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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		TYPE / DEPTH (m)	RESULT	CASING DEPTH (m)	WATER LEVEL (m)	TYPE / DEPTH (m)	RESULT	FROM (m)	TO (m)	TYPE
	Light grey reinforced CONCRETE comprised of aggregates of flint up to 20mm nominal size. 10mm reinforcement bar located at 115mm depth. Approximately 0.5% air voids. Blue membrane at base. (MADE GROUND)	0.20	24.50									0.30		D
	Brown gravelly SAND with frequent cobbles of angular brick and concrete. Gravel consists of fine to coarse sub-angular brick and concrete. (MADE GROUND)	0.70	24.00									0.60		D
	Dark brown black gravelly fine to coarse SAND. Gravel consists of fine to coarse sub-angular brick, concrete, asphaltic concrete, clinker and fabric. Slight TPH odour observed. (MADE GROUND)	1.10	23.60									0.90		ES
	Very dense dark brown blackish grey fine to coarse SAND. Gravel consists of fine to coarse sub-angular brick, concrete, asphaltic concrete, clinker and fabric. (MADE GROUND)					C 1.50-1.66	(8) then 25 blows for 10mm penetration		DRY			1.50	1.95	B
												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

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

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.

Groundwater observations

Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at 4.11m.

Chiselling details

Depth (m)	Duration (hh:mm)
4.50 - 4.80	00:45
5.50 - 5.70	00:30

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method Cable tool percussion	**Logged by** DN	**Date(s)** 27/02/2019 - 28/02/2019
Level (m OD) 24.70	**Compiled by** JJ	**Sheet number** Sheet 1 of 5
Co-ordinates -	**Checked by** KB	**BH01**

Report ref: STR4646-G01 **Revision:** 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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 10.00-10.45	(5) 19	6.00	DRY	PP 10.00	PP=225	10.00	10.45	D
												11.00	11.45	UT
										PP 11.50	PP=225	11.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

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.

Groundwater observations

Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at 4.11m.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)
150	6.00

Title

Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
27/02/2019 - 28/02/2019

Level (m OD)
24.70

Compiled by
JJ

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Co-ordinates
-

Checked by
KB

BH01

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Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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 12.00-12.45	(5) 21	6.00	DRY	PP 12.00	PP=225	12.00	12.45	D
										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													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

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.

Groundwater observations

Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at 4.11m.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
27/02/2019 - 28/02/2019

Level (m OD)
24.70

Compiled by
JJ

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Co-ordinates
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Checked by
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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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 22.00-22.45	(10) 38	6.00	DRY	PP 22.00	PP=225	22.00	22.45	D
										PP 23.00	PP=225	23.00		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

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.

Groundwater observations

Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at 4.11m.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method	Logged by	Date(s)
Cable tool percussion	DN	27/02/2019 - 28/02/2019
Level (m OD)	**Compiled by**	**Sheet number**
24.70	JJ	Sheet 4 of 5
Co-ordinates	**Checked by**	**BH01**
-	KB	

Report ref: STR4646-G01 **Revision:** 0

Proposed redevelopment
St Pancras Commercial Centre, Camden

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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=85	24.00	24.45	UT
										PP 24.50	PP=225	24.50		D
	BOREHOLE TERMINATED AT 25.00m	25.00	-0.30			S 25.00-25.45	(10) 42	6.00	DRY	PP 25.00	PP=225	25.00	25.45	D

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

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.

Groundwater observations

Groundwater strike at 4.8m depth, rising to 4.11m depth. Sealed off with casing at 4.11m.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
27/02/2019 - 28/02/2019

Level (m OD)
24.70

Compiled by
JJ

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Co-ordinates
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Proposed redevelopment
St Pancras Commercial Centre, Camden

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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)											0.20		D
												0.50		D
												0.80		D
												1.10		D
						C 1.50-1.95	(7) 21	1.50	DRY					
	BOREHOLE TERMINATED AT 2.60m	2.60	20.30											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole terminated due to presence of suspected concrete obstruction and reading on UXO magnetometer. Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

No groundwater encountered.

Chiselling details

Depth (m)	Duration (hh:mm)
2.20 - 2.60	01:00

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)
150	2.50

Title
Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
26/02/2019

Level (m OD)
22.90

Compiled by
JJ

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Co-ordinates
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Checked by
KB

BH02

Report ref: STR4646-G01

Revision: 0

Proposed redevelopment
St Pancras Commercial Centre, Camden

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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 2.00m	2.00	20.90											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole terminated due to presence of suspected concrete obstruction and reading on UXO magnetometer. Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

No groundwater encountered.

Chiselling details

Depth (m)	Duration (hh:mm)
0.00 - 1.20	01:00
1.40 - 2.00	01:30

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title
Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
26/02/2019

Level (m OD)
22.90

Compiled by
JJ

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Co-ordinates
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Checked by
KB

BH02A

Report ref: STR4646-G01

Revision: 0

Proposed redevelopment
St Pancras Commercial Centre, Camden

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole terminated due to presence of suspected concrete obstruction. Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

No groundwater encountered.

Chiselling details

Depth (m)	Duration (hh:mm)
0.00 - 1.20	01:00
1.50 - 2.90	05:00

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title
Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
04/03/2019 - 05/03/2019

Level (m OD)
22.90

Compiled by
JJ

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Co-ordinates
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Checked by
KB

BH02B

Report ref: STR4646-G01

Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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	B
												1.00		D
												2.00		B
												3.00		B
												4.00		B
	Stiff very high strength brown slightly sandy CLAY. (LONDON CLAY FORMATION)	5.10	20.40							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													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)
0.00 - 1.20	01:00
1.50 - 1.90	01:00

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method Cable tool percussion	**Logged by** DN	**Date(s)** 27/02/2019 - 01/03/2019
Level (m OD) 25.50	**Compiled by** JJ	**Sheet number** Sheet 1 of 8
Co-ordinates -	**Checked by** KB	**BH03**

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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)										UT=55	7.00	7.45	UT
										PP 7.50	PP=200	7.50		B
											UT=80	10.00	10.45	UT
	Very stiff very high strength blue grey silty slightly sandy CLAY (LONDON CLAY FORMATION)	10.50	15.00							PP 10.50	PP=183	10.50		D
											UT=90	11.00	11.45	UT
										PP 11.50	PP=225	11.50		D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)
1.90 - 2.30	01:00
2.60 - 2.90	01:00

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)
150	6.00

Title

Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
27/02/2019 - 01/03/2019

Level (m OD)
25.50

Compiled by
JJ

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Co-ordinates
-

Checked by
KB

BH03

Report ref: STR4646-G01

Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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 12.00-12.45	(5) 23	6.00	DRY	PP 12.00	PP=200	12.00	12.45	D
						S 14.00-14.45	(8) 29	6.00	DRY	PP 14.00	PP=163	14.00	14.45	D
											UT=100	16.00	16.45	UT
										PP 16.50	PP=217	16.50		D
						S 17.00-17.45	(9) 33	6.00	DRY			17.00	17.45	D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)
4.00 - 4.40	01:00
4.50 - 4.90	01:00

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
27/02/2019 - 01/03/2019

Level (m OD)
25.50

Compiled by
JJ

Sheet number
Sheet 3 of 8

Co-ordinates
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Checked by
KB

BH03

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Revision: 0

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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			
											UT=100	19.00	19.45	UT
										PP 19.50	PP=154	19.50		D
											UT=100	20.00	20.45	UT
										PP 20.50	PP=154	20.50		D
											UT=100	22.00	22.45	UT
										PP 22.50	PP=154	22.50		D
						S 23.00-23.45	(11) 39	6.00	DRY	PP 23.00	PP=225	23.00	23.45	D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
27/02/2019 - 01/03/2019

Level (m OD)
25.50

Compiled by
JJ

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Co-ordinates
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Checked by
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BH03

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WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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)											24.00	24.45	UT
										PP 24.50	PP=225	24.50		D
												25.00	25.45	UT
										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
						S 28.00-28.45	(14) 45	6.00	DRY	PP 28.00	PP=200	28.00	28.45	D
	CONTINUED ON NEXT SHEET											29.00	29.45	UT

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method	Logged by	Date(s)
Cable tool percussion	DN	27/02/2019 - 01/03/2019
Level (m OD)	**Compiled by**	**Sheet number**
25.50	JJ	Sheet 5 of 8
Co-ordinates	**Checked by**	**BH03**
-	KB	

Report ref: STR4646-G01 **Revision:** 0

soiltechnics
environmental and geotechnical consultants

WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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 30.00-30.44	(15) then 50 blows for 290mm penetration	6.00	DRY	PP 30.00	PP=225	30.00	30.45	D
										PP 31.00	PP=225	31.00	31.45	UT
												31.50		D
						S 32.00-32.42	(16) then 50 blows for 275mm penetration	6.00	DRY	PP 32.00	PP=225	32.00	32.45	D
												33.00	33.45	UT
										PP 33.60	PP=225	33.45		D
						S 34.00-34.40	(16) then 50 blows for 245mm penetration	6.00	DRY			34.00	34.45	D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method	Logged by	Date(s)
Cable tool percussion	DN	27/02/2019 - 01/03/2019
Level (m OD) 25.50	**Compiled by** JJ	**Sheet number** Sheet 6 of 8
Co-ordinates -	**Checked by** KB	**BH03**

Report ref: STR4646-G01 **Revision:** 0

soiltechnics
environmental and geotechnical consultants

WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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
										PP 35.50	PP=225	35.50		D
						S 36.00-36.38	(18) then 50 blows for 235mm penetration	6.00	DRY	PP 36.00	PP=225	36.00	36.45	D
	...from 36.8m depth, becoming mottled red brown.											37.00	37.45	UT
										PP 37.50	PP=225	37.50		D
						S 38.00-38.38	(24) then 50 blows for 225mm penetration	6.00	DRY			38.00	38.45	D
												39.00	39.45	UT
										PP 39.50	PP=225	39.50		D
						S 40.00-40.35	(25) then 50 blows for 200mm penetration	6.00	DRY	PP 40.00	PP=225	40.00	40.45	D
	CONTINUED ON NEXT SHEET													

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method	Logged by	Date(s)
Cable tool percussion	DN	27/02/2019 - 01/03/2019
Level (m OD) 25.50	**Compiled by** JJ	**Sheet number** Sheet 7 of 8
Co-ordinates -	**Checked by** KB	**BH03**

Report ref: STR4646-G01 **Revision:** 0

soiltechnics
environmental and geotechnical consultants

WELL	STRATA				WATER STRIKES	SPT TESTING				OTHER IN SITU TESTING		SAMPLING		
	DESCRIPTION	DEPTH (m)	REDUCED LVL (m OD)	LEGEND		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. (THANET SAND FORMATION)	41.00	-15.50			S 41.50-41.74	(25 blows for 135mm penetration) then 50 blows for 100mm penetration		39.50			41.00 41.00 41.00	41.45 41.45	B D UT
	BOREHOLE TERMINATED AT 42.00m	42.00	-16.50											

Key

D Small Disturbed Sample
B Bulk Disturbed Sample
ES Environmental Sample
W Water Sample
C Core sample
UT Undisturbed Sample

S Standard Penetration Test
C Standard Penetration Test (solid cone)

PP Pocket Penetrometer test
SV Shear Vane test
PID Photo Ionisation Detector test

Notes

Borehole remained upright and stable upon completion. UXO Specialist in attendance. Level is approximate only.

Groundwater observations

Groundwater encountered at 41m depth, rising to 39.3 on completion.

Chiselling details

Depth (m)	Duration (hh:mm)

Water added details

Depth (m)	Water Added (l)

Casing details

Diameter (mm)	Base depth (m)

Title

Borehole record

Method
Cable tool percussion

Logged by
DN

Date(s)
27/02/2019 - 01/03/2019

Level (m OD)
25.50

Compiled by
JJ

Sheet number
Sheet 8 of 8

Co-ordinates
-

Checked by
KB

BH03

Report ref: STR4646-G01

Revision: 0

TEST CERTIFICATE

Liquid and Plastic Limits

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

4041

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

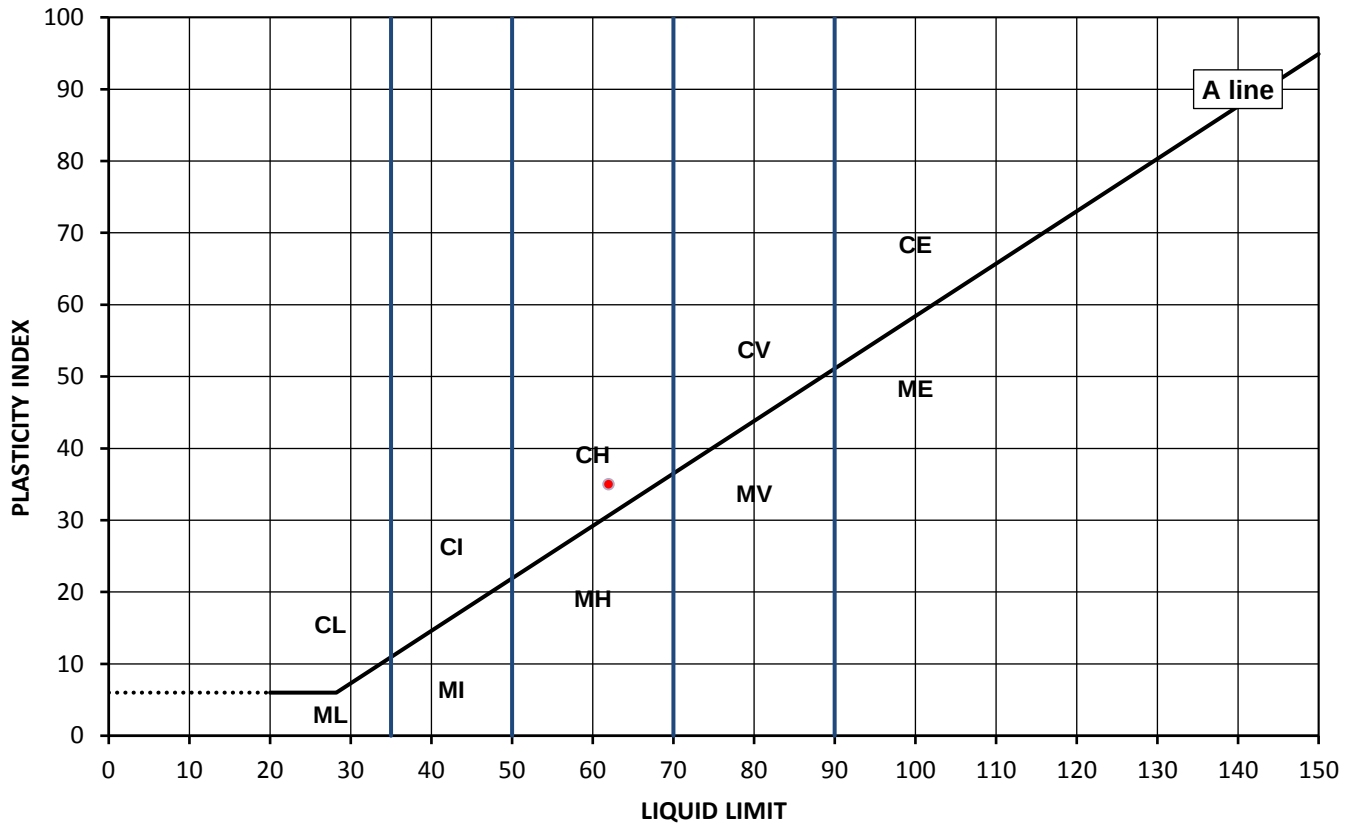
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not 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
Soil Description:	Brown slightly gravelly CLAY		

Sample Preparation: Tested after >425um removed by hand

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
29	62	27	35	96



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

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

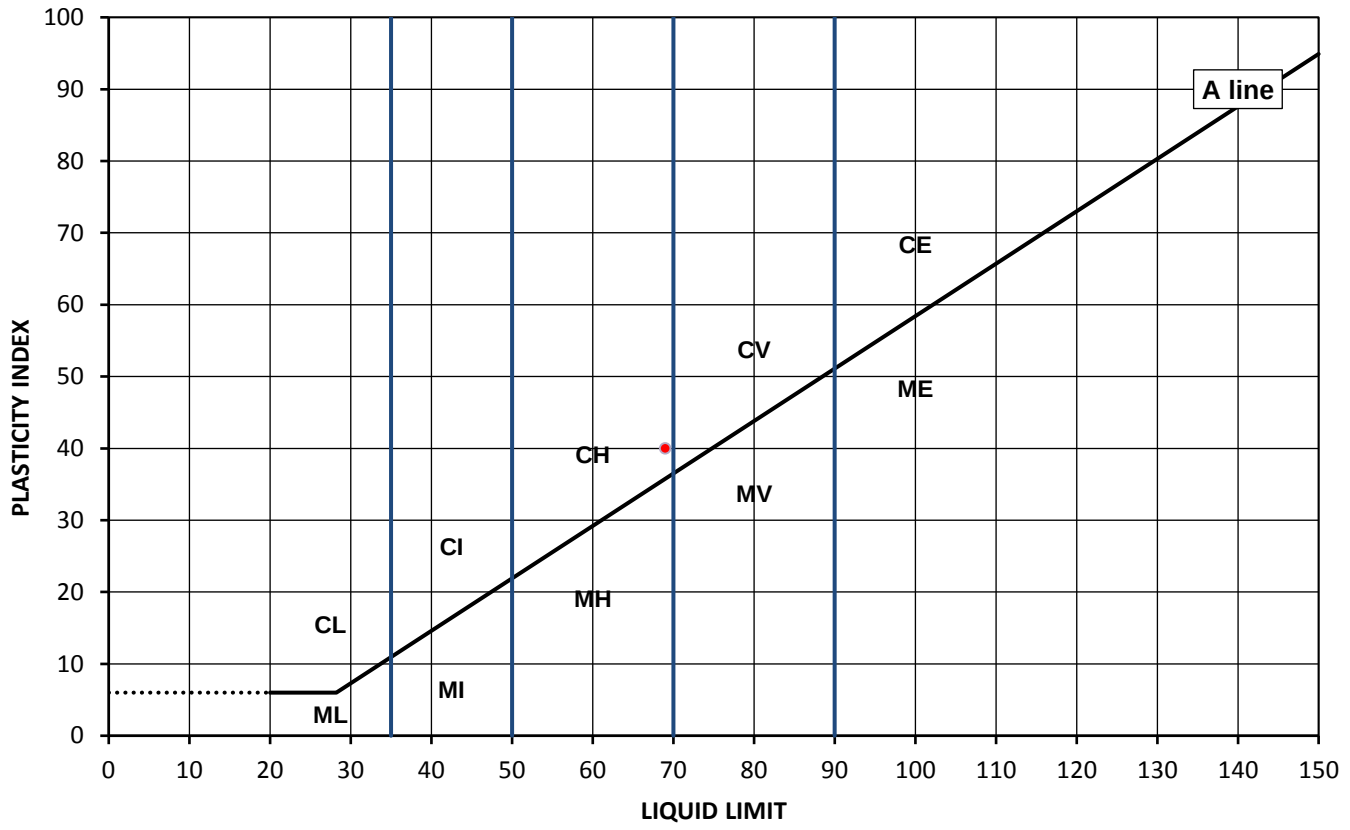
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176423	Depth Top [m]:	13.00
Hole No.:	BH01	Depth Base [m]:	Not Given
Sample Reference:	BH0113.001-018	Sample Type:	D
Soil Description:	Grey CLAY		

Sample Preparation: Tested in natural condition

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
28	69	29	40	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

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

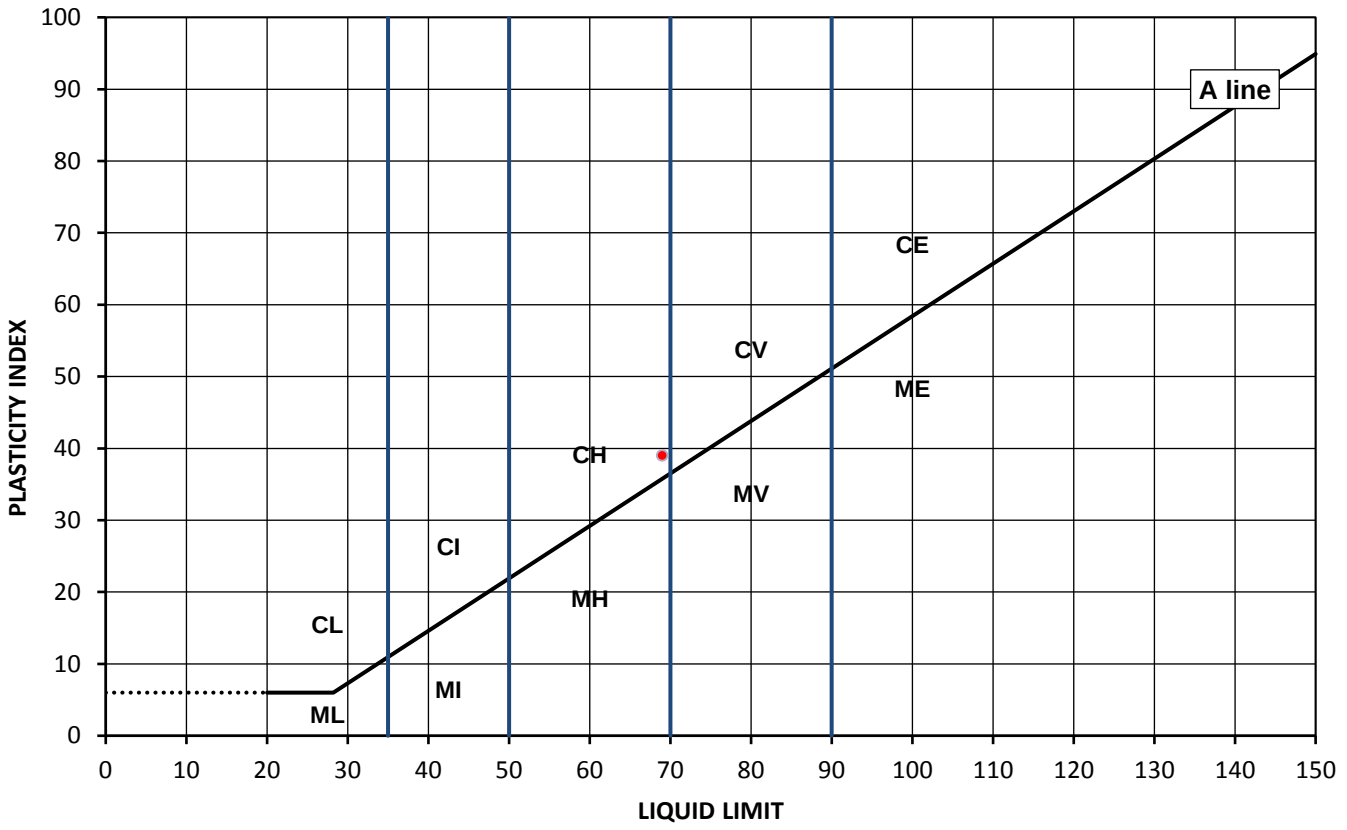
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176427	Depth Top [m]:	19.00
Hole No.:	BH01	Depth Base [m]:	19.45
Sample Reference:	BH119.001-027	Sample Type:	B
Soil Description:	Grey CLAY		

Sample Preparation: Tested in natural condition

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
31	69	30	39	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

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

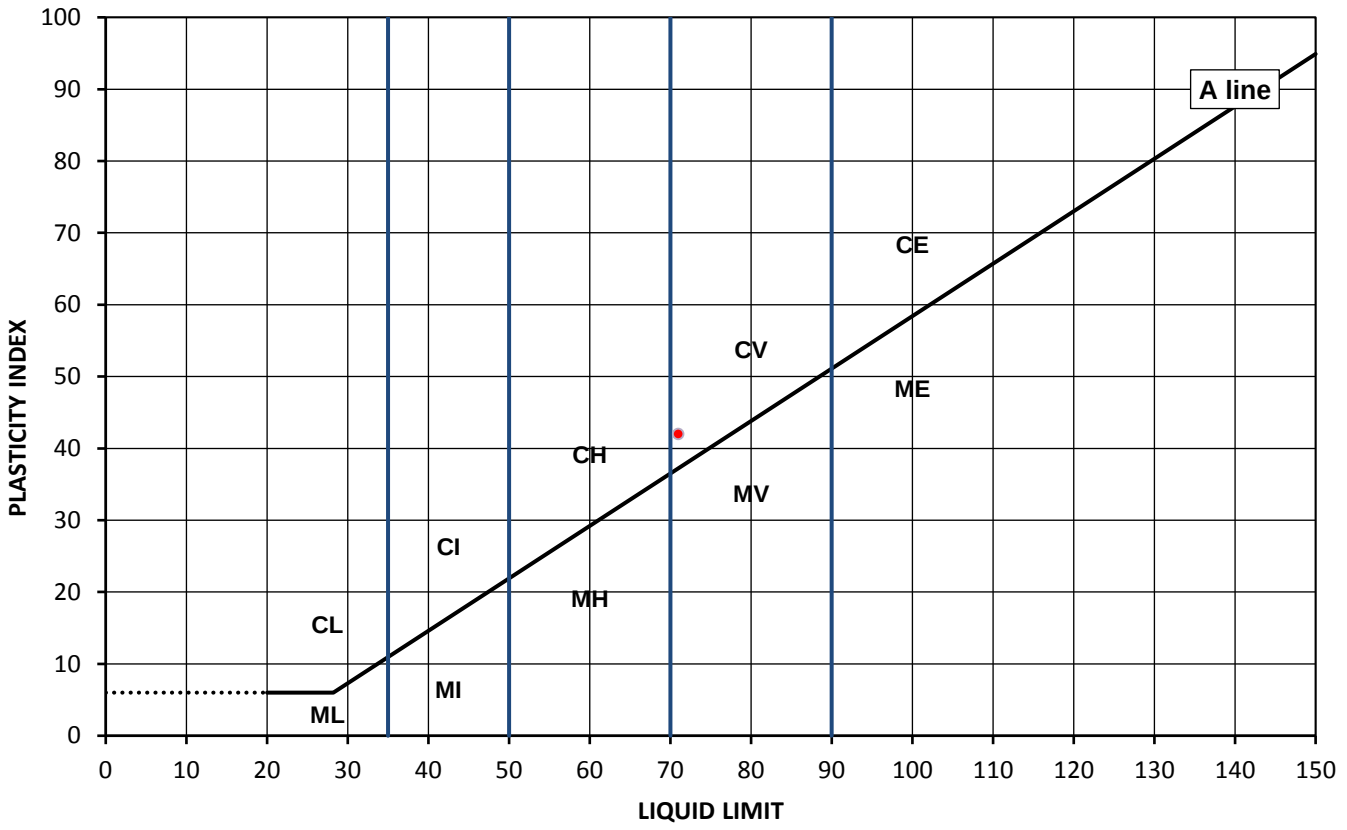
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176429	Depth Top [m]:	23.00
Hole No.:	BH01	Depth Base [m]:	Not Given
Sample Reference:	BH0123.001-031	Sample Type:	D
Soil Description:	Grey CLAY		

Sample Preparation: Tested in natural condition

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
26	71	29	42	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

