.50 - 2.90	05:00	Diameter (mm)	Base depth (m)	Cable tool percussion	DN	04/03/2019 - 05/03/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	No groundwater encountered.	Depth (m)	Water Added (I)			22.90	11	Sheet 1 of 1
PP Pocket Penetrometer test SV Shear Vane test						Co-ordinates	Checked by	BH02B
PID Photo Ionisation Detector test						-	КВ	DHUZD
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WELL

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									0				
STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING	:	SAMPLING	
DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown gravelly SAND with frequent cobbles of angular brick and rare concrete. Gravel consists of fine to coarse sub-angular brick, plastic, concrete, glass and slag. (MADE GROUND)											0.30	0.60	В
	 - - - - - - - -										1.00		D
	- - - - -										2.00		В
											3.00		В
											4.00		В
Stiff very high strength brown slightly sandy CLAY. (LONDON CLAY FORMATION)	5.10	20.40				(2) 45			PP 5.10	PP=150	5.10		D
	-				S 5.50-5.95	(3) 15	5.40	DRY	PP 5.50	PP=154	5.50	5.45	D
CONTINUED ON NEXT SHEET	I												

Кеу	Notes	Chise	elling details	Title			
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. UXO Specialist in	Depth (m)	Duration (hh:mm)	Borehole record			
ES Environmental Sample W Water Sample	attendance. Level is approximate only.	0.00 - 1.20	01:00	Casing details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample		1.50 - 1.90	01:00	Diameter (mm) Base depth (m)	Cable tool percussion	DN	27/02/2019 - 01/03/2019
S Standard Penetration Test	Groundwater observations	Water	added details		Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater encountered at 41m depth, rising to 39.3 on completion.	Depth (m)	Water Added (I)		25.50	11	Sheet 1 of 8
PP Pocket Penetrometer test					Co-ordinates	Checked by	DUOD
SV Shear Vane test PID Photo Ionisation Detector test					-	КВ	BH03
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	STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	i
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)		STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Stiff very high strength brown slightly sandy CLAY. (LONDON CLAY FORMATION)	-		<u> </u>										
		-												
		-		<u></u>	-									
											UT=55	7.00	7.45	UT
				<u> </u>	-					DD 7 50		7.50		
										PP 7.50	PP=200	7.50		В
		-			-									
		-			-									
		-			-									
		-		E	-									
		-												
		-		<u></u>	-									
					-						UT=80	10.00	10.45	UT
	Very stiff very high strength blue grey silty slightly sandy CLAY	10.50	15.00		-					PP 10.50	PP=183	10.50		D
	(LONDON CLAY FORMATION)	-			-									
		 		<u> </u>	-						UT=90	11.00	11.45	UT
		-			-					PP 11.50	PP=225	11.50		D
	CONTINUED ON NEXT SHEET													

Кеу	Notes	Chise	Chiselling details		Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. UXO Specialist in	Depth (m)	Duration (hh:mm)	Borehole rec	cord				
ES Environmental Sample W Water Sample	attendance. Level is approximate only.	1.90 - 2.30	01:00	Casing	g details	Method	Logged by	Date(s)	
C Core sample UT Undisturbed Sample		2.60 - 2.90	01:00	Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 01/03/2019	
S Standard Penetration Test	Groundwater observations	Water	added details	150	6.00	Level (m OD)	Compiled by	Sheet number	
C Standard Penetration Test (solid cone)	Groundwater encountered at 41m depth, rising to 39.3 on completion.	Depth (m)	Water Added (I)			25.50	11	Sheet 2 of 8	
PP Pocket Penetrometer test				-		Co-ordinates	Checked by	DUOD	
SV Shear Vane test PID Photo Ionisation Detector test						-	КВ	BH03	
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	STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	i
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very stiff very high strength blue grey silty slightly sandy CLAY (LONDON CLAY FORMATION)	- - - - - - -				S 12.00-12.4 5	(5) 23	6.00	DRY	PP 12.00	PP=200	12.00	12.45	D
						S 14.00-14.4	(8) 29	6.00	DRY	PP 14.00	PP=163	14.00	14.45	D
						5								
		-								PP 16.50	UT=100 PP=217	16.00	10.45	UT
	CONTINUED ON NEXT SHEET	- - - - - - - - -				S 17.00-17.4 5	(9) 33	6.00	DRY				17.45	

Кеу	Notes	Chise	elling details	Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. UXO Specialist in	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	attendance. Level is approximate only.	4.00 - 4.40	01:00	Casin	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample		4.50 - 4.90	01:00	Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 01/03/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater encountered at 41m depth, rising to 39.3 on completion.	Depth (m)	Water Added (I)			25.50	11	Sheet 3 of 8
PP Pocket Penetrometer test SV Shear Vane test						Co-ordinates	Checked by	DUOD
PID Photo Ionisation Detector test						-	КВ	BH03
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	STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very stiff very high strength blue grey silty slightly sandy CLAY (LONDON CLAY FORMATION)	_								PP 17.50	PP=225			
		_		<u> </u>										
				<u> </u>										
		-		<u> </u>										
		-									UT=100	19.00	19.45	UT
		_		<u> </u>						PP 19.50	PP=154	19.50		D
		-		<u> </u>						11 15.50	11-154	15.50		
											UT=100	20.00	20.45	UT
		-												
		_		<u> </u>						PP 20.50	PP=154	20.50		D
		_ 		<u> </u>										
		-												
		- 		E- <u>-</u> -										
		_ _ _		<u> </u>										
		-		<u> </u>							UT=100	22.00	22.45	UT
		-		 						PP 22.50	PP=154	22.50		D
		-												
		- 				S 23.00-23.4	(11) 39	6.00	DRY	PP 23.00	PP=225	23.00	23.45	D
	CONTINUED ON NEXT SHEET					5								

Кеу	Notes	Chise	lling details	Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. UXO Specialist in	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	attendance. Level is approximate only.			Casing	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 01/03/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater encountered at 41m depth, rising to 39.3 on completion.	Depth (m)	Water Added (I)			25.50	IJ	Sheet 4 of 8
PP Pocket Penetrometer test						Co-ordinates	Checked by	DUOD
SV Shear Vane test PID Photo Ionisation Detector test						-	КВ	BH03
Report ref: STR4646-G01			•				•	Revision: 0

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	STRATA						срт та	ESTING			TU TESTING		SAMPLING	
WELL		DEPTH	REDUCED		WATER STRIKES	TYPE /		CASING	WATER	TYPE /		FROM	TO	
	DESCRIPTION	(m)	LVL (m OD)	LEGEND		DEPTH (m)	RESULT	DEPTH (m)	LEVEL (m)	DEPTH (m)	RESULT	(m)	(m)	TYPE
	Very stiff very high strength blue grey silty slightly sandy CLAY (LONDON CLAY FORMATION)	_												
		-												
		_										24.00	24.45	UT
		_												
		_								PP 24.50	PP=225	24.50		D
		_										25.00	25.45	UT
		-												
		_								DD 35 50	DD 225	25.50		
										PP 25.50	PP=225	25.50		D
		_												
		_										26.00	26.45	UT
		_								PP 26.50	PP=225	26.50		D
		_												
		-										27.00	27.45	UT
		_								PP 27.50	PP=225	27.50		D
		_												
		-					(4.4) 45	6.00	2.01		55 300			
						S 28.00-28.4	(14) 45	6.00	DRY	PP 28.00	PP=200	28.00	28.45	D
						5								
		 -												
		-												
		_										29.00	29.45	UT
	CONTINUED ON NEXT SHEET	1	1	1	1	1	1	1	1	1				1

Кеу	Notes	Chise	elling details	Title]
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. UXO Specialist in	Depth (m)	Duration (hh:mm)	Borehole red	cord			
ES Environmental Sample W Water Sample	attendance. Level is approximate only.			Casin	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 01/03/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater encountered at 41m depth, rising to 39.3 on completion.	Depth (m)	Water Added (I)			25.50	IJ	Sheet 5 of 8
PP Pocket Penetrometer test						Co-ordinates	Checked by	DUOD
SV Shear Vane test PID Photo Ionisation Detector test						-	КВ	BH03
Report ref: STR4646-G01								Revision: 0

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	STRATA				WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	
WELL	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very stiff very high strength blue grey silty slightly sandy CLAY (LONDON CLAY FORMATION)	-												
		- - -								PP 29.50	PP=225	29.50		D
		- - -		[]- []-		S 30.00-30.4	(15) then 50 blows	6.00	DRY	PP 30.00	PP=225	30.00	30.45	D
		-				4	for 290mm penetration							
		-		 										
		-		 						PP 31.00	PP=225	31.00	31.45	UT
		- - -										31.50		D
		-		 		s	(16) then	6.00	DRY	PP 32.00	PP=225	32.00	32.45	D
		-		 		32.00-32.4 2	50 blows for 275mm penetration							
		-												
		- 		 								33.00	33.45	UT
		- - -								PP 33.60	PP=225	33.45		D
		-		 		S	(16) then	6.00	DRY			34.00	34.45	D
		-		 		34.00-34.4 0	50 blows for 245mm	0.00	DRI			34.00	34.43	
		-					penetration							
	CONTINUED ON NEXT SHEET	-												

Key Notes **Chiselling details** Title D Small Disturbed Sample B Bulk Disturbed Sample ES Environmental Sample Borehole remained upright and stable upon completion. UXO Specialist in Borehole record Depth (m) Duration (hh:mm) attendance. Level is approximate only. Casing details Method Logged by Date(s) W Water Sample C Core sample UT Undisturbed Sample DN 27/02/2019 - 01/03/2019 Cable tool percussion Diameter (mm) Base depth (m) Water added details Groundwater observations Level (m OD) Compiled by Sheet number S Standard Penetration Test C Standard Penetration Test (solid cone) Groundwater encountered at 41m depth, rising to 39.3 on completion. 25.50 JJ Sheet 6 of 8 Depth (m) Water Added (I) PP Pocket Penetrometer test **Co-ordinates** Checked by **BH03** SV Shear Vane test PID Photo Ionisation Detector test KB Report ref: STR4646-G01

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WELL	STRATA		1		WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Very stiff very high strength blue grey silty slightly sandy CLAY (LONDON CLAY FORMATION)	_										35.00	35.45	UT
		-										33.00	55.45	
		-		<u> </u>						PP 35.50	PP=225	35.50		D
				<u> </u>						PP 35.50	PP=225	35.50		
		-					(
						S 36.00-36.3		6.00	DRY	PP 36.00	PP=225	36.00	36.45	D
		_				8	for 235mm penetration							
		-					penetration							
	from 36.8m depth, becoming mottled red brown.													
		-										37.00	37.45	UT
		E												
										PP 37.50	PP=225	37.50		D
		-												
						S 38.00-38.3	(24) then 50 blows	6.00	DRY			38.00	38.45	D
		-				8	for 225mm							
							penetration							
		_												
												39.00	39.45	UT
		-								PP 39.50	PP=225	39.50		D
		-				s	(25) then	6.00	DRY	PP 40.00	PP=225	40.00	40.45	D
		-				40.00-40.3 5								
		_					penetration							
	CONTINUED ON NEXT SHEET													

Кеу	Notes	Chise	elling details	Title]
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. UXO Specialist in	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	attendance. Level is approximate only.			Casin	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 01/03/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater encountered at 41m depth, rising to 39.3 on completion.	Depth (m)	Water Added (I)			25.50	11	Sheet 7 of 8
PP Pocket Penetrometer test						Co-ordinates	Checked by	BUOD
SV Shear Vane test PID Photo Ionisation Detector test						-	КВ	BH03
Report ref: STR4646-G01	·		•				·	Revision: 0

WELL

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					er	IVIPONM	iental a	na geo	tecnnic	ai co	nsuit	ants
STRATA			WATER		SPT TE	STING		OTHER IN SI	TU TESTING		SAMPLING	i
	DEPTH (m)	REDUCED LVL (m OD)	STRIKES TYPE /	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	41.00	-15.50								41.00 41.00 41.00	41.45 41.45	B D UT
00m	42.00	-16.50		S 41.50-41.7 4	(25 blows for 135mm penetration) then 50 blows for		39.50					

 DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND	STRIKES	TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
Very stiff very high strength blue grey silty slightly sandy CLAY (LONDON CLAY FORMATION) Very dense green grey fine silty SAND.	 41.00	-15.50									41.00		в
(THANET SAND FORMATION)	- - -				s	(25 blows		39.50			41.00 41.00	41.45	D UT
BOREHOLE TERMINATED AT 42.00m	42.00	-16.50			41.50-41.7	for 135mm penetration) then 50 blows for							
	- 					100mm penetration							
	- - -												
	- - -												
	- - 												
	- - -												
	- - 												
	_												

Кеу	Notes	Chise	lling details	Title				
D Small Disturbed Sample B Bulk Disturbed Sample	Borehole remained upright and stable upon completion. UXO Specialist in	Depth (m)	Duration (hh:mm)	Borehole rec	ord			
ES Environmental Sample W Water Sample	attendance. Level is approximate only.			Casing	g details	Method	Logged by	Date(s)
C Core sample UT Undisturbed Sample				Diameter (mm)	Base depth (m)	Cable tool percussion	DN	27/02/2019 - 01/03/2019
S Standard Penetration Test	Groundwater observations	Water	added details			Level (m OD)	Compiled by	Sheet number
C Standard Penetration Test (solid cone)	Groundwater encountered at 41m depth, rising to 39.3 on completion.	Depth (m)	Water Added (I)			25.50	11	Sheet 8 of 8
PP Pocket Penetrometer test SV Shear Vane test						Co-ordinates	Checked by	BH03
PID Photo Ionisation Detector test						-	КВ	DIUS
Report ref: STR4646-G01								Revision: 0



Soil Description:

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Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge,	Job Number:	19-32782
	Walgrave, Northampton,	Date Sampled:	25/02/2019
	NN6 9PY	Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		
Test Results:			
Laboratory Reference:	1176420	Depth Top [m]:	6.50
Hole No.:	BH01	Depth Base [m]:	Not Given
Sample Reference:	BH016.501-010	Sample Type:	D

Brown slightly gravelly CLAY

	ived Moist ntent [%]	ture	Liq	uid l [%]	_imit		Pla	stic Lim [%]	it	Plasticit [%	-	% Pa BS	assing 425µı 5 Test Sieve	m
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100 -						_		-						
90 -	90											ine		

Sample Preparation: Tested after >425um removed by hand

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	60 -														\triangleleft						
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				Legend	l, bas	ed or	n BS 59	930:201 ¤	5 Code		actice	for site	invest		s id Lim	i+					
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								H V		igh ery higl	h			50 te 70 te							
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				C	Organi	ic		0	ap	opend t	o clas	sificatio	on for c	organio	: mate	rial (e	g CHO)			
Note:	Moistu	ure Cont	ent by E	3S 1377-2	2: 199	0: Ca	luse 3	2													
Rema	arks:																				
Appro Protu	li	PL Da	_ Geote ate Rep	iotrowski chnical La orted: 2	7/03/	2019	lanage	er				Sig A	ned:	\leq		en Be techni	rrill cal Gen	eral M	anager	(GF 232.4
This report ma The results inc	ay not be repr cluded within	produced other than n the report are rep	n in full without th resentative of the	the scope of the UKA he prior written appr e samples submitted row 39, 41-711 Ruda	oval of the is for analysis.	ssuing labor	atory.			Page	1 of 1					fo	or and	on be	half of	i2 Ar	alytical Lt



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Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Conta Site N Site A	ame: ddress	S:	Walgra NN6 9F Lauren	Wenha cras Ca	hampi m	ion,	'n								Date San Date Reco Date Te	mber: 1 npled: 2	9-32782 5/02/20 3/03/20 0/03/20	2 19 19 19
_abora Hole N Samp	No.:	Reference: erence:	BH01	3.001-0	18									I	Depth To Depth Bas Sample	e [m]: N	ot Give	n
-		paration: ived Moist		in natur		dition Limit		—	Pla	astic Lin	nit		Plas	ticity Ind	dex	%	Passin	g 425µm
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	oved:		isz Piotre eotechn								Si	gned:		Darren	Berrill hnical Ger			

The results included within the report are representative of the samples submitted for analysis. The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland." for and on behalf of i2 Analytical Ltd

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Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client A	Addre	SS:	Cedar	hnics L Barn, V ave, No PY	Vhite L									С	lient Refer Job Nu Date San Date Rec	mber: 19 npled: 29	9-32782 5/02/20	<u>2</u> 19
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aborat	tory F o.: e Refe	Reference: erence:	BH01	0.001-02	27									I	Depth To Depth Bas Sample	e [m]: 19	9.45	
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The results included within the report are representative of the samples submitted for analysis. The analysis was carried out at 12 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland."



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Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Conta Site N Site A	ame: ddres	s:	Walgra NN6 9F Lauren	Wenha cras Ca	hampi m	ion,	n								Date San Date Reco Date Te		5/02/20 3/03/20 0/03/20	19 19 19
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-		paration: ived Moist i		in natur		dition Limit			Pla	astic Lin	nit		Plas	ticity Inc	dex			g 425µm
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Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

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	Resu																				
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TEST CERTIFICATE

Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client: Client Add	lress:	Cedar Walgra NN6 9F		nite Lo nampt	odge,			. 65 1377				Da Da	Job Num ate Samp te Recei	nce: STC ber: 19-3 bled: 27/0 ved: 13/0	2782 2/2019 3/2019	
Contact: Site Name	:		Wenhar cras Car		Camder	ı								ted: 20/0 By: Not		
lole No.: Sample Re Soil Descr	sults: / Reference: eference:	BH03 BH031 Brown		andy								Dep		[m]: 10.5 [m]: Not ype: D		
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emarks	:															
pproved ?t.Ji	PL G	Report	nical Labo ed: 27/	03/20	-	er			Sig (*)	ined:		arren Bei eotechni		ral Mana	-	GF 232

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Client:

Soiltechnics Limited

TEST CERTIFICATE

Liquid and Plastic Limits

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

Client Reference: STQ4646



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

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	arks: oved:	PL (usz Piot Geotechi e Repor	nical Lal			er				S	igned:	\checkmark		n Berrill chnical Gen	eral Mar	ager	GF 232

The results included within the report are representative of the samples submitted for analysis. The results included within the report are representative of the samples submitted for analysis. The analysis was carried out at 12 Analytical Limited, u. Pionierow 39, 41-711 Ruds Slaska, Poland."



TEST CERTIFICATE

Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

	Addre	ess:	Cedar Walgra NN6 9		/hite Lc thampt									ient Refere Job Num Date Samp Date Recei	ber: 19- bled: 27/ ved: 13/	-32782 /02/201 /03/201	19 19
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	ddres	s:	Not Gi		inpuo,	Camaci	•							Campiec	г Ву. 110		
abora lole N amp	No.:	Reference erence:	BH03 BH032	45 28.001-0 ish grey										Depth Top Depth Base Sample T	[m]: 28.		
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AS		ntent [%]	sture		Liquid [%					6 Limit %]		Plas	ticity Inc [%]	iex			g 425µm Sieve
		25			71	l			2	29			42			10	0
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ema	arks:																
ppro	oved:	PL	iusz Piot Geotechi e Repor t	nical Lat			er				Signed:	\leq	Darren I Geotech	Berrill nnical Gene	eral Mana	ager	GF 232

The results included within the report are representative of the samples submitted for analysis. The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland." for and on behalf of i2 Analytical Ltd



TEST CERTIFICATE

Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client Client Conta	Addre	ess:	Cedar Walgr NN6 9	chnics L [·] Barn, V ave, No PY n Wenh	White rtham	l ∟odge,				BS 1377					Date Sam Date Rece	mber: 19 npled: 27)-32782 7/02/20 [,] 3/03/20 [,]	2 19 19
Site N	lame:		St Par	ncras Ca		s, Camd	en									ed By: No		
Test Labor Hole I Samp	No.:	Ilts: Reference:	BH03	49 33.451-(080										Depth To Depth Bas Sample	e [m]: N		n
-	Rece	paration: ived Moist		d in natu	Liqui	d Limit			Pla	astic Lir	nit		Plas	sticity In	dex			g 425µm
	Coi	ntent [%] 23				%] 64				[%] 24				[%] 40		E	3S Test 10	
																		-
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		0 10	20) 3	0	40	50	60		י0 20טוס נו	80 MIT	90	100	110	120	130	140	150
				сс	, base Clay Silt	d on BS	5930:	2015 C Plas L I H V E	ticity Low Medi High Very	um		te inve	belov 35 tc 50 tc 70 tc	d Limit w 35 o 50 o 70)			
Note:	Moist	ure Content	by BS		rganio : 1990		3.2	0	appe	end to cla	assifica	ation fo	r organic	material	l (eg CHO)		
Rem	arks:																	
Appro Q.J.	oved: Ji	PL G				ory Mana 019	iger				S	bigned:	5	Darren Geotec	Berrill hnical Ger	neral Mar	nager	GF 23

The results included within the report are representative of the samples submitted for analysis. The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland." for and on behalf of i2 Analytical Ltd



Client:

Soiltechnics Limited

TEST CERTIFICATE

Liquid and Plastic Limits

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

Client Reference: STQ4646



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Conta Site N Site A	lame: .ddress	5:	Walgr NN6 9 Laure	n Wenh ncras C	rtham am		en								Date S Date R Date	ampled eceived Tested	: 19-3278 : 27/02/2 : 13/03/2 : 20/03/2 : Not Giv	019 019 019	
abor ole l amp oil D	No.: le Refe escrip	Reference: erence:	BH03 BH03 Browr	53 39.501-i slightly d in nati	sand										Depth B	Top [m] ase [m] le Type	: Not Giv	en	
As		ved Moist	ture			d Limit %]			Pla	istic Lin [%]	nit		Plas	sticity In [%]	dex			ing 425µm st Sieve	n
	00.	23				60				29				31				100	
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	Moistu arks:	ure Conten	t by BS		rganic 1990		3.2	0	appe	nd to cla	assifica	tion for	organic	material	(eg C⊦	HO)			
), t	oved: Ji	PL C	Repor	nical La ted: 2 [°]	7/03/2	ory Mana 019	ger				Si	gned:	\leq	Darren Geotec		General I	Manager	GF	232