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

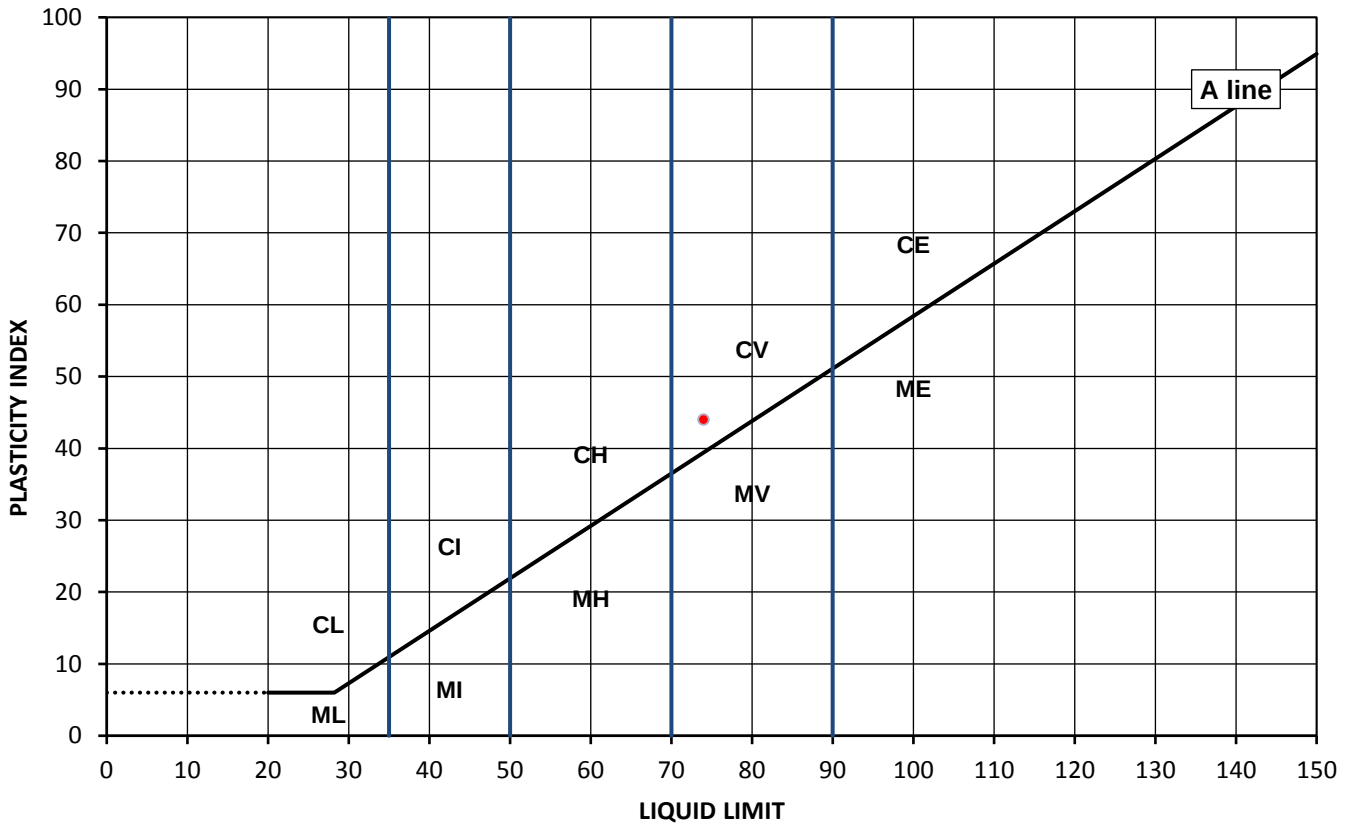
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176431	Depth Top [m]:	5.10
Hole No.:	BH03	Depth Base [m]:	Not Given
Sample Reference:	BH035.101.044	Sample Type:	D
Soil Description:	Brown CLAY		

Sample Preparation: Tested in natural condition

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
33	74	30	44	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

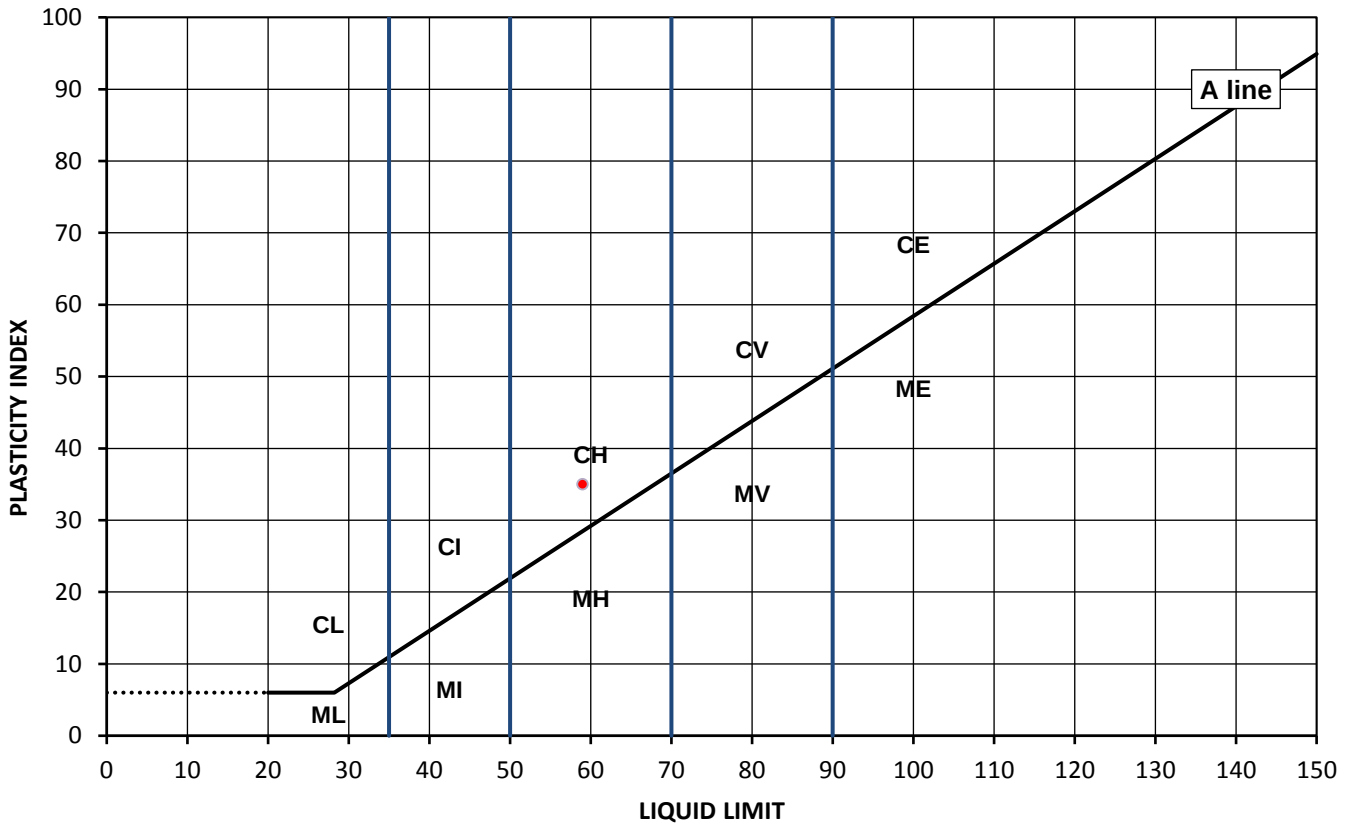
Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		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:	1176434	Depth Top [m]:	10.50
Hole No.:	BH03	Depth Base [m]:	Not Given
Sample Reference:	BH0310.501-049	Sample Type:	D
Soil Description:	Brown slightly sandy CLAY		
Sample Preparation:	Tested in natural condition		

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
27	59	24	35	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

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

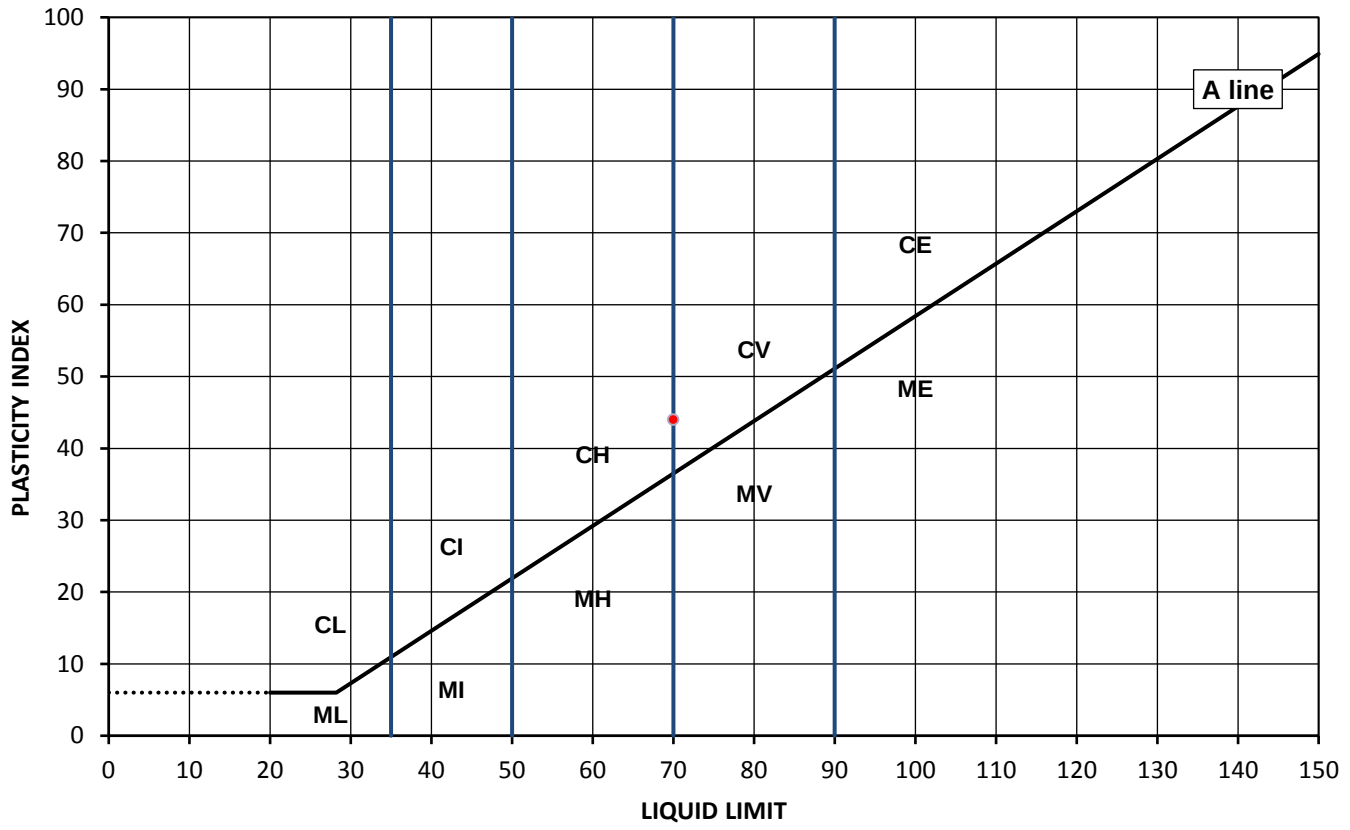
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176441	Depth Top [m]:	24.50
Hole No.:	BH03	Depth Base [m]:	Not Given
Sample Reference:	BH0324.501-065	Sample Type:	D
Soil Description:	Brown CLAY		

Sample Preparation: Tested in natural condition

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
25	70	26	44	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

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

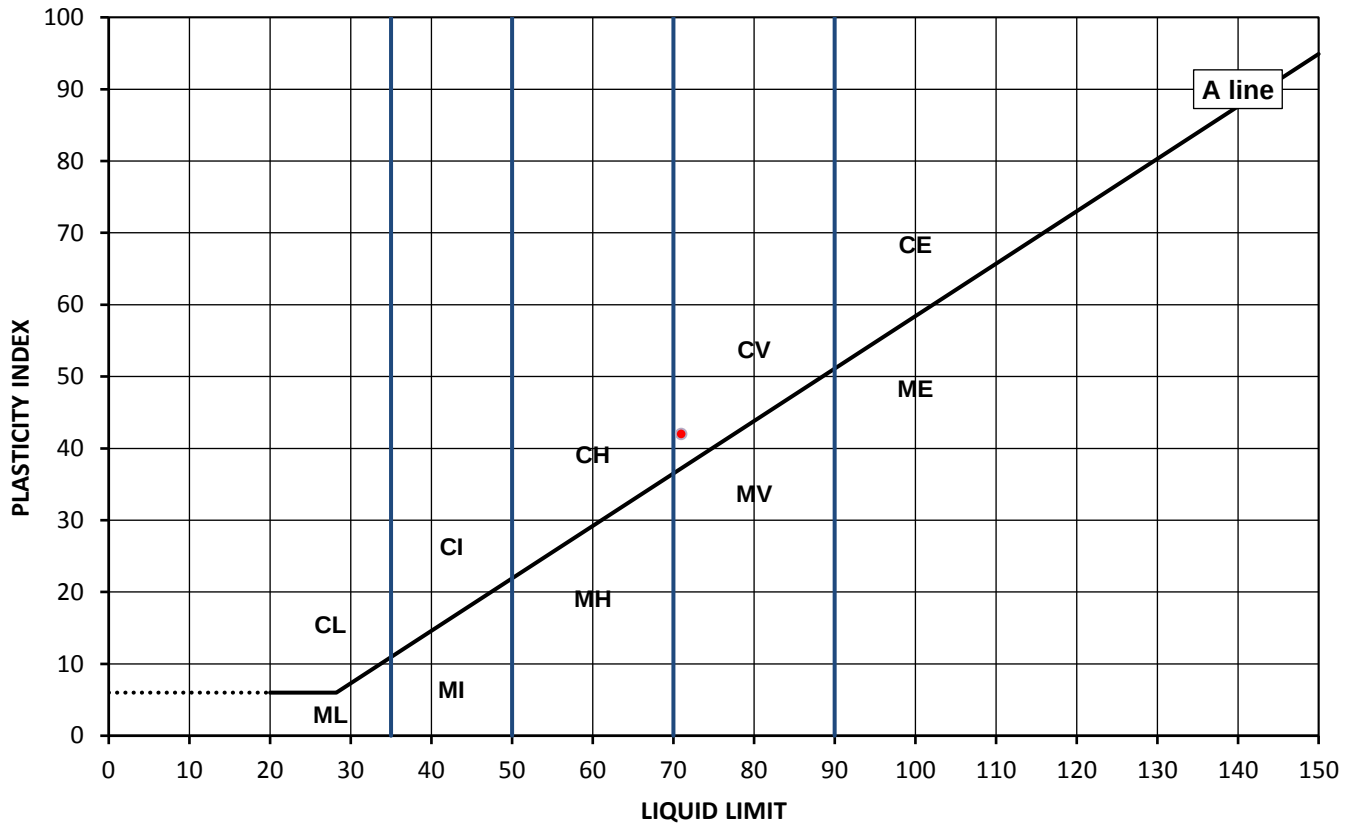
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176445	Depth Top [m]:	28.00
Hole No.:	BH03	Depth Base [m]:	28.45
Sample Reference:	BH0328.001-072	Sample Type:	D
Soil Description:	Brownish grey CLAY		

Sample Preparation: Tested in natural condition

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
25	71	29	42	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

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

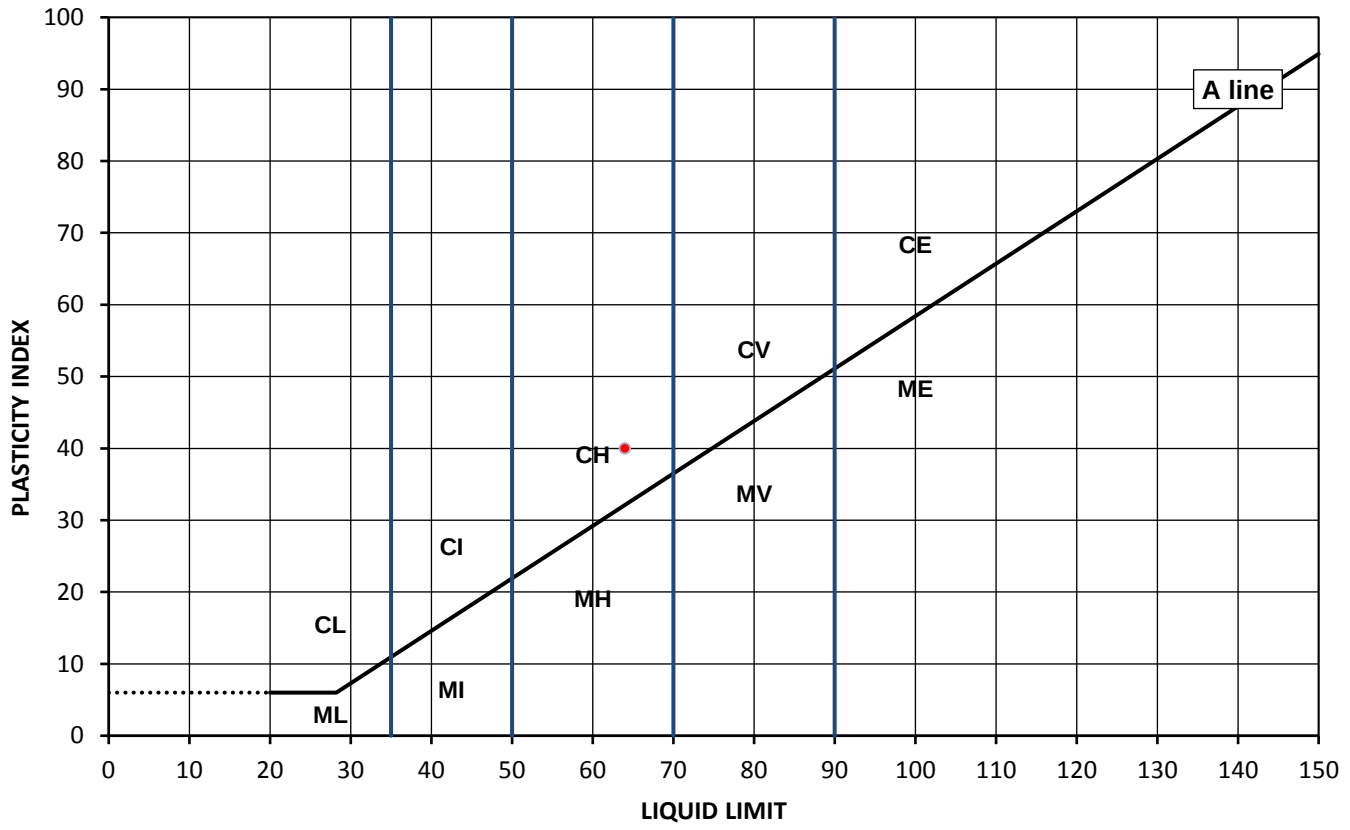
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	20/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176449	Depth Top [m]:	36.00
Hole No.:	BH03	Depth Base [m]:	Not Given
Sample Reference:	BH0333.451-080	Sample Type:	D
Soil Description:	Grey CLAY		

Sample Preparation: Tested in natural condition

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
23	64	24	40	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

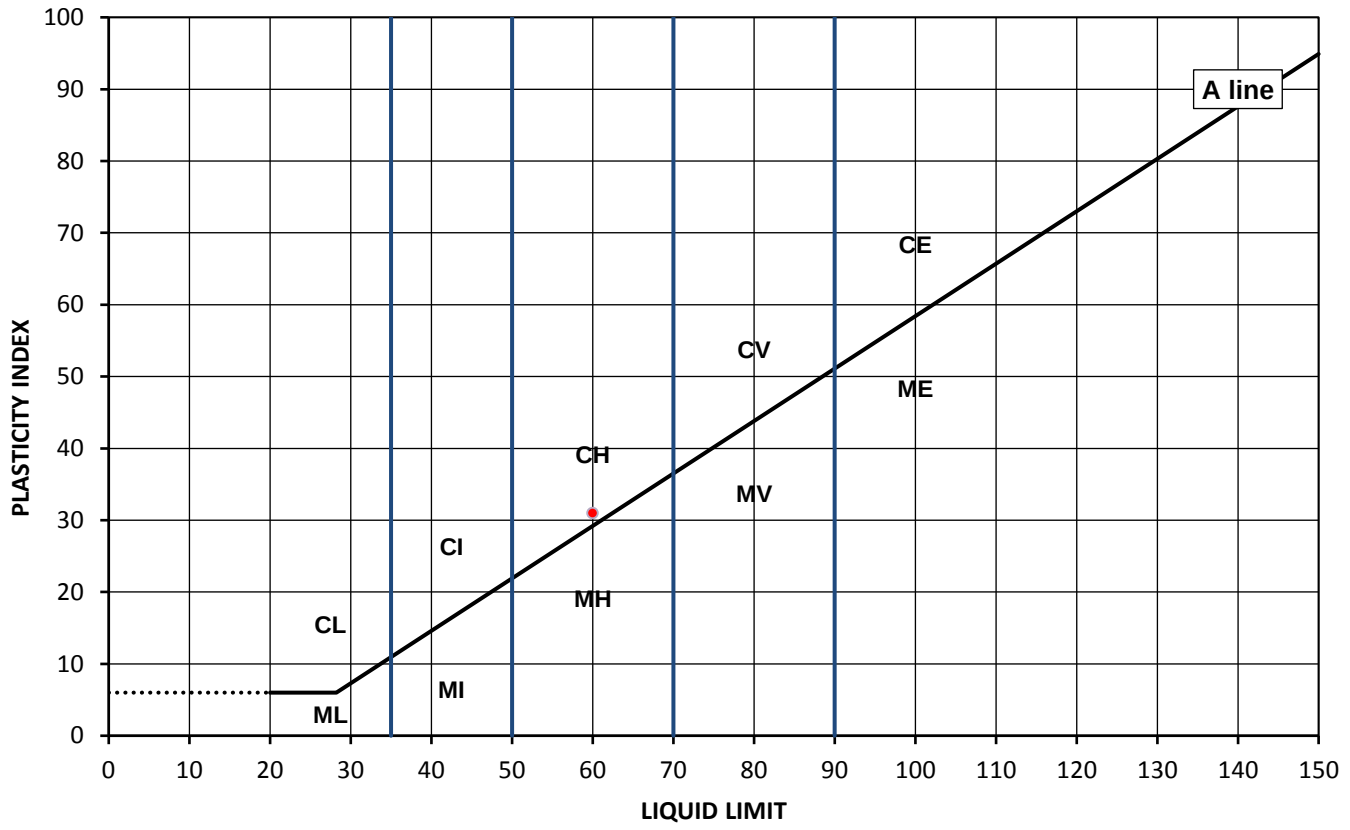
Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		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:	1176453	Depth Top [m]:	39.50
Hole No.:	BH03	Depth Base [m]:	Not Given
Sample Reference:	BH0339.501-089	Sample Type:	U
Soil Description:	Brown slightly sandy CLAY		
Sample Preparation:	Tested in natural condition		

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
23	60	29	31	100



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

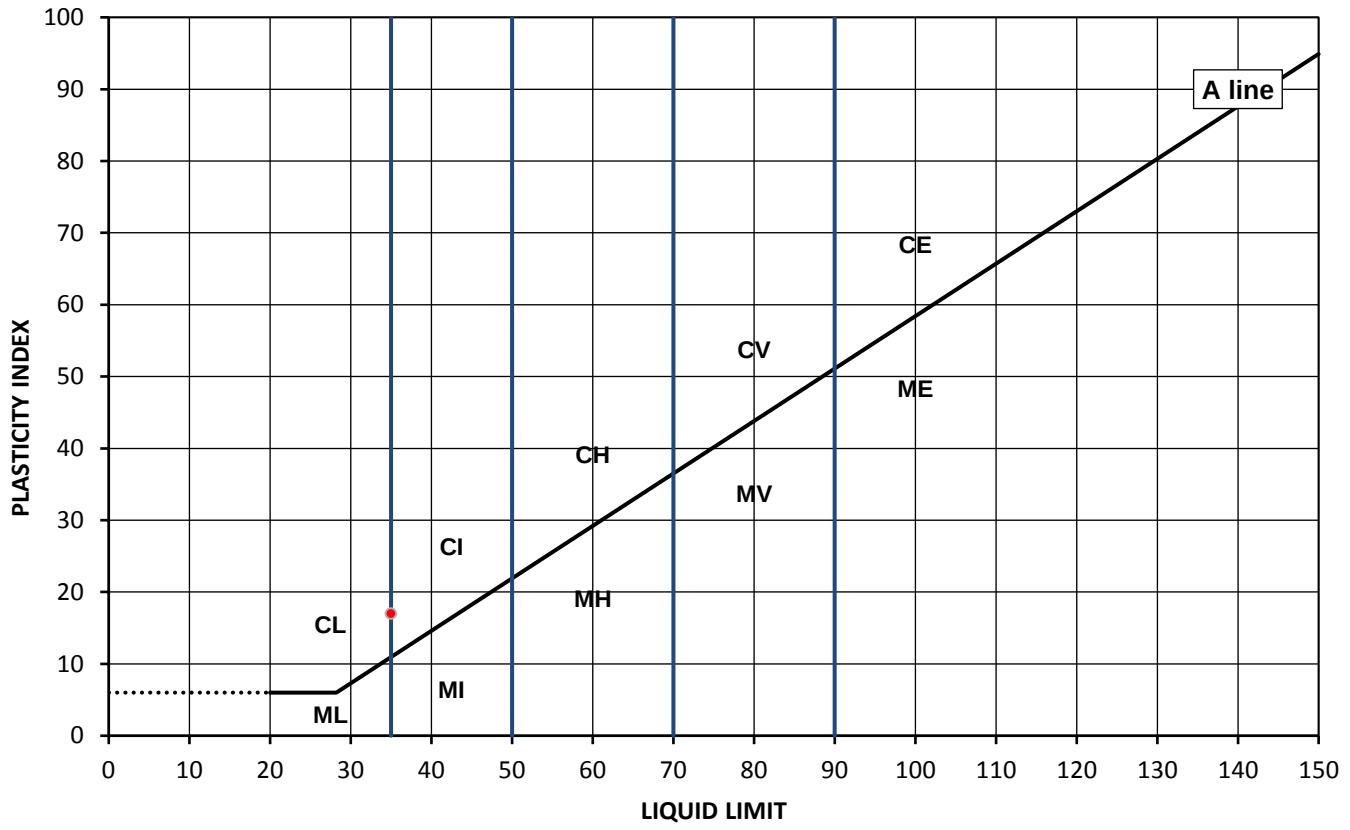
Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		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
Soil Description:	Brownish grey slightly gravelly very sandy CLAY		
Sample Preparation:	Tested after washing to remove >425um		

As Received Moisture Content [%]	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index [%]	% Passing 425µm BS Test Sieve
26	35	18	17	88



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

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

4041

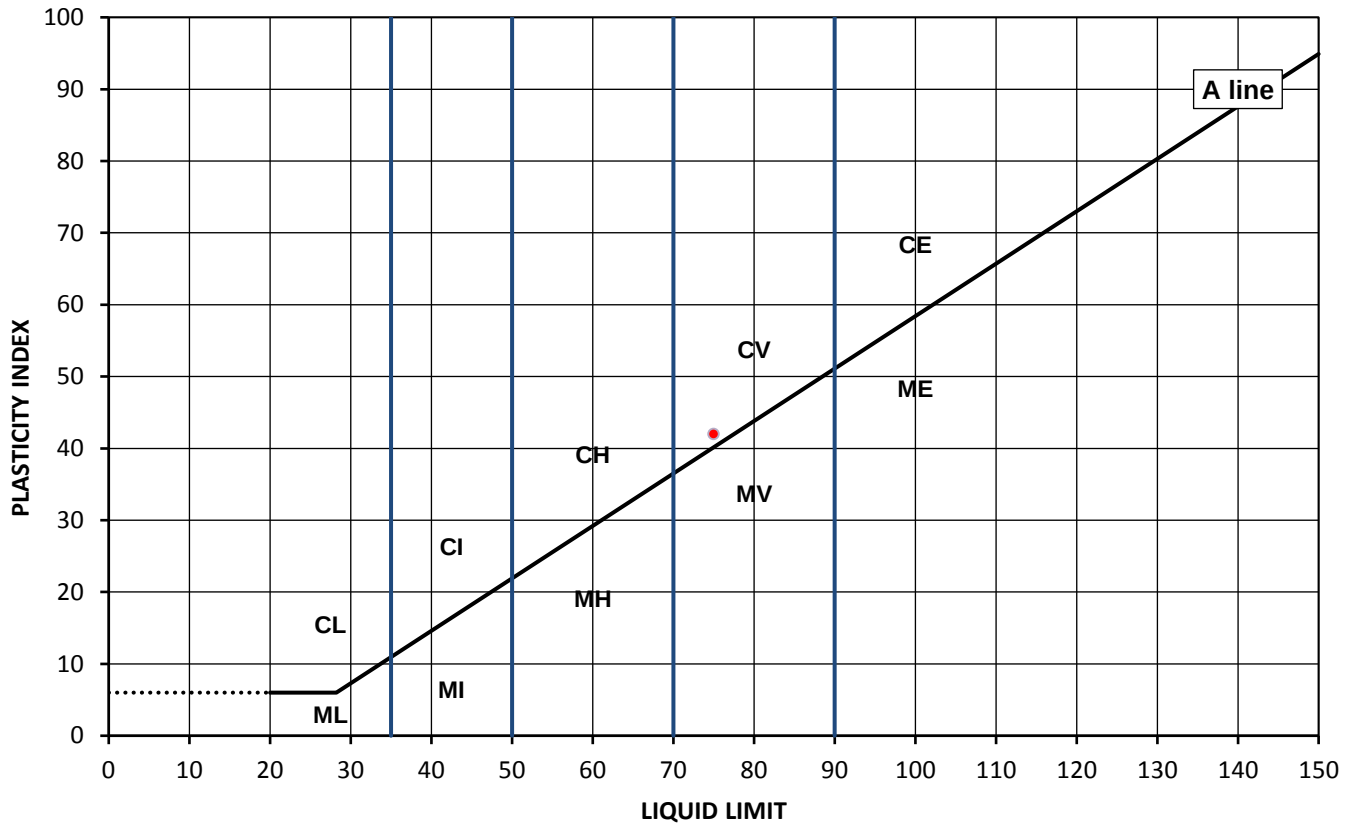
Tested in Accordance with: BS 1377-2: 1990: Clause 4.4 and 5

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		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:	B
Soil Description:	Greyish brown slightly gravelly CLAY		
Sample Preparation:	Tested after >425um removed by hand		

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



Legend, based on BS 5930:2015 Code of practice for site investigations

		Plasticity		Liquid Limit
C	Clay	L	Low	below 35
M	Silt	I	Medium	35 to 50
		H	High	50 to 70
		V	Very high	70 to 90
		E	Extremely high	exceeding 90
	Organic	O	append to classification for organic material (eg CHO)	

Note: Moisture Content by BS 1377-2: 1990: Caluse 3.2

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 232.4

for and on behalf of i2 Analytical Ltd

SUMMARY REPORT

Summary of Classification Test Results

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

UKAS TESTING 4041

Environmental Science

Tested in Accordance with:

MC by BS 1377-2: 1990: Clause 3.2; WC by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3, Clause 4.4 and 5; PD by BS 1377-2: 1990: Clause 8.2

Client: Soiltechnics Limited

Client Address: Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY

Contact: Lauren Wenham

Site Name: St Pancras Campus, Camden

Site Address: Not Given

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

Laboratory Reference	Hole No.	Sample				Description	Remarks	MC	WC	Atterberg				Density			Total Porosity#		
		Reference	Depth Top m	Depth Base m	Type			%	%	% Passing 425um %	LL %	PL %	PI %	bulk Mg/m3	dry Mg/m3	PD 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	B	Greyish brown slightly gravelly CLAY	Atterberg 1 Point	45		95	75	33	42						
1176427	BH01	BH119.001-027	19.00	19.45	B	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						

Note: # Non accredited; NP - Non plastic

Comments:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 234.6

for and on behalf of i2 Analytical Ltd

SUMMARY REPORT

Summary of Classification Test Results

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

UKAS TESTING 4041

Environmental Science

Tested in Accordance with:

MC by BS 1377-2: 1990: Clause 3.2; WC by BS EN 17892-1: 2014; Atterberg by BS 1377-2: 1990: Clause 4.3, Clause 4.4 and 5; PD by BS 1377-2: 1990: Clause 8.2

Client: Soiltechnics Limited

Client Address: Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY

Contact: Lauren Wenham

Site Name: St Pancras Campus, Camden

Site Address: Not Given

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

Laboratory Reference	Hole No.	Sample				Description	Remarks	MC	WC	Atterberg				Density			Total Porosity#		
		Reference	Depth Top	Depth Base	Type					% Passing 425um	LL	PL	PI	bulk	dry	PD			
			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

Signed: Darren Berrill
Geotechnical General Manager

GF 234.6

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

UKAS TESTING 4041

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

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		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		

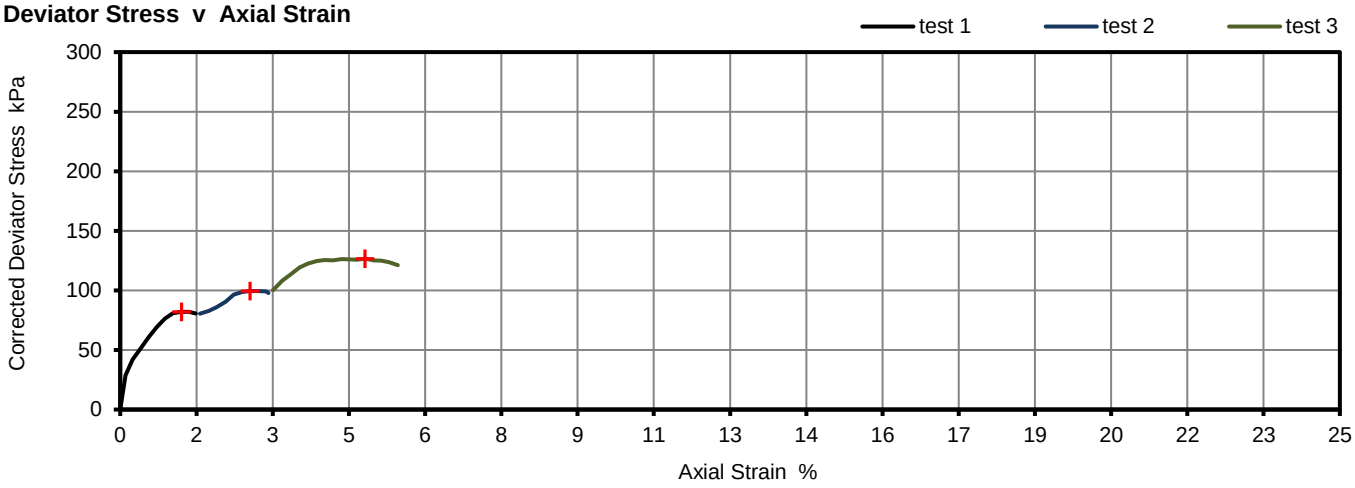
Test Results:

Laboratory Reference:	1176425	Depth Top [m]:	16.00
Hole No.:	BH01	Depth Base [m]:	16.45
Sample Reference:	BH0116.001-021	Sample Type:	U
Sample Description:	Dark brown CLAY		

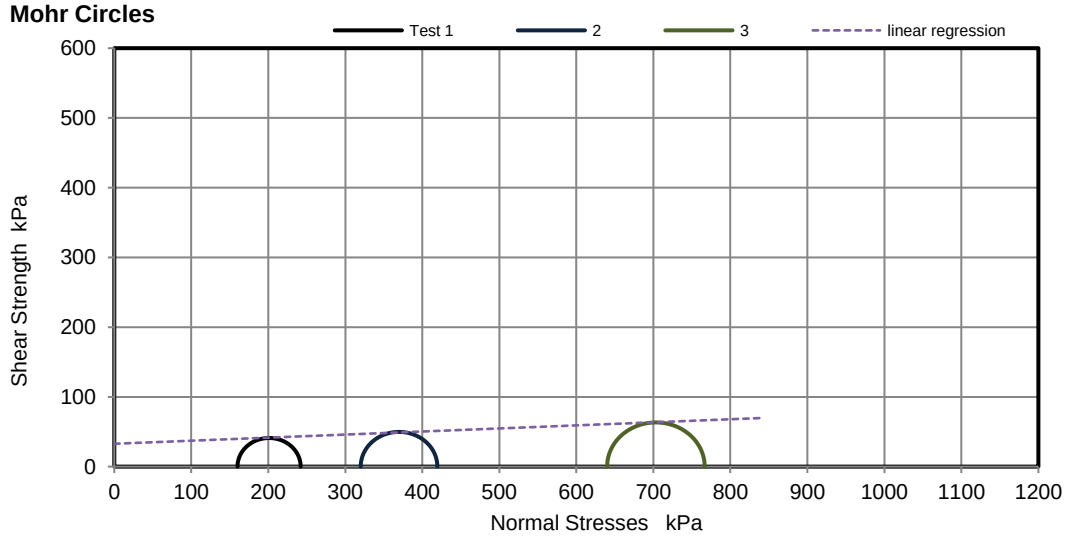
Length	195.80	mm
Diameter	102.80	mm
Bulk Density	2.01	Mg/m3
Moisture Content	27	%
Dry Density	1.58	Mg/m3
Membrane thickness	0.26	mm

Rate of Strain	2.00			%/min
Stage Number	1	2	3	
Cell Pressure	160	320	640	kPa
Axial Strain at failure	1.3	2.7	5.0	%
Deviator Stress, (σ1 - σ3)f	82	100	127	kPa
Shear strength, cu	41	50	63	kPa
Mode of failure	Brittle			
Membrane Correction	0.09	0.18	0.36	kPa

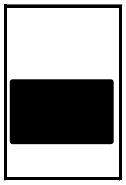
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



Linear Regression

ϕu	2.5	°
cu	33	kPa

Note: Mohr circles and their interpretation is not covered by BS1377. These are provided for information only.

Remarks: Correction values:160kPa-90N; 320kPa-180N; 640kPa-330N

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

Signed: Darren Berrill
Geotechnical General Manager

GF 186.6

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

UKAS TESTING 4041

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

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		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		

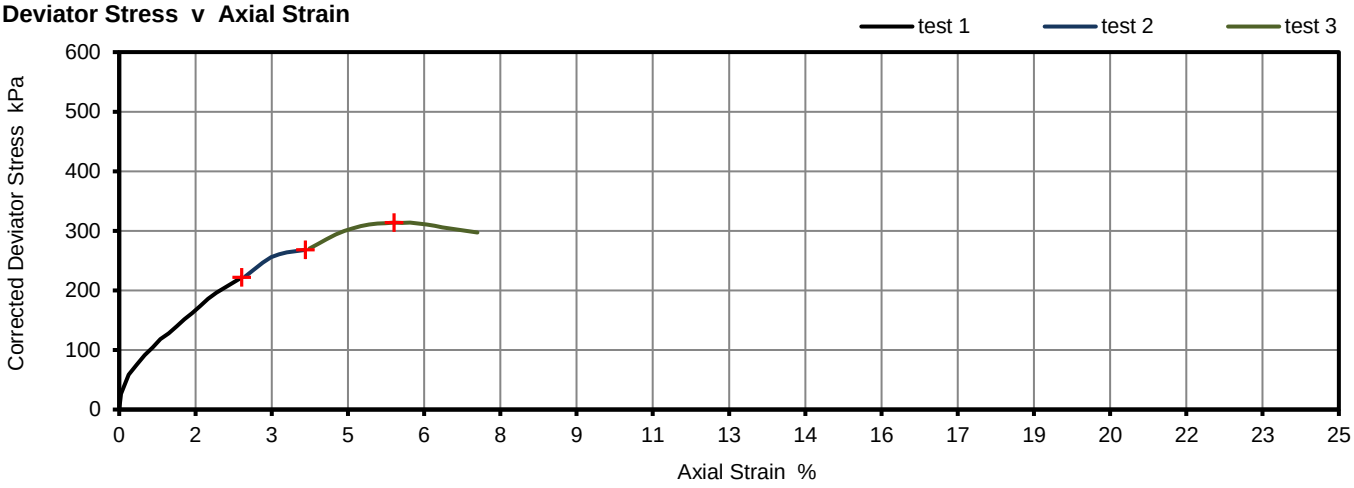
Test Results:

Laboratory Reference:	1176428	Depth Top [m]:	20.00
Hole No.:	BH01	Depth Base [m]:	20.45
Sample Reference:	BH0120.001-028	Sample Type:	U
Sample Description:	Brown CLAY		

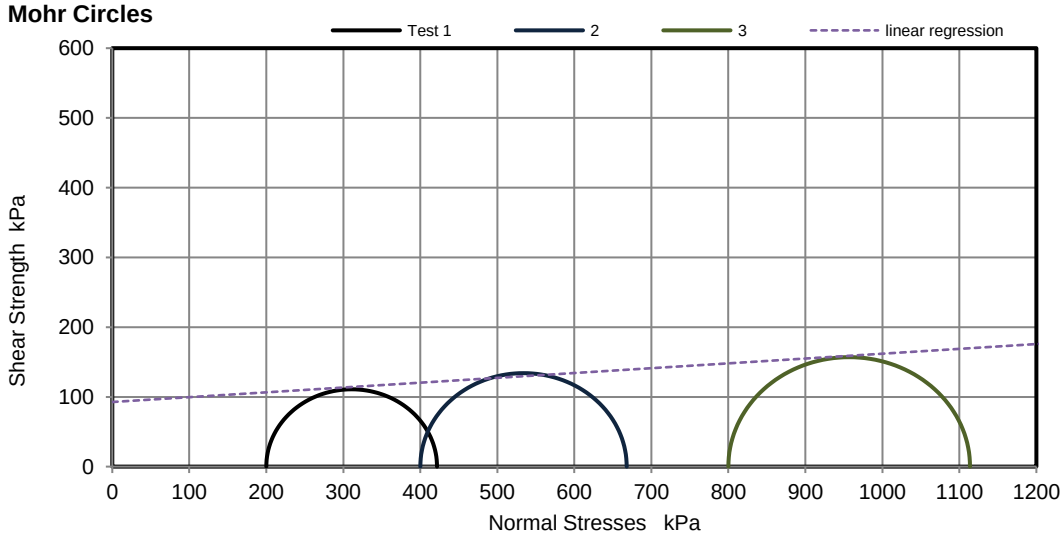
Length	196.40	mm
Diameter	103.40	mm
Bulk Density	1.98	Mg/m3
Moisture Content	29	%
Dry Density	1.54	Mg/m3
Membrane thickness	0.27	mm

Rate of Strain	2.00			%/min
Stage Number	1	2	3	
Cell Pressure	200	400	800	kPa
Axial Strain at failure	2.5	3.8	5.6	%
Deviator Stress, (σ1 - σ3)f	222	268	314	kPa
Shear strength, cu	111	134	157	kPa
Mode of failure	Brittle			
Membrane Correction	0.18	0.27	0.40	kPa

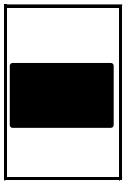
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



Linear Regression

ϕu	4.0	°
cu	93	kPa

Note: Mohr circles and their interpretation is not covered by BS1377. These are provided for information only.

Remarks: Correction values: 200kPa-112N; 400kPa-212N; 800kPa-410N

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

Signed: Darren Berrill
Geotechnical General Manager

GF 186.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

4041

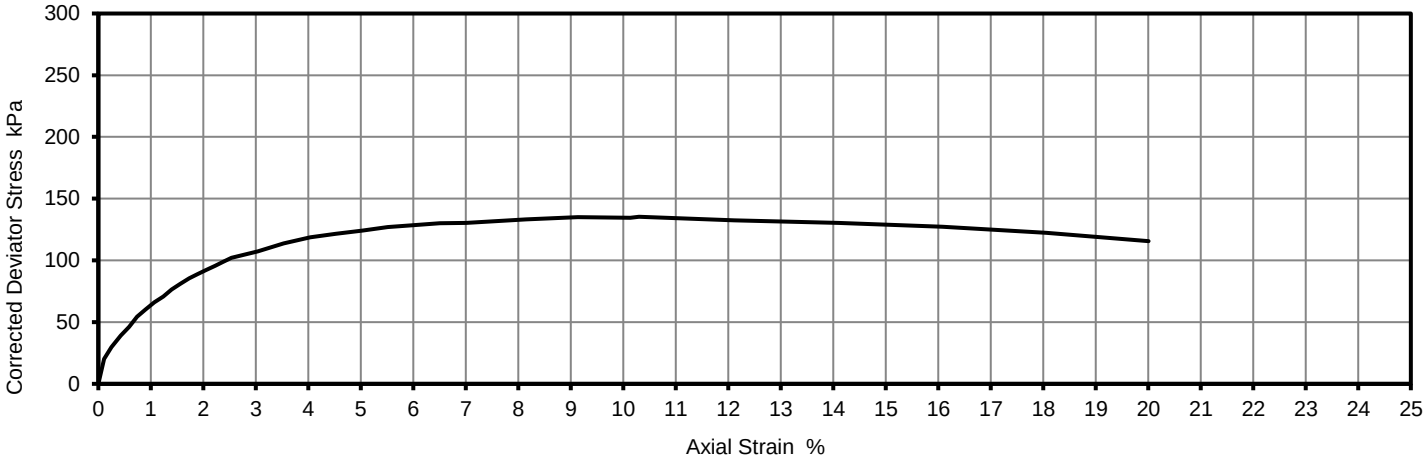
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

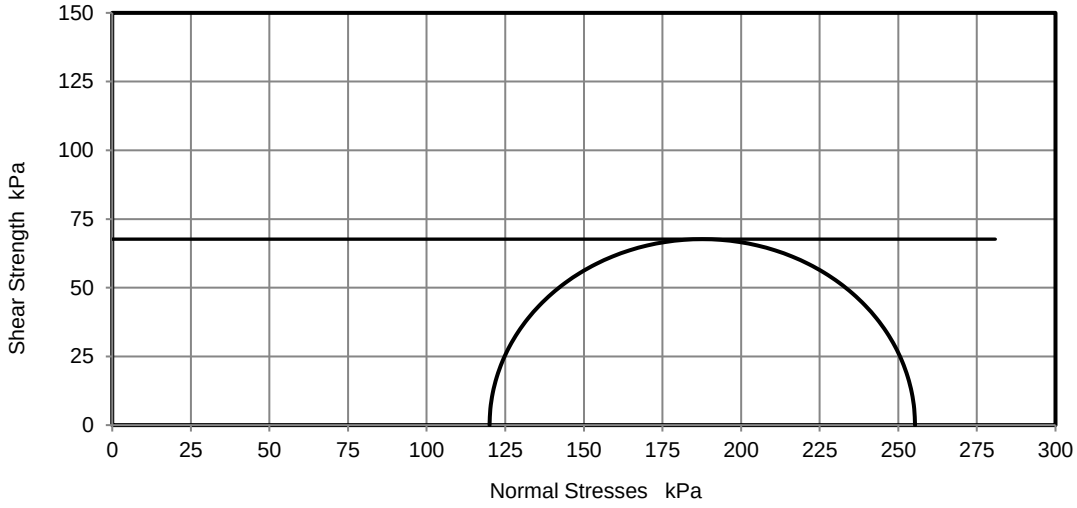
Laboratory Reference:	1176419	Depth Top [m]:	6.00
Hole No.:	BH01	Depth Base [m]:	6.45
Sample Reference:	BH016.001-009	Sample Type:	U
Sample Description:	Brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	199.31	mm	Cell Pressure	120	kPa	
Diameter	103.31	mm	Axial Strain at failure	10.3	%	
Bulk Density	1.95	Mg/m3	Deviator Stress, (σ1 - σ3)f	135	kPa	
Moisture Content	25	%	Undrained Shear Strength, cu	68	kPa	½(σ1 - σ3)f
Dry Density	1.57	Mg/m3	Mode of Failure	Compound		
Membrane Correction	0.57	kPa	Membrane thickness	0.26	mm	

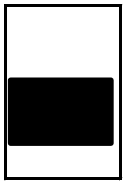
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

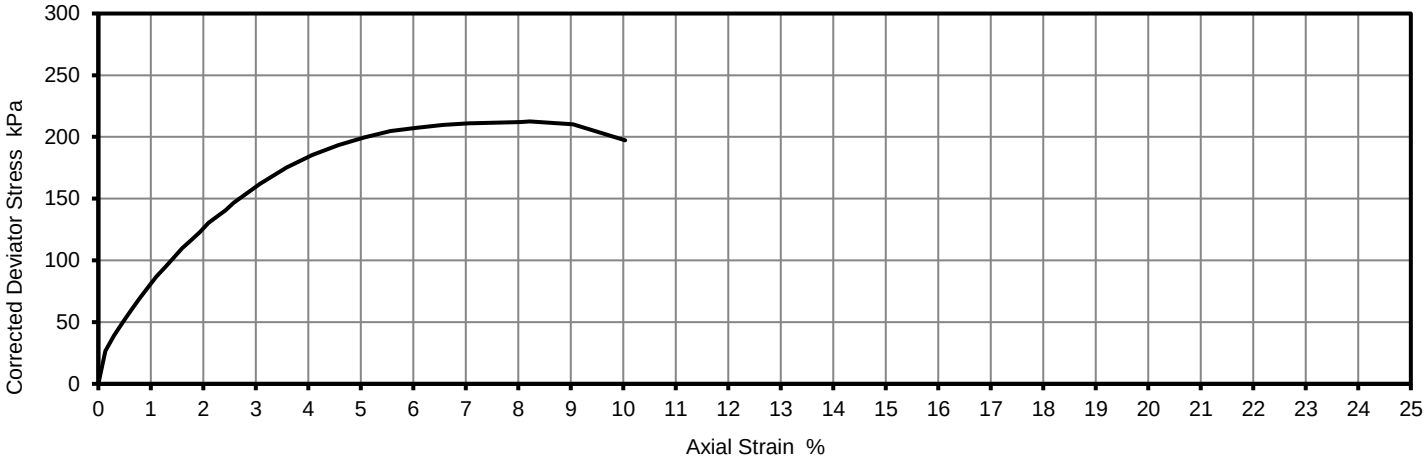
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

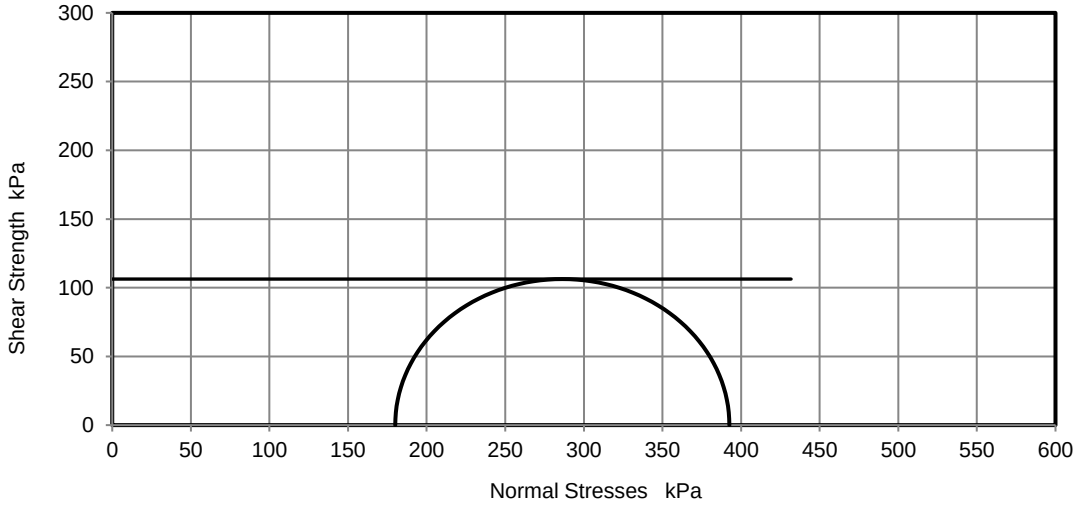
Laboratory Reference:	1176421	Depth Top [m]:	9.00
Hole No.:	BH01	Depth Base [m]:	9.45
Sample Reference:	BH019.001-012	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	199.90	mm	Cell Pressure	180	kPa	
Diameter	103.50	mm	Axial Strain at failure	8.2	%	
Bulk Density	2.00	Mg/m3	Deviator Stress, (σ1 - σ3)f	213	kPa	
Moisture Content	24	%	Undrained Shear Strength, cu	106	kPa	½(σ1 - σ3)f
Dry Density	1.62	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.49	kPa	Membrane thickness	0.26	mm	

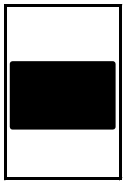
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

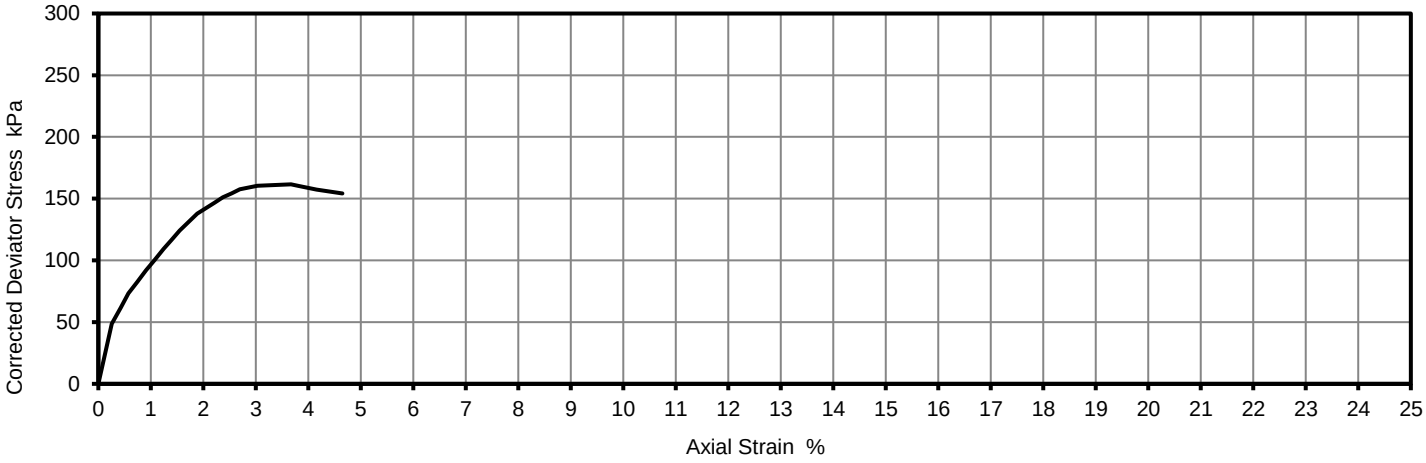
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

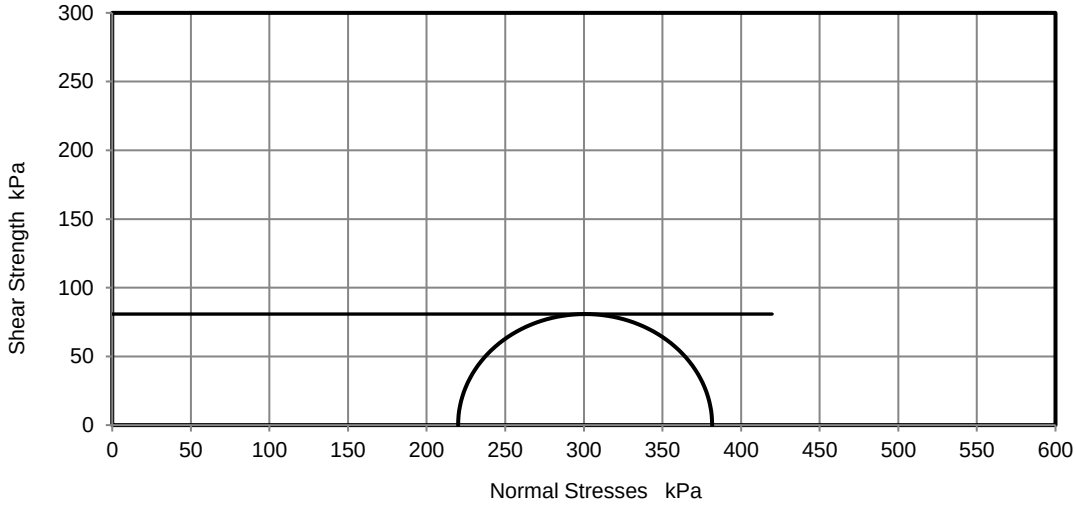
Laboratory Reference:	1176422	Depth Top [m]:	11.00
Hole No.:	BH01	Depth Base [m]:	11.45
Sample Reference:	BH0111.001-015	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	199.84	mm	Cell Pressure	220	kPa	
Diameter	103.36	mm	Axial Strain at failure	3.7	%	
Bulk Density	2.01	Mg/m3	Deviator Stress, (σ1 - σ3)f	162	kPa	
Moisture Content	29	%	Undrained Shear Strength, cu	81	kPa	½(σ1 - σ3)f
Dry Density	1.56	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.27	kPa	Membrane thickness	0.28	mm	

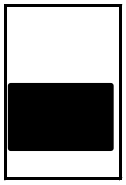
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