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Soil Description:

TEST CERTIFICATE

Liquid and Plastic Limits

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



Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge,	Job Number:	19-32782
	Walgrave, Northampton,	Date Sampled:	27/02/2019
	NN6 9PY	Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		
Test Results:			
Laboratory Reference:	1176454	Depth Top [m]:	41.00
Hole No.:	BH03	Depth Base [m]:	Not Given
Sample Reference:	BH0341.001-093	Sample Type:	D

Brownish grey slightly gravelly very sandy CLAY

	ed Moisture ent [%]	L	iquid Limit. [%]			c Limit %]		Plas	ticity Ind [%]	dex		ssing 425µm Test Sieve
2	26		35		1	8			17			88
¹⁰⁰ T												
90 -												ine
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arks:	<u> </u>											
oved: Ji			oratory Manag 03/2019	ger			Signed:	\leq	Darren Geotec		neral Manag	ger GF



Soil Description:

TEST CERTIFICATE

Liquid and Plastic Limits

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



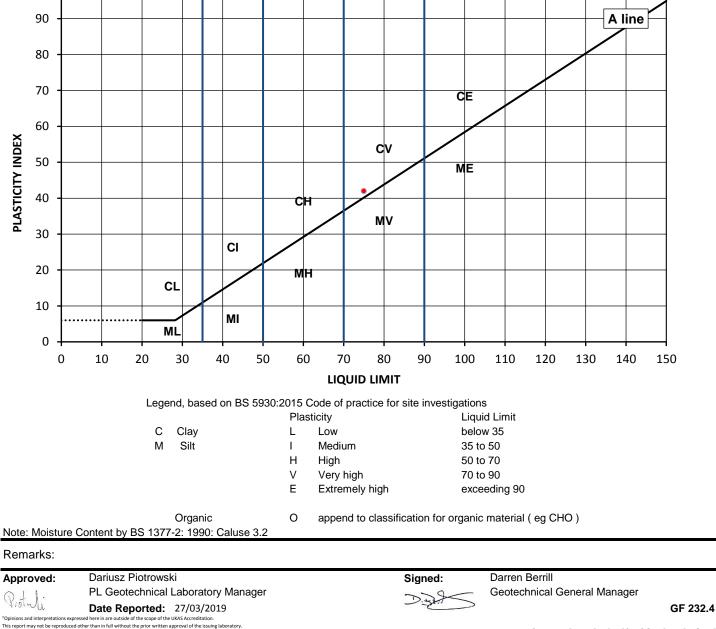
Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge,	Job Number:	19-32782
	Walgrave, Northampton,	Date Sampled:	25/02/2019
	NN6 9PY	Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		
Test Results:			
Laboratory Reference:	1176793	Depth Top [m]:	19.00
Hole No.:	BH01	Depth Base [m]	19.45
Sample Reference:	BH0119.001-026	Sample Type:	В

Tested after >425um removed by hand Sample Preparation:

Greyish brown slightly gravelly CLAY

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
45	75	33	42	95
100				
100				



The results included within the report are representative of the samples submitted for analysis. The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland."

SUMMARY REPORT

Summary of Classification Test Results

Tested in Accordance with:

4041 Client:	Soiltechnics Limited	MC by BS 1377-2: 1990: Clause 3.2; WC by BS EN 17892-1: 2014; Atterberg
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	by BS 1377-2: 1990: Clause 4.3, Clause 4.4 and 5; PD by BS 1377-2: 1990: Clause 8.2
Contact:	Lauren Wenham	
Site Name:	St Pancras Campus, Camden	
Site Address:	Not Given	

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



Client Reference: STQ4646 Job Number: 19-32782 Date Sampled: 25/02 - 27/02/2019 Date Received: 13/03/2019 Date Tested: 19/03 - 20/03/2019 Sampled By: Not Given

Test results

			Sample								Atte	rberg			Density		#	
Laboratory Reference	Hole No.	Reference	Depth Top	Depth Base	Туре	Description	Remarks	мс	wc	% Passing 425um	ш	PL	PI	bulk	dry	PD	Total Porosity#	
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%	
1176420	BH01	BH016.501-010	6.50	Not Given	D	Brown slightly gravelly CLAY	Atterberg 1 Point	29		96	62	27	35					
1176423	BH01	BH0113.001- 018	13.00	Not Given	D	Grey CLAY	Atterberg 1 Point	28		100	69	29	40					
1176793	BH01	BH0119.001- 026	19.00	19.45	В	Greyish brown slightly gravelly CLAY	Atterberg 1 Point	45		95	75	33	42					
1176427	BH01	BH119.001-027	19.00	19.45	В	Grey CLAY	Atterberg 1 Point	31		100	69	30	39					
1176429	BH01	BH0123.001- 031	23.00	Not Given	D	Grey CLAY	Atterberg 1 Point	26		100	71	29	42					
1176431	BH03	BH035.101.044	5.10	Not Given	D	Brown CLAY	Atterberg 1 Point	33		100	74	30	44					
1176434	BH03	BH0310.501- 049	10.50	Not Given	D	Brown slightly sandy CLAY	Atterberg 1 Point	27		100	59	24	35					
1176441	BH03	BH0324.501- 065	24.50	Not Given	D	Brown CLAY	Atterberg 1 Point	25		100	70	26	44					
1176445	BH03	BH0328.001- 072	28.00	28.45	D	Brownish grey CLAY	Atterberg 1 Point	25		100	71	29	42					
1176449	BH03	BH0333.451- 080	36.00	Not Given	D	Grey CLAY	Atterberg 1 Point	23		100	64	24	40					

Page 1 of 1

Note: # Non accredited; NP - Non plastic

Comments:

Approved:

PL Geotechnical Laboratory Manager 27/03/2019 Date Reported:

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Dariusz Piotrowski

Signed:

Darren Berrill

Geotechnical General Manager

GF 234.6

SUMMARY REPORT

Summary of Classification Test Results

Tested in Accordance with:

4041 Client:	Soiltechnics Limited	MC by BS 1377-2: 1990: Clause 3.2; WC by BS EN 17892-1: 2014; Atterberg
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	by BS 1377-2: 1990: Clause 4.3, Clause 4.4 and 5; PD by BS 1377-2: 1990: Clause 8.2
Contact:	Lauren Wenham	
Site Name:	St Pancras Campus, Camden	
Site Address:	Not Given	

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



Client Reference: STQ4646 Job Number: 19-32782 Date Sampled: 27/02/2019 Date Received: 13/03/2019 Date Tested: 19/03 - 20/03/2019 Sampled By: Not Given

Test results

			Sample		Atterberg				Density			#	ŧ						
Laboratory Reference	Hole No.	Reference	Depth Top	Depth Base	Туре	Description	Remarks	мс	wc	% Passing 425um	ш	PL	PI	bulk	dry	PD	Total Porosity#		
			m	m				%	%	%	%	%	%	Mg/m3	Mg/m3	Mg/m3	%		
1176453	BH03	BH0339.501- 089	39.50	Not Given	U	Brown slightly sandy CLAY	Atterberg 1 Point	23		100	60	29	31						
1176454	BH03	BH0341.001- 093	41.00	Not Given	D	Brownish grey slightly gravelly very sandy CLAY	Atterberg 1 Point	26		88	35	18	17						

Note: # Non accredited; NP - Non plastic

Comments:

Approved:

Dariusz Piotrowski PL Geotechnical Laboratory Manager

Date Reported: 27/03/2019

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Page 1 of 1

Darren Berrill Geotechnical General Manager

Signed:

GF 234.6



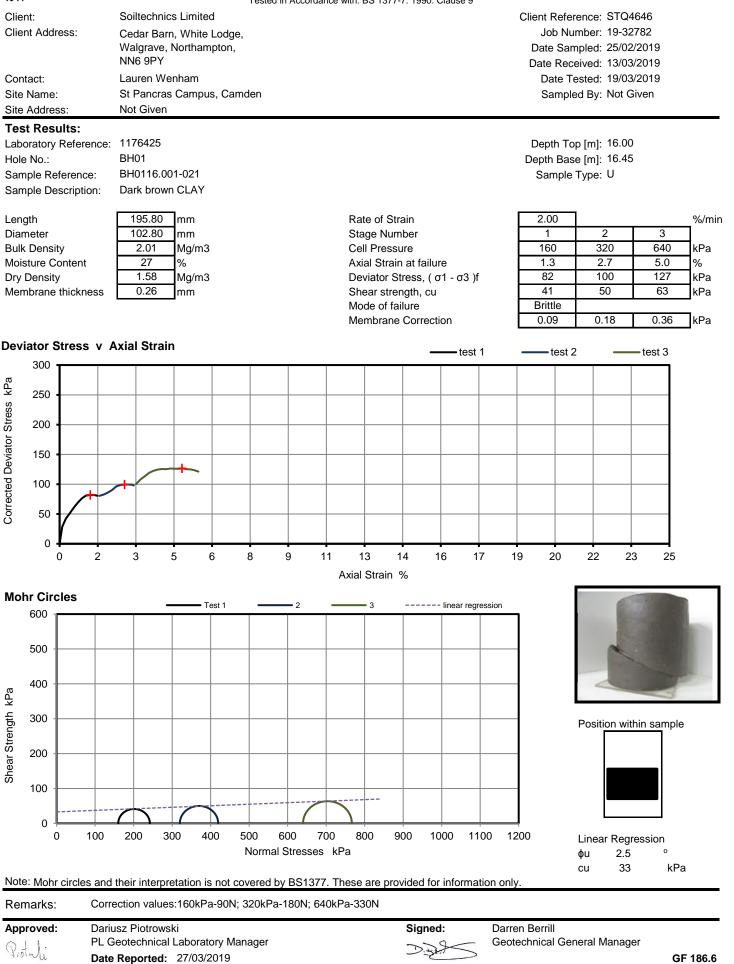
TEST CERTIFICATE

Unconsolidated Undrained Triaxial Compression

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



Tested in Accordance with: BS 1377-7: 1990: Clause 9



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for and on behalf of i2 Analytical Ltd



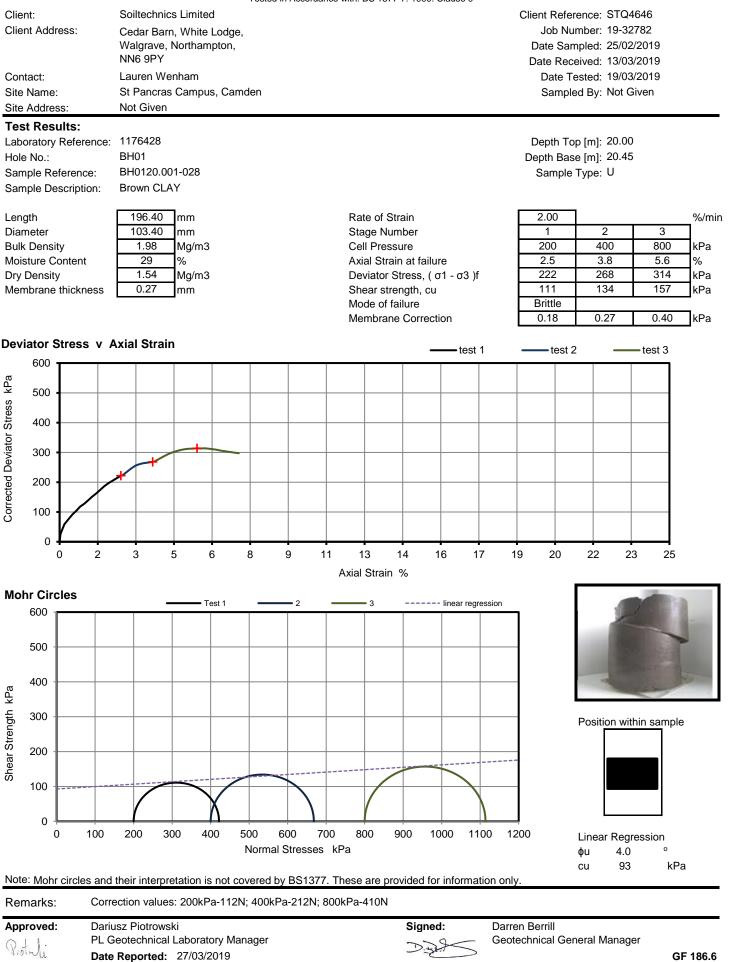
TEST CERTIFICATE

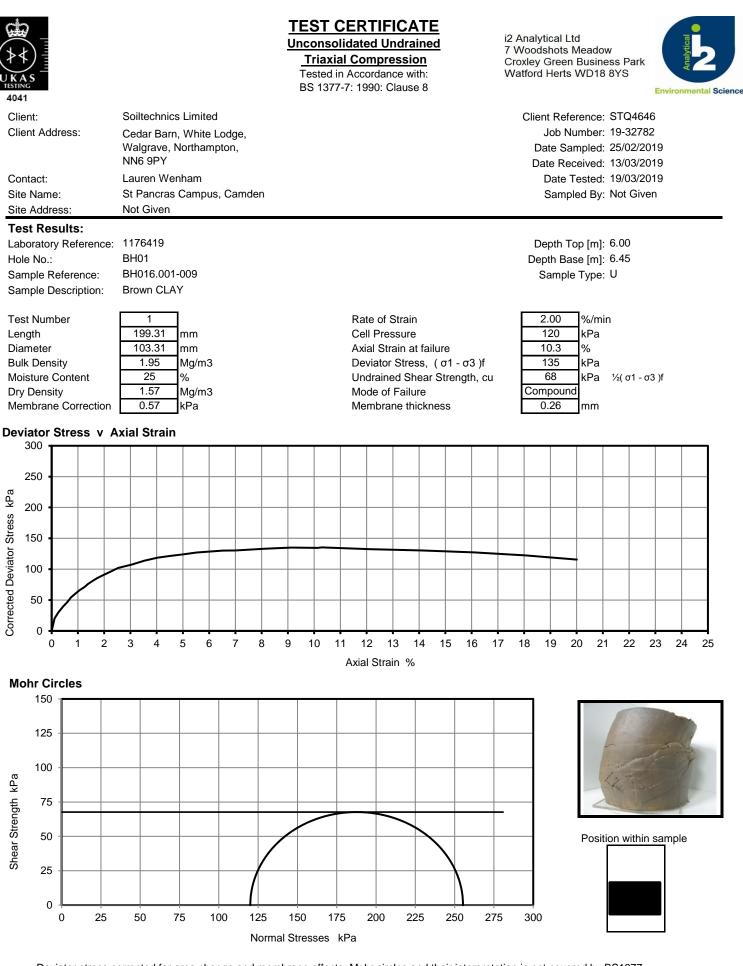
Unconsolidated Undrained Triaxial Compression

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



Tested in Accordance with: BS 1377-7: 1990: Clause 9





Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks:

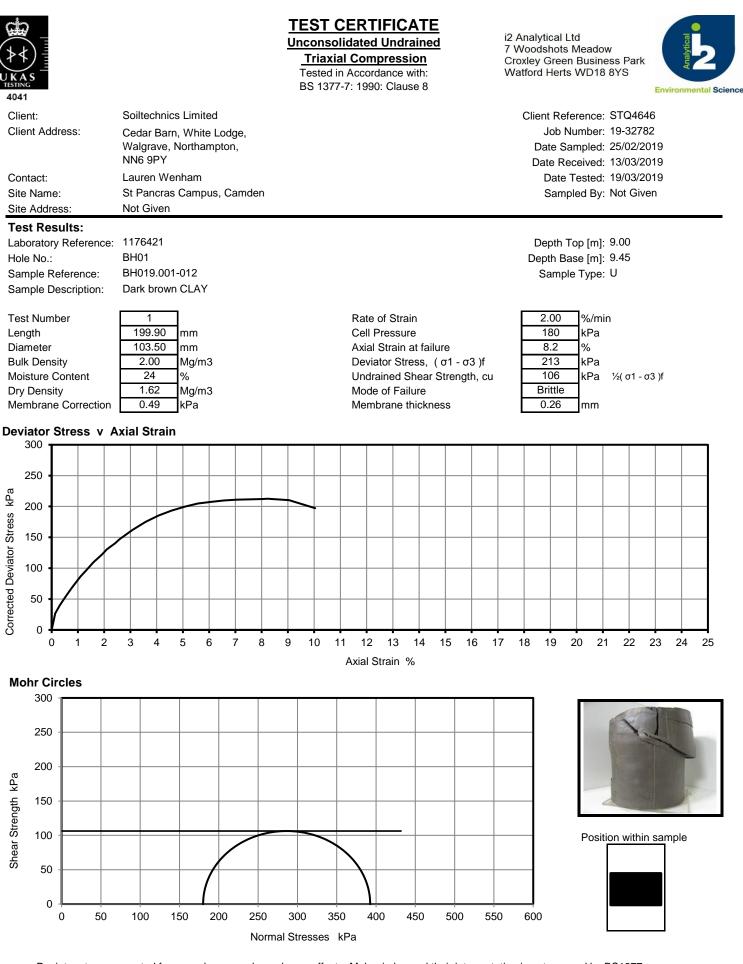
Approved:	Dariusz Piotrowski PL Geotechnical Laboratory Manager
Protuli	Date Reported: 27/03/2019
"Opinions and interpretations ex	pressed herein are outside of the scope of the UKAS Accreditation.

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The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland."



Darren Berrill Geotechnical General Manager



Note: Deviator stress corrected for area change and membrane effects. Mohr circles and their interpretation is not covered by BS1377. This is provided for information only.

Remarks:

Approved:	Dariusz Piotrowski
Rotali	PL Geotechnical Laboratory Manager
1.01 M	Date Reported: 27/03/2019
"Opinions and interpretations ex	pressed herein are outside of the scope of the UKAS Accreditation.

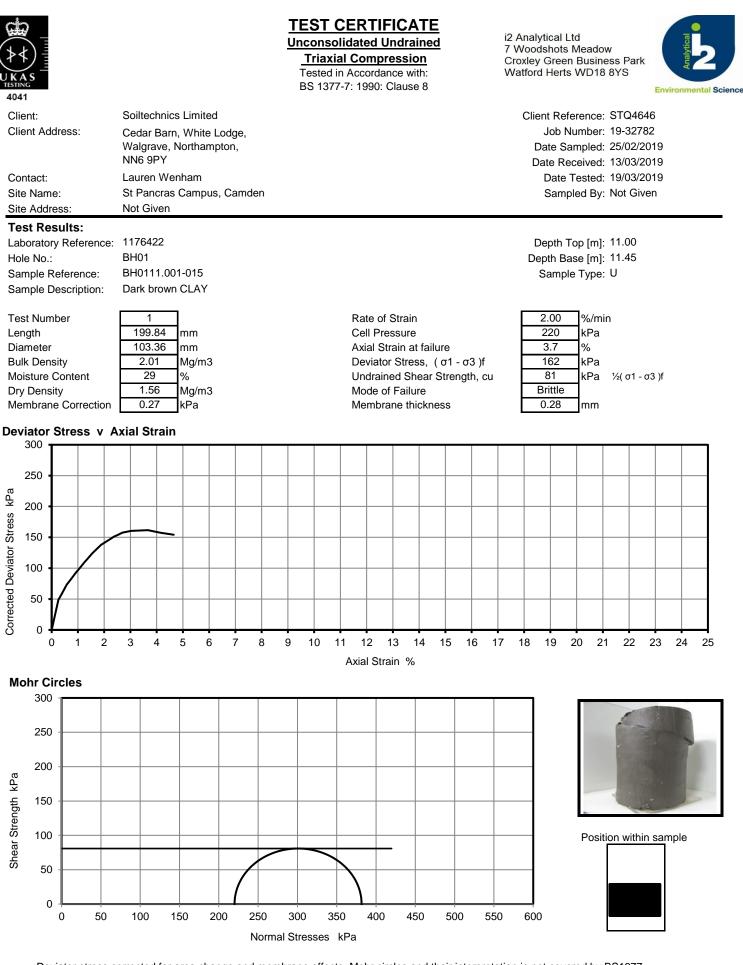
This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report are representative of the samples submitted for analysis.

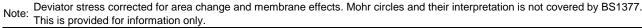
The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland."