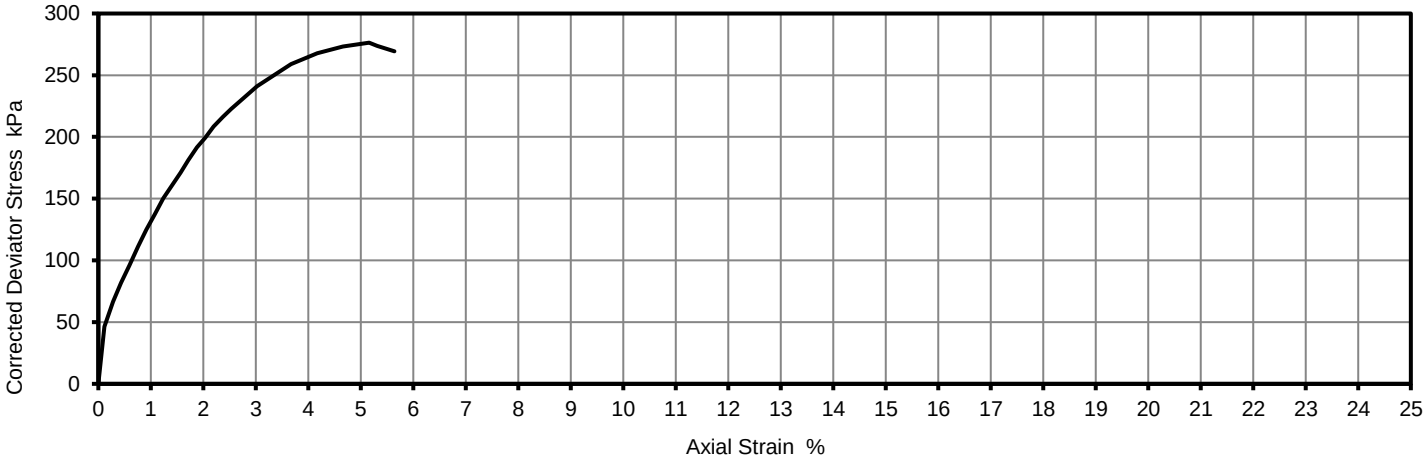
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

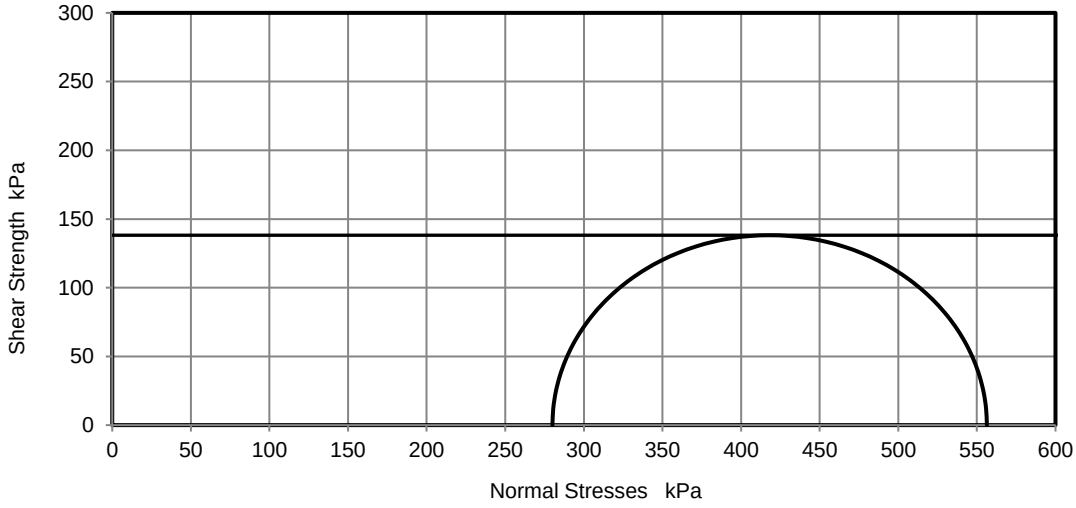
Laboratory Reference:	1176424	Depth Top [m]:	14.00
Hole No.:	BH01	Depth Base [m]:	14.45
Sample Reference:	BH0114.001-019	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	1.98	%/min	
Length	201.80	mm	Cell Pressure	280	kPa	
Diameter	103.40	mm	Axial Strain at failure	5.2	%	
Bulk Density	2.00	Mg/m3	Deviator Stress, (σ1 - σ3)f	276	kPa	
Moisture Content	25	%	Undrained Shear Strength, cu	138	kPa	½(σ1 - σ3)f
Dry Density	1.61	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.35	kPa	Membrane thickness	0.25	mm	

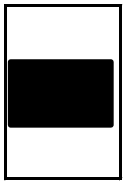
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

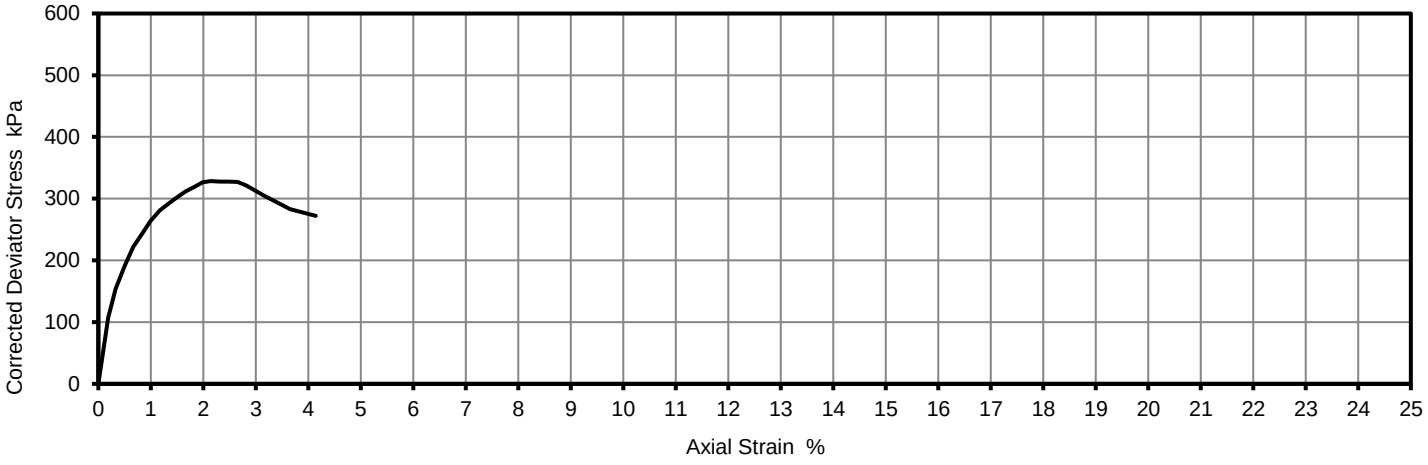
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

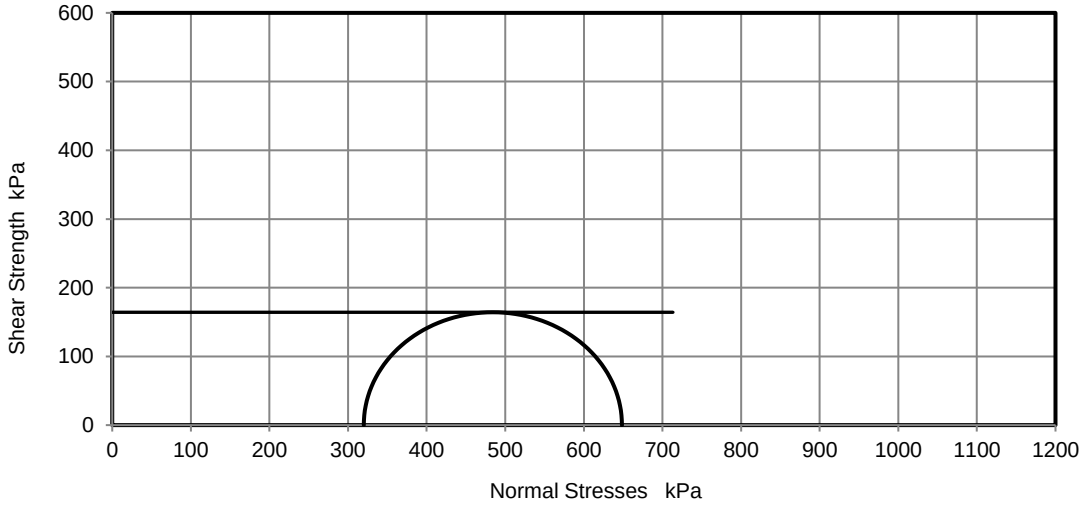
Laboratory Reference:	1176425	Depth Top [m]:	16.00
Hole No.:	BH01	Depth Base [m]:	16.45
Sample Reference:	BH0116.001-021	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min
Length	96.61	mm	Cell Pressure	320	kPa
Diameter	50.31	mm	Axial Strain at failure	2.1	%
Bulk Density	1.97	Mg/m3	Deviator Stress, (σ1 - σ3)f	328	kPa
Moisture Content	27	%	Undrained Shear Strength, cu	164	kPa ½(σ1 - σ3)f
Dry Density	1.55	Mg/m3	Mode of Failure	Brittle	
Membrane Correction	0.38	kPa	Membrane thickness	0.33	mm

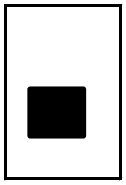
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

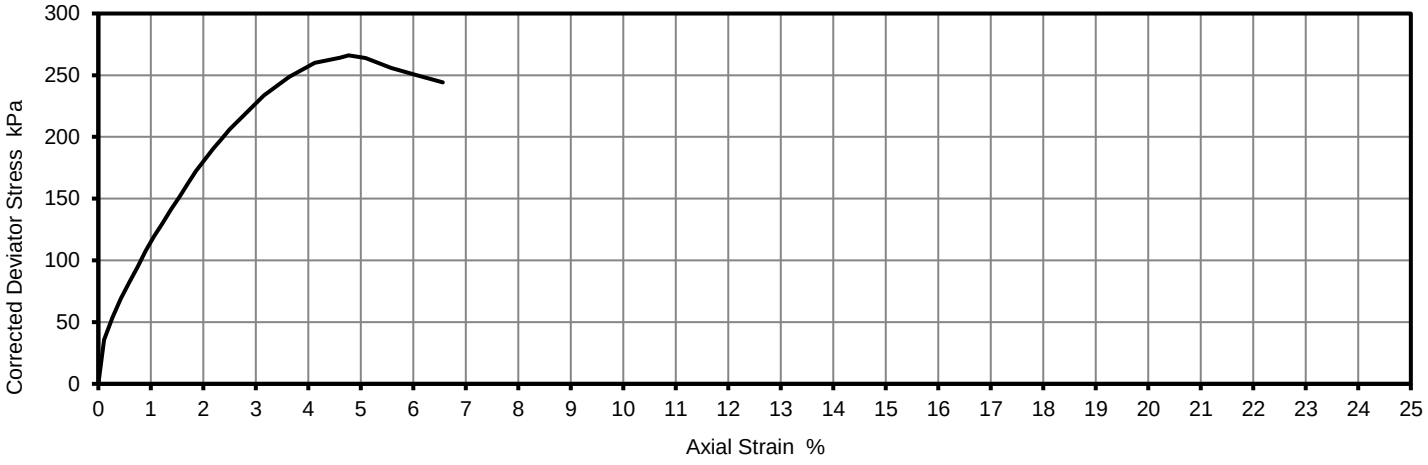
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

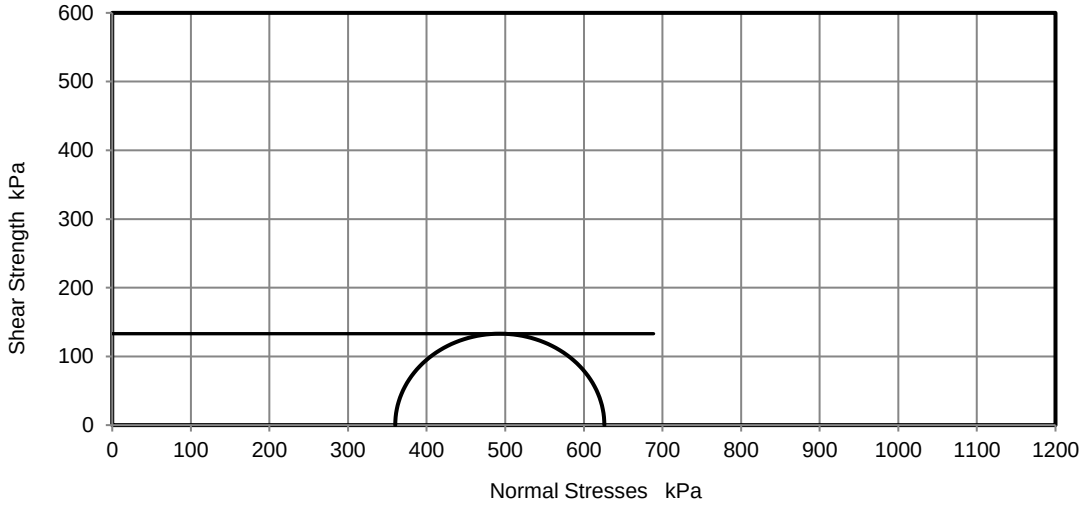
Laboratory Reference:	1176426	Depth Top [m]:	18.00
Hole No.:	BH01	Depth Base [m]:	18.45
Sample Reference:	BH0118.001-023	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	1.97	%/min	
Length	203.00	mm	Cell Pressure	360	kPa	
Diameter	103.20	mm	Axial Strain at failure	4.8	%	
Bulk Density	1.96	Mg/m3	Deviator Stress, (σ1 - σ3)f	266	kPa	
Moisture Content	28	%	Undrained Shear Strength, cu	133	kPa	½(σ1 - σ3)f
Dry Density	1.54	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.32	kPa	Membrane thickness	0.25	mm	

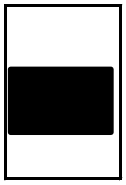
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

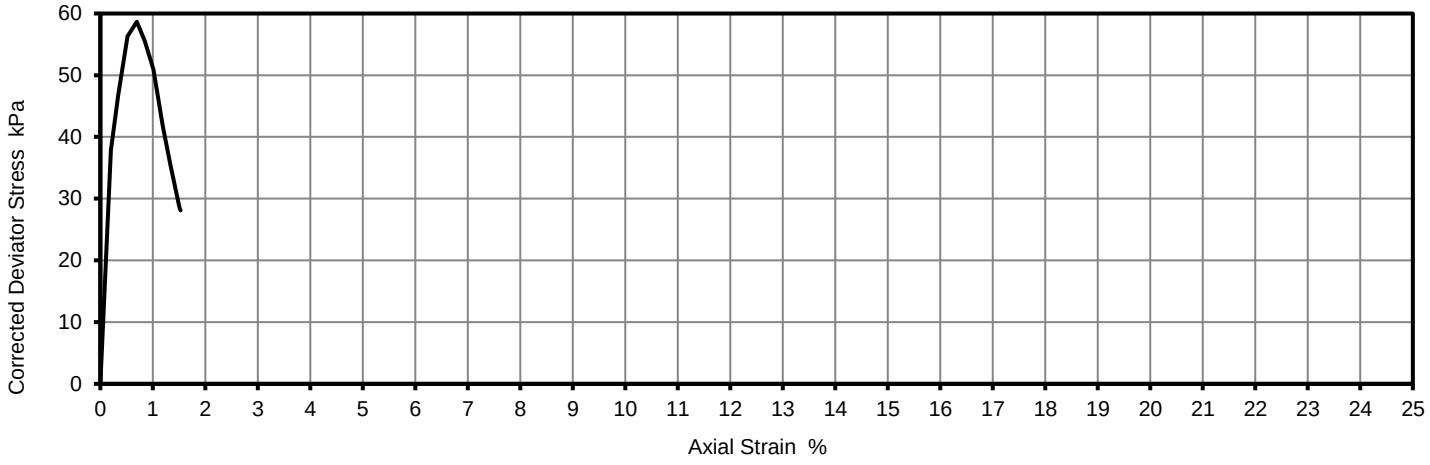
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

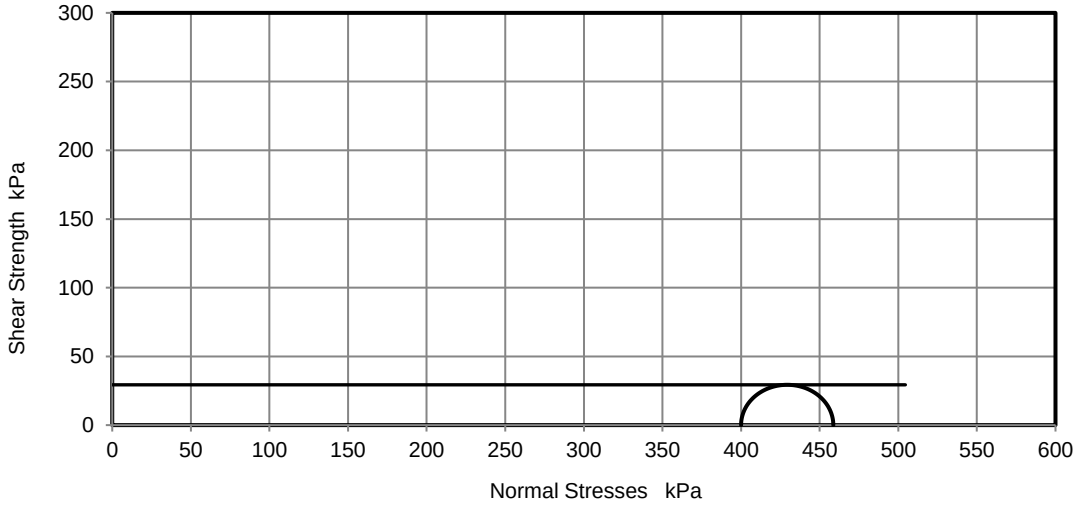
Laboratory Reference:	1176428	Depth Top [m]:	20.00
Hole No.:	BH01	Depth Base [m]:	20.45
Sample Reference:	BH0120.001-028	Sample Type:	U
Sample Description:	Brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	90.96	mm	Cell Pressure	400	kPa	
Diameter	50.16	mm	Axial Strain at failure	0.7	%	
Bulk Density	1.90	Mg/m3	Deviator Stress, (σ1 - σ3)f	59	kPa	
Moisture Content	29	%	Undrained Shear Strength, cu	29	kPa	½(σ1 - σ3)f
Dry Density	1.48	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.13	kPa	Membrane thickness	0.35	mm	

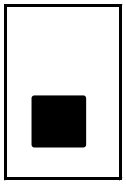
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

4041

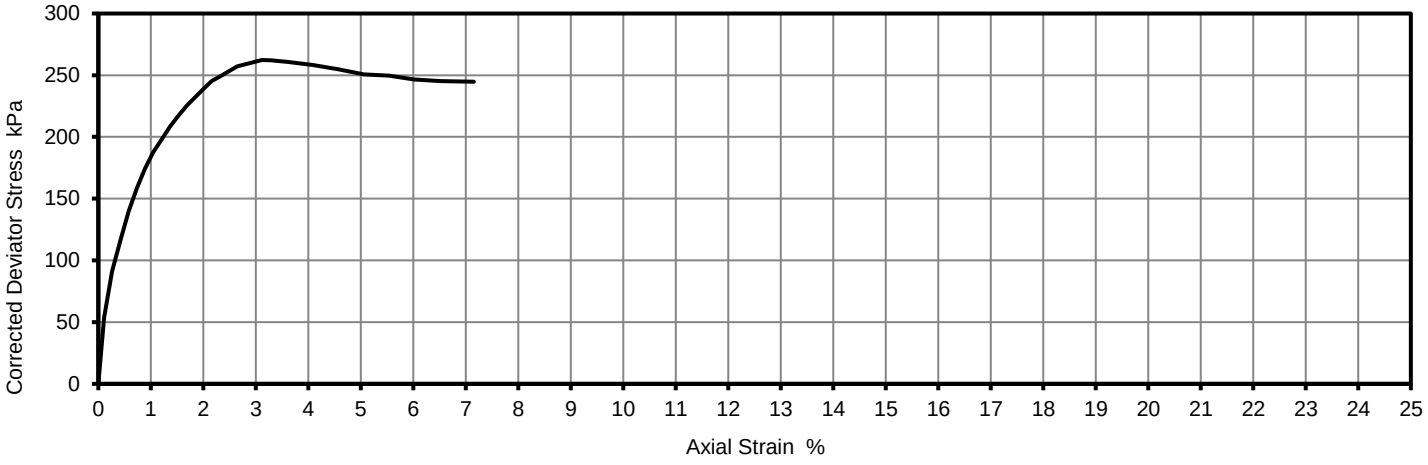
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

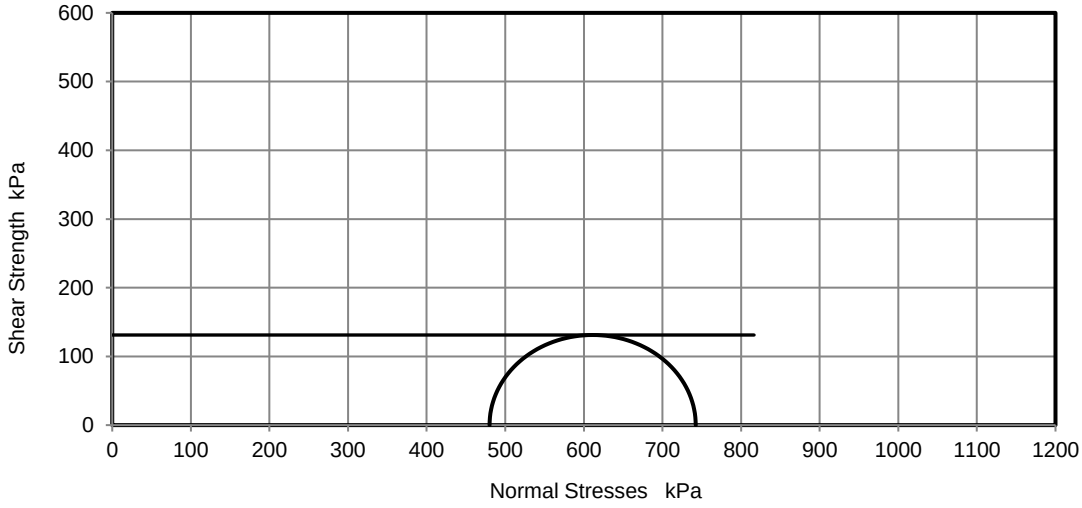
Laboratory Reference:	1176430	Depth Top [m]:	24.00
Hole No.:	BH01	Depth Base [m]:	24.45
Sample Reference:	BH0124.001-032	Sample Type:	U
Sample Description:	Dark brown slightly gravelly CLAY		

Test Number	1		Rate of Strain	1.95	%/min	
Length	205.11	mm	Cell Pressure	480	kPa	
Diameter	104.01	mm	Axial Strain at failure	3.1	%	
Bulk Density	2.04	Mg/m3	Deviator Stress, (σ1 - σ3)f	262	kPa	
Moisture Content	26	%	Undrained Shear Strength, cu	131	kPa	½(σ1 - σ3)f
Dry Density	1.62	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.18	kPa	Membrane thickness	0.22	mm	

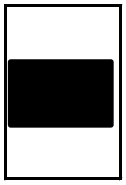
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

4041

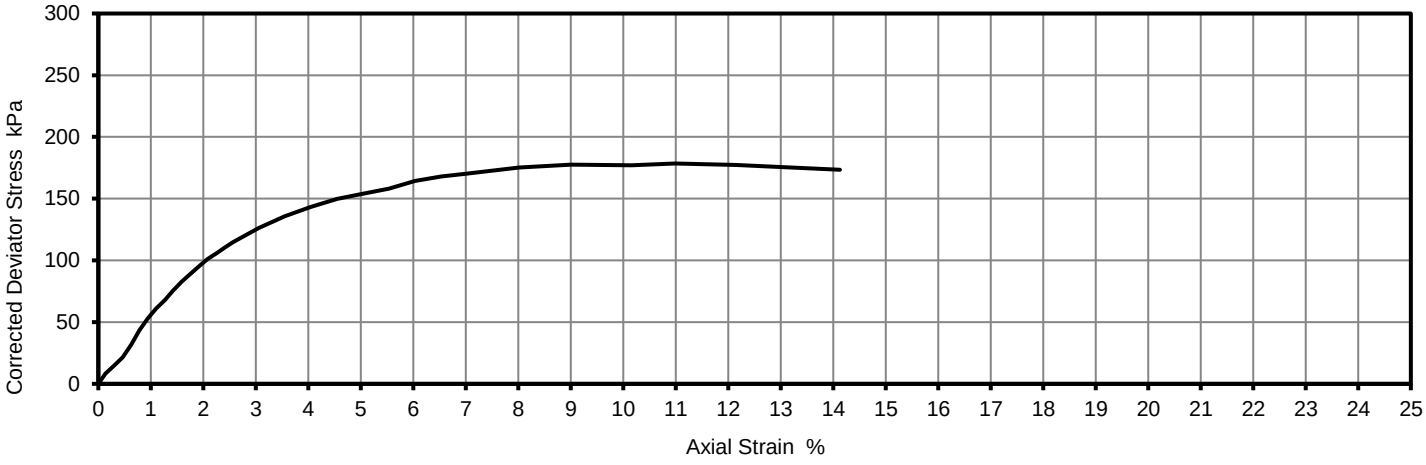
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

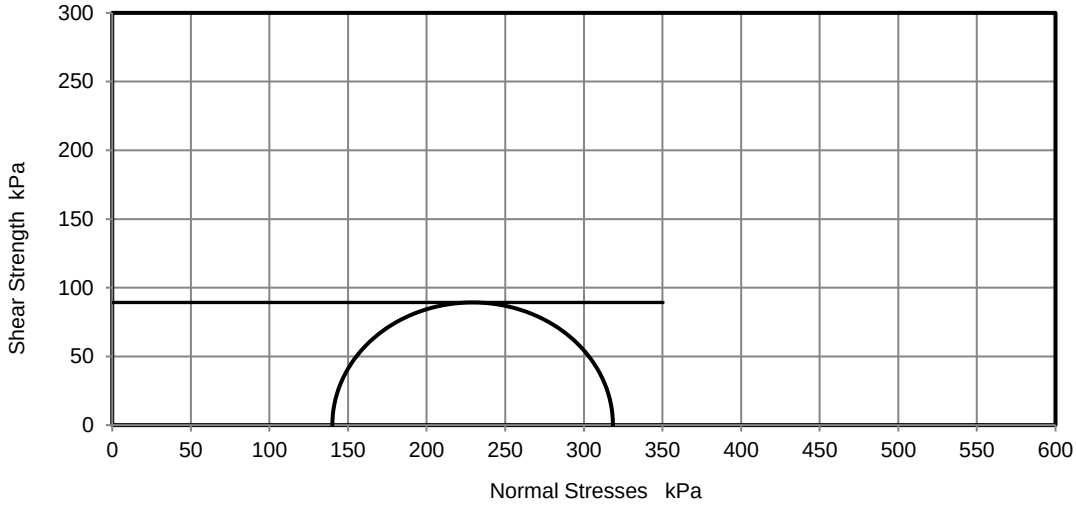
Laboratory Reference:	1176432	Depth Top [m]:	7.00
Hole No.:	BH03	Depth Base [m]:	7.45
Sample Reference:	BH037.001-046	Sample Type:	U
Sample Description:	Brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	199.85	mm	Cell Pressure	140	kPa	
Diameter	102.20	mm	Axial Strain at failure	11.0	%	
Bulk Density	1.93	Mg/m3	Deviator Stress, (σ1 - σ3)f	178	kPa	
Moisture Content	28	%	Undrained Shear Strength, cu	89	kPa	½(σ1 - σ3)f
Dry Density	1.51	Mg/m3	Mode of Failure	Compound		
Membrane Correction	0.54	kPa	Membrane thickness	0.23	mm	

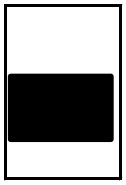
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