Darren Berrill Geotechnical General Manager

GF 184.6



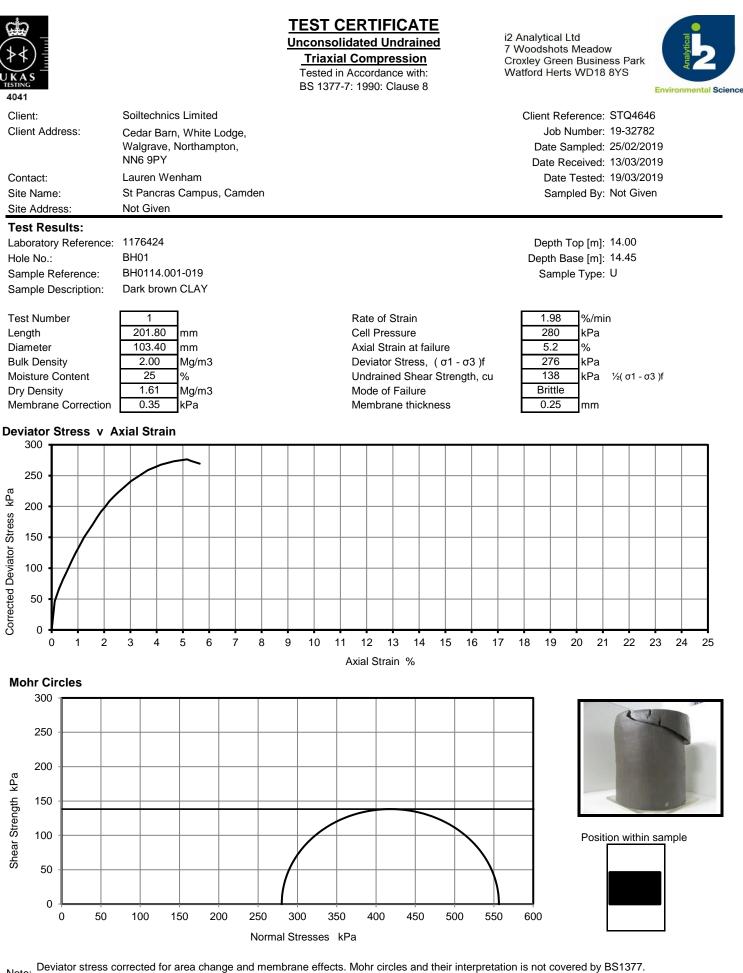


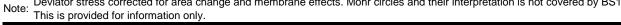
Remarks:

Approved:	Dariusz Piotrowski
Riotuli	PL Geotechnical Laboratory Manager
1.01 MU	Date Reported: 27/03/2019
"Opinions and interpretations ex	pressed herein are outside of the scope of the UKAS Accreditation.



Darren Berrill Geotechnical General Manager





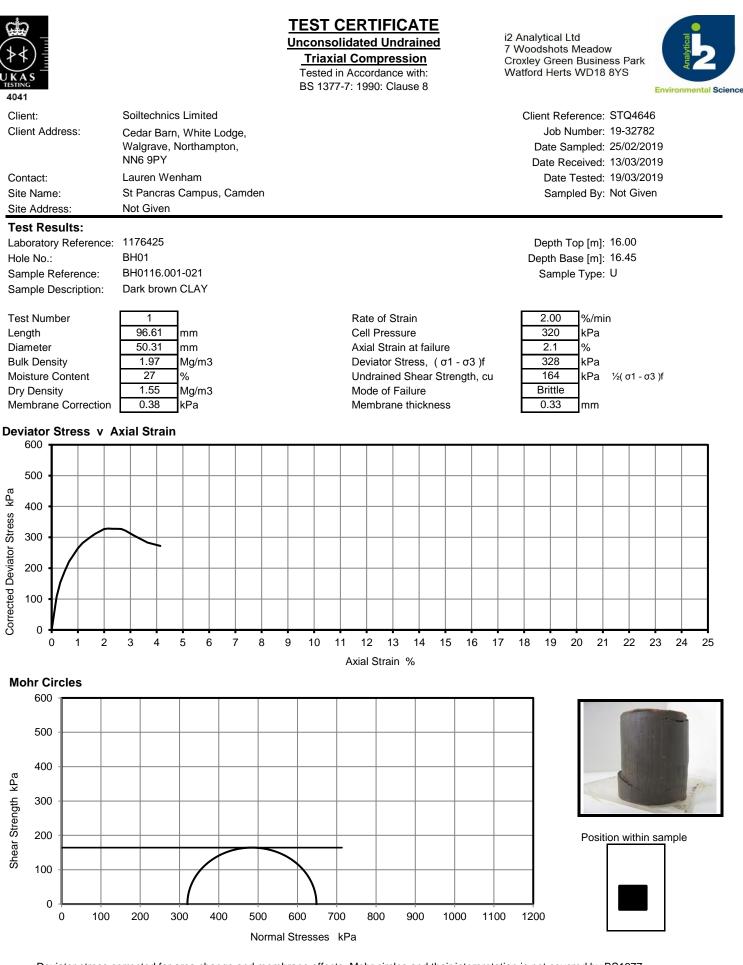
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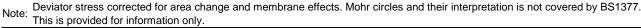
Approved:	Dariusz Piotrowski PL Geotechnical Laboratory Manager
Protuli	Date Reported: 27/03/2019
"Opinions and interpretations ex	pressed herein are outside of the scope of the UKAS Accreditation.



Darren Berrill Geotechnical General Manager

GF 184.6

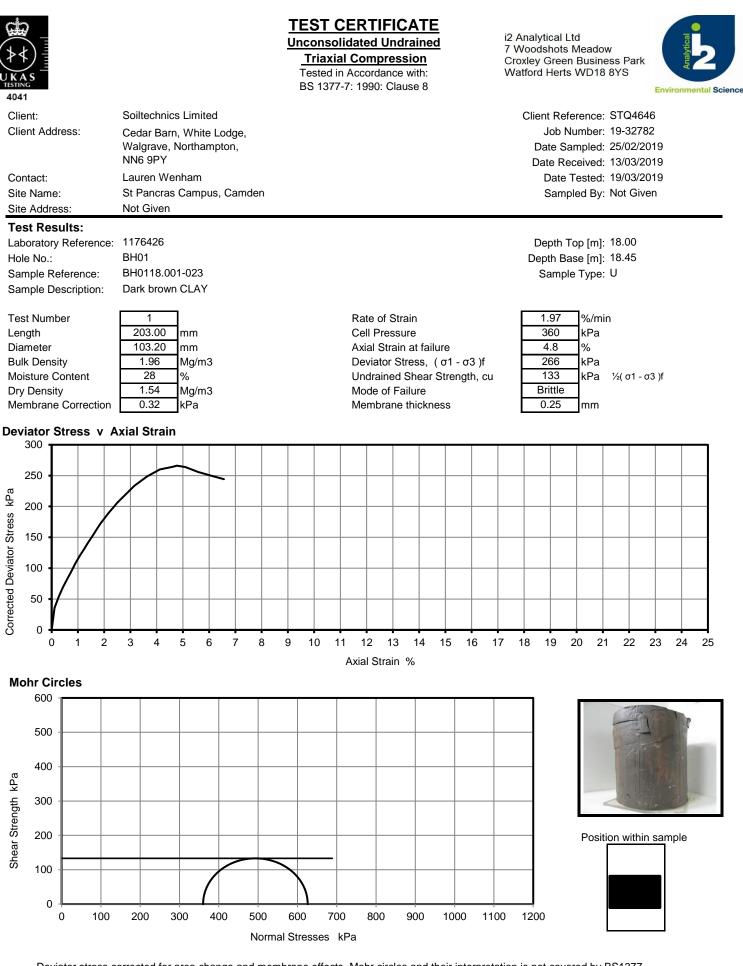




Remarks:

Approved:	Dariusz Piotrowski PL Geotechnical Laboratory Manager
Protuli	Date Reported: 27/03/2019
"Opinions and interpretations ex	pressed herein are outside of the scope of the UKAS Accreditation.

Signed:



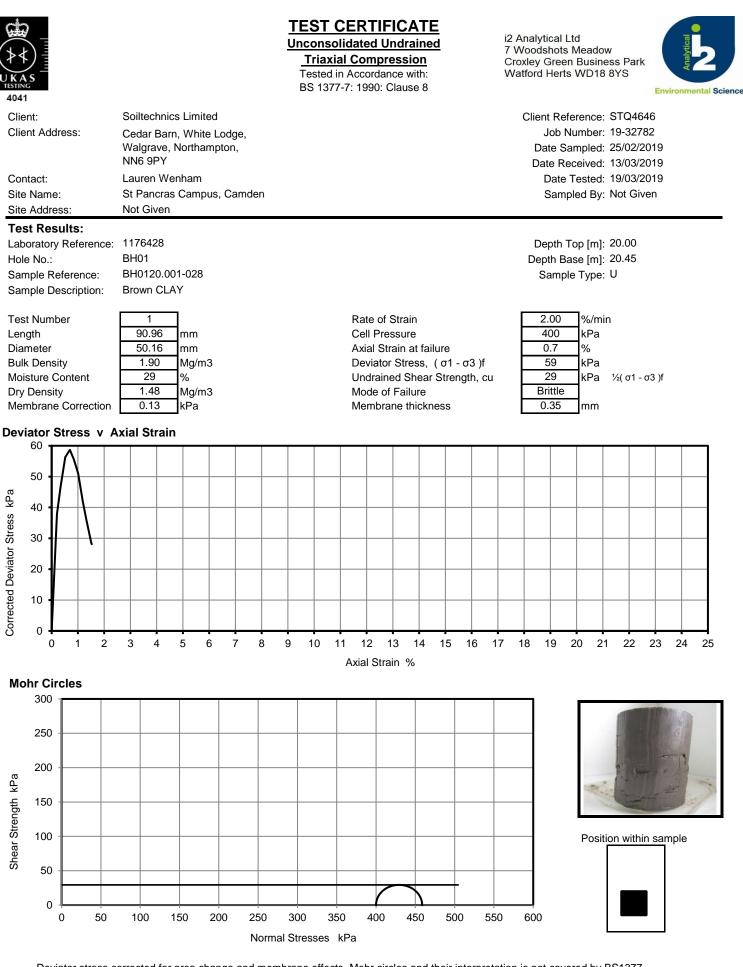
Remarks:

Approved:	Dariusz Piotrowski PL Geotechnical Laboratory Manager
Protuli	Date Reported: 27/03/2019



Darren Berrill Geotechnical General Manager

Page 1 of 1



Remarks:

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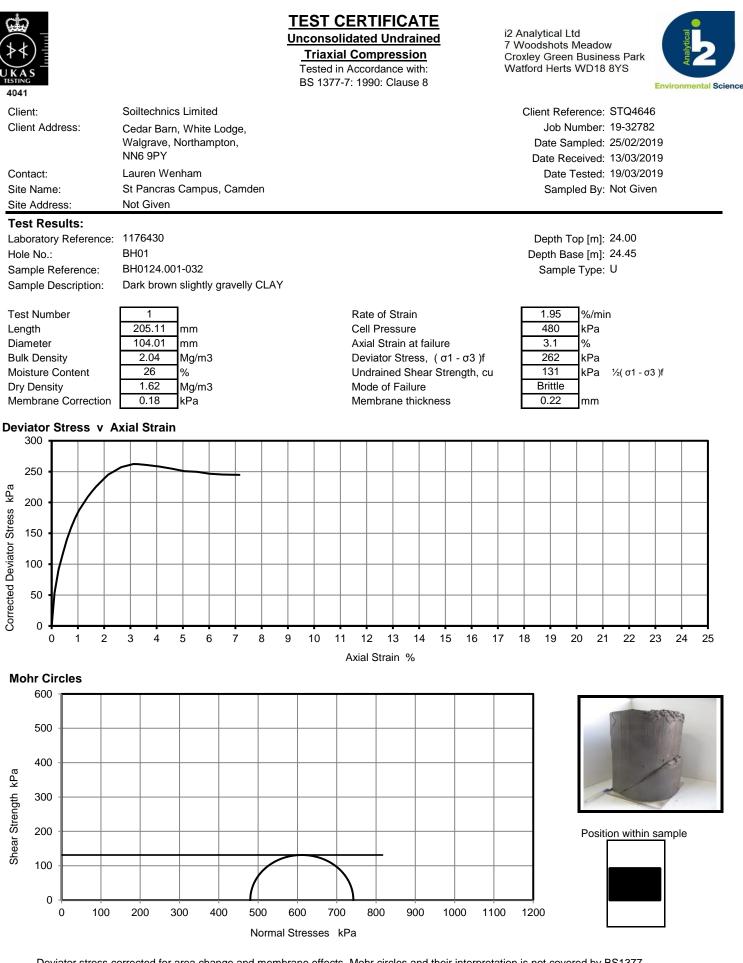
The analysis was carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland."

Signed:

Darren Berrill Geotechnical General Manager

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Page 1 of 1



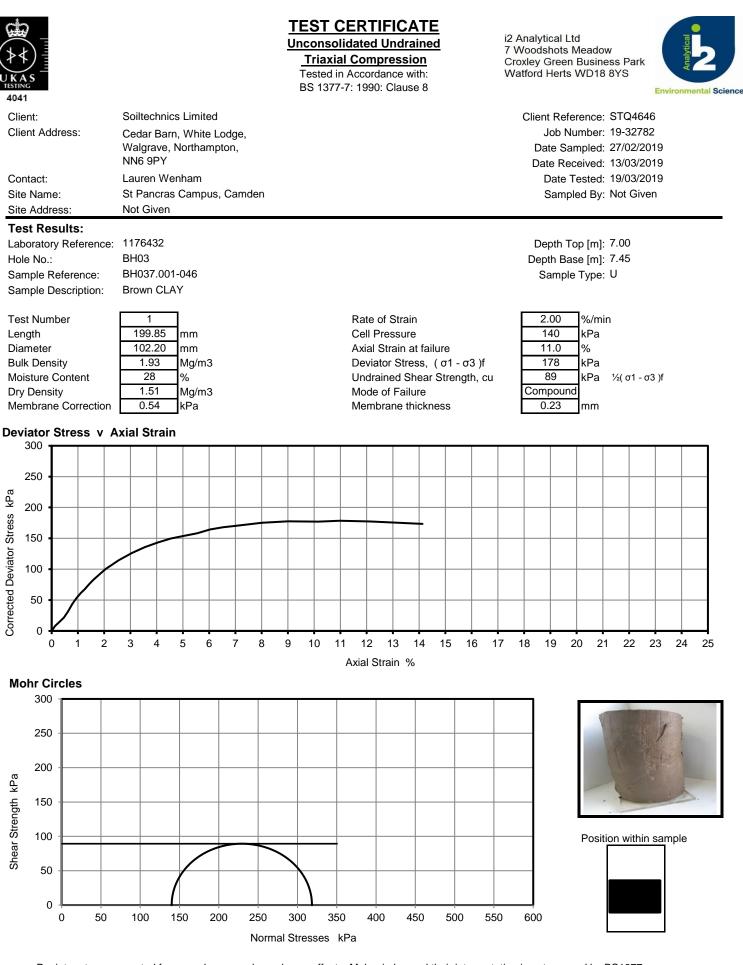
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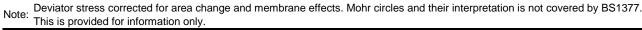
Approved:	Dariusz Piotrowski
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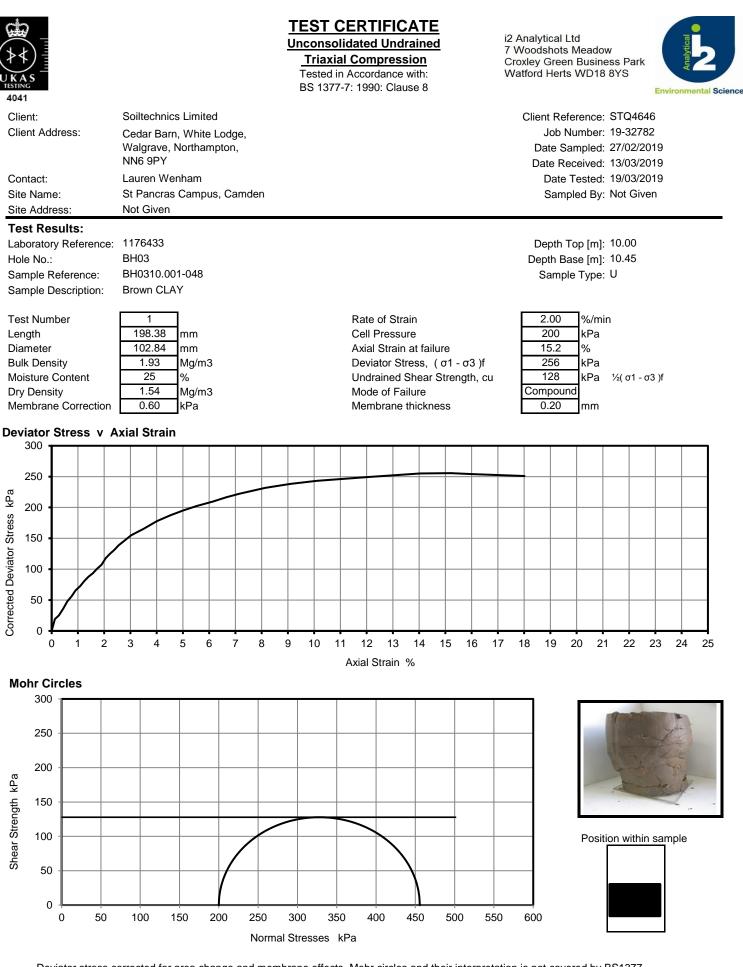


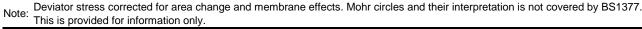


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Page 1 of 1

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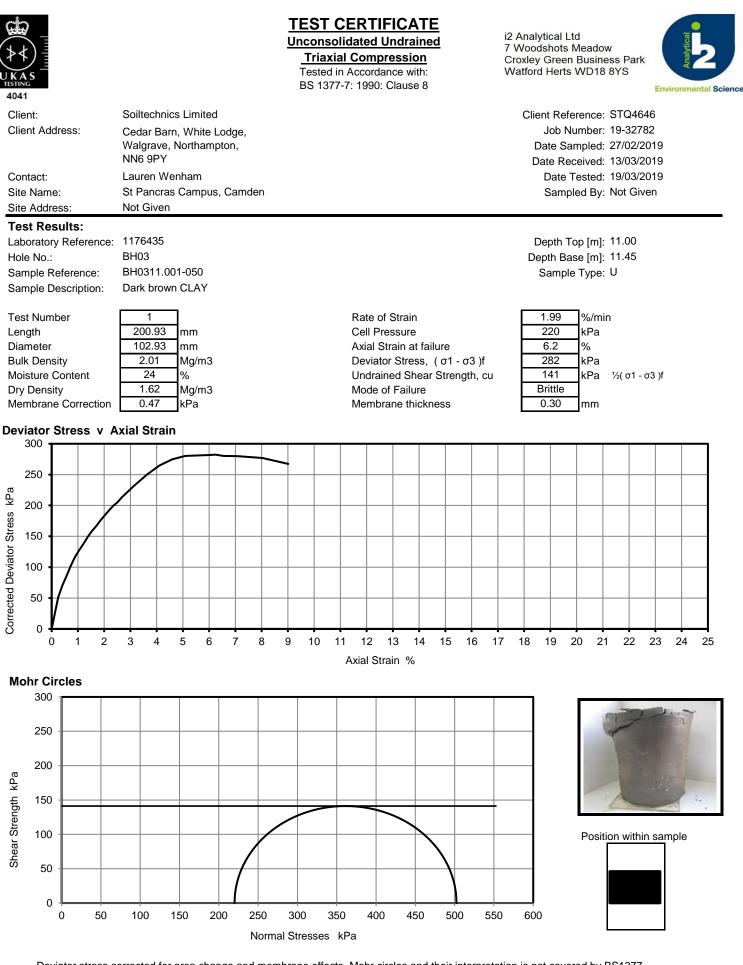
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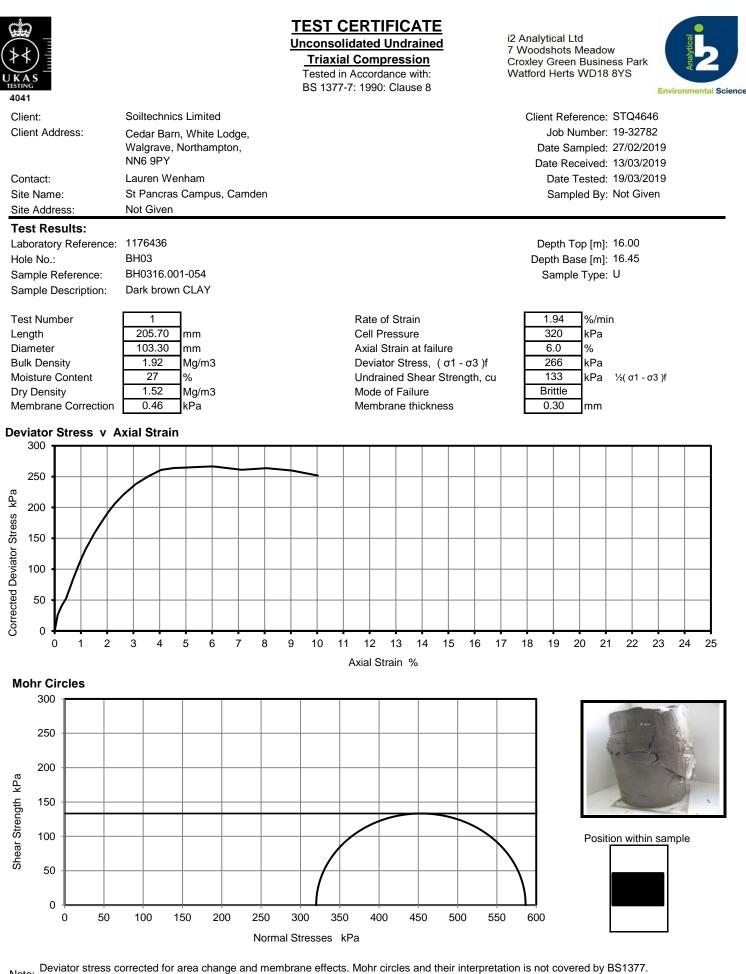
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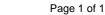
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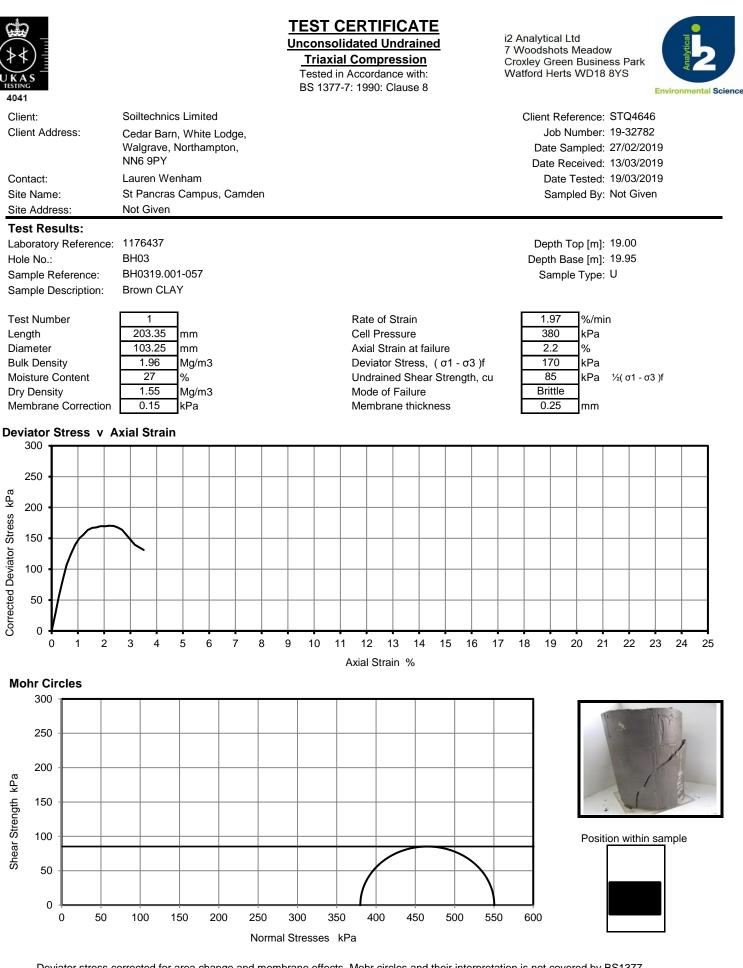
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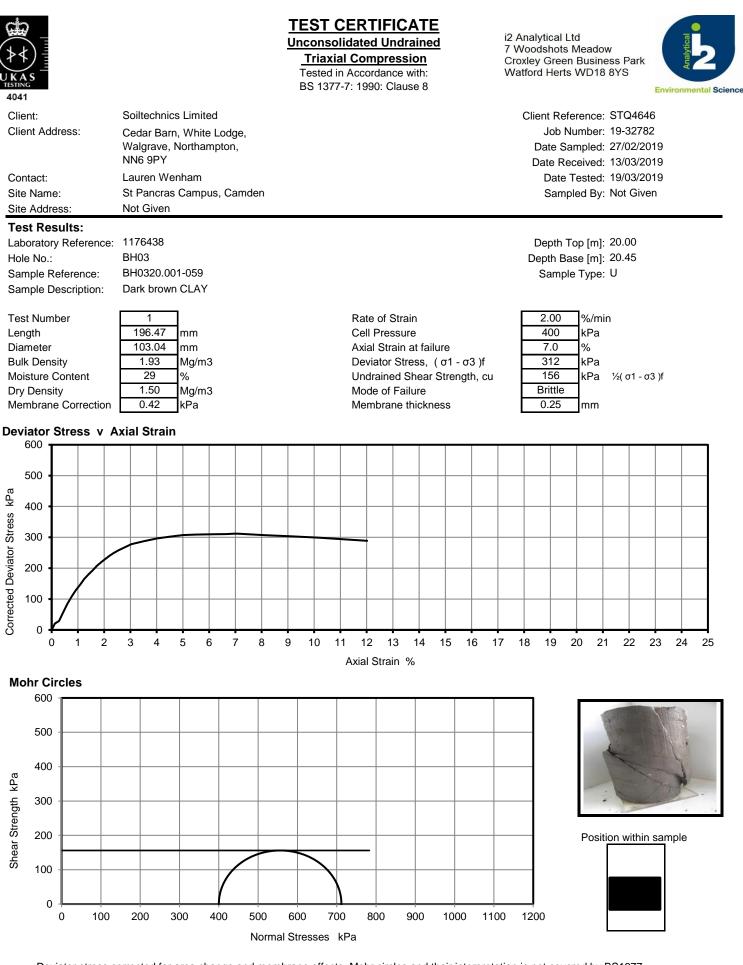




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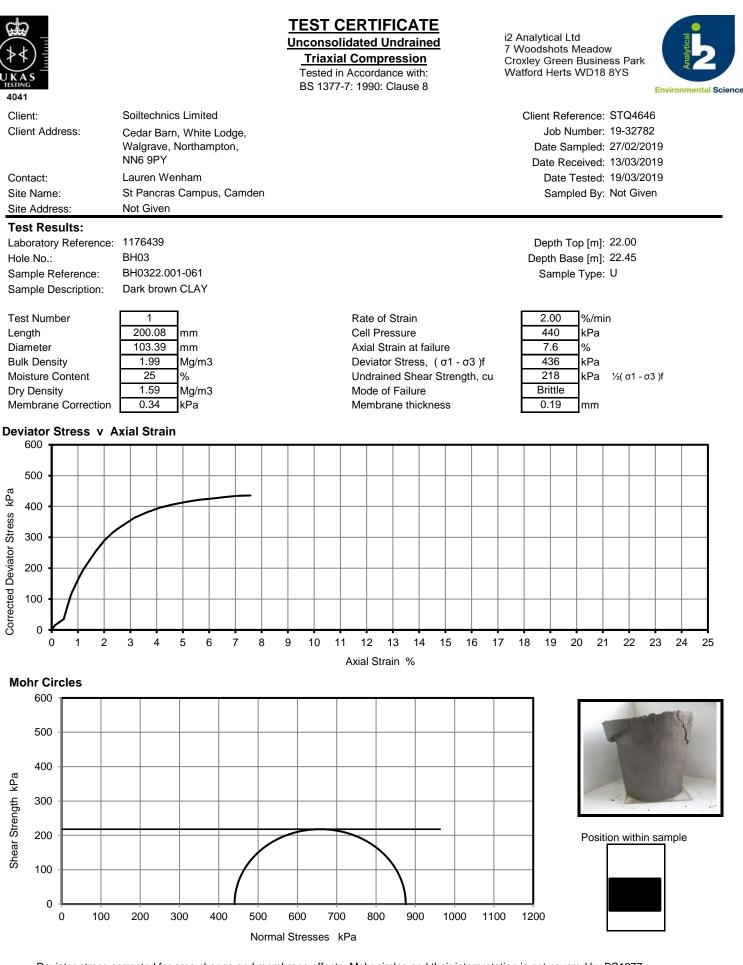
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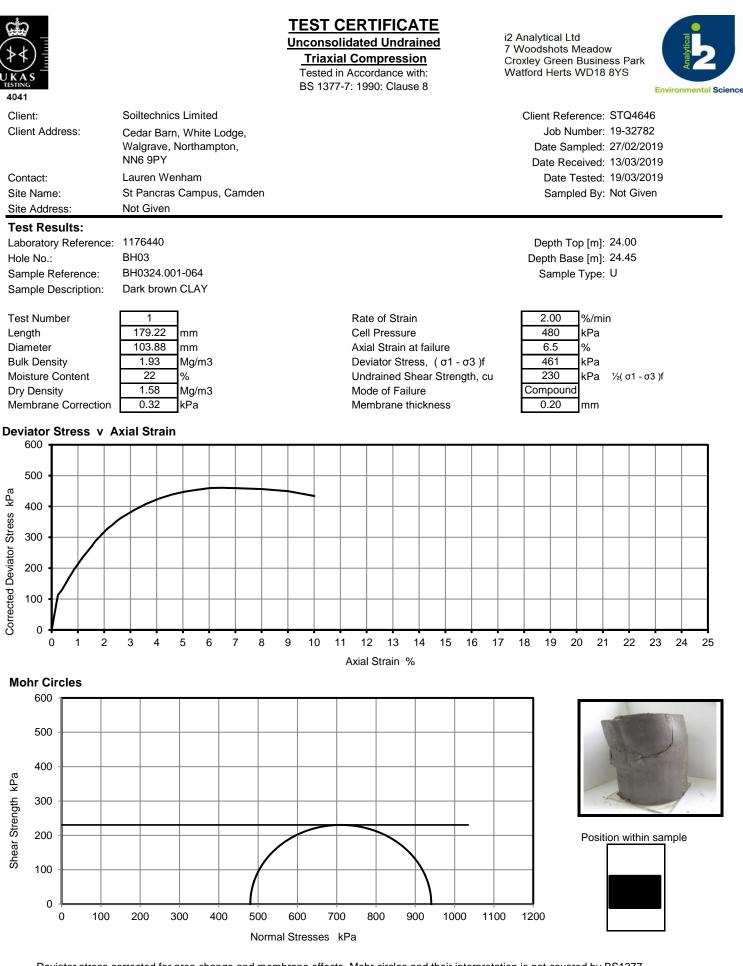
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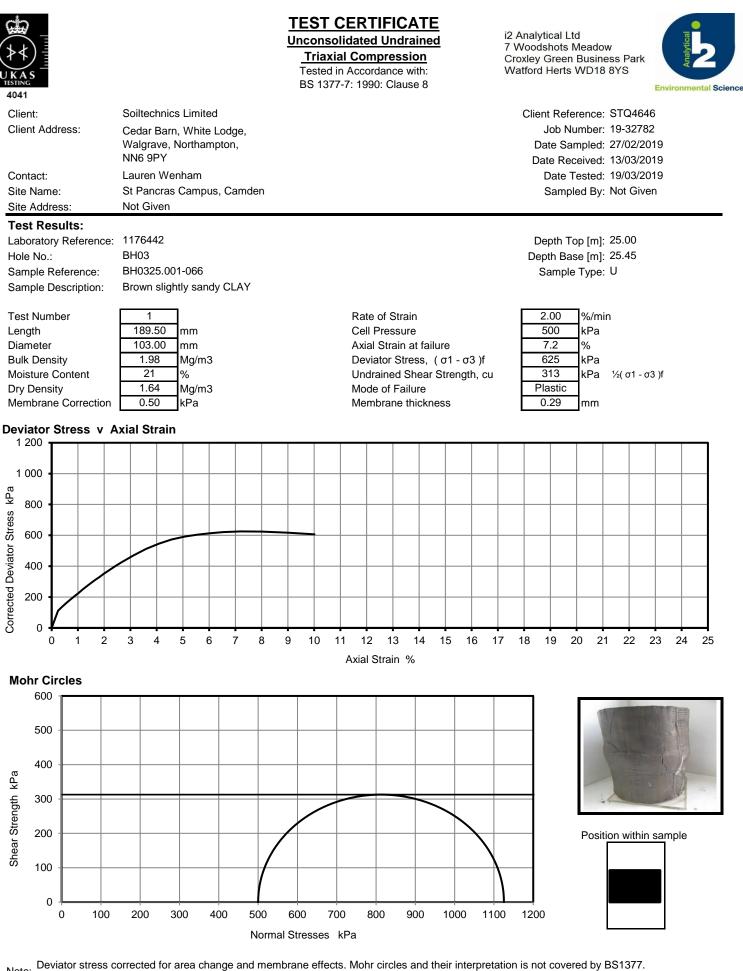




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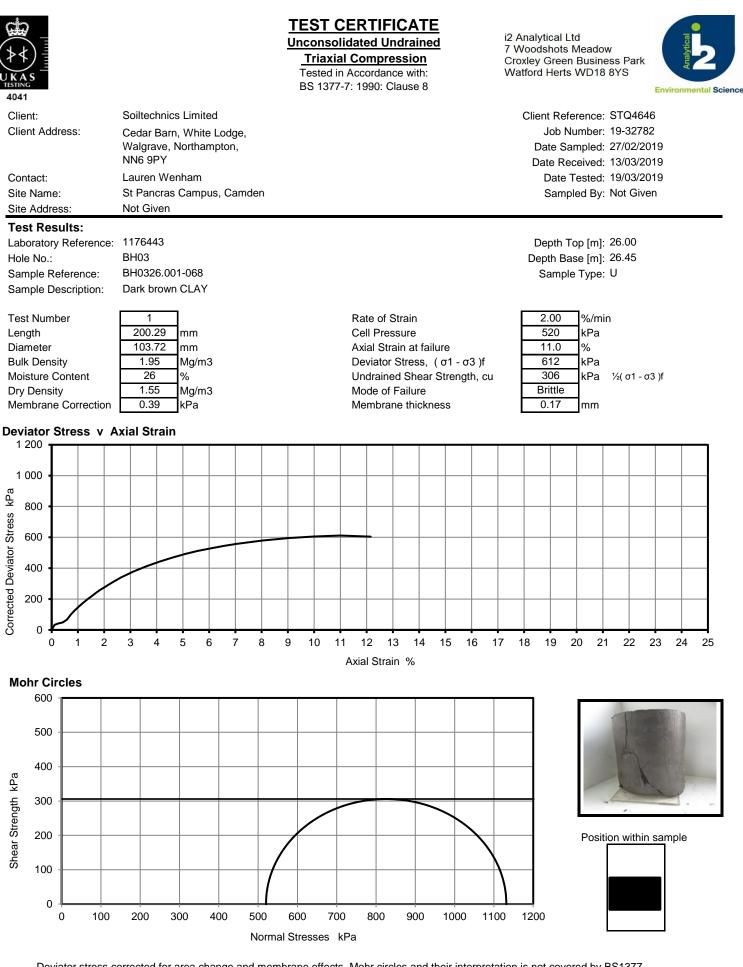


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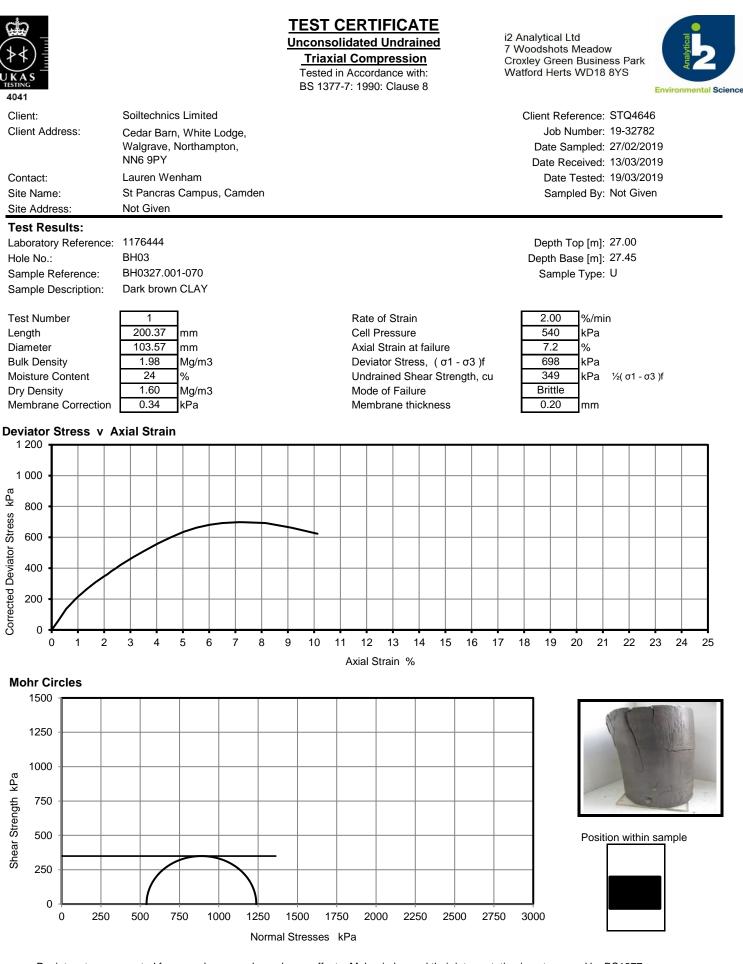
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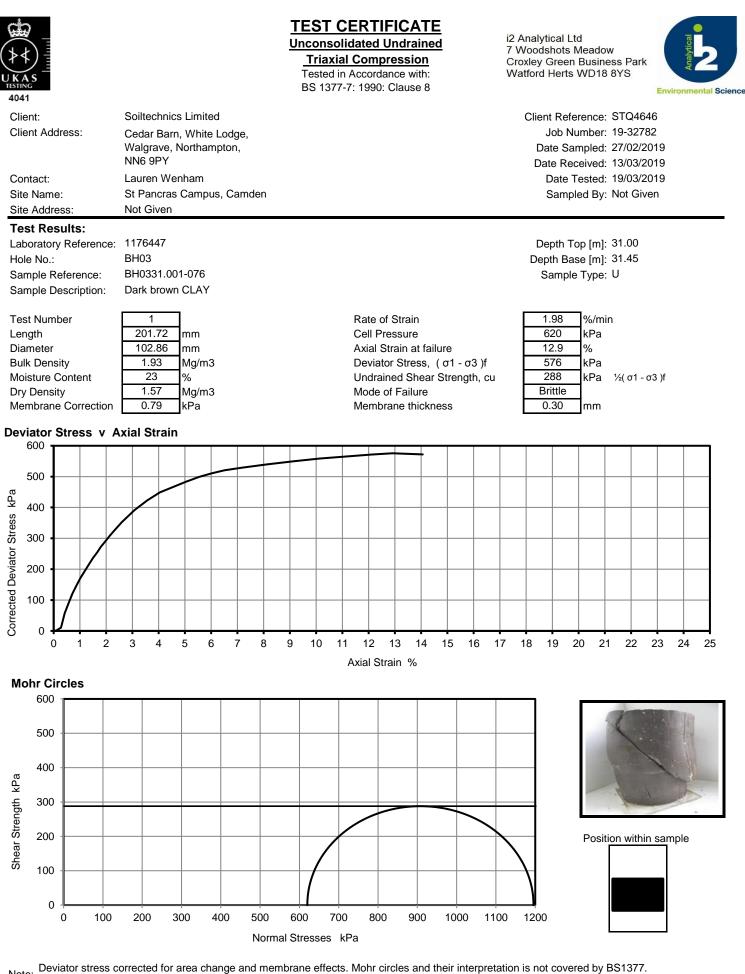
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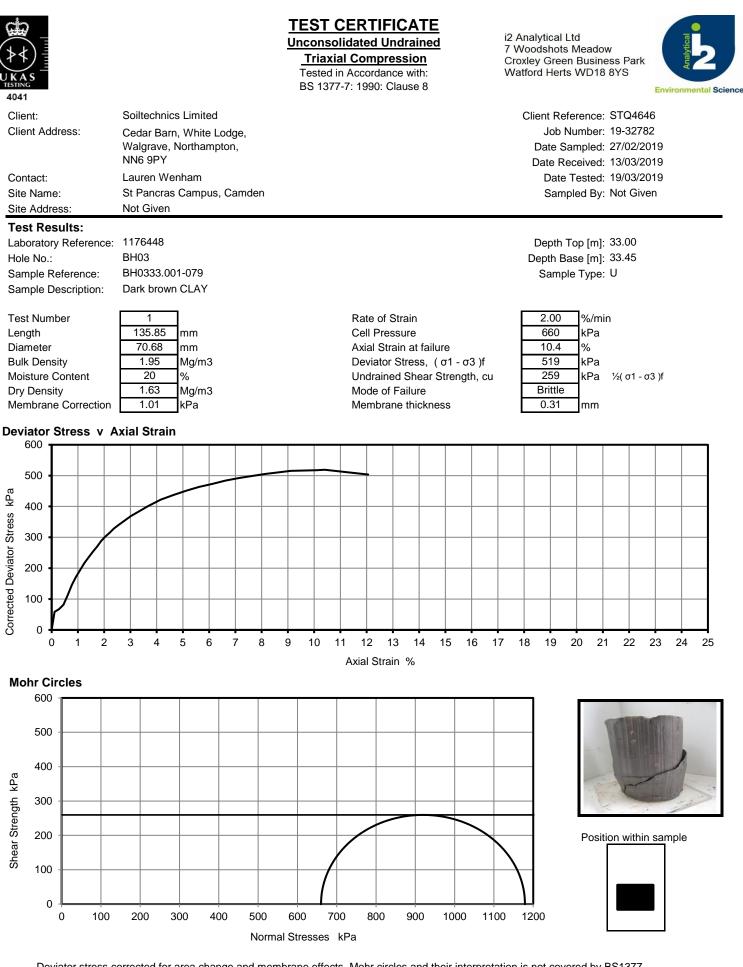
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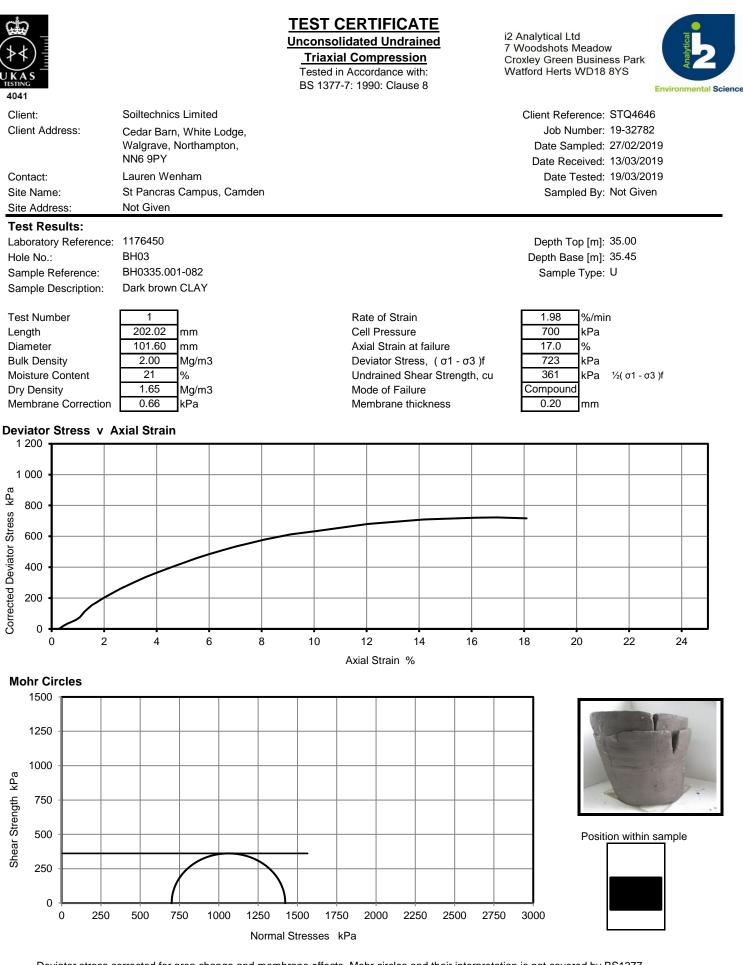
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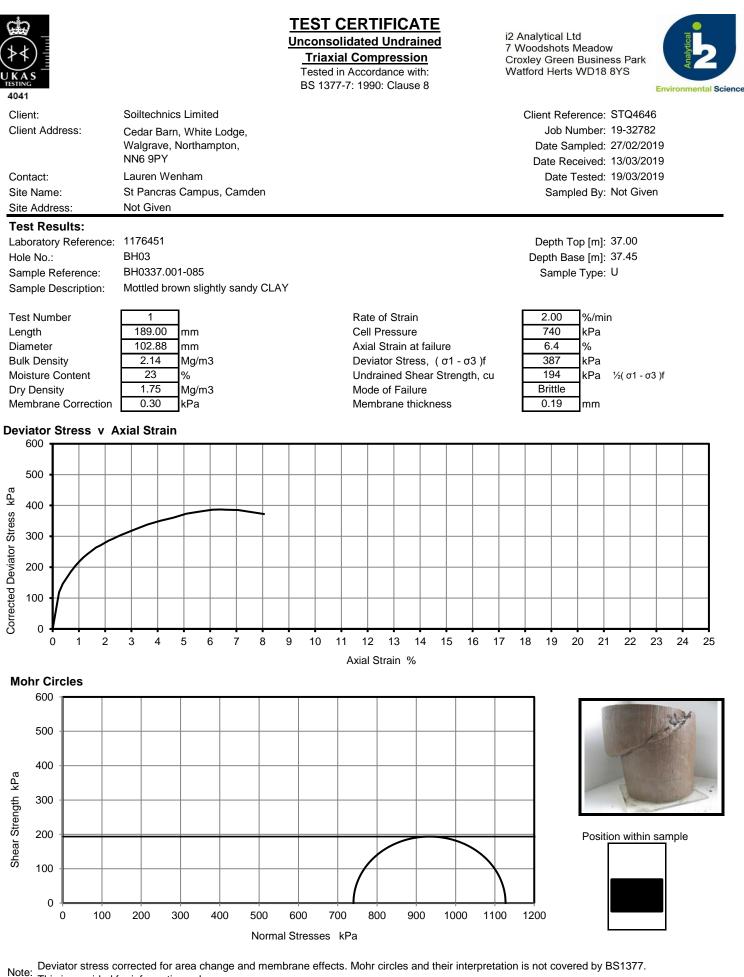