4041

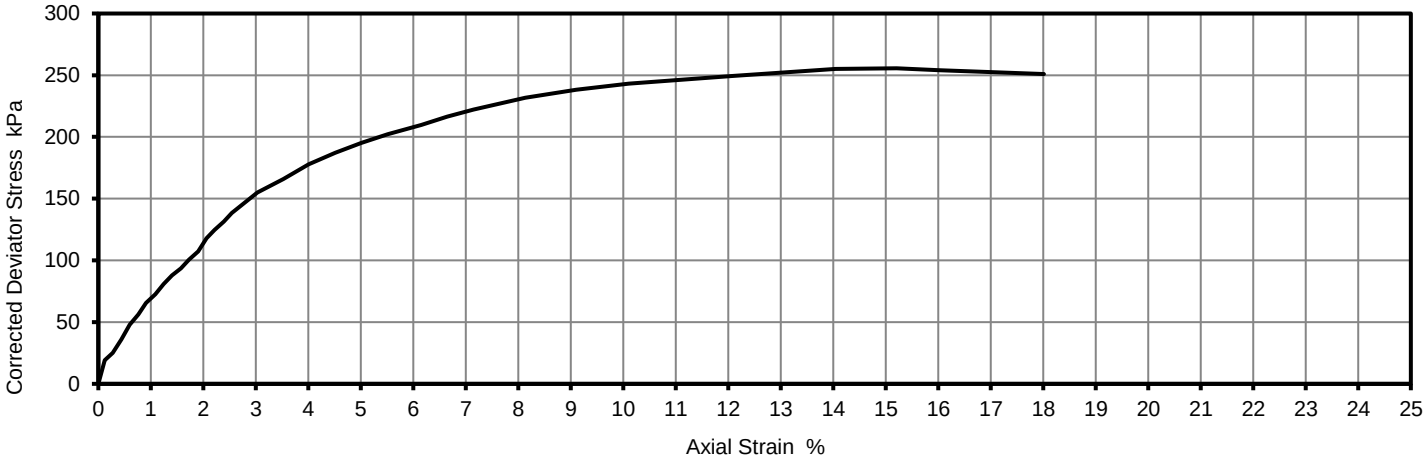
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

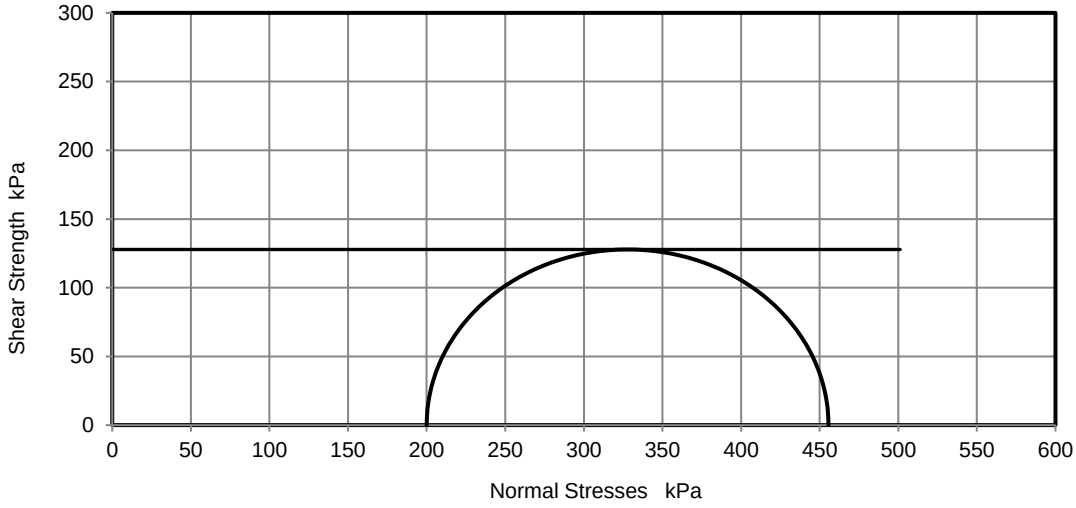
Laboratory Reference:	1176433	Depth Top [m]:	10.00
Hole No.:	BH03	Depth Base [m]:	10.45
Sample Reference:	BH0310.001-048	Sample Type:	U
Sample Description:	Brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	198.38	mm	Cell Pressure	200	kPa	
Diameter	102.84	mm	Axial Strain at failure	15.2	%	
Bulk Density	1.93	Mg/m3	Deviator Stress, (σ1 - σ3)f	256	kPa	
Moisture Content	25	%	Undrained Shear Strength, cu	128	kPa	½(σ1 - σ3)f
Dry Density	1.54	Mg/m3	Mode of Failure	Compound		
Membrane Correction	0.60	kPa	Membrane thickness	0.20	mm	

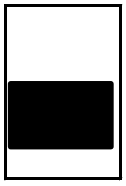
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

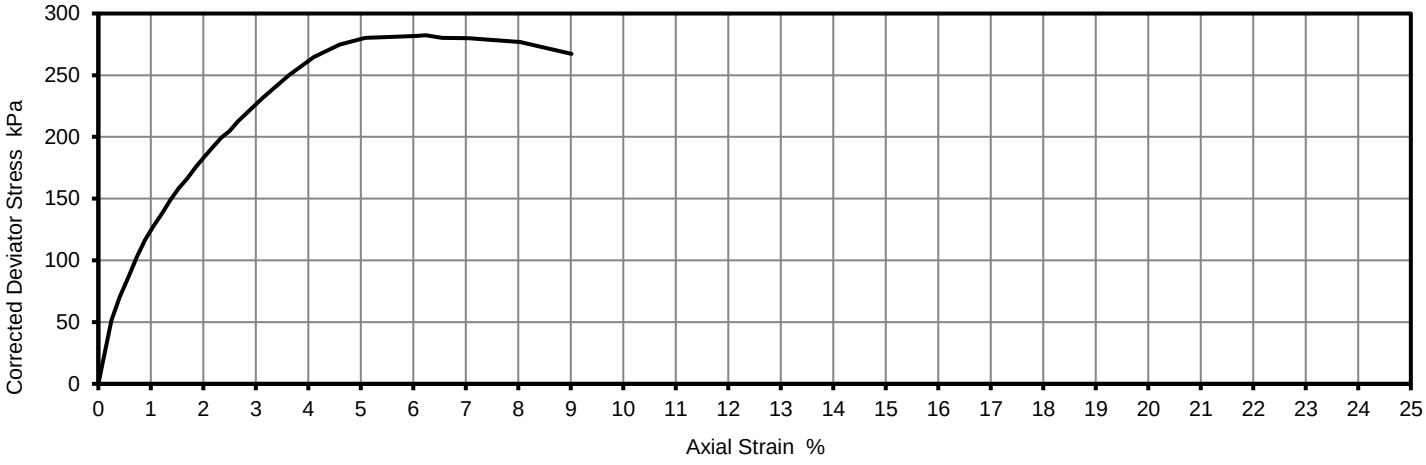
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

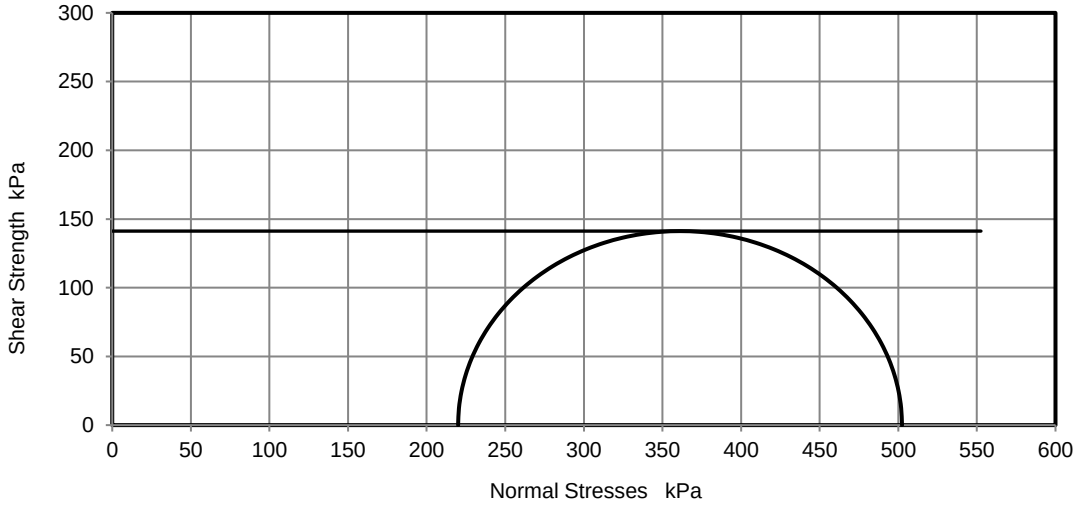
Laboratory Reference:	1176435	Depth Top [m]:	11.00
Hole No.:	BH03	Depth Base [m]:	11.45
Sample Reference:	BH0311.001-050	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	1.99	%/min
Length	200.93	mm	Cell Pressure	220	kPa
Diameter	102.93	mm	Axial Strain at failure	6.2	%
Bulk Density	2.01	Mg/m3	Deviator Stress, (σ1 - σ3)f	282	kPa
Moisture Content	24	%	Undrained Shear Strength, cu	141	kPa ½(σ1 - σ3)f
Dry Density	1.62	Mg/m3	Mode of Failure	Brittle	
Membrane Correction	0.47	kPa	Membrane thickness	0.30	mm

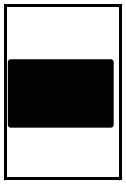
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

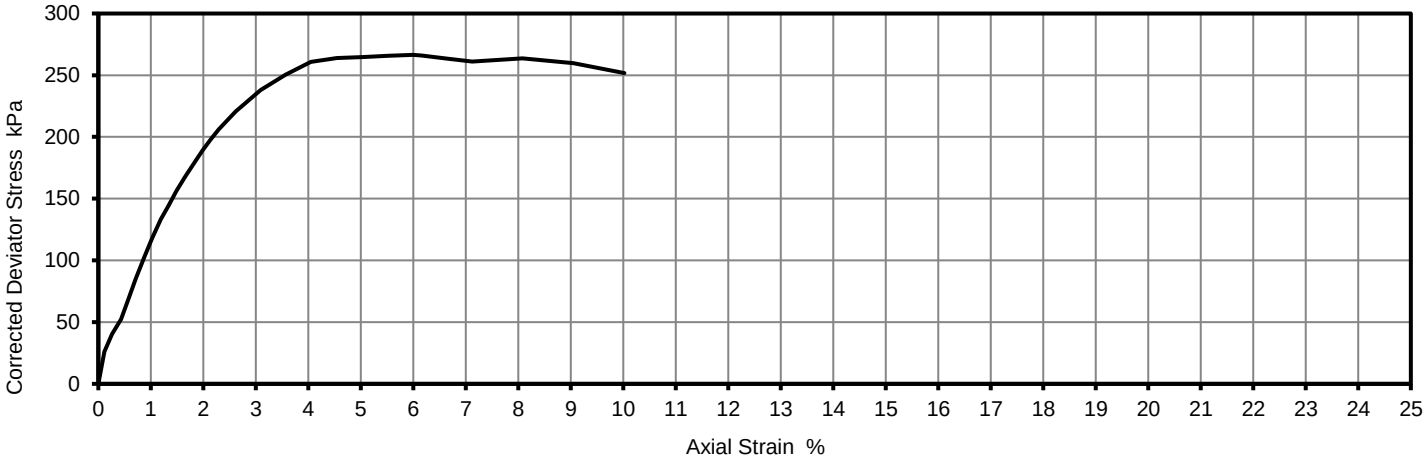
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

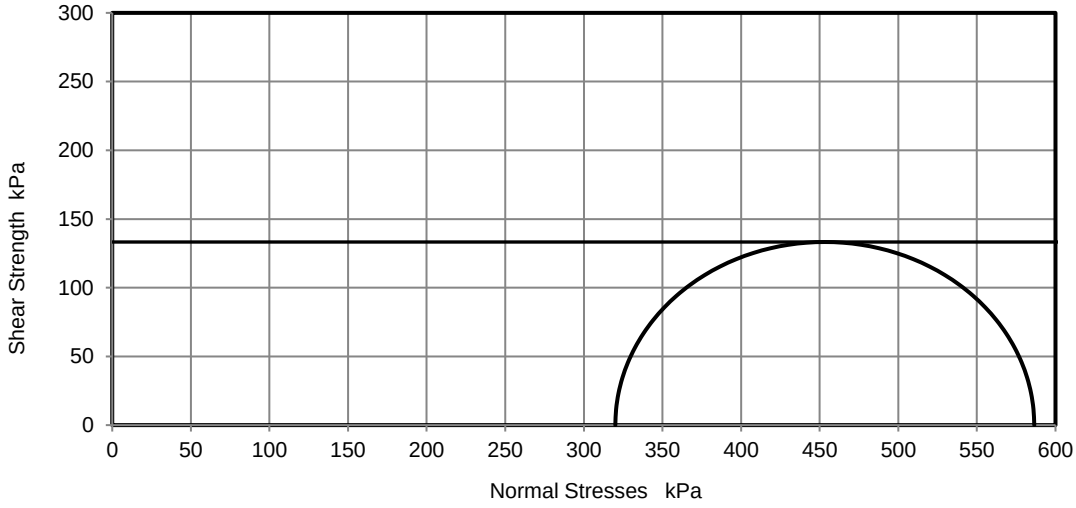
Laboratory Reference:	1176436	Depth Top [m]:	16.00
Hole No.:	BH03	Depth Base [m]:	16.45
Sample Reference:	BH0316.001-054	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	1.94	%/min
Length	205.70	mm	Cell Pressure	320	kPa
Diameter	103.30	mm	Axial Strain at failure	6.0	%
Bulk Density	1.92	Mg/m3	Deviator Stress, (σ1 - σ3)f	266	kPa
Moisture Content	27	%	Undrained Shear Strength, cu	133	kPa ½(σ1 - σ3)f
Dry Density	1.52	Mg/m3	Mode of Failure	Brittle	
Membrane Correction	0.46	kPa	Membrane thickness	0.30	mm

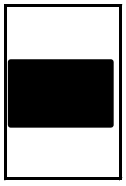
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING
4041

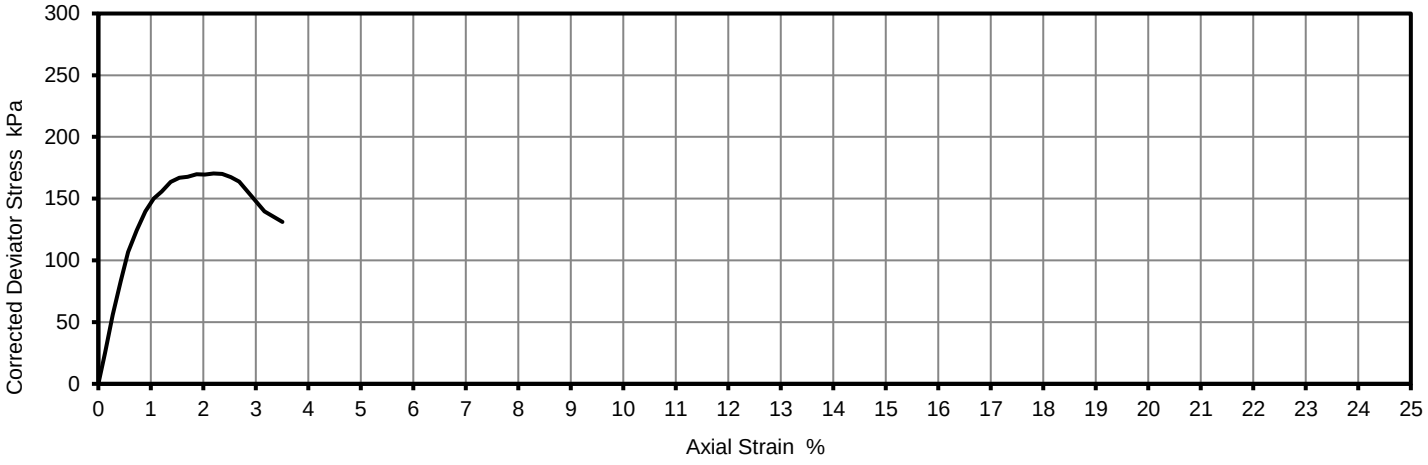
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

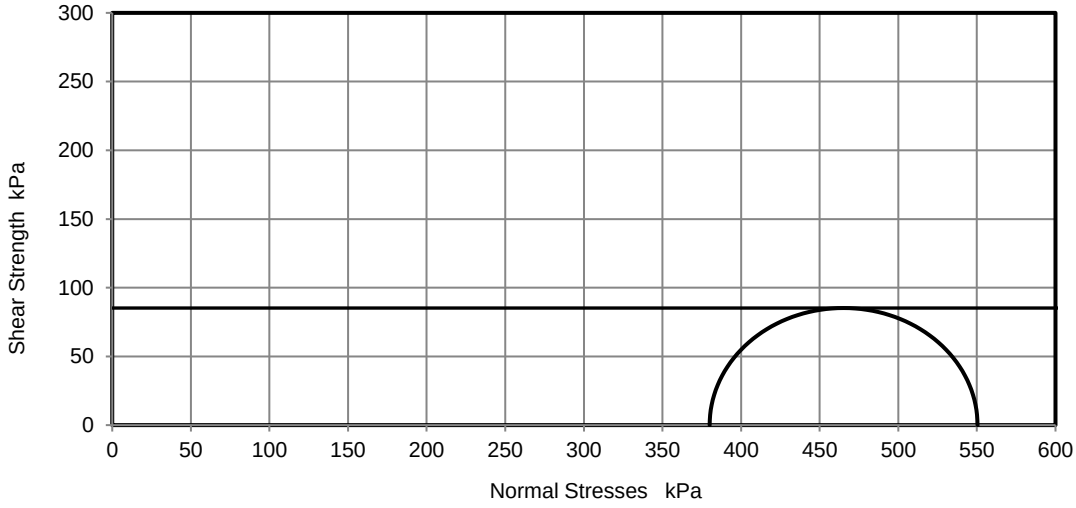
Laboratory Reference:	1176437	Depth Top [m]:	19.00
Hole No.:	BH03	Depth Base [m]:	19.95
Sample Reference:	BH0319.001-057	Sample Type:	U
Sample Description:	Brown CLAY		

Test Number	1		Rate of Strain	1.97	%/min	
Length	203.35	mm	Cell Pressure	380	kPa	
Diameter	103.25	mm	Axial Strain at failure	2.2	%	
Bulk Density	1.96	Mg/m3	Deviator Stress, (σ1 - σ3)f	170	kPa	
Moisture Content	27	%	Undrained Shear Strength, cu	85	kPa	½(σ1 - σ3)f
Dry Density	1.55	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.15	kPa	Membrane thickness	0.25	mm	

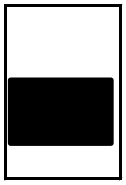
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

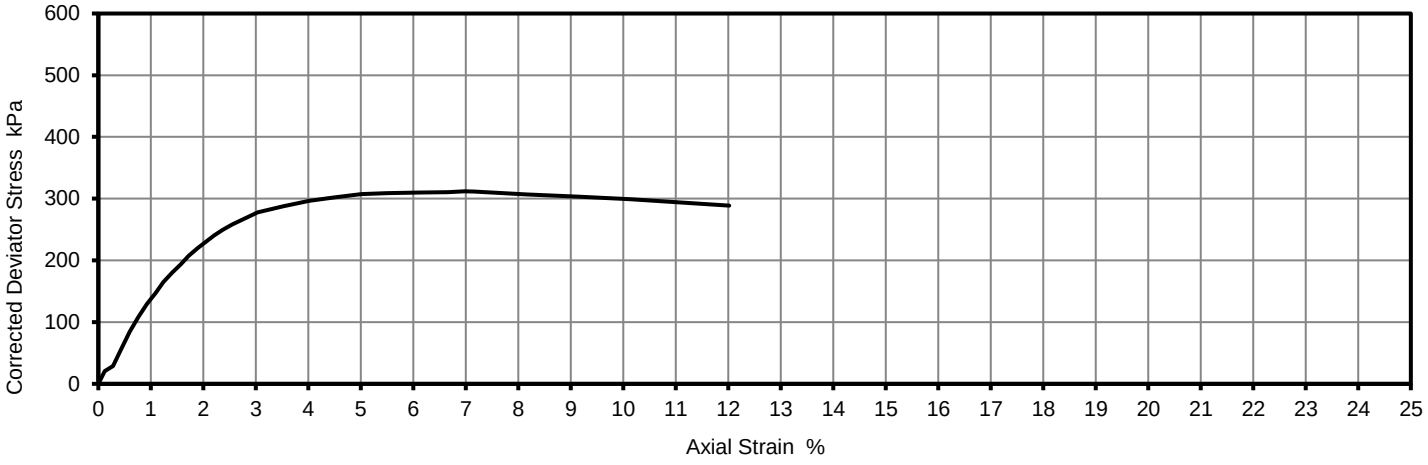
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

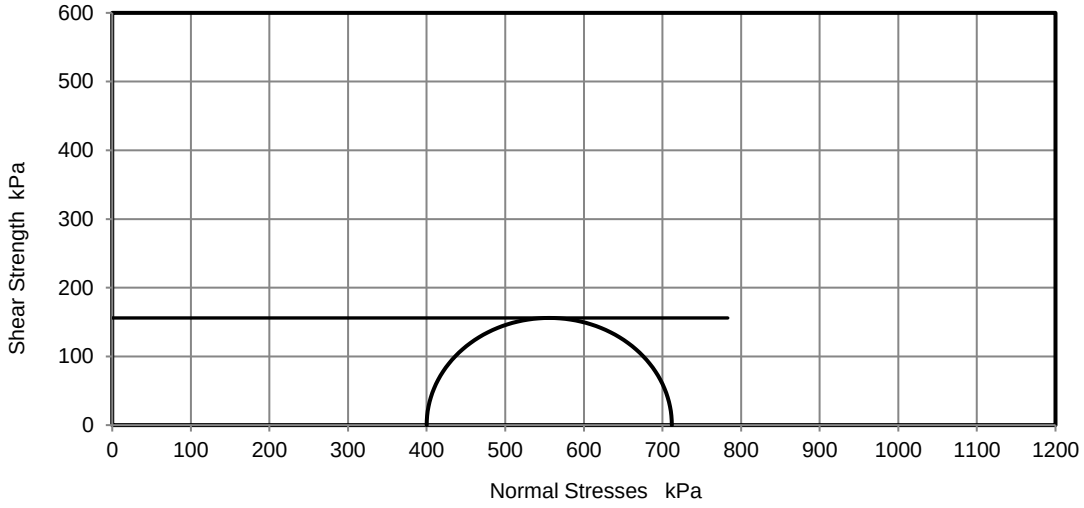
Laboratory Reference:	1176438	Depth Top [m]:	20.00
Hole No.:	BH03	Depth Base [m]:	20.45
Sample Reference:	BH0320.001-059	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	196.47	mm	Cell Pressure	400	kPa	
Diameter	103.04	mm	Axial Strain at failure	7.0	%	
Bulk Density	1.93	Mg/m3	Deviator Stress, (σ1 - σ3)f	312	kPa	
Moisture Content	29	%	Undrained Shear Strength, cu	156	kPa	½(σ1 - σ3)f
Dry Density	1.50	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.42	kPa	Membrane thickness	0.25	mm	

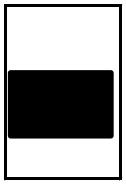
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

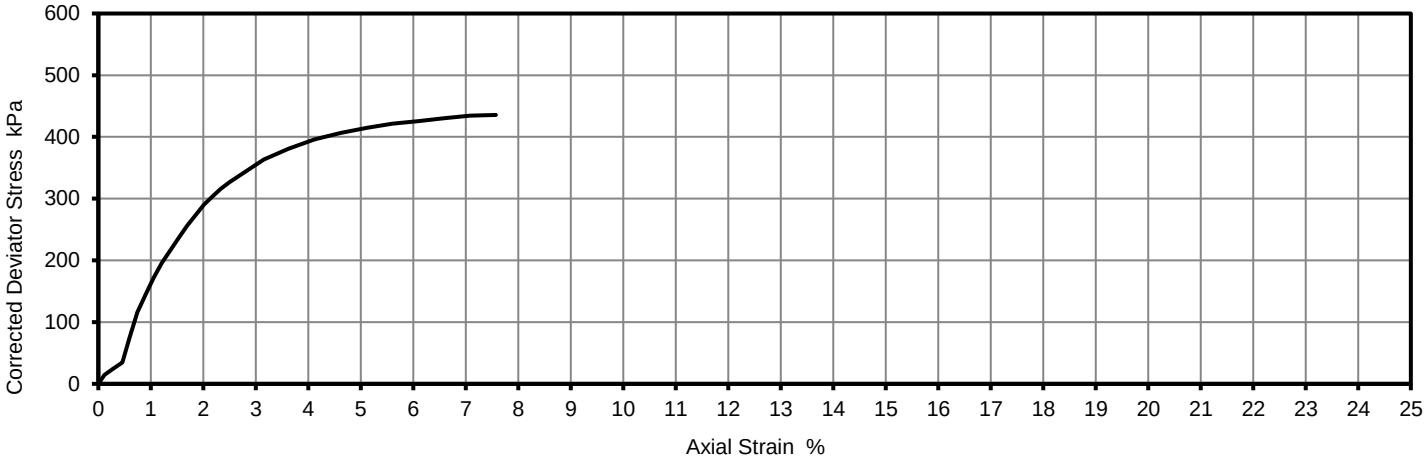
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

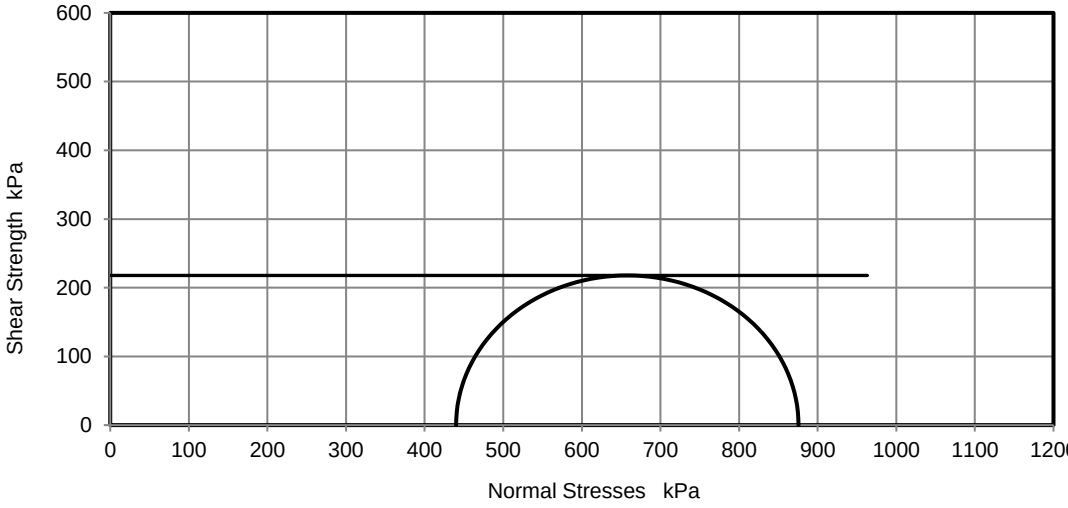
Laboratory Reference:	1176439	Depth Top [m]:	22.00
Hole No.:	BH03	Depth Base [m]:	22.45
Sample Reference:	BH0322.001-061	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	200.08	mm	Cell Pressure	440	kPa	
Diameter	103.39	mm	Axial Strain at failure	7.6	%	
Bulk Density	1.99	Mg/m3	Deviator Stress, (σ1 - σ3)f	436	kPa	
Moisture Content	25	%	Undrained Shear Strength, cu	218	kPa	½(σ1 - σ3)f
Dry Density	1.59	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.34	kPa	Membrane thickness	0.19	mm	

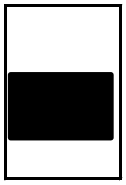
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

4041

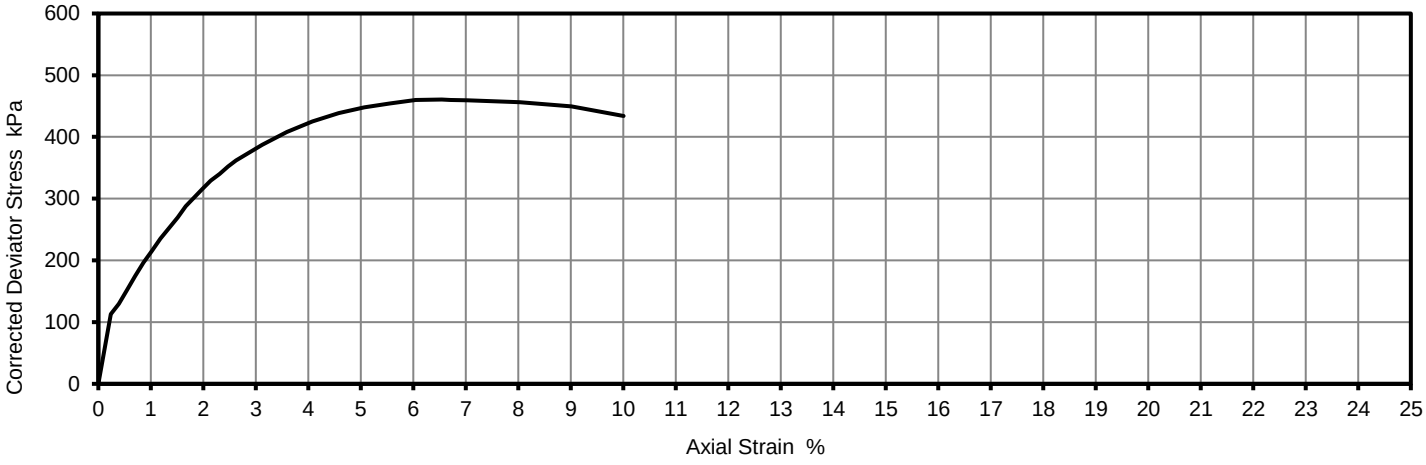
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