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Darren Berrill Geotechnical General Manager

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



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Note: Cv corrected to 20°C

Remarks:

Approved: Potuli

Dariusz Piotrowski PL Geotechnical Laboratory Manager Date Reported: 27/03/2019



Avg. temperature for test

Settlement on saturation

Swelling Pressure

Darren Berrill Geotechnical General Manager

GF 172.10

Page 1 of 1

for and on behalf of i2 Analytical Ltd

%

22.0 °C Not measured kPa



One Dimensional Consolidation Test

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



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Remarks:

Approved: Ristuli Dariusz Piotrowski PL Geotechnical Laboratory Manager Date Reported: 27/03/2019



Darren Berrill Geotechnical General Manager

GF 172.10

for and on behalf of i2 Analytical Ltd



One Dimensional Consolidation Test

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



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Remarks:

Approved: Ristuli

Dariusz Piotrowski PL Geotechnical Laboratory Manager Date Reported: 27/03/2019



Darren Berrill Geotechnical General Manager

GF 172.10

for and on behalf of i2 Analytical Ltd



One Dimensional Consolidation Test

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



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ress kP 0 74 1 4 2 9 5 9	sure Pa 0 0 0 80 60 20	ratio 0.700 0.569 0.512 0.458 0.391	m2/MN - 0.049 0.024 0.016	(t50, log) m2/yr - N/A N/A 1.4	(t90, root m2/yr - N/A N/A 0.94	- 0.0025 0.0013 0.0013		Ind Ori Pai Liq Pla Spe Dia Hei Mo	ex tests entation of the sam ticle density uid limit stic limit ecimen details meter ght isture Content	ple	ass N In 50 20	umed /A /A /A itial 0.00 0.00 23	Final - 17.17 22	% mm mm %		
ress kP 0 74 1 4 2 9 5 9	sure Pa 0 0 0 80 60 20	ratio 0.700 0.569 0.512 0.458 0.391	m2/MN - 0.049 0.024 0.016	(t50, log) m2/yr - N/A N/A 1.4	(t90, root m2/yr - N/A N/A 0.94	- 0.0025 0.0013 0.0013		Ind Ori Pau Liq Pla Dia Hei Mo Bul	ex tests entation of the sam ticle density uid limit stic limit ecimen details meter ght isture Content k density	ple	ass N In 50 20 1	umed //A //A //A //A //A //A //A //A //A //	Final - 17.17 22 2.22	% % mm mm % Mg/m	13	
ress kP 0 74 1 4 2 9 5 9	sure Pa 0 0 0 80 60 20	ratio 0.700 0.569 0.512 0.458 0.391	m2/MN - 0.049 0.024 0.016	(t50, log) m2/yr - N/A N/A 1.4	(t90, root m2/yr - N/A N/A 0.94	- 0.0025 0.0013 0.0013		Ind Ori Pau Liq Pla Dia Hei Mo Bul Dry	ex tests entation of the sam ticle density uid limit stic limit ecimen details meter ght isture Content k density density	ple	ass N In 50 20 1	umed I/A I/A itial 0.00 0.00 23 .92 .56	Final - 17.17 22	% mm mm %	13	
ress kP 0 74 1 4 2 9 5 9	sure Pa 0 0 0 80 60 20	ratio 0.700 0.569 0.512 0.458 0.391	m2/MN - 0.049 0.024 0.016	(t50, log) m2/yr - N/A N/A 1.4	(t90, root m2/yr - N/A N/A 0.94	- 0.0025 0.0013 0.0013		Ind Ori Pa Liq Pla Dia Hei Mo Bul Dry Voi	ex tests entation of the sam ticle density uid limit stic limit ecimen details meter ght isture Content k density	ple	ass N In 50 20 21 1 0.	umed //A //A //A //A //A //A //A //A //A //	Final - 17.17 22 2.22 1.82	% % mm mm % Mg/m	13	
ress kP 0 74 1 4 2 9 5 9	sure Pa 0 0 0 80 60 20	ratio 0.700 0.569 0.512 0.458 0.391	m2/MN - 0.049 0.024 0.016	(t50, log) m2/yr - N/A N/A 1.4	(t90, root m2/yr - N/A N/A 0.94	- 0.0025 0.0013 0.0013		Ind Ori Pau Liq Pla Spr Dia Hei Mo Bul Dry Voi Sat	ex tests entation of the sam ticle density uid limit stic limit ecimen details meter ght isture Content k density density ds Ratio		ass N In 50 20 21 1 0.	umed I/A I/A itial 0.00 0.00 23 .92 .56 700	Final - 17.17 22 2.22 1.82 0.460 128	% ////////////////////////////////////	13	
Press kP 0 74 1 4 2 9 5 9	sure Pa 0 0 0 80 60 20	ratio 0.700 0.569 0.512 0.458 0.391	m2/MN - 0.049 0.024 0.016	(t50, log) m2/yr - N/A N/A 1.4	(t90, root m2/yr - N/A N/A 0.94	- 0.0025 0.0013 0.0013		Ind Ori Pai Pla Dia Hei Mo Bul Dry Voi Sat Avg Sw	ex tests entation of the samp ticle density uid limit stic limit ecimen details meter ght isture Content k density density ds Ratio uration	est	asss N In 50 20 21 1 0. 8	umed //A i//A itial 0.00 23 .92 .56 700 39	Final - 17.17 22 2.22 1.82 0.460 128	% 	13	

Remarks:

Approved:
Piotuli

Dariusz Piotrowski PL Geotechnical Laboratory Manager Date Reported: 27/03/2019



Darren Berrill Geotechnical General Manager

GF 172.10



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

Report No.:	19-09242-1		
Initial Date of Issue:	25-Mar-2019		
Client	Soiltechnics Limited		
Client Address:	Cedar Barn White Lodge Walgrave Northampton Northamptonshire NN6 9PY		
Contact(s):	Alexa Band Lauren Wenham		
Project	STR4646 St Pancras Campus, Camden		
Quotation No.:		Date Received:	14-Mar-2019
Order No.:	POR005024	Date Instructed:	14-Mar-2019
No. of Samples:	2		
Turnaround (Wkdays):	7	Results Due:	22-Mar-2019
Date Approved:	25-Mar-2019		
Approved By:			
M.J.			
Details:	Martin Dver, Laboratory Manager		

Details:

Martin Dyer, Laboratory Manager



Project: STR4646 St Pancras Campus, Camden

Chemtest Job No:	19-09242						LandfIII V	Vaste Acceptan	ce Criteria
Chemtest Sample ID:	793563							Limits	
Sample Ref:	2-101							Stable, Non-	
Sample ID:	WAC010.002-10)1						reactive	
Sample Location:	WAC01							hazardous	Hazardous
Top Depth(m):	0.00						Inert Waste	waste in non-	Waste
Bottom Depth(m):							Landfill	hazardous	Landfill
Sampling Date:	06-Feb-2019							Landfill	
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	U	%			[B] 1.4	3	5	6
Loss On Ignition	2610	U	%			3.7			10
Total BTEX	2760	U	mg/kg			[B] < 0.010	6		
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1		
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			[B] 780	500		
Total (Of 17) PAH's	2700	N	mg/kg			41	100		
рН	2010	U				10.1		>6	
Acid Neutralisation Capacity	2015	N	mol/kg			0.096		To evaluate	To evaluate
Eluate Analysis			2:1	8:1	2:1	Cumulative		for compliance	•
			mg/l	mg/l	mg/kg	mg/kg 10:1		S EN 12457 at L	/S 10 I/kg
Arsenic	1450	U	0.0028	0.0027	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.011	0.011	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	0.0099	0.0097	< 0.050	0.097	0.5	10	70
Copper	1450	U	0.0020	0.0042	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.0053	0.0035	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	0.0054	0.0099	0.011	0.090	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0050	0.0046	< 0.50	< 0.50	4	50	200
Chloride	1220	U	19	5.8	38	83	800	15000	25000
Fluoride	1220	U	0.16	0.38	< 1.0	3.4	10	150	500
Sulphate	1220	U	150	100	290	1100	1000	20000	50000
Total Dissolved Solids	1020	Ν	290	270	570	2800	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	6.3	< 2.5	< 50	< 50	500	800	1000

Solid Information									
Dry mass of test portion/kg	0.175								
Moisture (%)	11								

Leachate Test Information	
Leachant volume 1st extract/l	0.328
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.331

Waste Acceptance Criteria

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



Project: STR4646 St Pancras Campus, Camden

Chemtest Job No:	19-09242			Landfill Waste Acceptance Crit					
Chemtest Sample ID:	793564							Limits	
Sample Ref:	2-102							Stable, Non-	
Sample ID:	WAC020.002-10)2						reactive	
Sample Location:	WAC02							hazardous	Hazardous
Top Depth(m):	0.00						Inert Waste	waste in non-	Waste
Bottom Depth(m):							Landfill	hazardous	Landfill
Sampling Date:	26-Feb-2019							Landfill	
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	U	%			1.1	3	5	6
Loss On Ignition	2610	U	%			3.1			10
Total BTEX	2760	U	mg/kg			[B] < 0.010	6		
Total PCBs (7 Congeners)	2815	U	mg/kg			< 0.10	1		
TPH Total WAC (Mineral Oil)	2670	U	mg/kg			[B] 140	500		
Total (Of 17) PAH's	2700	N	mg/kg			180	100		
рН	2010	U				9.9		>6	
Acid Neutralisation Capacity	2015	Ν	mol/kg			0.079		To evaluate	To evaluate
Eluate Analysis			2:1	8:1	2:1	Cumulative		for compliance	-
			mg/l	mg/l	mg/kg	mg/kg 10:1	using BS	6 EN 12457 at L	/S 10 I/kg
Arsenic	1450	U	0.0048	0.0040	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.0088	0.0058	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	0.0037	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	0.0029	0.0026	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.0060	0.0024	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	0.0029	0.0042	< 0.010	0.040	0.06	0.7	5
Selenium	1450	U	0.0014	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0010	< 0.0010	< 0.50	< 0.50	4	50	200
Chloride	1220	U	23	3.4	46	68	800	15000	25000
Fluoride	1220	U	0.16	0.22	< 1.0	2.1	10	150	500
Sulphate	1220	U	63	52	130	540	1000	20000	50000
Total Dissolved Solids	1020	Ν	190	140	380	1500	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	7.9	3.1	< 50	< 50	500	800	1000

Solid Information									
Dry mass of test portion/kg	0.175								
Moisture (%)	11								

Leachate Test Information	
Leachant volume 1st extract/l	0.329
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.306

Waste Acceptance Criteria

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



Deviations

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

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
793563	2-101	WAC010.002-101	WAC01	06-Feb-2019	В	Amber Glass 250ml
793563	2-101	WAC010.002-101	WAC01	06-Feb-2019	В	Plastic Tub 500g
793564	2-102	WAC020.002-102	WAC02	26-Feb-2019	В	Amber Glass 250ml
793564	2-102	WAC020.002-102	WAC02	26-Feb-2019	В	Plastic Tub 500g



Test Methods

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

The right chemistry to deliver results

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation The results relate only to the items tested Uncertainty of measurement for the determinands tested are available upon request None of the results in this report have been recovery corrected All results are expressed on a dry weight basis The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols For all other tests the samples were dried at < 37°C prior to analysis All Asbestos testing is performed at the indicated laboratory Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt All water samples will be retained for 14 days from the date of receipt Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com





Report No.:	19-09237-1		
Initial Date of Issue:	22-Mar-2019		
Client	Soiltechnics Limited		
Client Address:	Cedar Barn White Lodge Walgrave Northampton Northamptonshire NN6 9PY		
Contact(s):	Alexa Band Lauren Wenham		
Project	STR4646 St Pancras Campus, Camden		
Quotation No.:		Date Received:	14-Mar-2019
Order No.:	POR005023	Date Instructed:	14-Mar-2019
No. of Samples:	20		
Turnaround (Wkdays):	5	Results Due:	20-Mar-2019
Date Approved:	22-Mar-2019		
Approved By:			

Details:

Martin Dyer, Laboratory Manager



Bulk Identification Certificate

Client: Soiltechnics Limited

Site Address:

Date Sampled: 25-Feb-2019 Date Received: 14-Mar-2019 Your Ref.:

Project:STR4646 St Pancras Campus,
CamdenJob Number:19-09237No Samples:22-Mar-2019

Sample No.	Sample ID	Sample Ref.	Description	Top (m) Bottom	(m) SOP	Accred.	Laboratory	Material	Result
793551	TP020.601-099	1-099	TP02	0.60	2185	U	COVENTRY	Board	Amosite

The in-house procedure SOP2185 is in accordance with the requirements of Appendix 2 of the Analyst Guide (HSG 248).

The results relate only to items tested as supplied by the client.

Comments and interpretations are beyond the scope of UKAS accreditation.

Samples associated with asbestos in building surveys are retained for six months (HSG 264 refers)

The right chemistry to deliver results Project: STR4646 St Pancras Campus, Camden

Client: Soiltechnics Limited		Che	mtest J	ob No.:	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237
Quotation No.:		Chemte	est Sam	ple ID.:	793536	793537	793538	793539	793541	793542	793543	793544	793545
Order No.: POR005023		Clie	nt Samp	ole Ref.:	1-003	1-004	1-016	1-006	1-036	1-037	1-039	1-042	1-043
					BH010.901-	BH011.501-	BH0111.501-	BH013.001-	BH020.501-	BH020.801-	BH030.301-		BH034.001-
		Cli	ient Sarr	nple ID.:	003	004	016	006	036	037	039	BH033.001-042	043
		S	ample L	ocation:	BH01	BH01	BH01	BH01	BH02	BH02	BH03	BH03	BH03
				le Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top De		0.90	1.50	11.50	3.00	0.50	0.80	0.30	3.00	4.00
		Во	ttom De			1.95		3.45			0.60		
				ampled:	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	26-Feb-2019	26-Feb-2019	27-Feb-2019	27-Feb-2019	27-Feb-2019
			Asbest	tos Lab:		COVENTRY				COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD									
АСМ Туре	U	2192		N/A		-				-	-		
Asbestos Identification	U	2192	%	0.001		No Asbestos				No Asbestos	No Asbestos		
ACM Detection Stage	U	2192		N/A		Detected				Detected	Detected		
Moisture	N	2030	%	0.020	8.6	11	20	15	13			15	11
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown			Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	NONE	Stones	Stones			Stones, Roots	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Clay	Sand	Sand			Sand	Sand
DH	M	2040		N/A	9.6	11.1	8.5	9.3	8.5			9.4	Ganu
Boron (Hot Water Soluble)	M	2120	-	0.40	1.1	11.1	0.5	9.5	0.75			3.4 1.6	
Sulphate (2:1 Water Soluble) as SO4	M	2120		0.40	1.1	0.52	0.44	0.22	0.75			1.0	
	M	2120	<u> </u>	0.010		0.52	0.44	0.22					
Total Sulphur Cyanide (Complex)	M	2300			[B] 1.5	0.24	0.43	0.21	[B] 0.70			[B] 0.50	
	M	2300		0.50								[B] < 0.50	
Cyanide (Free)		-		0.50	[B] < 0.50				[B] < 0.50 [B] 0.70				
Cyanide (Total)	M	2300	mg/kg	0.50	[B] 1.5	0.00	0.44	0.44	[B] 0.70			[B] 0.50	
Sulphate (Acid Soluble)	M	2430	%	0.010	4.4	0.32	0.11	0.41	10			47	
Arsenic	M	2450		1.0	14				16			17	
Beryllium	U	2450	0 0		< 1.0				< 1.0			< 1.0	
Cadmium	M	2450			0.60				0.74			0.42	
Chromium	M	2450	3.3		81				29			32	
Copper	M	2450	0 0	0.50	45				49			42	
Mercury	M	2450		0.10	0.36				0.51			0.41	
Nickel	M	2450		0.50	23				23			22	
Lead	М	2450	0 0	0.50	320				200			170	
Selenium	M	2450		0.20	< 0.20				0.40			< 0.20	
Vanadium	U	2450		5.0	51				35			36	
Zinc	М	2450			82				160			140	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50				< 0.50			< 0.50	
Organic Matter	М	2625	%	0.40	8.8				4.7			3.8	1.4
Aliphatic TPH >C5-C6	N	2680		0.010	[B] < 0.010								[B] < 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	[B] < 0.010								[B] < 0.010
Aliphatic TPH >C8-C10	N	2680	0 0	0.10	[B] 15								[B] < 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	[B] 130								[B] < 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	[B] 690								[B] < 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	[B] 1200								[B] < 0.10

The right chemistry to deliver results Project: STR4646 St Pancras Campus, Camden