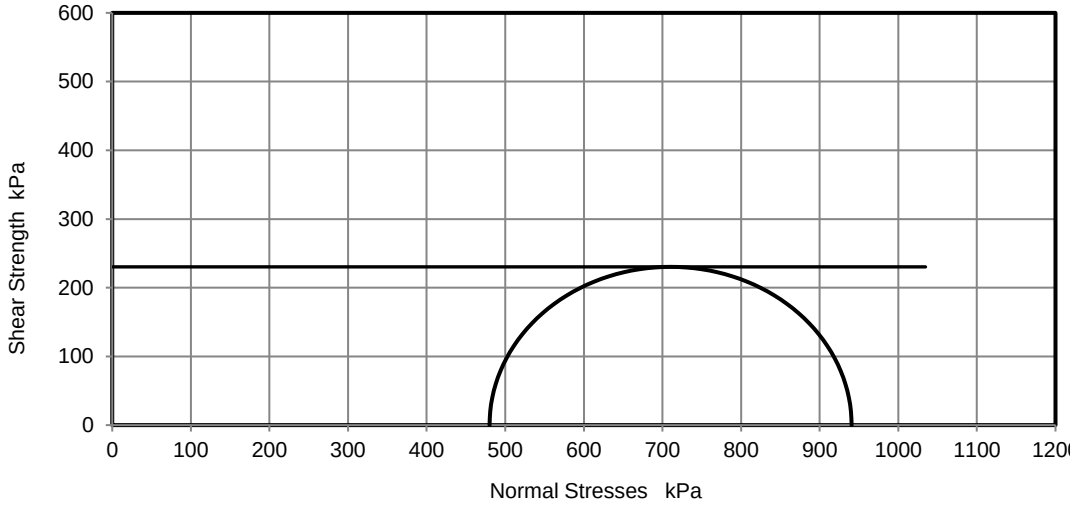
Laboratory Reference:	1176440	Depth Top [m]:	24.00
Hole No.:	BH03	Depth Base [m]:	24.45
Sample Reference:	BH0324.001-064	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	179.22	mm	Cell Pressure	480	kPa	
Diameter	103.88	mm	Axial Strain at failure	6.5	%	
Bulk Density	1.93	Mg/m3	Deviator Stress, (σ1 - σ3)f	461	kPa	
Moisture Content	22	%	Undrained Shear Strength, cu	230	kPa	½(σ1 - σ3)f
Dry Density	1.58	Mg/m3	Mode of Failure	Compound		
Membrane Correction	0.32	kPa	Membrane thickness	0.20	mm	

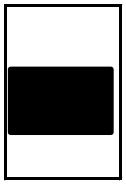
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

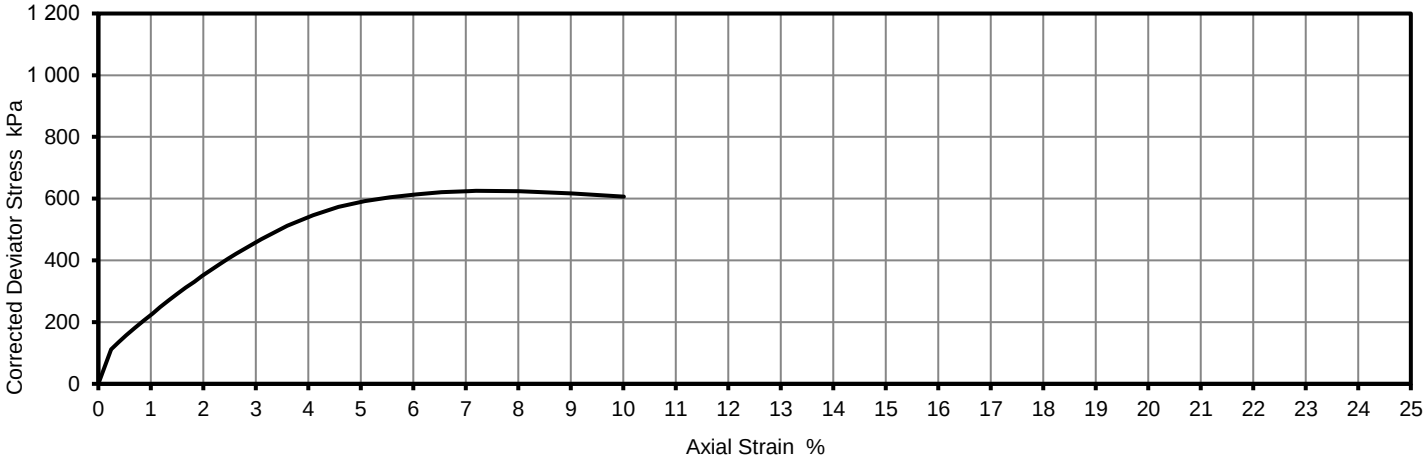
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

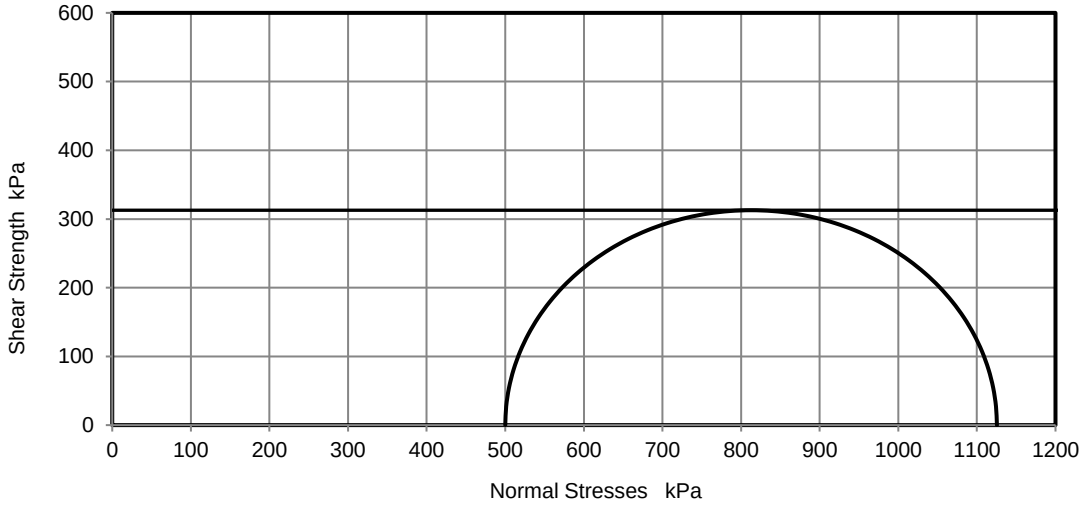
Laboratory Reference:	1176442	Depth Top [m]:	25.00
Hole No.:	BH03	Depth Base [m]:	25.45
Sample Reference:	BH0325.001-066	Sample Type:	U
Sample Description:	Brown slightly sandy CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	189.50	mm	Cell Pressure	500	kPa	
Diameter	103.00	mm	Axial Strain at failure	7.2	%	
Bulk Density	1.98	Mg/m3	Deviator Stress, (σ1 - σ3)f	625	kPa	
Moisture Content	21	%	Undrained Shear Strength, cu	313	kPa	½(σ1 - σ3)f
Dry Density	1.64	Mg/m3	Mode of Failure	Plastic		
Membrane Correction	0.50	kPa	Membrane thickness	0.29	mm	

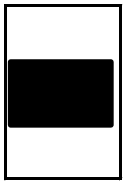
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

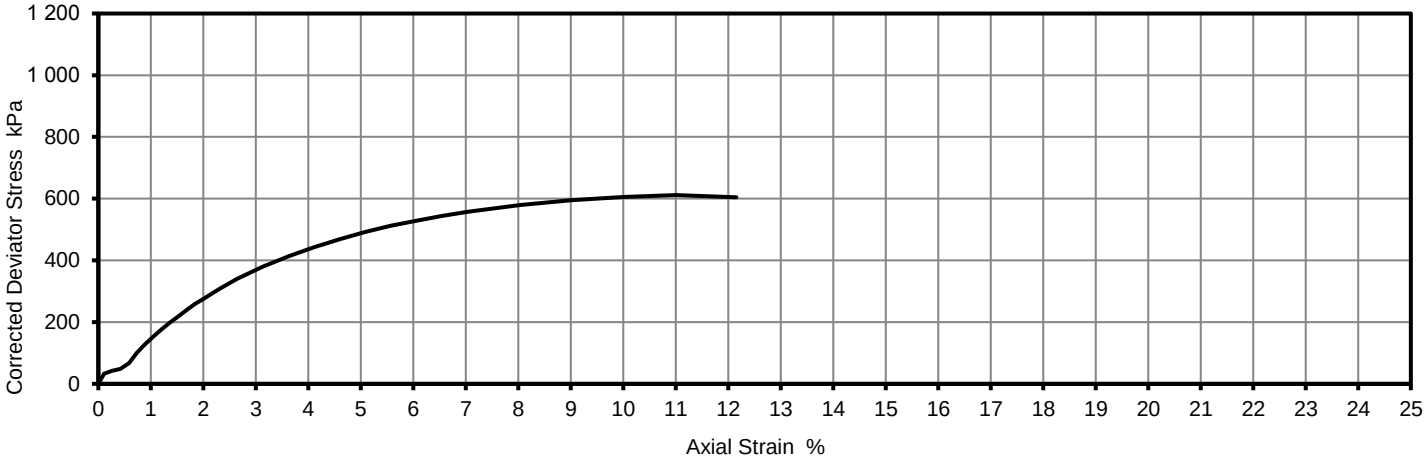
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

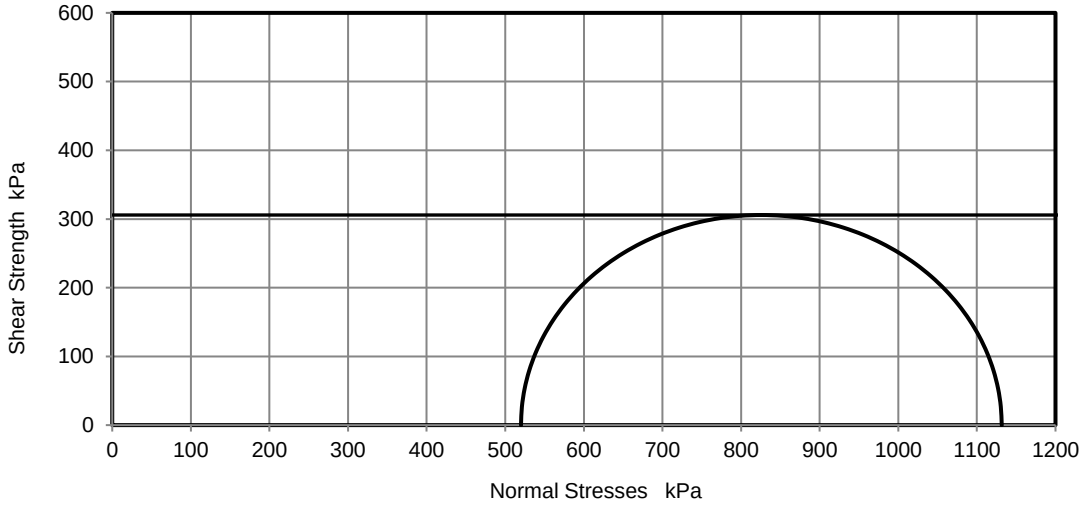
Laboratory Reference:	1176443	Depth Top [m]:	26.00
Hole No.:	BH03	Depth Base [m]:	26.45
Sample Reference:	BH0326.001-068	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	200.29	mm	Cell Pressure	520	kPa	
Diameter	103.72	mm	Axial Strain at failure	11.0	%	
Bulk Density	1.95	Mg/m3	Deviator Stress, (σ1 - σ3)f	612	kPa	
Moisture Content	26	%	Undrained Shear Strength, cu	306	kPa	½(σ1 - σ3)f
Dry Density	1.55	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.39	kPa	Membrane thickness	0.17	mm	

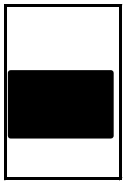
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

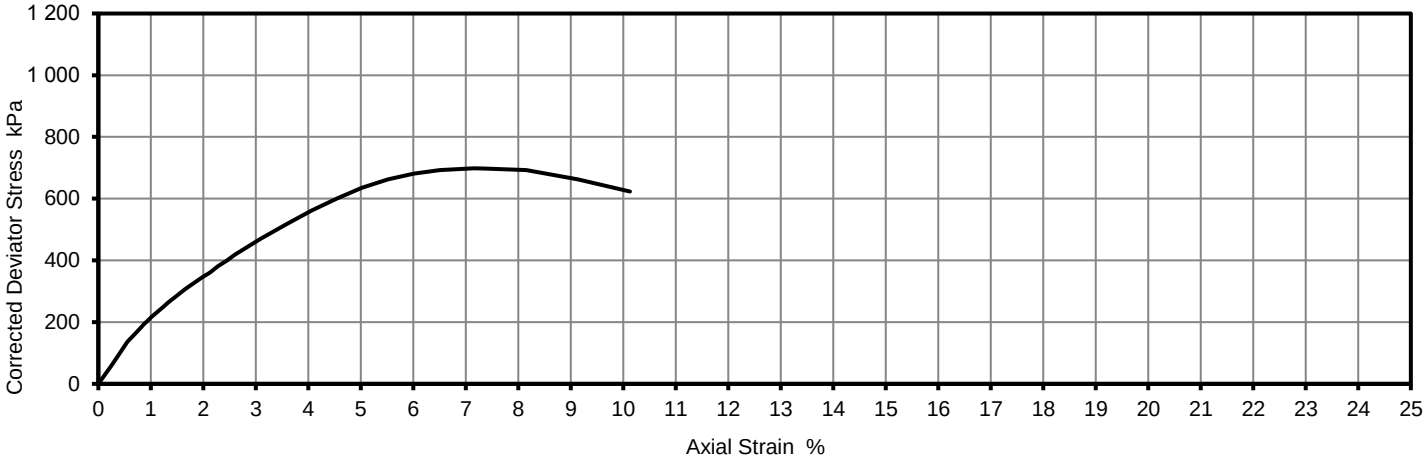
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

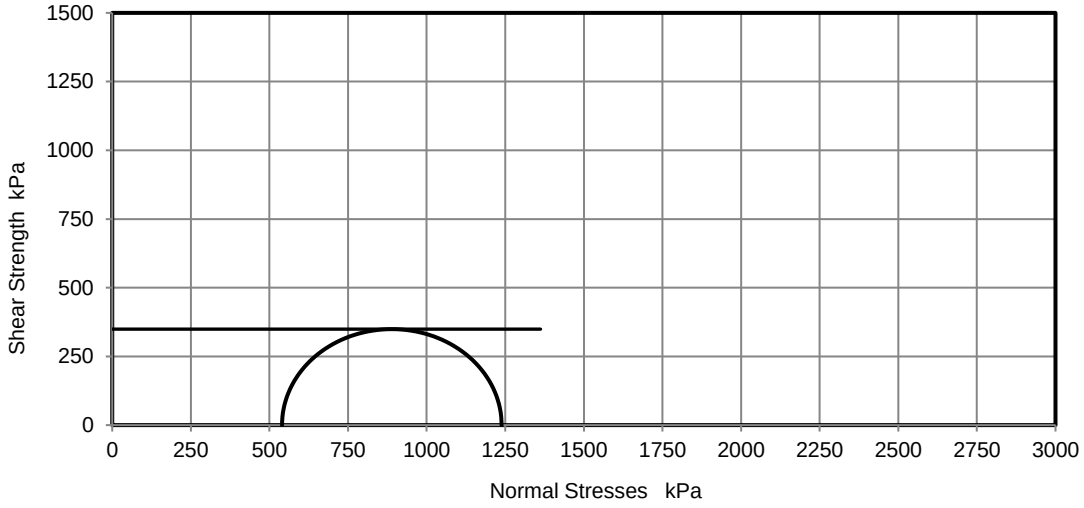
Laboratory Reference:	1176444	Depth Top [m]:	27.00
Hole No.:	BH03	Depth Base [m]:	27.45
Sample Reference:	BH0327.001-070	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	200.37	mm	Cell Pressure	540	kPa	
Diameter	103.57	mm	Axial Strain at failure	7.2	%	
Bulk Density	1.98	Mg/m3	Deviator Stress, (σ1 - σ3)f	698	kPa	
Moisture Content	24	%	Undrained Shear Strength, cu	349	kPa	½(σ1 - σ3)f
Dry Density	1.60	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.34	kPa	Membrane thickness	0.20	mm	

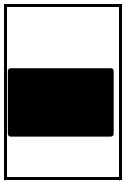
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

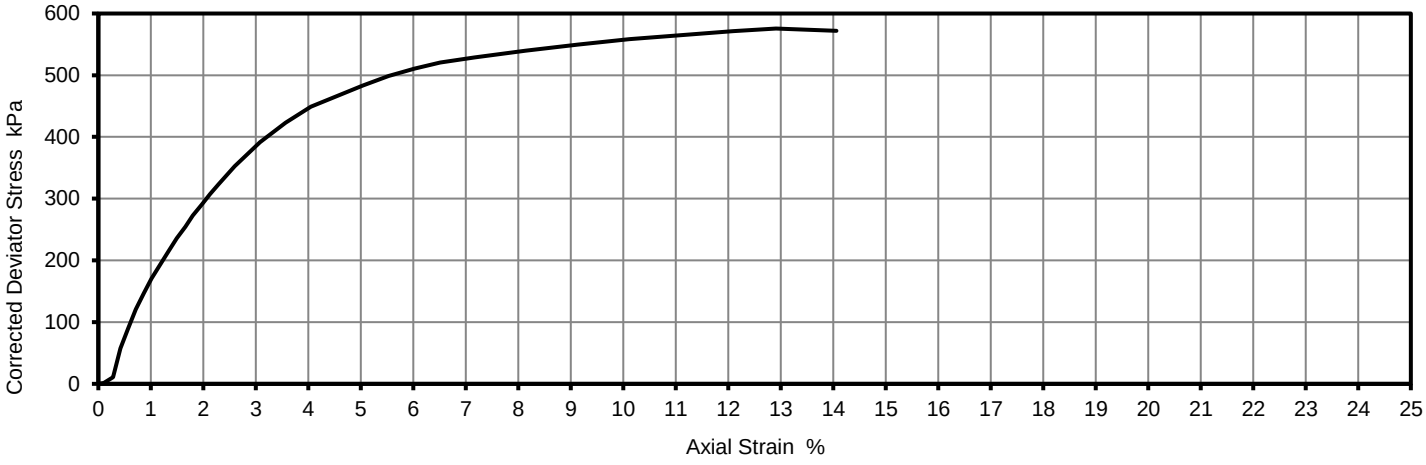
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

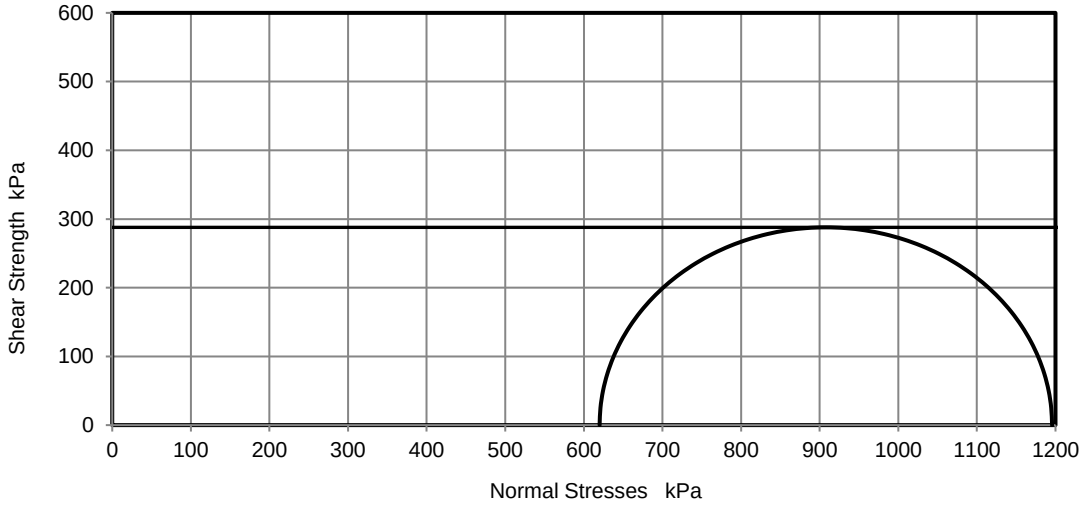
Laboratory Reference:	1176447	Depth Top [m]:	31.00
Hole No.:	BH03	Depth Base [m]:	31.45
Sample Reference:	BH0331.001-076	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	1.98	%/min
Length	201.72	mm	Cell Pressure	620	kPa
Diameter	102.86	mm	Axial Strain at failure	12.9	%
Bulk Density	1.93	Mg/m3	Deviator Stress, (σ1 - σ3)f	576	kPa
Moisture Content	23	%	Undrained Shear Strength, cu	288	kPa ½(σ1 - σ3)f
Dry Density	1.57	Mg/m3	Mode of Failure	Brittle	
Membrane Correction	0.79	kPa	Membrane thickness	0.30	mm

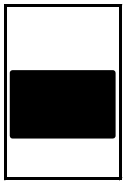
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

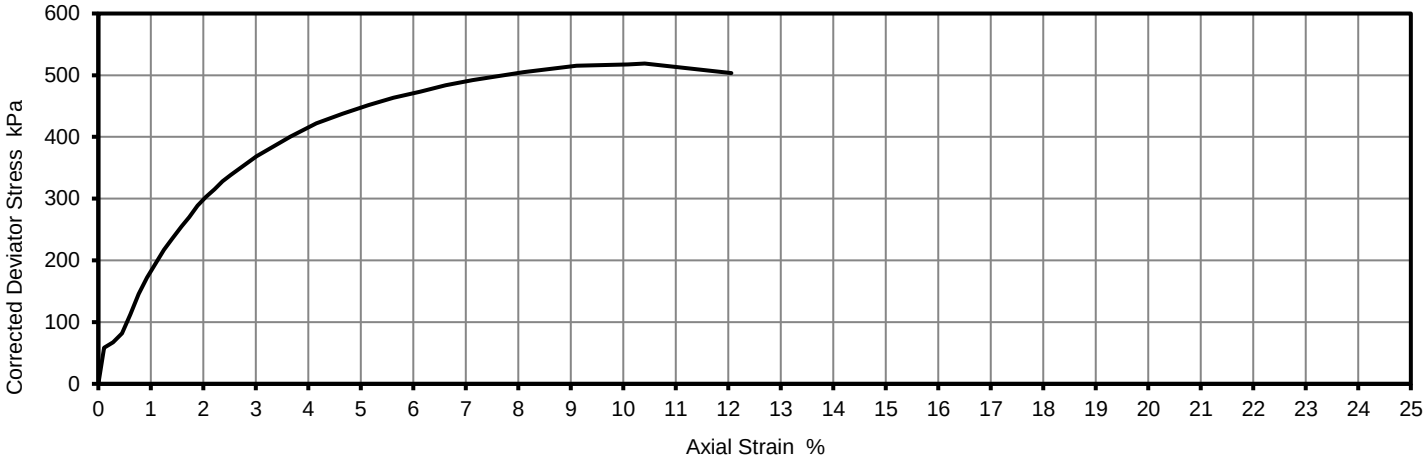
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

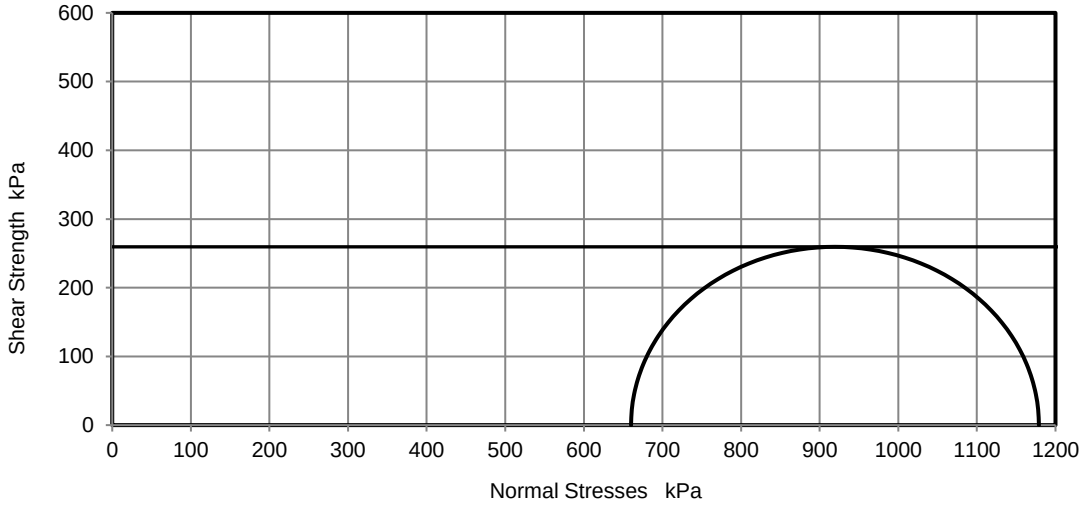
Laboratory Reference:	1176448	Depth Top [m]:	33.00
Hole No.:	BH03	Depth Base [m]:	33.45
Sample Reference:	BH0333.001-079	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	135.85	mm	Cell Pressure	660	kPa	
Diameter	70.68	mm	Axial Strain at failure	10.4	%	
Bulk Density	1.95	Mg/m3	Deviator Stress, (σ1 - σ3)f	519	kPa	
Moisture Content	20	%	Undrained Shear Strength, cu	259	kPa	½(σ1 - σ3)f
Dry Density	1.63	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	1.01	kPa	Membrane thickness	0.31	mm	

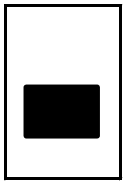
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

4041

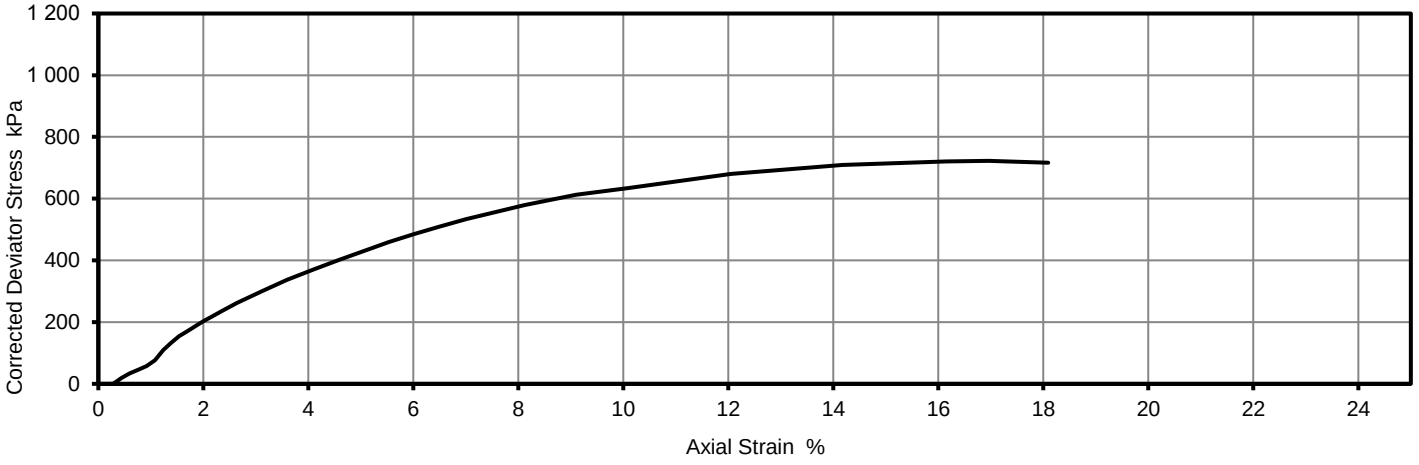
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