Client: Soiltechnics Limited	Chemtest Job		19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237
Quotation No.:		Chemtest Sample ID.:	793536	793537	793538	793539	793541	793542	793543	793544	793545
Order No.: POR005023		Client Sample Ref.:	1-003	1-004	1-016	1-006	1-036	1-037	1-039	1-042	1-043
		Client Sample ID.:	BH010.901-	BH011.501-	BH0111.501-	BH013.001-	BH020.501-	BH020.801-	BH030.301-		BH034.001-
	Client Sample		003	004	016	006	036	037	039	BH033.001-042	043
		Sample Location:	BH01	BH01	BH01	BH01	BH02	BH02	BH03	BH03	BH03
		Sample Type:	SOIL	SOIL							
		Top Depth (m):	0.90	1.50	11.50	3.00	0.50	0.80	0.30	3.00	4.00
		Bottom Depth (m):		1.95		3.45			0.60		
		Date Sampled:	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	26-Feb-2019	26-Feb-2019	27-Feb-2019	27-Feb-2019	27-Feb-2019
		Asbestos Lab:		COVENTRY				COVENTRY	COVENTRY		
Determinand	Accred.	SOP Units LOD									
Aliphatic TPH >C21-C35	N	2680 mg/kg 0.10	[B] 5500								[B] 47
Aliphatic TPH >C35-C44	N	2680 mg/kg 0.10	[B] 280								[B] < 0.10
Total Aliphatic Hydrocarbons	N	2680 mg/kg 1.0	[B] 7800								[B] 47
Aromatic TPH >C5-C7	N	2680 mg/kg 0.010	[B] < 0.010								[B] < 0.010
Aromatic TPH >C7-C8	N	2680 mg/kg 0.010	[B] < 0.010								[B] < 0.010
Aromatic TPH >C8-C10	N	2680 mg/kg 0.10	[B] < 0.10								[B] < 0.10
Aromatic TPH >C10-C12	N	2680 mg/kg 0.10	[B] 22								[B] < 0.10
Aromatic TPH >C12-C16	N	2680 mg/kg 0.10	[B] 130								[B] < 0.10
Aromatic TPH >C16-C21	N	2680 mg/kg 0.10	[B] 110								[B] 2.1
Aromatic TPH >C21-C35	N	2680 mg/kg 0.10	[B] 1700								[B] 110
Aromatic TPH >C35-C44	N	2680 mg/kg 0.10	[B] 350								[B] < 0.10
Total Aromatic Hydrocarbons	N	2680 mg/kg 1.0	[B] 2300								[B] 110
Total Petroleum Hydrocarbons	N	2680 mg/kg 2.0	[B] 10000								[B] 160
Benzene	М	2760 µg/kg 1.0	[B] < 1.0								[B] < 1.0
Toluene	М	2760 µg/kg 1.0	[B] < 1.0								[B] 1.5
Ethylbenzene	М	2760 µg/kg 1.0	[B] < 1.0								[B] 2.1
m & p-Xylene	М	2760 µg/kg 1.0	[B] < 1.0								[B] 1.9
o-Xylene	М	2760 µg/kg 1.0	[B] < 1.0								[B] < 1.0
Methyl Tert-Butyl Ether	М	2760 µg/kg 1.0	[B] < 1.0								[B] < 1.0
Naphthalene	М	2800 mg/kg 0.10	0.28				0.30			0.26	0.45
Acenaphthylene	N	2800 mg/kg 0.10	0.38				0.23			0.13	0.16
Acenaphthene	М	2800 mg/kg 0.10	0.56				0.11			0.11	2.2
Fluorene	М	2800 mg/kg 0.10	0.88				0.27			< 0.10	2.3
Phenanthrene	М	2800 mg/kg 0.10	5.4				2.5			1.5	27
Anthracene	М	2800 mg/kg 0.10	0.72				0.56			0.33	5.1
Fluoranthene	М	2800 mg/kg 0.10	6.8				4.5			3.1	25
Pyrene	М	2800 mg/kg 0.10	5.9	1			3.7			2.6	20
Benzo[a]anthracene	М	2800 mg/kg 0.10	2.6	1			2.0			1.4	10
Chrysene	М	2800 mg/kg 0.10	3.3				1.9			1.4	9.9
Benzo[b]fluoranthene	М	2800 mg/kg 0.10	3.9				2.8			2.0	12
Benzo[k]fluoranthene	М	2800 mg/kg 0.10	1.7	1			1.2			0.81	4.7
Benzo[a]pyrene	М	2800 mg/kg 0.10	3.1	1			2.4			1.6	9.7
Indeno(1,2,3-c,d)Pyrene	М	2800 mg/kg 0.10	2.5	1			2.1			1.5	7.1
Dibenz(a,h)Anthracene	N	2800 mg/kg 0.10	0.36	l			0.29			0.21	0.99
Benzo[g,h,i]perylene	М	2800 mg/kg 0.10	2.4	İ			1.7			1.3	5.9



Client: Soiltechnics Limited		Cher	ntest Jo	b No.:	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237
Quotation No.:	Chemtest Sample ID.:			793536	793537	793538	793539	793541	793542	793543	793544	793545	
Order No.: POR005023	Client Sample Ref.:				1-003	1-004	1-016	1-006	1-036	1-037	1-039	1-042	1-043
	Client Sample ID.:				BH010.901-	BH011.501-	BH0111.501-	BH013.001-	BH020.501-	BH020.801-	BH030.301-	BH033.001-042	BH034.001-
		Cile	int Sam	pie iD	003	004	016	006	036	037	039	БП033.001-042	043
	Sample Location:				BH01	BH01	BH01	BH01	BH02	BH02	BH03	BH03	BH03
			Sampl	е Туре:	SOIL	SOIL							
			Тор Dep	oth (m):	0.90	1.50	11.50	3.00	0.50	0.80	0.30	3.00	4.00
		Bot	tom Dep	oth (m):		1.95		3.45			0.60		
			Date Sa	mpled:	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	26-Feb-2019	26-Feb-2019	27-Feb-2019	27-Feb-2019	27-Feb-2019
			Asbest	os Lab:		COVENTRY				COVENTRY	COVENTRY		
Determinand	Accred.	SOP	Units	LOD									
Total Of 16 PAH's	Ν	2800	mg/kg	2.0	41				27			18	140
Total Phenols	М	2920	mg/kg	0.30	< 0.30				< 0.30			< 0.30	

Chemtest The right chemistry to deliver results Project: STR4646 St Pancras Campus, Camden

Client: Soiltechnics Limited	Chemtest Job No.:			19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	
Quotation No.:	Chemtest Sample ID.:			793546	793547	793548	793549	793550	793552	793553	793554	793555	
Order No.: POR005023		Clie	nt Samp	le Ref.:	1-093	1-044	1-094	1-095	1-098	1-100	1-106	1-108	1-109
					BH0341.001-	BH035.101-	TP01A0.701-	TP01A0.801-	TP020.601-	TP020.901-	TP040.201-	TP040.601-	TP040.901-
		Cli	ent Sam	ipie ID.:	093	044	094	095	098	100	106	108	109
		Sa	ample L	ocation:	BH03	BH03	TP01A	TP01A	TP02	TP02	TP04	TP04	TP04
	Sample Type: Top Depth (m): Bottom Depth (m):				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					41.00	5.10	0.70	0.80	0.60	0.90	0.20	0.60	0.90
					41.45								
			Date Sa	ampled:	27-Feb-2019	27-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019
			Asbest	tos Lab:				COVENTRY			COVENTRY		
Determinand	Accred.	SOP	Units	LOD									
АСМ Туре	U	2192		N/A				-			-		
Asbestos Identification	U	2192	%	0.001				No Asbestos Detected			No Asbestos Detected		
ACM Detection Stage	U	2192		N/A				-			-		
Moisture	N	2030	%	0.020	25	23	12		11	12		11	11
Soil Colour	Ν	2040		N/A	Brown	Brown	Brown		Brown	Brown		Brown	Brown
Other Material	N	2040		N/A	NONE	NONE	Stones, Brick		Stones	Stones, Brick		Stones	Stones
Soil Texture	N	2040		N/A	Clay	Clay	Sand		Sand	Sand		Sand	Sand
На	М	2010		N/A	8.6	8.3	9.9		9.5	10.1			10.1
Boron (Hot Water Soluble)	М	2120	mg/kg				1.7		1.2	-			0.74
Sulphate (2:1 Water Soluble) as SO4	М	2120	g/l	0.010	0.36	1.3				0.61			-
Total Sulphur	M	2175	%	0.010	0.72	1.7				0.14			
Cyanide (Complex)	М	2300	mg/kg	0.50	-		[B] < 0.50		[B] < 0.50				[B] < 0.50
Cyanide (Free)	М	2300	mg/kg				[B] < 0.50		[B] < 0.50				[B] < 0.50
Cyanide (Total)	М	2300	mg/kg				[B] < 0.50		[B] < 0.50				[B] < 0.50
Sulphate (Acid Soluble)	М	2430	%	0.010	0.14	2.3				0.37			
Arsenic	М	2450	mg/kg	1.0			22		19				18
Beryllium	U	2450	mg/kg				< 1.0		< 1.0				< 1.0
Cadmium	М	2450	mg/kg				0.24		0.21				0.34
Chromium	М	2450	mg/kg				24		22				21
Copper	M	2450	mg/kg				75		42				26
Mercury	M	2450	mg/kg				1.1		0.67				0.30
Nickel	М	2450	mg/kg				27		20				22
Lead	М	2450	mg/kg				590		180				200
Selenium	M	2450	mg/kg				0.38		< 0.20				< 0.20
Vanadium	U	2450	mg/kg				36		33				30
Zinc	M	2450	mg/kg				170		140				470
Chromium (Hexavalent)	N	2490	mg/kg				< 0.50	1	< 0.50				< 0.50
Organic Matter	M	2625	%	0.40			1.9	1	1.9			2.9	0.97
Aliphatic TPH >C5-C6	N	2680	mg/kg					1		1		[B] < 0.010	
Aliphatic TPH >C6-C8	N	2680		0.010				1	1			[B] < 0.010	
Aliphatic TPH >C8-C10	N	2680	mg/kg					1	1	1		[B] < 0.10	
Aliphatic TPH >C10-C12	N	2680	mg/kg	1				1	1			[B] < 0.10	
Aliphatic TPH >C12-C16	N	2680	mg/kg					1				[B] < 0.10	
Aliphatic TPH >C16-C21	N	2680	mg/kg					1	1	1		[B] < 0.10	

Chemtest The right chemistry to deliver results Project: STR4646 St Pancras Campus, Camden

Client: Soiltechnics Limited		Cher	ntest J	ob No.:	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237
Quotation No.:	Chemtest Sample ID.:		793546	793547	793548	793549	793550	793552	793553	793554	793555		
Order No.: POR005023		Clier	nt Samp	le Ref.:	1-093	1-044	1-094	1-095	1-098	1-100	1-106	1-108	1-109
		01.			BH0341.001-	BH035.101-	TP01A0.701-	TP01A0.801-	TP020.601-	TP020.901-	TP040.201-	TP040.601-	TP040.901-
		CIIE	ent Sam	pie ID.:	093	044	094	095	098	100	106	108	109
		Sa	mple Lo	ocation:	BH03	BH03	TP01A	TP01A	TP02	TP02	TP04	TP04	TP04
	Sample Type: Top Depth (m): Bottom Depth (m): Date Sampled: Asbestos Lab:				SOIL	SOIL							
					41.00	5.10	0.70	0.80	0.60	0.90	0.20	0.60	0.90
					41.45								
					27-Feb-2019	27-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019	25-Feb-2019
								COVENTRY			COVENTRY		
Determinand	Accred.	SOP	Units	LOD									
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10								[B] 32	
Aliphatic TPH >C35-C44	N	2680	mg/kg									[B] 6.2	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0								[B] 38	
Aromatic TPH >C5-C7	N	2680	mg/kg									[B] < 0.010	
Aromatic TPH >C7-C8	N	2680		0.010					1			[B] < 0.010	
Aromatic TPH >C8-C10	N	2680	mg/kg			1		1	1		1	[B] < 0.10	
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10								[B] < 0.10	
Aromatic TPH >C12-C16	N	2680	mg/kg									[B] 1.2	
Aromatic TPH >C16-C21	N	2680	mg/kg									[B] 3.5	
Aromatic TPH >C21-C35	N	2680	mg/kg									[B] 320	
Aromatic TPH >C21-C35	N	2680	mg/kg									[B] 320 [B] 23	
	N											[B] 23 [B] 350	
Total Aromatic Hydrocarbons	N	2680 2680	mg/kg	1.0 2.0								[B] 390	
Total Petroleum Hydrocarbons			mg/kg										
Benzene	M	2760	µg/kg	1.0								[B] < 1.0	
Toluene	M	2760	µg/kg	1.0								[B] < 1.0	
Ethylbenzene	M	2760	µg/kg	1.0								[B] < 1.0	
m & p-Xylene	M	2760	µg/kg	1.0								[B] < 1.0	
o-Xylene	М	2760	µg/kg	1.0								[B] < 1.0	
Methyl Tert-Butyl Ether	М	2760	µg/kg	1.0								[B] < 1.0	
Naphthalene	M	2800	mg/kg	0.10			0.35		0.19			0.27	0.17
Acenaphthylene	N	2800	mg/kg				0.14		< 0.10			0.20	0.18
Acenaphthene	М	2800	mg/kg				0.23		< 0.10			0.11	0.10
Fluorene	M	2800	mg/kg				0.18		< 0.10			0.12	0.13
Phenanthrene	M	2800	mg/kg				2.9		0.83			1.5	1.3
Anthracene	М	2800	mg/kg	0.10			0.66		0.17			0.34	0.32
Fluoranthene	М	2800	mg/kg	0.10			4.7		1.4			3.4	3.1
Pyrene	М	2800	mg/kg	0.10			4.1		1.2			3.1	2.8
Benzo[a]anthracene	М	2800	mg/kg	0.10			2.3		0.66			1.6	1.5
Chrysene	М	2800	mg/kg	0.10			2.3		0.82			1.7	1.6
Benzo[b]fluoranthene	М	2800	mg/kg	0.10			3.2		0.94			2.3	2.1
Benzo[k]fluoranthene	М	2800	mg/kg				1.4		0.42			0.94	0.98
Benzo[a]pyrene	М	2800	mg/kg				2.6		0.76			1.7	1.6
Indeno(1,2,3-c,d)Pyrene	М	2800	mg/kg				2.4		0.57			1.4	1.3
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10			0.33		< 0.10			0.17	0.16
Benzo[g,h,i]perylene	M	2800	mg/kg			1	2.1		0.64			1.5	1.6



Results - Soil

Client: Soiltechnics Limited	C	Chemtest	Job No.:	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237	19-09237
Quotation No.:	Che	mtest Sai	nple ID.:	793546	793547	793548	793549	793550	793552	793553	793554	793555
Order No.: POR005023	(Client Sam	ple Ref.:	1-093	1-044	1-094	1-095	1-098	1-100	1-106	1-108	1-109
	Client Sample ID.:		BH0341.001-	BH035.101-	TP01A0.701-	TP01A0.801-	TP020.601-	TP020.901-	TP040.201-	TP040.601-	TP040.901-	
			093	044	094	095	098	100	106	108	109	
	Sample Location:		BH03	BH03	TP01A	TP01A	TP02	TP02	TP04	TP04	TP04	
	Sample Type:		SOIL									
		Top D	epth (m):	41.00	5.10	0.70	0.80	0.60	0.90	0.20	0.60	0.90
		Bottom D	epth (m):	41.45								
		Date \$	Sampled:	27-Feb-2019	27-Feb-2019	25-Feb-2019						
		Asbe	stos Lab:				COVENTRY			COVENTRY		
Determinand	Accred. S	OP Units	s LOD									
Total Of 16 PAH's	N 28	00 mg/k	g 2.0			30		8.9			20	19
Total Phenols	M 29	20 mg/k	g 0.30			< 0.30		< 0.30				< 0.30

The right chemistry to deliver results Project: STR4646 St Pancras Campus, Camden

Results - Water

Client: Soiltechnics Limited	Chemtest Job No.: 19-09237						
Quotation No.:	(st Sam		793540		
Order No.: POR005023			nt Samp		2-001		
					BH015.742-		
		Clie	ent Sam	ipie ID.:	001		
		Sa	ample Lo		BH01		
			Sampl	e Type:	WATER		
			Top De	oth (m):	5.74		
			ampled:	11-Mar-2019			
Determinand	Accred.						
рН	U	1010		N/A	8.3		
Ammoniacal Nitrogen	U	1220	mg/l	0.050	4.2		
Nitrate	U	1220	mg/l	0.50	0.98		
Sulphate	U	1220	mg/l	1.0	4100		
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050		
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050		
Cyanide (Complex)	U	1300	mg/l	0.050	< 0.050		
Sulphide	U	1325	mg/l	0.050	[B] < 0.050		
Magnesium	U	1415	mg/l	0.50	490		
Arsenic (Dissolved)	U	1450	µg/l	1.0	5.1		
Boron (Dissolved)	U	1450	µg/l	20	790		
Beryllium (Dissolved)	U	1450	µg/l	1.0	< 1.0		
Cadmium (Dissolved)	U	1450	µg/l	0.080	< 0.080		
Chromium (Dissolved)	U	1450	µg/l	1.0	< 1.0		
Copper (Dissolved)	U	1450	µg/l	1.0	6.4		
Mercury (Dissolved)	U	1450	µg/l	0.50	< 0.50		
Nickel (Dissolved)	U	1450	µg/l	1.0	< 1.0		
Lead (Dissolved)	U	1450	µg/l	1.0	< 1.0		
Selenium (Dissolved)	U	1450	µg/l	1.0	20		
Vanadium (Dissolved)	U	1450	µg/l	1.0	< 1.0		
Zinc (Dissolved)	U	1450	µg/l	1.0	91		
Aliphatic TPH >C5-C6	Ν	1675	µg/l	0.010	< 0.010		
Aliphatic TPH >C6-C8	Ν	1675	µg/l	0.010	< 0.010		
Aliphatic TPH >C8-C10	Ν	1675	µg/l	0.10	< 0.10		
Aliphatic TPH >C10-C12	Ν	1675	µg/l	0.10	< 0.10		
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10		
Aliphatic TPH >C16-C21	Ν	1675	µg/l	0.10	< 0.10		
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10		
Aliphatic TPH >C35-C44	Ν	1675	µg/l	0.10	< 0.10		
Total Aliphatic Hydrocarbons	N	1675	µg/l	1.0	< 1.0		
Aromatic TPH >C5-C7	N	1675	µg/l	0.010	< 0.010		
Aromatic TPH >C7-C8	N	1675	µg/l	0.010	< 0.010		
Aromatic TPH >C8-C10	Ν	1675	µg/l	0.10	< 0.10		
Aromatic TPH >C10-C12	Ν	1675	µg/l	0.10	< 0.10		
Aromatic TPH >C12-C16	Ν	1675	µg/l	0.10	< 0.10		
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10		
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10		

The right chemistry to deliver results Project: STR4646 St Pancras Campus, Camden

Results - Water

Client: Soiltechnics Limited		19-09237			
Quotation No.:	(Chemte	st Sam	ple ID.:	793540
Order No.: POR005023		Clier	nt Samp	le Ref.:	2-001
		Cliv	ent Sam		BH015.742-
		Cire	ent Sam	pie iD	001
		Sa	ample Lo		BH01
				e Type:	WATER
			Тор Dep	, ,	5.74
			Date Sa	ampled:	11-Mar-2019
Determinand	Accred.	SOP	Units	LOD	
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	1.0	< 1.0
Total Petroleum Hydrocarbons	N	1675	µg/l	2.0	< 2.0
Benzene	U	1760	µg/l	1.0	< 1.0
Toluene	U	1760	µg/l	1.0	< 1.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0
Naphthalene	U	1800	µg/l	0.10	< 0.10
Acenaphthylene	U	1800	µg/l	0.10	< 0.10
Acenaphthene	U	1800	µg/l	0.10	< 0.10
Fluorene	U	1800	µg/l	0.10	< 0.10
Phenanthrene	U	1800	µg/l	0.10	< 0.10
Anthracene	U	1800	µg/l	0.10	< 0.10
Fluoranthene	U	1800	µg/l	0.10	< 0.10
Pyrene	U	1800	µg/l	0.10	< 0.10
Benzo[a]anthracene	U	1800	µg/l	0.10	< 0.10
Chrysene	U	1800	µg/l	0.10	< 0.10
Benzo[b]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[k]fluoranthene	U	1800	µg/l	0.10	< 0.10
Benzo[a]pyrene	U	1800	µg/l	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	1800	µg/l	0.10	< 0.10
Dibenz(a,h)Anthracene	U	1800	µg/l	0.10	< 0.10
Benzo[g,h,i]perylene	U	1800	µg/l	0.10	< 0.10
Total Of 16 PAH's	U	1800	µg/l	2.0	< 2.0
Total Phenols	U	1920	mg/l	0.030	< 0.030



Deviations

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

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
793536	1-003	BH010.901-003	BH01	25-Feb-2019	В	Amber Glass 250ml
793536	1-003	BH010.901-003	BH01	25-Feb-2019	В	Plastic Tub 500g
793540	2-001	BH015.742-001	BH01	11-Mar-2019	В	Coloured Winchester 1000ml
793540	2-001	BH015.742-001	BH01	11-Mar-2019	В	EPA Vial 40ml
793540	2-001	BH015.742-001	BH01	11-Mar-2019	В	Plastic Bottle 1000ml
793541	1-036	BH020.501-036	BH02	26-Feb-2019	В	Plastic Tub 500g
793544	1-042	BH033.001-042	BH03	27-Feb-2019	В	Plastic Tub 500g
793545	1-043	BH034.001-043	BH03	27-Feb-2019	В	Amber Glass 250ml
793548	1-094	TP01A0.701-094	TP01A	25-Feb-2019	В	Plastic Tub 500g
793550	1-098	TP020.601-098	TP02	25-Feb-2019	В	Amber Glass 250ml
793550	1-098	TP020.601-098	TP02	25-Feb-2019	В	Plastic Tub 500g
793554	1-108	TP040.601-108	TP04	25-Feb-2019	В	Amber Glass 250ml
793554	1-108	TP040.601-108	TP04	25-Feb-2019	В	Plastic Tub 500g
793555	1-109	TP040.901-109	TP04	25-Feb-2019	В	Plastic Tub 500g



Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	рН	pH Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl- pphenylenediamine.
1415	Cations in Waters by ICP-MS	Sodium; Potassium; Calcium; Magnesium	Direct determination by inductively coupled plasma - mass spectrometry (ICP-MS).
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	determination by inductively coupled plasma
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	рН	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2185	Asbestos	Asbestos	Polarised light microscopy
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.



Test Methods

SOP	Title	Parameters included	Method summary
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35–C44Aromatics: >C5–C7, >C7–C8, >C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35–C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenz[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1- Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.



Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation The results relate only to the items tested Uncertainty of measurement for the determinands tested are available upon request None of the results in this report have been recovery corrected All results are expressed on a dry weight basis The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols For all other tests the samples were dried at < 37°C prior to analysis All Asbestos testing is performed at the indicated laboratory Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

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

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt All water samples will be retained for 14 days from the date of receipt Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Darryl Neylon Soiltechnics Ltd White Lodge Cedar Barn Walgrave NN6 9PY



DETS Ltd Unit 1 Rose Lane Industrial Estate Rose Lane Lenham Heath Kent ME17 2JN t: 01622 850410

DETS Report No: 19-04352

Site Reference:	St, Pancras Campus, Camden
Site Reference:	St, Pancras Campus, Camden

Project / Job Ref: STR4646

Order No: POR005119

Sample Receipt Date: 28/03/2019

Sample Scheduled Date: 28/03/2019

Report Issue Number: 1

Reporting Date: 03/04/2019

Authorised by:

Mur

Dave Ashworth Deputy Quality Manager

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.