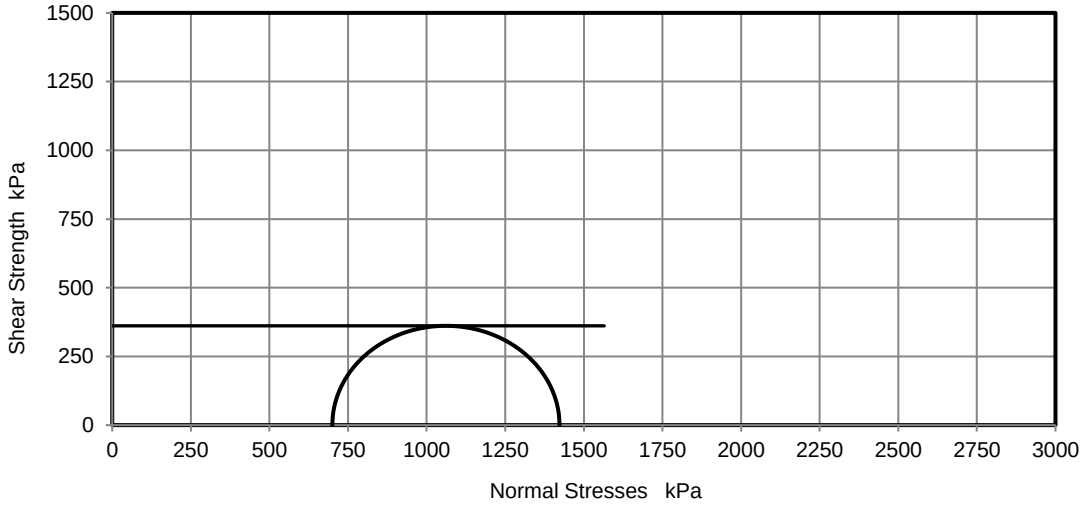
Laboratory Reference:	1176450	Depth Top [m]:	35.00
Hole No.:	BH03	Depth Base [m]:	35.45
Sample Reference:	BH0335.001-082	Sample Type:	U
Sample Description:	Dark brown CLAY		

Test Number	1		Rate of Strain	1.98	%/min	
Length	202.02	mm	Cell Pressure	700	kPa	
Diameter	101.60	mm	Axial Strain at failure	17.0	%	
Bulk Density	2.00	Mg/m3	Deviator Stress, (σ1 - σ3)f	723	kPa	
Moisture Content	21	%	Undrained Shear Strength, cu	361	kPa	½(σ1 - σ3)f
Dry Density	1.65	Mg/m3	Mode of Failure	Compound		
Membrane Correction	0.66	kPa	Membrane thickness	0.20	mm	

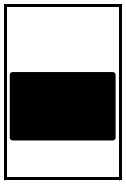
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

Unconsolidated Undrained

Triaxial Compression

Tested in Accordance with:
BS 1377-7: 1990: Clause 8

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

UKAS TESTING 4041

Environmental Science

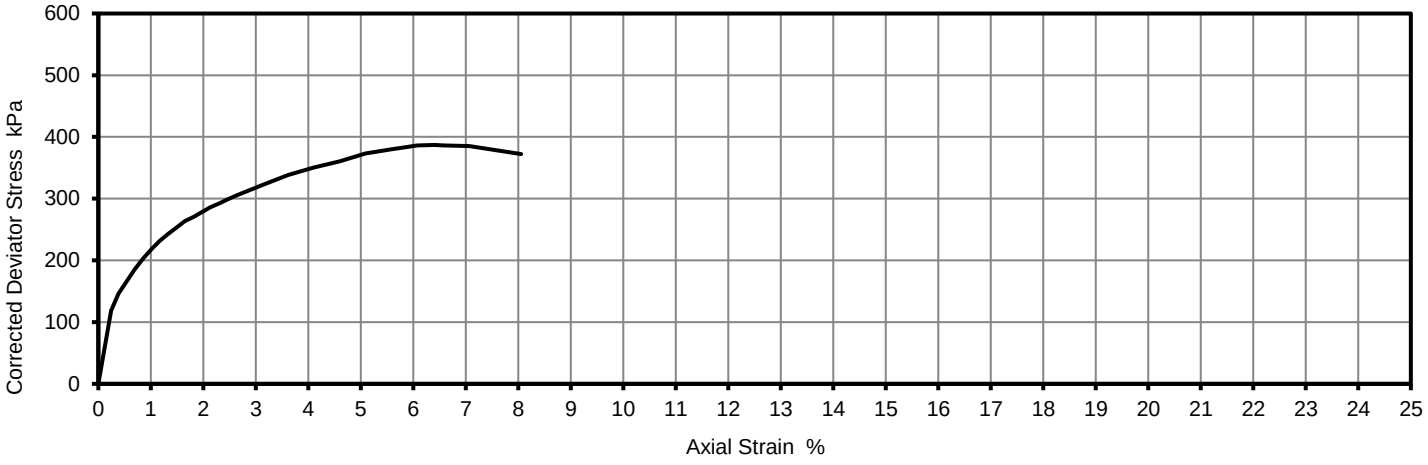
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

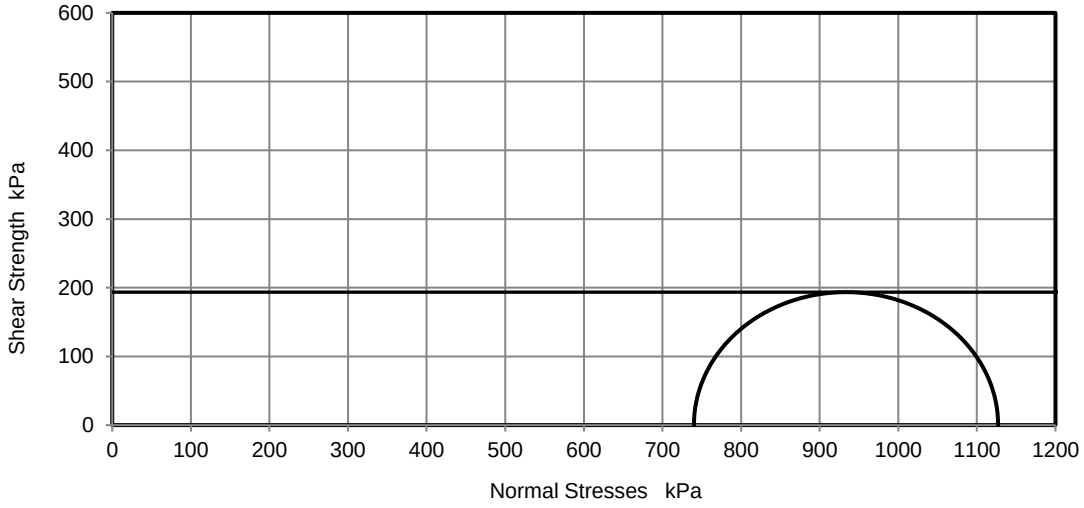
Laboratory Reference:	1176451	Depth Top [m]:	37.00
Hole No.:	BH03	Depth Base [m]:	37.45
Sample Reference:	BH0337.001-085	Sample Type:	U
Sample Description:	Mottled brown slightly sandy CLAY		

Test Number	1		Rate of Strain	2.00	%/min	
Length	189.00	mm	Cell Pressure	740	kPa	
Diameter	102.88	mm	Axial Strain at failure	6.4	%	
Bulk Density	2.14	Mg/m3	Deviator Stress, (σ1 - σ3)f	387	kPa	
Moisture Content	23	%	Undrained Shear Strength, cu	194	kPa	½(σ1 - σ3)f
Dry Density	1.75	Mg/m3	Mode of Failure	Brittle		
Membrane Correction	0.30	kPa	Membrane thickness	0.19	mm	

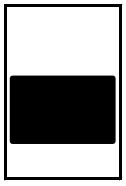
Deviator Stress v Axial Strain



Mohr Circles



Position within sample



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
Date Reported: 27/03/2019

Signed: Darren Berrill
Geotechnical General Manager

GF 184.6

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

One Dimensional Consolidation Test

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

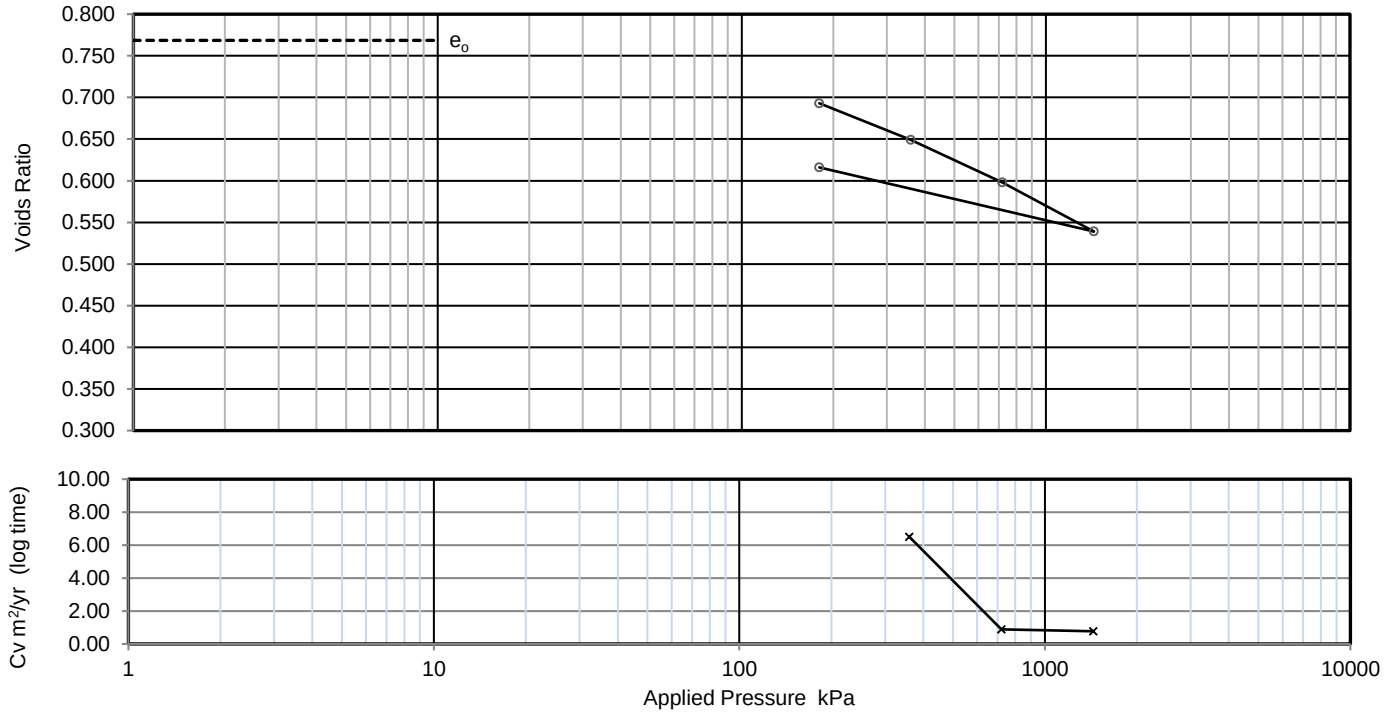
4041

Tested in Accordance with: BS 1377-5: 1990: Clause 3

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	25/02/2019
		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:	1176421	Depth Top [m]:	9.00
Hole No.:	BH01	Depth Base [m]:	9.45
Sample Reference:	BH019.001-012	Sample Type:	U
Sample Description:	Dark brown CLAY		



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root m2/yr	Csec
0	0.769	-	-	-	-
180	0.693	0.24	N/A	N/A	0.0014
360	0.649	0.14	6.5	3.4	0.0009
720	0.598	0.086	0.88	1.8	0.0014
1 440	0.539	0.051	0.77	0.83	0.0023
180	0.616	0.04			

Preparation

Index tests

Orientation of the sample	Vertical		
Particle density	assumed	2.65	Mg/m3
Liquid limit	N/A		%
Plastic limit	N/A		%

Specimen details	Initial	Final	
Diameter	50.00	-	mm
Height	20.01	18.29	mm
Moisture Content	28	27	%
Bulk density	1.91	2.08	Mg/m3
Dry density	1.50	1.64	Mg/m3
Voids Ratio	0.769	0.616	
Saturation	96	116	%
Avg. temperature for test	22.0		°C
Swelling Pressure	Not measured		kPa
Settlement on saturation			%

Note: Cv corrected to 20°C

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 172.10

for and on behalf of i2 Analytical Ltd

TEST CERTIFICATE

One Dimensional Consolidation Test

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

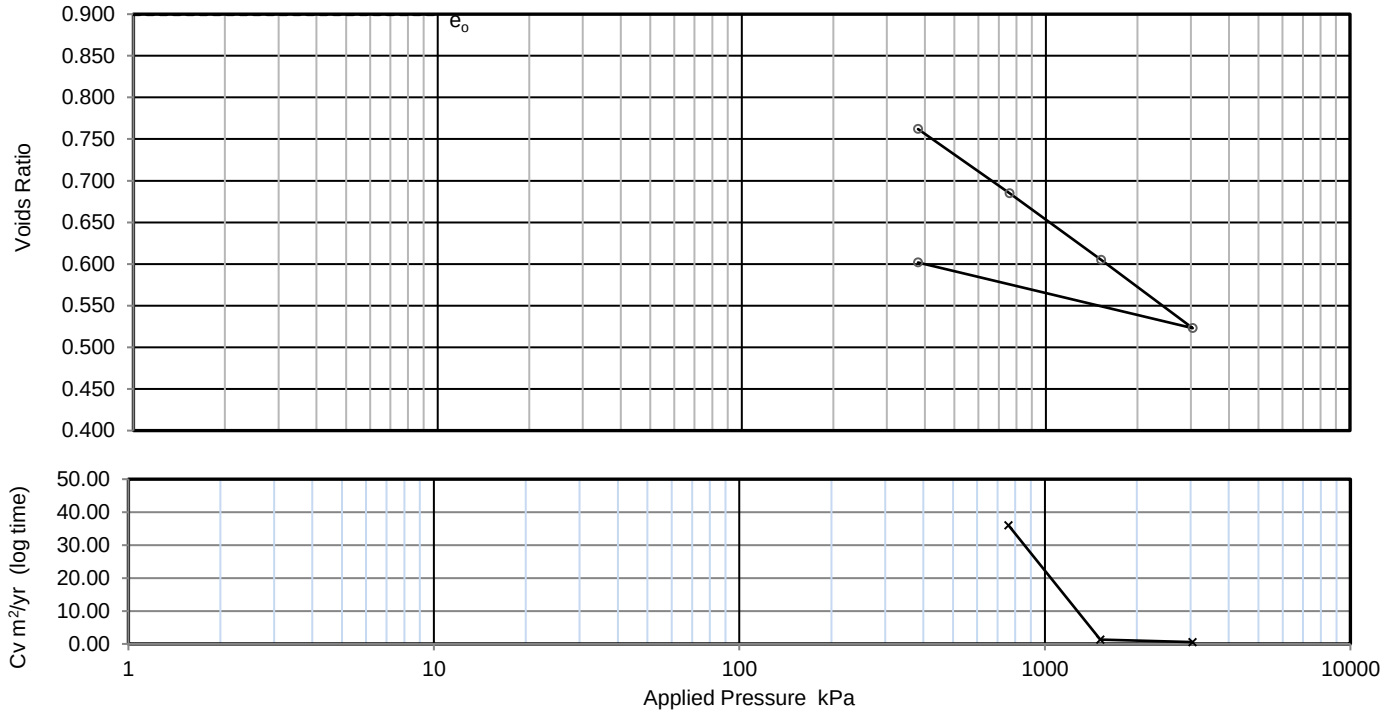
4041

Tested in Accordance with: BS 1377-5: 1990: Clause 3

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		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:	1176437	Depth Top [m]:	19.00
Hole No.:	BH03	Depth Base [m]:	19.95
Sample Reference:	BH0319.001-057	Sample Type:	U
Sample Description:	Brown CLAY		



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root m2/yr	Csec
0	0.900	-	-	-	-
380	0.762	0.19	N/A	N/A	0.0059
760	0.685	0.12	36	N/A	0.0019
1 520	0.605	0.062	1.3	0.63	0.0019
3 040	0.523	0.034	0.56	0.54	0.002
380	0.602	0.02			

Preparation

Index tests

Orientation of the sample	Vertical		
Particle density	assumed	2.65	Mg/m3
Liquid limit	N/A		%
Plastic limit	N/A		%

Specimen details	Initial	Final	
Diameter	50.00	-	mm
Height	20.00	16.87	mm
Moisture Content	28	28	%
Bulk density	1.79	2.12	Mg/m3
Dry density	1.40	1.65	Mg/m3
Voids Ratio	0.900	0.602	
Saturation	83	124	%
Avg. temperature for test	22.0		°C
Swelling Pressure	Not measured		kPa
Settlement on saturation			%

Note: Cv corrected to 20°C

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

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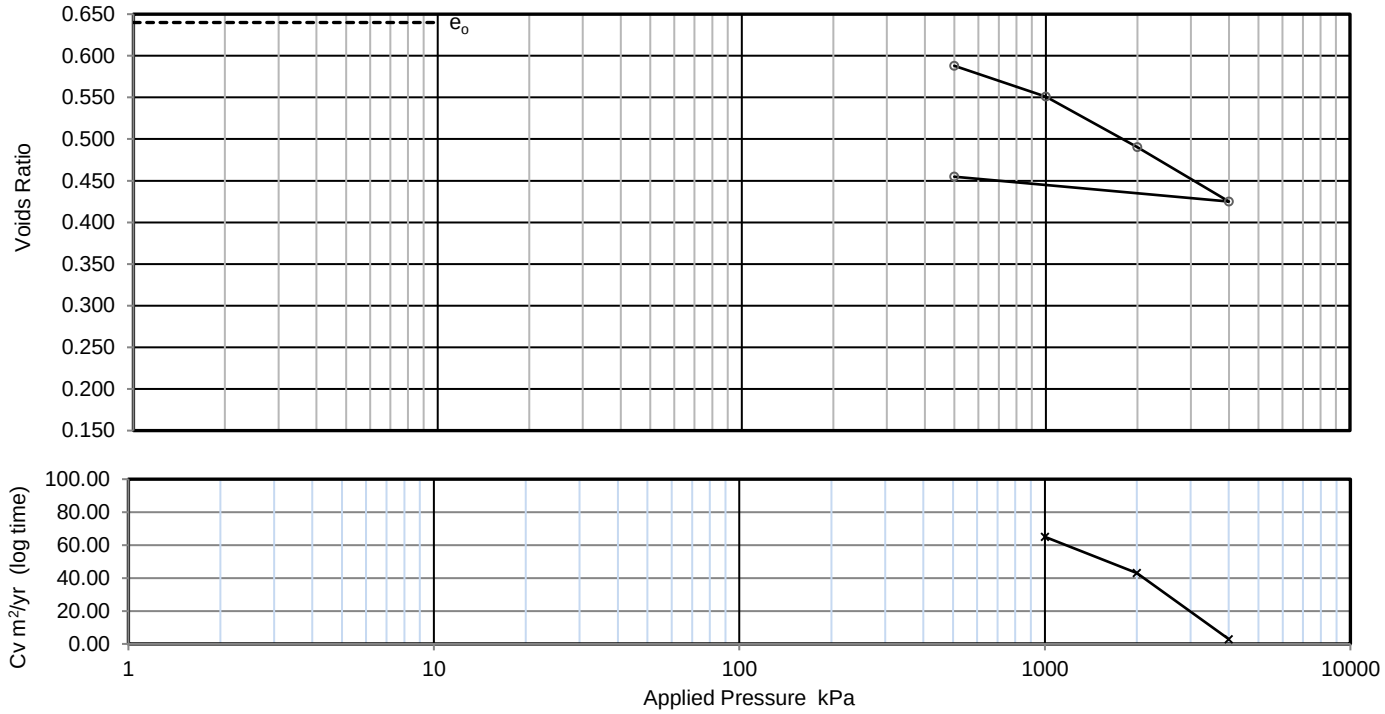
Tested in Accordance with: BS 1377-5: 1990: Clause 3

Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		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:	1176442	Depth Top [m]:	25.00
Hole No.:	BH03	Depth Base [m]:	25.45
Sample Reference:	BH0325.001-066	Sample Type:	U
Sample Description:	Brown slightly sandy CLAY		



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root m2/yr	Csec
0	0.640	-	-	-	-
500	0.588	0.063	N/A	N/A	0.001
1 000	0.551	0.048	65	52	0.0019
2 000	0.490	0.039	43	40	0.0025
4 000	0.425	0.022	2.9	3.9	0.0032
500	0.455	0.0061			

Preparation

Index tests

Orientation of the sample	Vertical		
Particle density	assumed	2.65	Mg/m3
Liquid limit	N/A		%
Plastic limit	N/A		%

Specimen details	Initial	Final	
Diameter	50.00	-	mm
Height	20.01	17.76	mm
Moisture Content	21	20	%
Bulk density	1.95	2.19	Mg/m3
Dry density	1.62	1.82	Mg/m3
Voids Ratio	0.640	0.455	
Saturation	87	119	%
Avg. temperature for test	22.0		°C
Swelling Pressure	Not measured		kPa
Settlement on saturation			%

Note: Cv corrected to 20°C

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 172.10

for and on behalf of i2 Analytical Ltd

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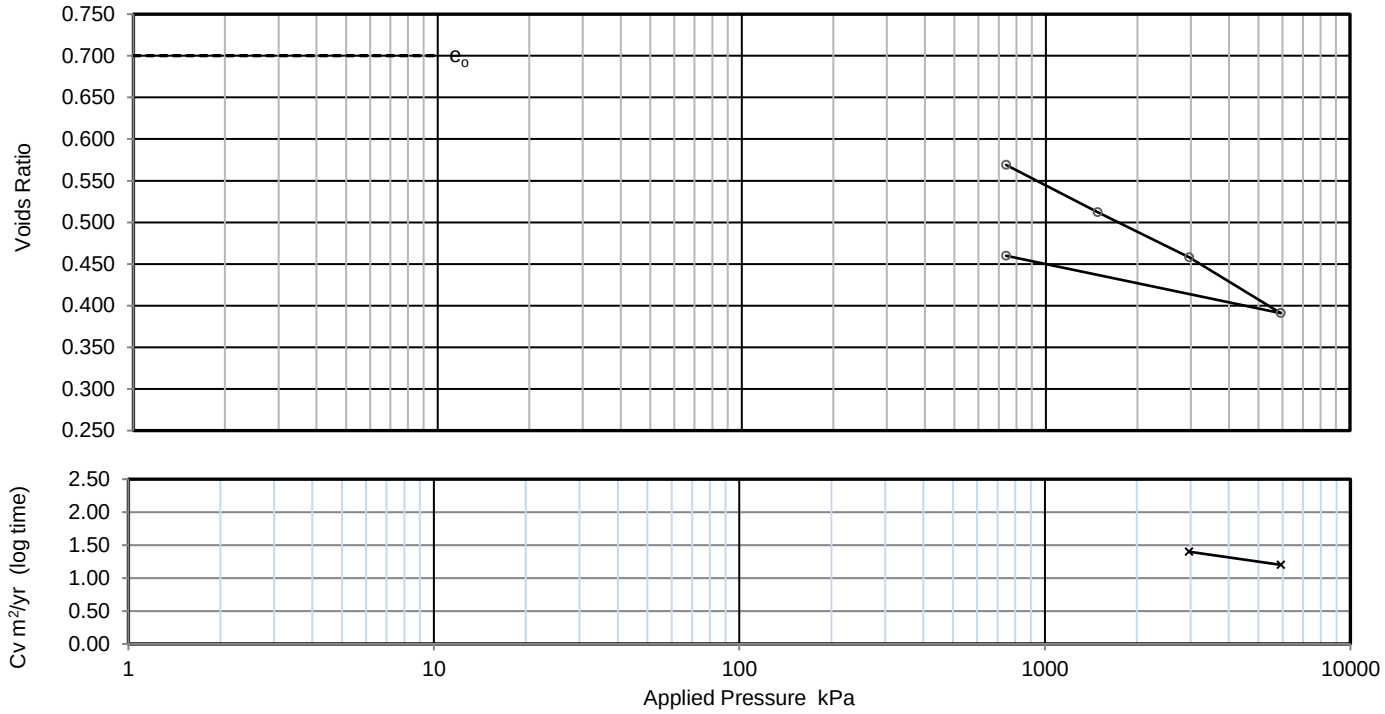
Client:	Soiltechnics Limited	Client Reference:	STQ4646
Client Address:	Cedar Barn, White Lodge, Walgrave, Northampton, NN6 9PY	Job Number:	19-32782
		Date Sampled:	27/02/2019
		Date Received:	13/03/2019
Contact:	Lauren Wenham	Date Tested:	19/03/2019
Site Name:	St Pancras Campus, Camden	Sampled By:	Not Given
Site Address:	Not Given		

Test Results:

Laboratory Reference:	1176451	Depth Top [m]:	37.00
Hole No.:	BH03	Depth Base [m]:	37.45
Sample Reference:	BH0337.001-085	Sample Type:	U
Sample Description:	Mottled brown slightly sandy CLAY		



Applied Pressure kPa	Voids ratio	Mv m2/MN	Cv (t50, log) m2/yr	Cv (t90, root m2/yr	Csec
0	0.700	-	-	-	-
740	0.569	0.1	N/A	N/A	0.0025
1 480	0.512	0.049	N/A	N/A	0.0013
2 960	0.458	0.024	1.4	0.94	0.0013
5 920	0.391	0.016	1.2	0.82	0.0019
740	0.460	0.0095			

Preparation

Index tests			
Orientation of the sample	Vertical		
Particle density	assumed	2.65	Mg/m3
Liquid limit	N/A		%
Plastic limit	N/A		%

Specimen details	Initial	Final	
Diameter	50.00	-	mm
Height	20.00	17.17	mm
Moisture Content	23	22	%
Bulk density	1.92	2.22	Mg/m3
Dry density	1.56	1.82	Mg/m3
Voids Ratio	0.700	0.460	
Saturation	89	128	%
Avg. temperature for test	22.0		°C
Swelling Pressure	Not measured		kPa
Settlement on saturation			%

Note: Cv corrected to 20°C

Remarks:

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

Signed: Darren Berrill
Geotechnical General Manager

GF 172.10

for and on behalf of i2 Analytical Ltd

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

UKAS TESTING
2183

Final Report

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:

Details: Martin Dyer, Laboratory Manager

Results - 2 Stage WAC

Project: STR4646 St Pancras Campus, Camden

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-09242								
Chemtest Sample ID:	793563								
Sample Ref:	2-101								
Sample ID:	WAC010.002-101								
Sample Location:	WAC01								
Top Depth(m):	0.00								
Bottom Depth(m):									
Sampling Date:	06-Feb-2019								
Determinand	**SOP**	**Accred.**	**Units**				**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
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	--	--
pH	2010	U				10.1	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.096	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/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	N	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.

Results - 2 Stage WAC

Project: STR4646 St Pancras Campus, Camden

							Landfill Waste Acceptance Criteria Limits		
Chemtest Job No:	19-09242								
Chemtest Sample ID:	793564								
Sample Ref:	2-102								
Sample ID:	WAC020.002-102								
Sample Location:	WAC02								
Top Depth(m):	0.00								
Bottom Depth(m):									
Sampling Date:	26-Feb-2019								
Determinand	**SOP**	**Accred.**	**Units**				**Inert Waste Landfill**	**Stable, Non-reactive hazardous waste in non-hazardous Landfill**	**Hazardous Waste Landfill**
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	--	--
pH	2010	U				9.9	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.079	--	To evaluate	To evaluate
Eluate Analysis			**2:1 mg/l**	**8:1 mg/l**	**2:1 mg/kg**	**Cumulative mg/kg 10:1**	**Limit values for compliance leaching test using BS EN 12457 at L/S 10 l/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	N	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	B	Amber Glass 250ml
793563	2-101	WAC010.002-101	WAC01	06-Feb-2019	B	Plastic Tub 500g
793564	2-102	WAC020.002-102	WAC02	26-Feb-2019	B	Amber Glass 250ml
793564	2-102	WAC020.002-102	WAC02	26-Feb-2019	B	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	pH	pH Meter
2015	Acid Neutralisation Capacity	Acid Reserve	Titration
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2610	Loss on Ignition	loss on ignition (LOI)	Determination of the proportion by mass that is lost from a soil by ignition at 550°C.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2815	Polychlorinated Biphenyls (PCB) ICES7Congeners in Soils by GC-MS	ICES7 PCB congeners	Acetone/Hexane extraction / GC-MS
640	Characterisation of Waste (Leaching)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

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

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

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

Final Report

Report No.:	19-09237-1
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, Camden

Job Number: 19-09237

No Samples:

Date Reported: 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)

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Results - Soil

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
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.:	BH010.901-003	BH011.501-004	BH0111.501-016	BH013.001-006	BH020.501-036	BH020.801-037	BH030.301-039	BH033.001-042	BH034.001-043
					Sample Location:	BH01	BH01	BH01	BH01	BH02	BH02	BH03	BH03	BH03
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	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**										
ACM Type	U	2192		N/A			-				-	-		
Asbestos Identification	U	2192	%	0.001			No Asbestos Detected				No Asbestos Detected	No Asbestos Detected		
ACM Detection Stage	U	2192		N/A			-				-	-		
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	
pH	M	2010		N/A	9.6	11.1	8.5	9.3	8.5			9.4		
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.1				0.75			1.6		
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010		0.52	0.44	0.22						
Total Sulphur	M	2175	%	0.010		0.24	0.43	0.21						
Cyanide (Complex)	M	2300	mg/kg	0.50	[B] 1.5				[B] 0.70			[B] 0.50		
Cyanide (Free)	M	2300	mg/kg	0.50	[B] < 0.50				[B] < 0.50			[B] < 0.50		
Cyanide (Total)	M	2300	mg/kg	0.50	[B] 1.5				[B] 0.70			[B] 0.50		
Sulphate (Acid Soluble)	M	2430	%	0.010		0.32	0.11	0.41						
Arsenic	M	2450	mg/kg	1.0	14				16			17		
Beryllium	U	2450	mg/kg	1.0	< 1.0				< 1.0			< 1.0		
Cadmium	M	2450	mg/kg	0.10	0.60				0.74			0.42		
Chromium	M	2450	mg/kg	1.0	81				29			32		
Copper	M	2450	mg/kg	0.50	45				49			42		
Mercury	M	2450	mg/kg	0.10	0.36				0.51			0.41		
Nickel	M	2450	mg/kg	0.50	23				23			22		
Lead	M	2450	mg/kg	0.50	320				200			170		
Selenium	M	2450	mg/kg	0.20	< 0.20				0.40			< 0.20		
Vanadium	U	2450	mg/kg	5.0	51				35			36		
Zinc	M	2450	mg/kg	0.50	82				160			140		
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50				< 0.50			< 0.50		
Organic Matter	M	2625	%	0.40	8.8				4.7			3.8	1.4	
Aliphatic TPH >C5-C6	N	2680	mg/kg	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	mg/kg	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	

Chemtest
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Results - Soil

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.:**		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.:		BH010.901-003	BH011.501-004	BH0111.501-016	BH013.001-006	BH020.501-036	BH020.801-037	BH030.301-039	BH033.001-042	BH034.001-043
			Sample Location:		BH01	BH01	BH01	BH01	BH02	BH02	BH03	BH03	BH03
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	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	M	2760	µg/kg	1.0	[B] < 1.0								[B] < 1.0
Toluene	M	2760	µg/kg	1.0	[B] < 1.0								[B] 1.5
Ethylbenzene	M	2760	µg/kg	1.0	[B] < 1.0								[B] 2.1
m & p-Xylene	M	2760	µg/kg	1.0	[B] < 1.0								[B] 1.9
o-Xylene	M	2760	µg/kg	1.0	[B] < 1.0								[B] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[B] < 1.0								[B] < 1.0
Naphthalene	M	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	M	2800	mg/kg	0.10	0.56				0.11			0.11	2.2
Fluorene	M	2800	mg/kg	0.10	0.88				0.27			< 0.10	2.3
Phenanthrene	M	2800	mg/kg	0.10	5.4				2.5			1.5	27
Anthracene	M	2800	mg/kg	0.10	0.72				0.56			0.33	5.1
Fluoranthene	M	2800	mg/kg	0.10	6.8				4.5			3.1	25
Pyrene	M	2800	mg/kg	0.10	5.9				3.7			2.6	20
Benzo[a]anthracene	M	2800	mg/kg	0.10	2.6				2.0			1.4	10
Chrysene	M	2800	mg/kg	0.10	3.3				1.9			1.4	9.9
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	3.9				2.8			2.0	12
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	1.7				1.2			0.81	4.7
Benzo[a]pyrene	M	2800	mg/kg	0.10	3.1				2.4			1.6	9.7
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	2.5				2.1			1.5	7.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.36				0.29			0.21	0.99
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	2.4				1.7			1.3	5.9

Chemtest
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Results - Soil

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.:**		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.:		BH010.901-003	BH011.501-004	BH0111.501-016	BH013.001-006	BH020.501-036	BH020.801-037	BH030.301-039	BH033.001-042	BH034.001-043
			Sample Location:		BH01	BH01	BH01	BH01	BH02	BH02	BH03	BH03	BH03
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	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**									
Total Of 16 PAH's	N	2800	mg/kg	2.0	41				27			18	140
Total Phenols	M	2920	mg/kg	0.30	< 0.30				< 0.30			< 0.30	

Chemtest
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Results - Soil

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					Client Sample Ref.:	1-093	1-044	1-094	1-095	1-098	1-100	1-106	1-108	1-109
					Client Sample ID.:	BH0341.001-093	BH035.101-044	TP01A0.701-094	TP01A0.801-095	TP020.601-098	TP020.901-100	TP040.201-106	TP040.601-108	TP040.901-109
					Sample Location:	BH03	BH03	TP01A	TP01A	TP02	TP02	TP04	TP04	TP04
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	41.00	5.10	0.70	0.80	0.60	0.90	0.20	0.60	0.90
					Bottom Depth (m):	41.45								
					Date Sampled:	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
					Asbestos Lab:				COVENTRY			COVENTRY		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**										
ACM Type	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	N	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	
pH	M	2010		N/A	8.6	8.3	9.9		9.5	10.1			10.1	
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40			1.7		1.2				0.74	
Sulphate (2:1 Water Soluble) as SO4	M	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)	M	2300	mg/kg	0.50			[B] < 0.50		[B] < 0.50					[B] < 0.50
Cyanide (Free)	M	2300	mg/kg	0.50			[B] < 0.50		[B] < 0.50					[B] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50			[B] < 0.50		[B] < 0.50					[B] < 0.50
Sulphate (Acid Soluble)	M	2430	%	0.010	0.14	2.3				0.37				
Arsenic	M	2450	mg/kg	1.0			22		19					18
Beryllium	U	2450	mg/kg	1.0			< 1.0		< 1.0					< 1.0
Cadmium	M	2450	mg/kg	0.10			0.24		0.21					0.34
Chromium	M	2450	mg/kg	1.0			24		22					21
Copper	M	2450	mg/kg	0.50			75		42					26
Mercury	M	2450	mg/kg	0.10			1.1		0.67					0.30
Nickel	M	2450	mg/kg	0.50			27		20					22
Lead	M	2450	mg/kg	0.50			590		180					200
Selenium	M	2450	mg/kg	0.20			0.38		< 0.20					< 0.20
Vanadium	U	2450	mg/kg	5.0			36		33					30
Zinc	M	2450	mg/kg	0.50			170		140					470
Chromium (Hexavalent)	N	2490	mg/kg	0.50			< 0.50		< 0.50					< 0.50
Organic Matter	M	2625	%	0.40			1.9		1.9				2.9	0.97
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010									[B] < 0.010	
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010									[B] < 0.010	
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10									[B] < 0.10	
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10									[B] < 0.10	
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10									[B] < 0.10	
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10									[B] < 0.10	

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Results - Soil

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
Quotation No.:					**Chemtest Sample ID.:**	793546	793547	793548	793549	793550	793552	793553	793554	793555
Order No.: POR005023					Client Sample Ref.:	1-093	1-044	1-094	1-095	1-098	1-100	1-106	1-108	1-109
					Client Sample ID.:	BH0341.001-093	BH035.101-044	TP01A0.701-094	TP01A0.801-095	TP020.601-098	TP020.901-100	TP040.201-106	TP040.601-108	TP040.901-109
					Sample Location:	BH03	BH03	TP01A	TP01A	TP02	TP02	TP04	TP04	TP04
					Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
					Top Depth (m):	41.00	5.10	0.70	0.80	0.60	0.90	0.20	0.60	0.90
					Bottom Depth (m):	41.45								
					Date Sampled:	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
					Asbestos Lab:				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	0.10									[B] 6.2	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0									[B] 38	
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010									[B] < 0.010	
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010									[B] < 0.010	
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10									[B] < 0.10	
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10									[B] < 0.10	
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10									[B] 1.2	
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10									[B] 3.5	
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10									[B] 320	
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10									[B] 23	
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0									[B] 350	
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0									[B] 390	
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	M	2760	µg/kg	1.0									[B] < 1.0	
Methyl Tert-Butyl Ether	M	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	0.10				0.14		< 0.10			0.20	0.18
Acenaphthene	M	2800	mg/kg	0.10				0.23		< 0.10			0.11	0.10
Fluorene	M	2800	mg/kg	0.10				0.18		< 0.10			0.12	0.13
Phenanthrene	M	2800	mg/kg	0.10				2.9		0.83			1.5	1.3
Anthracene	M	2800	mg/kg	0.10				0.66		0.17			0.34	0.32
Fluoranthene	M	2800	mg/kg	0.10				4.7		1.4			3.4	3.1
Pyrene	M	2800	mg/kg	0.10				4.1		1.2			3.1	2.8
Benzo[a]anthracene	M	2800	mg/kg	0.10				2.3		0.66			1.6	1.5
Chrysene	M	2800	mg/kg	0.10				2.3		0.82			1.7	1.6
Benzo[b]fluoranthene	M	2800	mg/kg	0.10				3.2		0.94			2.3	2.1
Benzo[k]fluoranthene	M	2800	mg/kg	0.10				1.4		0.42			0.94	0.98
Benzo[a]pyrene	M	2800	mg/kg	0.10				2.6		0.76			1.7	1.6
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10				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	0.10				2.1		0.64			1.5	1.6

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Results - Soil

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			Client Sample Ref.:		1-093	1-044	1-094	1-095	1-098	1-100	1-106	1-108	1-109
			Client Sample ID.:		BH0341.001-093	BH035.101-044	TP01A0.701-094	TP01A0.801-095	TP020.601-098	TP020.901-100	TP040.201-106	TP040.601-108	TP040.901-109
			Sample Location:		BH03	BH03	TP01A	TP01A	TP02	TP02	TP04	TP04	TP04
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		41.00	5.10	0.70	0.80	0.60	0.90	0.20	0.60	0.90
			Bottom Depth (m):		41.45								
			Date Sampled:		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
			Asbestos Lab:					COVENTRY			COVENTRY		
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Total Of 16 PAH's	N	2800	mg/kg	2.0			30		8.9			20	19
Total Phenols	M	2920	mg/kg	0.30			< 0.30		< 0.30				< 0.30

Chemtest
The right chemistry to deliver results

Results - Water

Project: STR4646 St Pancras Campus, Camden

Client: Soiltechnics Limited			**Chemtest Job No.:**		19-09237
Quotation No.:			**Chemtest Sample ID.:**		793540
Order No.: POR005023			Client Sample Ref.:		2-001
			Client Sample ID.:		BH015.742-001
			Sample Location:		BH01
			Sample Type:		WATER
			Top Depth (m):		5.74
			Date Sampled:		11-Mar-2019
Determinand	**Accred.**	**SOP**	**Units**	**LOD**	
pH	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	N	1675	µg/l	0.010	< 0.010
Aliphatic TPH >C6-C8	N	1675	µg/l	0.010	< 0.010
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10
Aliphatic TPH >C35-C44	N	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	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10
Aromatic TPH >C12-C16	N	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

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Results - Water

Project: STR4646 St Pancras Campus, Camden

Client: Soiltechnics Limited			**Chemtest Job No.:**		19-09237
Quotation No.:			**Chemtest Sample ID.:**		793540
Order No.: POR005023			Client Sample Ref.:		2-001
			Client Sample ID.:		BH015.742-001
			Sample Location:		BH01
			Sample Type:		WATER
			Top Depth (m):		5.74
			Date Sampled:		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	B	Amber Glass 250ml
793536	1-003	BH010.901-003	BH01	25-Feb-2019	B	Plastic Tub 500g
793540	2-001	BH015.742-001	BH01	11-Mar-2019	B	Coloured Winchester 1000ml
793540	2-001	BH015.742-001	BH01	11-Mar-2019	B	EPA Vial 40ml
793540	2-001	BH015.742-001	BH01	11-Mar-2019	B	Plastic Bottle 1000ml
793541	1-036	BH020.501-036	BH02	26-Feb-2019	B	Plastic Tub 500g
793544	1-042	BH033.001-042	BH03	27-Feb-2019	B	Plastic Tub 500g
793545	1-043	BH034.001-043	BH03	27-Feb-2019	B	Amber Glass 250ml
793548	1-094	TP01A0.701-094	TP01A	25-Feb-2019	B	Plastic Tub 500g
793550	1-098	TP020.601-098	TP02	25-Feb-2019	B	Amber Glass 250ml
793550	1-098	TP020.601-098	TP02	25-Feb-2019	B	Plastic Tub 500g
793554	1-108	TP040.601-108	TP04	25-Feb-2019	B	Amber Glass 250ml
793554	1-108	TP040.601-108	TP04	25-Feb-2019	B	Plastic Tub 500g
793555	1-109	TP040.901-109	TP04	25-Feb-2019	B	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	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	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
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	pH	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.

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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
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Rose Lane
Lenham Heath
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ME17 2JN
t: 01622 850410

DETS Report No: 19-04352

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:

Dave Ashworth
Deputy Quality Manager

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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	ISO17025	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)	mg/l	< 0.1	ISO17025	1.9				
Total Phenols (monohydric)	ug/l	< 10	NONE	< 10				
Total PAH	ug/l	< 0.01	NONE	1.19				

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

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Water Analysis Certificate - Speciated PAH						
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**				
Naphthalene	ug/l	< 0.01	NONE	< 0.01			
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	0.43			
Fluorene	ug/l	< 0.01	NONE	< 0.01			
Phenanthrene	ug/l	< 0.01	NONE	0.06			
Anthracene	ug/l	< 0.01	NONE	< 0.01			
Fluoranthene	ug/l	< 0.01	NONE	0.39			
Pyrene	ug/l	< 0.01	NONE	0.31			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008			
Total EPA-16 PAHs	ug/l	< 0.01	NONE	1.19			

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Water Analysis Certificate - TPH CWG Banded						
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**					
Aliphatic >C5 - C6	ug/l	< 10	NONE	< 10				
Aliphatic >C6 - C8	ug/l	< 10	NONE	< 10				
Aliphatic >C8 - C10	ug/l	< 10	NONE	< 10				
Aliphatic >C10 - C12	ug/l	< 10	NONE	< 10				
Aliphatic >C12 - C16	ug/l	< 10	NONE	< 10				
Aliphatic >C16 - C21	ug/l	< 10	NONE	< 10				
Aliphatic >C21 - C34	ug/l	< 10	NONE	22				
Aliphatic (C5 - C34)	ug/l	< 70	NONE	< 70				
Aromatic >C5 - C7	ug/l	< 10	NONE	< 10				
Aromatic >C7 - C8	ug/l	< 10	NONE	< 10				
Aromatic >C8 - C10	ug/l	< 10	NONE	< 10				
Aromatic >C10 - C12	ug/l	< 10	NONE	< 10				
Aromatic >C12 - C16	ug/l	< 10	NONE	< 10				
Aromatic >C16 - C21	ug/l	< 10	NONE	< 10				
Aromatic >C21 - C35	ug/l	< 10	NONE	15				
Aromatic (C5 - C35)	ug/l	< 70	NONE	< 70				
Total >C5 - C35	ug/l	< 140	NONE	< 140				

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Water Analysis Certificate - BTEX / MTBE						
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					
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				

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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	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	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	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	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	Cyanide - Free	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 dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 – C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	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	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichlorometha	E108
Water	UF	Petroleum Ether Extract (PEE)	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 semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	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, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	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	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	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

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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			Summary of test data					Initial comparison	Outlier test					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	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Arsenic	S4UL	640	6	14.0	22.0	17.7	0	Mean value below guideline	y					normal	normal	y	19.9	**Arsenic**
Beryllium	S4UL	12	6	1.0	1.0	1.0	0	Mean value below guideline	y					not normal	not normal	n	1.0	**Beryllium**
Boron	S4UL	240000	6	0.7	1.7	1.2	0	Mean value below guideline	y					normal	not normal	n	1.9	**Boron**
Cadmium	S4UL	190	6	0.2	0.7	0.4	0	Mean value below guideline	y					normal	normal	y	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	y					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	y	0.8	**Mercury#**
Nickel	S4UL	980	6	20.0	27.0	22.8	0	Mean value below guideline	y					normal	not normal	n	27.0	**Nickel**
Selenium	S4UL	12000	6	0.2	0.4	0.3	0	Mean value below guideline	y					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
#	Assumed to be elemental mercury as initial screening value

Title	Table number
Analysis of test data in relation to concentrations of inorganic chemical contaminants.	1

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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			Summary of test data					Initial Screening	Outlier test				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	Location of outlier	Depth / Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
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	y	0.3	**Acenaphthylene**
Anthracene	S4UL	520000	6	0.2	0.7	0.5	0	Mean value below guideline	y				normal	normal	y	0.6	**Anthracene**
Benzo(a)anthracene	S4UL	170	6	0.7	2.6	1.7	0	Mean value below guideline	y				normal	normal	y	2.3	**Benzo(a)anthracene**
Benzo(a)pyrene	S4UL	35	6	0.8	3.1	2.0	0	Mean value below guideline	y				normal	normal	y	2.7	**Benzo(a)pyrene**
Benzo(b)fluoranthene	S4UL	44	6	0.9	3.9	2.5	0	Mean value below guideline	y				normal	normal	y	3.3	**Benzo(b)fluoranthene**
Benzo(g,h,i)perylene	S4UL	3900	6	0.6	2.4	1.6	0	Mean value below guideline	y				normal	normal	y	2.1	**Benzo(g,h,i)perylene**
Benzo(k)fluoranthene	S4UL	1200	6	0.4	1.7	1.1	0	Mean value below guideline	y				normal	normal	y	1.5	**Benzo(k)fluoranthene**
Chrysene	S4UL	350	6	0.8	3.3	1.9	0	Mean value below guideline	y				normal	normal	y	2.6	**Chrysene**
Dibenzo(a,h)anthracene	S4UL	3.5	6	0.1	0.4	0.2	0	Mean value below guideline	y				normal	normal	y	0.3	**Dibenzo(a,h)anthracene**
Fluoranthene	S4UL	23000	6	1.4	6.8	3.9	0	Mean value below guideline	y				normal	normal	y	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	y				normal	normal	y	2.3	**Indeno(1,2,3-cd)pyrene**
Naphthalene	S4UL	190	6	0.2	0.4	0.3	0	Mean value below guideline	y				normal	normal	y	0.3	**Naphthalene**
Phenanthrene	S4UL	22000	6	0.8	5.4	2.4	0	Mean value below guideline	y				normal	normal	y	3.8	**Phenanthrene**
Phenols	S4UL	760	6	0.3	0.3	0.3	0	Mean value below guideline	y				not normal	not normal	n	0.3	**Phenols**
Pyrene	S4UL	54000	6	1.2	5.9	3.4	0	Mean value below guideline	y				normal	normal	y	4.7	**Pyrene**

Notes

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
ATK	Soil Screening Value derived by Atkins
*	Assuming a SOM of 1%

Title: Analysis of test data in relation to concentrations of organic chemical contaminants.
Table number: 2

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

Adopted Model: Industrial/Commercial and BPG5
Receptor: Vegetation

Test procedure			Summary of test data					Initial comparison	Outlier test				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	Location of outlier	Depth	Concentration mg/kg	Shapiro-Wilk Normality test	Probability plot test	Data normally distributed?	95% UCL of mean mg/kg	Contaminant
Arsenic	S4UL	640	6	14.0	22.0	17.7	0	Mean value below guideline	y					normal	normal	y	19.9	**Arsenic**
Beryllium	S4UL	12	6	1.0	1.0	1.0	0	Mean value below guideline	y					not normal	not normal	n	1.0	**Beryllium**
Boron	S4UL	240000	6	0.7	1.7	1.2	0	Mean value below guideline	y					normal	not normal	n	1.9	**Boron**
Cadmium	S4UL	190	6	0.2	0.7	0.4	0	Mean value below guideline	y					normal	normal	y	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	y					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 (l)	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	y	0.8	**Mercury#**
Nickel	S4UL	980	6	20.0	27.0	22.8	0	Mean value below guideline	y					normal	not normal	n	27.0	**Nickel**
Selenium	S4UL	12000	6	0.2	0.4	0.3	0	Mean value below guideline	y					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
#	Assumed to be elemental mercury as initial screening value

Title	Table number
Analysis of test data in relation to concentrations of inorganic chemical contaminants.	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 (mg/kg)	Concentration BH01 0.90	BH03 4.00	TP04 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 (mg/kg)	Concentration BH01 0.90	BH03 4.00	TP04 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	Table number
Comparison of measured concentrations of petroleum hydrocarbons with guideline values.	

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Summary of groundwater test results

Receptor	**Groundwater**		
Water type	**Freshwater**		
Fish type	**Cyprinid**		
Water hardness	**>250**	**mg/l**	**(measured at a concentration of 276mg/l on the Thames Water website)$**

Contaminant	Guideline value (µg/l)	Guideline source	Location Depth (m)	BH01 5.74
Inorganics (µg/l)				
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/l)				
Hydrocarbons[1]	10	UKDWS		< 2.0
Benzene	30	EQS (f)		< 1.0
Toluene[2]	50	EQS (f)		< 1.0
Ethyl benzene[3]	300	WHO		< 1.0
Xylene[2]	30	EQS (f)		< 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 CIRIA C552	
	Humans						Vegetation	Water					Consequence of risk occurring via most likely pathway	Risk
	Ingestion of air-borne dusts	Ingestion of soil	Ingestion of vegetables and soil attached to vegetables	Inhalation of air-borne dusts	Inhalation of vapours	Dermal contact with soil and dust	Root uptake, deposition to shoots and foliage contact	Percolation of water through contaminated soils	Near-surface water run-off through contaminated	Saturation of contaminated soils by flood waters				
Soils														
Former industrial/ commercial activities	Likely	Low-likelihood	Unlikely	Likely	Likely	Likely	-	-	-	-	Current site users	Adult	Medium	Moderate
	Likely	Likely	Unlikely	Likely	Likely	Likely	-	-	-	-	Construction operatives	Adult	Medium	Moderate
	-	-	-	-	-	-	Likely	-	-	-	Vegetation (current)	-	Mild	Low/moderate
Existing commercial units	Low-likelihood	Low likelihood	Unlikely	Low-likelihood	Low-likelihood	Low-likelihood	-	-	-	-	Current site users	Adult	Medium	Low/moderate
	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	Table number
Initial Conceptual Site Model	1

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Updated Conceptual Model (following laboratory testing)

Current site use commercial/industrial

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

Title	Table number
Updated Conceptual Site Model	2

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Final Conceptual Model (following remediation)

Current site use commercial/industrial

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

Title	Table number
Final Conceptual Site Model	3

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Record of in-situ gas and water level monitoring results

Date / Time	Instrument Used	Location	Atmospheric pressure (mB)	Temperature (°C)	Methane, CH_4 (%v/v) *Chg*		Carbon Dioxide, CO_2 (%v/v) *Chg*		Oxygen, O_2 (%v/v)		Balance	Lower Explosive Limit	Gas Flow (q)	Peak hazardous gas flow rate *Qhgs*		Steady hazardous gas flow rate *Qhgs*		NHBC Guideline	NHBC Guideline	Characteristic gas situation	Potentially Explosive	Water Level (m)
					Peak	Steady	Peak	Steady	Minimum	Average	(%v/v)	(% LEL)	(l/Hr)	CH_4	CO_2	CH_4	CO_2	(Peak)	(Steady)			
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 (l/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	Revision
Record of in-situ gas monitoring results	Final

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Table comparing cumulative compound concentrations with hazardous waste threshold values

Category of danger		Irritant	Harmful	Toxic		Carcinogenic		Corrosive		Toxic for reproduction		Mutagenic		Ecotoxic		
														∑N : R50-53/0.25 +∑N : R51-53/2.5 +∑N : R52-53/25	∑N : 50-53 +∑N : R50	∑N : 50-53 +∑N : 51-53 +∑N : 52-53 +∑N : R53
Risk Phrase		Xi	Xn	T+	T	Carc Cat 1 or 2	Carc Cat 3	C R34	C R35	Repr Cat 1 or 2	Repr Cat 3	Muta Cat 2	Muta Cat 3			
Contaminant	Highest concentration	H4 (%)	H5 (%)	H6 (%)	H6 (%)	H7 (%)	H7 (%)	H8 (%)	H8 (%)	H10 (%)	H10 (%)	H11 (%)	H11 (%)	H14	H14	H14
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
PAH																
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)anthracene	0.36				0.0000	0.0000									0.0000	0.0000
TPH																
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

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Landfill Waste Acceptance Criteria				Laboratory test data	
Parameter	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill	WAC01	WAC02
Parameters determined on the waste					
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**
pH		>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 compliance test using BN 12457-3 at L/S 10 l kg^{-1}					
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

Notes

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

Title

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

Table number

1 of 1

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Basic categorisation schedule for Made Ground soils with no asbestos containing materials

Produced following the requirements of The Landfill (England and Wales) (Amendment) Regulations 2004 Part 2 (5)

(a) *Source and origin of waste*

Proposed development at St Pancras Commercial Centre, Camden

(b) *Process producing the waste*

Foundation and service trench excavations/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. Gravel consists of brick, concrete, flint, asphaltic concrete, clinker, fabric, plastic, slag and flint.

(e) *Appearance of the waste*

As above

(f) *European waste catalogue code*

17-05-03* (*for hazardous waste*)

(g) *Hazardous waste properties*

Elevated combined metals and total petroleum 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

(l) *Name of waste producer*

To be confirmed

(m) *Name and address of consultant*

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Schedule Date:

May 2019

Soiltechnics reference:

STR4646-G01

signed

Darryl Neylon B.Sc, (Hons) FGS
Geo-environmental Engineer, Soiltechnics Limited

Basic categorisation schedule for London Clay Formation

Produced following the requirements of The Landfill (England and Wales) (Amendment) Regulations 2004 Part 2 (5)

(a) *Source and origin of waste*

Proposed development at St Pancras Commercial Centre, Camden

(b) *Process producing the waste*

Foundation and service trench excavations/general site clearance

(c) *Statement on waste treatment*

Refer to pre-treatment confirmation form

(d) *Composition of the waste*

Stiff brown and grey silty clay

(e) *Appearance of the waste*

As above

(f) *European waste catalogue code*

17-05-04 (*for non-hazardous waste*)

(g) *Hazardous waste properties*

None

(h) *Is the waste prohibited under regulation 9?*

No

(i) *Landfill class*

Inert by virtue of being natural in origin and unaffected by anthropogenic contamination

(j) *Additional precautions required at landfill*

None

(k) *Can waste be recycled or recovered?*

Yes

(l) *Name of waste producer*

To be confirmed

(m) *Name and address of consultant*

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Schedule Date:

May 2019

Soiltechnics reference:

STR4646-G01

signed

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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) *Source and origin of waste*

Proposed development at St Pancras Commercial Centre, Camden

(b) *Process producing the waste*

Foundation and service trench excavations/general site clearance

(c) *Statement on waste treatment*

Refer to pre-treatment confirmation form

(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) *Appearance of the waste*

As above

(f) *European waste catalogue code*

17-05-05* *(Construction material containing asbestos)*

(g) *Hazardous waste properties*

Positive identification of asbestos containing materials

(h) *Is the waste prohibited under regulation 9?*

No

(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

(l) *Name of waste producer*

To be confirmed

(m) *Name and address of consultant*

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