Water Analysis Certificate								
DETS Report No: 19-04352	Date Sampled	23/03/19						
Soiltechnics Ltd	Time Sampled	None Supplied						
Site Reference: St, Pancras Campus, Camden	TP / BH No	BH01						
Project / Job Ref: STR4646	Additional Refs	None Supplied						
Order No: POR005119	Depth (m)	4.15						
Reporting Date: 03/04/2019	DETS Sample No	398685						

Determinand	Unit	RL	Accreditation			
pH	pH Units	N/a		8.9		
Total Cyanide	ug/l	< 5	NONE	12		
Complex Cyanide	ug/l	< 5	NONE	12		
Free Cyanide	ug/l	< 5	NONE	< 5		
Sulphate as SO ₄	mg/l	< 1	ISO17025	776		
Sulphide	mg/l	< 0.1	NONE	< 0.1		
Ammoniacal Nitrogen as NH ₄	ug/l	< 50	NONE	< 50		
Nitrate as NO ₃	mg/l	< 0.5	ISO17025	48.8		
Arsenic (dissolved)	ug/l	< 5	ISO17025	< 5		
Beryllium (dissolved)	ug/l	< 3	ISO17025	< 3		
Boron (dissolved)	ug/l	< 5	ISO17025	595		
Cadmium (dissolved)	ug/l	< 0.4	ISO17025	< 0.4		
Chromium (dissolved)	ug/l	< 5	ISO17025	11		
Copper (dissolved)	ug/l	< 5	ISO17025	< 5		
Lead (dissolved)	ug/l	< 5	ISO17025	< 5		
Mercury (dissolved)	ug/l	< 0.05	ISO17025	< 0.05		
Nickel (dissolved)	ug/l	< 5	ISO17025	< 5		
Selenium (dissolved)	ug/l	< 5	ISO17025	29		
Vanadium (dissolved)	ug/l	< 5	ISO17025	17		
Zinc (dissolved)	ug/l	< 2	ISO17025	27		
Magnesium (dissolved)		< 0.1	ISO17025	1.9		
Total Phenols (monohydric)		< 10		< 10		
Total PAH	ug/l	< 0.01	NONE	1.19		

Subcontracted analysis ^(S) Insufficient sample ^{I/S} Unsuitable Sample ^{U/S}



Water Analysis Certifica	Water Analysis Certificate - Speciated PAH										
DETS Report No: 19-043	52		Date Sampled	23/03/19							
Soiltechnics Ltd			Time Sampled	None Supplied							
Site Reference: St, Pancr	as Campus, Camden		TP / BH No	BH01							
Project / Job Ref: STR46	46	4	dditional Refs	None Supplied							
Order No: POR005119			Depth (m)	4.15							
Reporting Date: 03/04/2	2019	D	TS Sample No	398685							
Determinand											
Naphthalene		< 0.01	NONE	< 0.01							
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01							
Acenaphthene			NONE	0.43							
Fluorene		< 0.01	NONE	< 0.01							
Phenanthrene		< 0.01	NONE	0.06							
Anthracene			NONE	< 0.01							
Fluoranthene		< 0.01	NONE	0.39							
Pyrene		< 0.01	NONE	0.31							
Benzo(a)anthracene	5		NONE	< 0.01							
Chrysene			NONE	< 0.01							
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01							
Benzo(k)fluoranthene			NONE	< 0.01							
Benzo(a)pyrene			NONE	< 0.01							
Indeno(1,2,3-cd)pyrene		< 0.01	NONE	< 0.01							
Dibenz(a,h)anthracene		< 0.01	NONE	< 0.01							
Benzo(ghi)perylene		: 0.008		< 0.008							
Total EPA-16 PAHs	ug/l	< 0.01	NONE	1.19							



Water Analysis Certifica	Water Analysis Certificate - TPH CWG Banded										
DETS Report No: 19-043	52		Date Sampled	23/03/19							
Soiltechnics Ltd			Time Sampled	None Supplied							
Site Reference: St, Pancr	as Campus, Camden		TP / BH No	BH01							
Project / Job Ref: STR46	46	4	Additional Refs	None Supplied							
Order No: POR005119			Depth (m)	4.15							
Reporting Date: 03/04/2	2019	D	ETS Sample No	398685							
Determinand			Accreditation								
Aliphatic >C5 - C6	5,	< 10	NONE	< 10							
Aliphatic >C6 - C8	5,	< 10	NONE	< 10							
Aliphatic >C8 - C10	5,	< 10	NONE	< 10							
Aliphatic >C10 - C12	5,	< 10	NONE	< 10							
Aliphatic >C12 - C16	ug/l	< 10	NONE	< 10							
Aliphatic >C16 - C21	ug/l	< 10	NONE	< 10							
Aliphatic >C21 - C34		< 10	NONE	22							
Aliphatic (C5 - C34)		< 70	NONE	< 70							
Aromatic >C5 - C7	5,	< 10	NONE	< 10							
Aromatic >C7 - C8		< 10	NONE	< 10							
Aromatic >C8 - C10	5,	< 10	NONE	< 10							
Aromatic >C10 - C12		< 10	NONE	< 10							
Aromatic >C12 - C16	- 51	< 10	NONE	< 10			ļ				
Aromatic >C16 - C21	ug/l	< 10	NONE	< 10							
Aromatic >C21 - C35		< 10	NONE	15							
Aromatic (C5 - C35)		< 70	NONE	< 70							
Total >C5 - C35	ug/l	< 140	NONE	< 140							





Water Analysis Certifica	Water Analysis Certificate - BTEX / MTBE										
DETS Report No: 19-0435	52		Date Sampled	23/03/19							
Soiltechnics Ltd			Time Sampled	None Supplied							
Site Reference: St, Pancra	as Campus, Camden		TP / BH No	BH01							
Project / Job Ref: STR464	46		Additional Refs	None Supplied							
Order No: POR005119			Depth (m)	4.15							
Reporting Date: 03/04/2	019	DETS Sample No		398685							
Determinand	Unit	RL	Accreditation								
Benzene	ug/l	< 1	ISO17025	< 1							
Toluene	ug/l	< 5	ISO17025	< 5							
Ethylbenzene	ug/l	< 5	ISO17025	< 5							
p & m-xylene	ug/l	< 10	ISO17025	< 10							
o-xylene	ug/l	< 5	ISO17025	< 5							
MTBE	ug/l	< 10	ISO17025	< 10							





Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 19-04352
Soiltechnics Ltd
Site Reference: St, Pancras Campus, Camden
Project / Job Ref: STR4646
Order No: POR005119
Reporting Date: 03/04/2019

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	UF		Determination of BTEX by headspace GC-MS	E101
Water	F		Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F		Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F		Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF		Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR deter	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F		Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
	_		Determination of liquid: liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by	
Water	F	C12-C16, C16-C21, C21-C40)		E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F		Based on National Rivers Authority leaching test 1994	E301
Leachate	F		Based on BS EN 12457 Pt1, 2, 3	E301
Water	F		Determination of metals by filtration followed by ICP-MS	E102
Water	F		Determination of liquid:liquid extraction with hexane followed by GI-FID	E102
Water	F		Determination of nitrate by filtration & analysed by ion chromatography	E104
Water	UF		Determination of phenols by distillation followed by colorimetry	E109
water	UF	Monoriyunc Phenor	Determination of PAH compounds by concentration through SPE cartridge, collection in	EIZI
Water	F	PAH - Speciated (EPA 16)	dichloromethane followed by GC-MS	E105
Water	F		Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethan	E108
Water	UF		Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of saminue by distinct on one of the same of the sam	E106
Water	UF	Toluene Extractable Matter (TFM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF		Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34,	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)		E104
Water	UF		Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered UF Unfiltered

Analysis of test data in relation to concentrations of inorganic chemical contaminants

Adopted Model:	Industrial/Commercial
Receptor:	Current site user and construction operatives

Test procedure			Summ	ary of to	est data			Initial comparison	Outlier tes	t				Normality t	est		UCL	
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
	<u> </u>						a a z		të D	ZÕ	<u><u> </u></u>	Ō						
Arsenic	S4UL	640	6	14.0	22.0	17.7	0	Mean value below guideline	У					normal	normal	У	19.9	Arsenic
Beryllium	S4UL	12	6	1.0	1.0	1.0	0	Mean value below guideline	У					not normal	not normal	n	1.0	Beryllium
Boron	S4UL	240000	6	0.7	1.7	1.2	0	Mean value below guideline	У					normal	not normal	n	1.9	Boron
Cadmium	S4UL	190	6	0.2	0.7	0.4	0	Mean value below guideline	У					normal	normal	У	0.6	Cadmium
Chromium (III)	S4UL	8600	6	21.0	81.0	34.8	0	Mean value below guideline	n					not normal	not normal	n	75.8	Chromium (III)
Copper	S4UL	68000	6	26.0	75.0	46.5	0	Mean value below guideline	У					normal	not normal	n	75.0	Copper
Cyanide (total)	ATK	34	6	0.5	1.5	0.7	0	Mean value below guideline	n					not normal	not normal	n	1.4	Cyanide (total)
Lead	C4SL (I)	1100	6	170.0	590.0	276.7	0	Mean value below guideline	n					not normal	not normal	n	566.5	Lead
Mercury#	S4UL	58	6	0.3	1.1	0.6	0	Mean value below guideline	n					normal	normal	У	0.8	Mercury#
Nickel	S4UL	980	6	20.0	27.0	22.8	0	Mean value below guideline	У					normal	not normal	n	27.0	Nickel
Selenium	S4UL	12000	6	0.2	0.4	0.3	0	Mean value below guideline	У					not normal	not normal	n	0.4	Selenium
Vanadium	S4UL	9000	6	30.0	51.0	36.8	0	Mean value below guideline	n					not normal	not normal	n	49.8	Vanadium
Zinc	S4UL	730000	6	82.0	470.0	193.7	0	Mean value below guideline	n					not normal	not normal	n	440.7	Zinc

S4UL Suitable for Use Level as published by LQM/CIEH C4SL Category 4 Screening Level C4SL (lower) (upper) Category 4 Screening Level for Lead at lower or upper bound of range ATK Soil Screening Value derived by Atkins BPG5 Guideline from BPG Note 5 as published by Forest Research

Title

Analysis of test data in relation to concentrations of inorganic chemical contaminants.

Report ref: STQ4646-GO1 Revision O

soiltechnics environmental and geotechnical consultants

Table number 1

Analysis of test data in relation to concentrations of organic chemical contaminants

Adopted model:	Industrial/Commercial
Receptor:	Current site users, construction operatives & vegetation

Test procedure			Summ	nary of	test dat	a		Initial Screening	Outlier	test				Normality t	est		UCL	
Contaminant	Guideline source	Guideline value*	No. of tests	Min.	Max.	Mean	No. of tests above guideline	Initial screening	s outlier ??	Number of outliers	Location of outlier	ţ	Concentration	Shapiro-Wilk Normality test		ot Data normally distributed?	95% UCL of mean	Contaminant
	Guio sou	mg/kg		mg/kg	mg/kg	mg/kg	No. abo guid		Pass test?	Nur out	Loc	Depth	mg/kg				mg/kg	
Acenaphthene	S4UL	84000	6	0.1	0.6	0.2	0	Mean value below guideline	n					not normal	not normal	n	0.5	Acenaphthene
Acenaphthylene	S4UL	83000	6	0.1	0.4	0.2	0	Mean value below guideline	n					normal	normal	У	0.3	Acenaphthylene
Anthracene	S4UL	520000	6	0.2	0.7	0.5	0	Mean value below guideline	У					normal	normal	У	0.6	Anthracene
Benzo(a)anthracene	S4UL	170	6	0.7	2.6	1.7	0	Mean value below guideline	У					normal	normal	У	2.3	Benzo(a)anthracene
Benzo(a)pyrene	S4UL	35	6	0.8	3.1	2.0	0	Mean value below guideline	У					normal	normal	У	2.7	Benzo(a)pyrene
Benzo(b)fluoranthene	S4UL	44	6	0.9	3.9	2.5	0	Mean value below guideline	У					normal	normal	У	3.3	Benzo(b)fluoranthene
Benzo(g,h,i)perylene	S4UL	3900	6	0.6	2.4	1.6	0	Mean value below guideline	У					normal	normal	У	2.1	Benzo(g,h,i)perylene
Benzo(k)fluoranthene	S4UL	1200	6	0.4	1.7	1.1	0	Mean value below guideline	У					normal	normal	У	1.5	Benzo(k)fluoranthene
Chrysene	S4UL	350	6	0.8	3.3	1.9	0	Mean value below guideline	У					normal	normal	У	2.6	Chrysene
Dibenzo(a,h)anthracene	S4UL	3.5	6	0.1	0.4	0.2	0	Mean value below guideline	У					normal	normal	У	0.3	Dibenzo(a,h)anthracene
Fluoranthene	S4UL	23000	6	1.4	6.8	3.9	0	Mean value below guideline	У					normal	normal	У	5.4	Fluoranthene
Fluorene	S4UL	63000	6	0.1	0.9	0.3	0	Mean value below guideline	n					not normal	not normal	n	0.8	Fluorene
Indeno(1,2,3-cd)pyrene	S4UL	500	6	0.6	2.5	1.7	0	Mean value below guideline	У					normal	normal	У	2.3	Indeno(1,2,3-cd)pyrene
Naphthalene	S4UL	190	6	0.2	0.4	0.3	0	Mean value below guideline	У					normal	normal	У	0.3	Naphthalene
Phenanthrene	S4UL	22000	6	0.8	5.4	2.4	0	Mean value below guideline	У					normal	normal	У	3.8	Phenanthrene
Phenols	S4UL	760	6	0.3	0.3	0.3	0	Mean value below guideline	У					not normal	not normal	n	0.3	Phenols
Pyrene	S4UL	54000	6	1.2	5.9	3.4	0	Mean value below guideline	У					normal	normal	У	4.7	Pyrene

<u>Notes</u>

*

S4UL	Suitable for Use Level as published by LQM/CIEH
C4SL	Category 4 Screening Level
SGV	Soil Guideline Value as published by the Environment Agency 2009
SSV	Soil Screening Value as derived by Soiltechnics
АТК	Soil Screening Value derived by Atkins

Assuming a SOM of 1%

Title

Analysis of test data in relation to concentrations of organic chemical contaminants.

Report ref: STR4646-GO1 Revision O

soiltechnics environmental and geotechnical consultants

Table number

2

Analysis of test data in relation to concentrations of inorganic chemical contaminants

Adopted Model: Receptor:	Industrial/Commercial and BPG5 Vegetation																	
Test procedure			Summary of test data					Initial comparison	Outlier tes				Normality test			UCL		
Contaminant	Guideline source	Guideline value mg/kg	No. of tests	Min. mg/kg	Max. mg/kg	Mean mg/kg	No. of tests above guideline value	Initial screening	Pass outlier test?	Number of outliers	ocation of utlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
	<u> </u>						<u>0</u> 6 77 2		¢ ⊅	2 0	0 [
Arsenic	S4UL	640	6	14.0	22.0	17.7	0	Mean value below guideline	У					normal	normal	у	19.9	Arsenic
Beryllium	S4UL	12	6	1.0	1.0	1.0	0	Mean value below guideline	У					not normal	not normal	n	1.0	Beryllium
Boron	S4UL	240000	6	0.7	1.7	1.2	0	Mean value below guideline	У					normal	not normal	n	1.9	Boron
Cadmium	S4UL	190	6	0.2	0.7	0.4	0	Mean value below guideline	У					normal	normal	У	0.6	Cadmium
Chromium (III)	S4UL	8600	6	21.0	81.0	34.8	0	Mean value below guideline	n					not normal	not normal	n	75.8	Chromium (III)
Copper	BPG5	130	6	26.0	75.0	46.5	0	Mean value below guideline	У					normal	not normal	n	75.0	Copper
Cyanide (total)	ATK	34	6	0.5	1.5	0.7	0	Mean value below guideline	n					not normal	not normal	n	1.4	Cyanide (total)
Lead	C4SL (I)	1100	6	170.0	590.0	276.7	0	Mean value below guideline	n					not normal	not normal	n	566.5	Lead
Mercury#	S4UL	58	6	0.3	1.1	0.6	0	Mean value below guideline	n					normal	normal	У	0.8	Mercury#
Nickel	S4UL	980	6	20.0	27.0	22.8	0	Mean value below guideline	У					normal	not normal	n	27.0	Nickel
Selenium	S4UL	12000	6	0.2	0.4	0.3	0	Mean value below guideline	У					not normal	not normal	n	0.4	Selenium
Vanadium	S4UL	9000	6	30.0	51.0	36.8	0	Mean value below guideline	n					not normal	not normal	n	49.8	Vanadium
Zinc	BPG5	300	6	82.0	470.0	193.7	1	Mean value below guideline	n					not normal	not normal	n	440.7	Zinc

S4UL Suitable for Use Level as published by LQM/CIEH C4SL Category 4 Screening Level C4SL (lower) (upper) Category 4 Screening Level for Lead at lower or upper bound of range ATK Soil Screening Value derived by Atkins BPG5 Guideline from BPG Note 5 as published by Forest Research

Title

Analysis of test data in relation to concentrations of inorganic chemical contaminants.

Report ref: STQ4646-GO1 Revision O

#

Assumed to be elemental mercury as initial screening value

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Table number 3

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Summary of petroleum hydrocarbon test results

Model: Industrial/Commercial

BTEX (Red highlights indicate exceedance of guideline value)

Indicator	unit	S4UL	Concentra	ation	
		(mg/kg)	BH01	BH03	TP04
			0.90	4.00	0.60
Benzene	mg/kg	27	< 0.001	< 0.001	< 0.001
Toluene	mg/kg	56000	< 0.001	0.0015	< 0.001
Ethylbenzene	mg/kg	5700	< 0.001	0.0021	< 0.001
o-Xylene	mg/kg	6600	< 0.001	< 0.001	< 0.001
m,p-Xylene	mg/kg	5900	< 0.001	0.0019	< 0.001

Hydrocarbon banding (Red highlights indicate exceedance of guideline value)

Fraction	unit	S4UL	Concentra	ation		
		(mg/kg)	BH01	BH03	TP04	
			0.90	4.00	0.60	
Aliphatic						
EC 5 - 6	mg/kg	3200	< 0.010	< 0.010	< 0.010	
EC >6 - 8	mg/kg	7800	< 0.010	< 0.010	< 0.010	
EC >8 - 10	mg/kg	2000	15	< 0.10	< 0.10	
EC >10 - 12	mg/kg	9700	130	< 0.10	< 0.10	
EC >12 - 16	mg/kg	59000	690	< 0.10	< 0.10	
EC >16 - 35	mg/kg	1600000	6700	47	32	
EC >35 - 44	mg/kg	1600000	280	< 0.10	6.2	
Aromatic						
EC 5 - 7 (benzene)	mg/kg	26000	< 0.010	< 0.010	< 0.010	
EC >7 - 8 (toluene)	mg/kg	56000	< 0.010	< 0.010	< 0.010	
EC >8 - 10	mg/kg	3500	< 0.10	< 0.10	< 0.10	
EC >10 - 12	mg/kg	16000	22	< 0.10	< 0.10	
EC >12 - 16	mg/kg	36000	130	< 0.10	1.2	
EC >16 - 21	mg/kg	28000	110	2.1	3.5	
EC >21 - 35	mg/kg	28000	1700	110	320	
EC >35 - 44	mg/kg	28000	350	< 0.10	23	

Title

Comparison of measured concentrations of petroleum hydrocarbons with guideline values. Table number

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Summary of groundwater test results

Receptor Water type Fish type	Groundwater Freshwater Cyprinid										
Water hardness	>250	mg/l	(measured	at a concentration of 276mg/l on the Th	ames						
			Water web	Water website) ^{\$}							
Contaminant	Guideline value	Guideline	Location	BH01							
	(µg/I)	source	Depth (m)	5.74							
Inorganics (µg/I)											
Arsenic	50	EQS (f)		5							
Boron	2000	EQS (f)		790							
Cadmium	5	EQS (f)		< 0.080							
Chromium	250	EQS (f)	_ [< 1.0							
Copper	28	EQS (f)		6							
Lead	250	EQS (f)		< 1.0							
Mercury	1	EQS (f)		< 0.50							
Nickel	200	EQS (f)		< 1.0							
Selenium ¹	10	UKDWS		20							
Vanadium ²	60	EQS (f)		< 1.0							
Zinc	500	EQS (f)		91							
Free Cyanide ¹	50	UKDWS		< 0.050							
Nitrate as N	50000	UKDWS		980							
Sulphate as SO4	400000	EQS(f)		4100000							
PAH (µg/l)											
Benzo(a)pyrene ^{1,4}	0.01	UKDWS		< 0.10							
Naphthalene ²	10	EQS (f)		< 0.10							
Sum of 4 PAH ¹	0.1	UKDWS		<0.10*							
TPH (µg/I)											
Hydrocarbons ¹	10	UKDWS		< 2.0							
Benzene	30	EQS (f)		< 1.0							
Toluene ²	50	EQS (f)		< 1.0							
Ethyl benzene ³	300	WHO	ן ך	< 1.0							
Xylene ²	30	EQS (f)	7 ľ	< 1.0							

Notes

1 EQS values not available

2 UKDWS not available

3 Lower detectable limit above UKDWS. Concentrations below detectable limits are not considered further.

* Taken as lower detection limit

Taken as lower detection limit of a single compound

\$ Hardness data presented by the Environment Agency

UKDWS UK Drinking Water Standard Guideline taken from "The Water Supply (Water Quality) Regulations 2000"

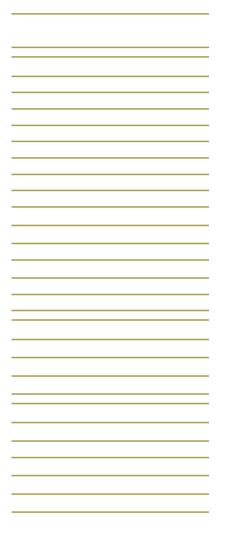
EQS (f) Environmental Quality Standard for freshwater published by the Environment Agency

EQS (s) Environmental Quality Standard for saltwater published by the Environment Agency

Title	Table number
Comparison of measured concentrations with	
guideline values for water receptors.	05

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Initial Conceptual Model (based on source-pathway-receptor model)

Current site use

commercial/industrial

Source	Pathway										Receptor		Risk assessment to C	RIA C552
	Humans						Vegetation	Water			—		Consequence of risk occurrir	g Risk
	Ingestion of air-	Ingestion of soil	Ingestion of	Inhalation of air-	Inhalation of	Dermal contact	Root uptake,	Percolation of	Near-surface	Saturation of	_		via most likely pathway	
	borne dusts		vegetables and	borne dusts	vapours	with soil and dus	deposition to	water through	water run-off	contaminated				
			soil attached to				shoots and	contaminated	through	soils by flood				
			vegetables				foliage contact	soils	contaminated	waters				
<u>Soils</u>														
Former industria	al/ Likely	Low-likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Current site users	Adult	Medium	Moderate
commercial	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Moderate
activities	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate
Existing commerc	ial Low-likelihood	Low likelihood	Unlikely	Low-likelihood	Low-likelihood	Low-likelihood	-	-	-	-	Current site users	Adult	Medium	Low/moderate
units	Low-likelihood	Low-likelihood	Unlikely	Low-likelihood	Low-likelihood	Low-likelihood	-	-	-	-	Construction operatives	Adult	Medium	Low/moderate
	-	-	-	-	-	-	Low-likelihood	-	-	-	Vegetation (current)	-	Mild	Low
Made Ground	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Current site users	Adult	Medium	Moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives		Medium	Moderate
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate
Leachate														
Made Ground	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (current and proposed)	-	Medium	Low

Title Initial Conceptual Site Model

Report ref: STR4646-GO1 Revision O

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Table number 1



May 2018 Appendix J

Updated Conceptual Model (following laboratory testing)

Current site use

commercial/industrial

Source	Pathway										Receptor		Risk assessment to Cl	RIA C552	
	Humans						Vegetation	Water			—		Consequence of risk occurrin	g Risk	
	Ingestion of air-	Ingestion of soil	Ingestion of	Inhalation of air-	Inhalation of	Dermal contact	Root uptake,	Percolation of	Near-surface	Saturation of	—		via most likely pathway		
	borne dusts		vegetables and	borne dusts	vapours	with soil and dus	t deposition to	water through	water run-off	contaminated					
			soil attached to				shoots and	contaminated	through	soils by flood					
			vegetables				foliage contact	soils	contaminated	waters					
Soil <u>s</u>															
Former industria	al/ Likely	Low-likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Current site users	Adult	Minor	Low	
commercial	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Moderate	
activities	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate	
Existing commerc	ial Low-likelihood	Low likelihood	Unlikely	Low-likelihood	Low-likelihood	Low-likelihood	-	-	-	-	Current site users	Adult	Minor	Very low	
units	Low-likelihood	Low-likelihood	Unlikely	Low-likelihood	Low-likelihood	Low-likelihood	-	-	-	-	Construction operatives	Adult	Minor	Very low	
	-	-	-	-	-	-	Low-likelihood	-	-	-	Vegetation (current)	-	Minor	Very low	
Made Ground	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Current site users	Adult	Medium	Moderate	
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives		Medium	Moderate	
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate	
<u>Leachate</u>															
Made Ground	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (current and proposed)	-	Medium	Low	

Title Updated Conceptual Site Model

Report ref: STR4646-GO1 Revision O

soiltechnics environmental and geotechnical consultants

Table number

Final Conceptual Model (following remediation)

Current site use

commercial/industrial

Source	Pathway										Receptor		Risk assessment to Cl	RIA C552	
	Humans						Vegetation	Water			_		Consequence of risk occurrin	g Risk	
	Ingestion of air-	Ingestion of soil	Ingestion of	Inhalation of air-	Inhalation of	Dermal contact	Root uptake,	Percolation of	Near-surface	Saturation of	_		via most likely pathway		
	borne dusts		vegetables and	borne dusts	vapours	with soil and dust	deposition to	water through	water run-off	contaminated					
			soil attached to				shoots and	contaminated	through	soils by flood					
			vegetables				foliage contact	soils	contaminated	waters					
<u>Soils</u>															
Former industri	al/ Likely	Low-likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Current site users	Adult	Minor	Low	
commercial	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Moderate	
activities	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate	
Existing commerc	cial Low-likelihood	Low likelihood	Unlikely	Low-likelihood	Low-likelihood	Low-likelihood	-	-	-	-	Current site users	Adult	Minor	Very low	
units	Low-likelihood	Low-likelihood	Unlikely	Low-likelihood	Low-likelihood	Low-likelihood	-	-	-	-	Construction operatives	Adult	Minor	Very low	
	-	-	-	-	-	-	Low-likelihood	-	-	-	Vegetation (current)	-	Minor	Very low	
Made Ground	Likely	Low likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Current site users	Adult	Medium	Moderate	
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives		Medium	Moderate	
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate	
<u>Leachate</u>															
Made Ground	-	-	-	-	-	-	-	Unlikely	Unlikely	Unlikely	Water (current and proposed)	-	Medium	Low	

Title Final Conceptual Site Model

Report ref: STR4646-GO1 Revision O

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Table number

3



May 2018 Appendix J

Record of in-situ gas and water level monitoring results

Date / Time	rument Used	Location	tmospheric essure (mB)	perature (°C)		ane, CH₄ v) <i>Chg</i>	Carbon CO ₂ (%v	-	Oxygen, C	0₂ (%v/v)	Balance	Lower Explosive Limit	Gas Flow (q)	gas flo			azardous w rate ags	NHBC Guideline	NHBC Guideline	acteristic gas situation	otentially Explosive	ter Level (m)
	Insti		At	Tem	Peak	Steady	Peak	Steady	Minimum	Average	(%v/v)	(% LEL)	(l/Hr)	CH ₄	CO ₂	CH ₄	CO ₂	(Peak)	(Steady)	Char	∠ −	Wat
25/03/2019 11:19	GA5000	BH01	1032	12.0	0.0	0.0	0.1	0.1	21.0	21.0	78.9	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	4.15
21/03/2019 09:40	GA5000	BH01	1032	10.0	0.0	0.0	0.1	0.1	21.0	21.0	78.9	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	4.13
03/04/2019 09:02	GA2000+	BH01	1029	8.0	0.0	0.0	0.2	0.2	21.1	21.1	78.7	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	4.21
11/03/2019 11:04	GA5000	BH03	998	10.0	0.0	0.0	0.1	0.1	21.3	21.4	79.0	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	5.48
21/03/2019 09:52	GA5000	BH03	998	10.0	0.0	0.0	0.2	0.2	20.8	20.8	79.0	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	4.3
25/03/2019 11:38	GA5000	BH03	1032	12.0	0.0	0.0	0.2	0.2	20.8	20.8	79.0	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	4.42
03/04/2019 09:15	GA5000	BH03	1032	8.0	0.0	0.0	0.2	0.2	20.3	20.3	79.5	0.0	0.0	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	NO	5.05

0.0	0.0	0.2	0.2	20.3	20.3	79.5	0.0	0.10	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	Worst case scenario
0.0	0.0	0.2	0.2	20.9	20.9	79.0	0.0	0.10	0.00	0.00	0.00	0.00	GREEN	GREEN	ONE	Average site scenario

Additonal considerations:

Notes:

1) Gas Screening Value (GSV) derived by multiplying the peak gas concentration (%) by the peak flow rate (I/h).

2) The gas analyser is capable of measuring flow to an accuracy of 0.1l/h. Below this value the analyser records zero flow. Adopting a precautionary approach we have used a flow rate of 0.1l/h when the analyser records zero with this flow rate used to determine the gas screening value.

Title	Re
Record of in-situ gas monitoring results	Fir

Report ref: STR4646-G01 Revision: O

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Revision

Final

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Table comparing cumulative compound concentrations with hazardous waste threshold values

Category o	f danger	Irritant	Harmful	То	xic	Carci	nogenic	Corr	osive	Toxic for re	production	Muta	agenic		Ecotoxic	
														∑N : R50-53/0.25	ΣN : 50-53	∑N : 50-53
														+∑N : R51-53/2.5	+∑N : R50	+∑N : 51-53
						Carc Cat 1				Repr Cat 1 or				+∑N : R52-53/25		+∑N : 52-53
Risk Ph	rase	Xi	Xn	T+	т	or 2	Carc Cat 3	C R34	C R35	2	Repr Cat 3	Muta Cat 2	Muta Cat 3			+∑N : R53
Contaminant	Highest	H4	H5	H6	H6	H7	H7	H8	H8	H10	H10	H11	H11	H14	H14	H14
	concentration	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)			
Metals																
Arsenic	22.00			0.0029	0.0034	0.0034								1.7798	0.0034	0.0034
Beryllium	0.00	0.0000		0.0000	0.0000	0.0000										0.0000
Copper	75.00	0.0188	0.0188												0.0188	0.0188
Cadmium	0.74		0.0001		0.0001	0.0001										
Chromium	81.00					0.0131									0.0131	0.0131
Lead	590.00		0.0636							0.0636	0.0636				0.0636	0.0636
Mercury	1.10			0.0001											0.0001	0.0001
Nickel	27.00		0.0034				0.0034				0.0034				0.0034	0.0034
Selenium	0.40				0.0000										0.0000	0.0000
Zinc	470.00	0.3408	0.3408			0.1302		0.0980					0.2209		0.3408	0.3408
Vanadium	51.00	0.0075			0.0075						0.0075		0.0075			0.0075
РАН																
Naphthalene	0.35		0.0000												0.0000	0.0000
Benzo(a)anthracene	2.60				0.0003	0.0003									0.0003	0.0003
Chrysene	3.30				0.0003	0.0003							0.0003		0.0003	0.0003
Benzo(b)fluoranthene	3.90				0.0004	0.0004									0.0004	0.0004
Benzo(k)fluoranthene	1.70				0.0002	0.0002									0.0002	0.0002
Benzo(a)pyrene	3.10					0.0003				0.0003		0.0003			0.0003	0.0003
Dibenzo(a,h)anthracen	e 0.36				0.0000	0.0000									0.0000	0.0000
ТРН																
Benzene	1.00				0.0001	0.0001										
Hydrocarbon (C6 to C35) 10000.00		1.0000			1.0000					0.0000	1.0000				1.0000
						(-)	/>			()	()	(/			
Total (or greatest)		0.3670	1.4267	0.0030	0.0123	(1)	(0.0034)	0.0980	0.0000	(0.0636)	(0.0636)	(1)	(0.2209)	1.7798	0.4447	1.4522
Threshold		1%	1%	0.10%	3%	0.10%	1%	5%	1%	0.50%	3%	0.10%	1%	1	25%	25%
Exceeded Y/N		N	Y	N	N	Y	N	N	N	N	N	Y	N	Y	N	N

Title	Table number
Hazard assessment spreadsheet	1 of 1

Report ref: STR4646-GO1 . Revision: O

May 2019 Appendix L1

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Landfill Waste Acceptance		Laboratory tes	st data		
Parameter	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill	WAC01	WAC02
Parameters determined on the wa	iste				
Total organic carbon (w/w %)	3%	5%	6%*	1.4	1.1
Loss on ignition			10%*	3.7	3.1
BTEX (mg kg ⁻¹)	6			< 0.010	< 0.010
PCBs (7 congeners) (mg kg ⁻¹)	1			< 0.10	< 0.10
Mineral oil C_{10} - C_{40} (mg kg ⁻¹)	500			780	140
PAH (17 congeners)	100			41	180
рН		>6		10.1	9.9
Acid neutralisation capacity pH 6 (mol kg ⁻¹)		To be evaluated	To be evaluated		
Acid neutralisation capacity pH 4 (mol kg ⁻¹)		To be evaluated	To be evaluated		
Limit values (mg kg ⁻¹) for complian	ce test using B	N 12457-3 at L/S 10 l k	g ⁻¹		<u> </u>
As (arsenic)	0.5	2	25	< 0.050	< 0.050
Ba (barium)	20	100	300	< 0.50	< 0.50
Cd (cadmium)	0.04	1	5	< 0.010	< 0.010
Cr (chromium (total))	0.5	10	70	0.097	< 0.050
Cu (Copper)	2	50	100	< 0.050	< 0.050
Hg (mercury)	0.01	0.2	2	< 0.0050	< 0.0050
Mo (molybdenum)	0.5	10	30	< 0.050	< 0.050
Ni (nickel)	0.4	10	40	< 0.050	< 0.050
Pb (lead)	0.5	10	50	< 0.010	< 0.010
Sb (antimony)	0.06	0.7	5	0.090	0.040
Se (selenium)	0.1	0.5	7	< 0.010	< 0.010
Zn (zinc)	4	50	200	< 0.50	< 0.50
Cl (chloride)	800	15,000	25,000	83	68
F (fluoride)	10	150	500	3.4	2.1
SO ₄ (sulphate)	1000#	20,000	50,000	1100	540
Total Dissolved Solids (TDS) ⁺	4,000	60,000	100,000	2800	1500
Phenol index	1			< 0.50	< 0.50
Dissolved organic carbon at own pH or pH 7.5-8.0 [@]	500	800	1000	< 50	< 50

<u>Notes</u>

* Either TOC or LOI must be used for hazardous waste

If an inert waste does not meet the SO4 L/S10 limit, alternative limit values of 1500 mg l-1 SO4 at Co (initial eluate from the percolation test (prCEN/TS 14405:2003)) AND 6000 mg kg-1 SO4 at L/S10 (either from the percolation test or batch test BS EN 12457-3), can be used to demonstrate compliance with the acceptable criteria for inert wastes.

The value for TDS can be used instead of the values for Cl and SO4
 DOC at pH 7.5-8.0 abd L/S10 can be determined or eluate derived from a modified version of the pH dependence Test, prEN 14429, if the limit value at own pH (BS EN 12457 eluate) is not met.

PRIMARY CLASSIFICATION	HAZARDOUS	HAZARDOUS
	STABLE NON- REACTIVE	STABLE NON- REACTIVE
SECONDARY CLASSIFICATION	HAZARDOUS WASTE IN NON-	HAZARDOUS WASTE IN NON-
	HAZARDOUS LANDFILL	HAZARDOUS LANDFILL

Title

Comparison of test data to landfill waste acceptance criteria (table 5.1) (Secondary classification)

Table number

1 of 1



environmental and geotechnical consultants

B	Basic categorisation schedule for Made Ground soils with no asbestos									
	containing materials									
P		f The Landfill (England and Wales) (Amendment) ons 2004 Part 2 (5)								
(a)	Source and origin of waste									
	Proposed development at St Pancras Comme	ercial Centre, Camden								
(b)	Process producing the waste									
	Foundation and service trench excavations/g	general site clearance								
(c)	Statement on waste treatment									
	Refer to pre-treatment confirmation form									
(d)	Composition of the waste									
	Brown and dark brown gravelly sand. Grave fabric, plastic, slag and flint.	I consists of brick, concrete, flint, asphaltic concrete, clinker,								
(e)	Appearance of the waste									
	As above									
(f)	European waste catalogue code									
	17-05-03 * (for hazardous waste)									
(g)	g) Hazardous waste properties									
	Elevated combined metals and total petrole	um hydrocarbons								
(h)	Is the waste prohibited under regulation 9?									
	No									
(i)	Landfill class									
	Stable non-reactive hazardous waste in non-	hazardous landfill								
(j)	Additional precautions required at landfill									
	None									
(k)	Can waste be recycled or recovered?									
	Yes									
(1)	Name of waste producer									
	To be confirmed									
(m)	Name and address of consultant									
	Tel: (01604) 781877	nite Lodge, Walgrave, Northampton. NN6 9PY. E-mail: mail@soiltechnics.net								
	Fax: (01604) 781007	Website: www.soiltechnics.net								
Schee	dule Date:	signed								
May	2019	12 11/								
Soilte	echnics reference:	- V /VpC								
STR4	646-G01	Darryl Neylon B.Sc, (Hons) FGS								
	Geo-environmental Engineer, Soiltechnics Limited									

environmental and geotechnical consultants

Basic categorisation schedule for London Clay Formation

Produced following the requirements of The Landfill (England and Wales) (Amendment)

Regulations 2004 Part 2 (5)

Source and origin of waste		
Proposed development at St Pancras Commercial Centre, Camden		
Process producing the waste		
Foundation and service trench excavations/g	eneral site clearance	
Statement on waste treatment		
Refer to pre-treatment confirmation form		
composition of the waste	of the waste	
Stiff brown and grey silty clay		
Appearance of the waste		
As above		
(f) European waste catalogue code 17-05-04 (for non-hazardous waste)		
		Hazardous waste properties
None		
) Is the waste prohibited under regulation 9?		
No		
Landfill class		
nert by virtue of being natural in origin and u	inaffected by anthronogonic contamination	
	analiected by antihopogenic containination	
dditional precautions required at landfill	anarected by anthropogenic containination	
dditional precautions required at landfill		
dditional precautions required at landfill None		
dditional precautions required at landfill None Tan waste be recycled or recovered?		
dditional precautions required at landfill None Can waste be recycled or recovered? Yes		
Additional precautions required at landfill None Tan waste be recycled or recovered? Yes lame of waste producer To be confirmed lame and address of consultant		
Additional precautions required at landfill None Tan waste be recycled or recovered? Yes lame of waste producer To be confirmed lame and address of consultant Soiltechnics Limited, Cedar Barn, Wh	ite Lodge, Walgrave, Northampton. NN6 9PY.	
Additional precautions required at landfill None Tan waste be recycled or recovered? Yes lame of waste producer To be confirmed lame and address of consultant		
Additional precautions required at landfill None Tan waste be recycled or recovered? Yes lame of waste producer To be confirmed lame and address of consultant Soiltechnics Limited, Cedar Barn, Wh Tel: (01604) 781877	ite Lodge, Walgrave, Northampton. NN6 9PY. E-mail: mail@soiltechnics.net	
Additional precautions required at landfill None Can waste be recycled or recovered? Yes lame of waste producer To be confirmed lame and address of consultant Soiltechnics Limited, Cedar Barn, Wh Tel: (01604) 781877 Fax: (01604) 781007	ite Lodge, Walgrave, Northampton. NN6 9PY. E-mail: mail@soiltechnics.net Website: www.soiltechnics.net	
Additional precautions required at landfill None Tan waste be recycled or recovered? Yes lame of waste producer To be confirmed lame and address of consultant Soiltechnics Limited, Cedar Barn, Wh Tel: (01604) 781877 Fax: (01604) 781007 e Date: L9	ite Lodge, Walgrave, Northampton. NN6 9PY. E-mail: mail@soiltechnics.net Website: www.soiltechnics.net	
Additional precautions required at landfill None Tan waste be recycled or recovered? Yes lame of waste producer To be confirmed lame and address of consultant Soiltechnics Limited, Cedar Barn, Wh Tel: (01604) 781877 Fax: (01604) 781007 e Date:	ite Lodge, Walgrave, Northampton. NN6 9PY. E-mail: mail@soiltechnics.net Website: www.soiltechnics.net	
	rocess producing the waste Foundation and service trench excavations/g tatement on waste treatment Refer to pre-treatment confirmation form omposition of the waste Stiff brown and grey silty clay ppearance of the waste As above uropean waste catalogue code C-05-04 (for non-hazardous waste) azardous waste properties None the waste prohibited under regulation 9? No andfill class	

environmental and geotechnical consultants

Basic categorisation schedule for Made Ground soils containing asbestos			
containing materials			
Produced following the requirements of The Landfill (England and Wales) (Amendment) Regulations 2004 Part 2 (5)			
(a)	(a) Source and origin of waste		
	Proposed development at St Pancras Commercial C	entre, Camden	
(b)	Process producing the waste		
Foundation and service trench excavations/general site clearance		site clearance	
(c)	(c) Statement on waste treatment		
	Refer to pre-treatment confirmation form		
(d)	 (d) Composition of the waste Individual pieces of asbestos containing materials within brown and dark brown gravelly sand. Gravel consists of brick, concrete, flint, asphaltic concrete, clinker, fabric, plastic, slag and flint. 		
(e)	(e) Appearance of the waste		
	As above		
(f)	(f) European waste catalogue code		
	17-05-05* (Construction material containing asbesto	s)	
(g)) Hazardous waste properties		
	Positive identification of asbestos containing mater	ials	
(h)	h) Is the waste prohibited under regulation 9?		
	Νο		
(i)	Landfill class		
	Hazardous by virtue of positive identification of asbestos containing materials		
(j)	Additional precautions required at landfill		
	None		
(k)	Can waste be recycled or recovered?		
	Yes		
(1)	Name of waste producer		
	To be confirmed		
(m)	m) Name and address of consultant Soiltechnics Limited, Cedar Barn, White Lodge, Walgrave, Northampton. NN6 9PY.		
	Tel: (01604) 781877	E-mail: mail@soiltechnics.net Website: www.soiltechnics.net	
Scheo	Fax: (01604) 781007 edule Date: sign		
May 2019		2.11	
Soiltechnics reference:		N	
STR4646-G01 Darryl Neylon B.Sc, (Hons) FGS		yl Neylon B.Sc, (Hons) FGS	
5111-40	Geo	environmental Engineer, Soiltechnics Limited	