

**APPENDIX
E**

SOIL CHEMICAL RESULTS SUMMARY

Site: Haverhill Business Park, Suffolk
 Job No: AG2983-19

Exploratory Hole Reference	Depth (m)	DCS205	DCS206	DCS207	DCS208	DCS209	TP205	TP207	TP208	TP209	No. of samples (n)
		0.30	0.15	0.10	0.40	0.20	0.20	0.80	0.10	0.50	
Strata		Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	Made Ground	
	Units										
Arsenic	mg/kg	24	21	22	24	24	23	22	24	23	9
Beryllium	mg/kg	1	1	1	1	1	1	1	1.1	1	9
Boron	mg/kg	14	14	15	13	14	12	14	17	14	9
Cadmium	mg/kg	0.27	0.22	0.20	0.20	0.27	0.25	0.22	0.31	0.27	9
Chromium	mg/kg	27	25	24	24	28	24	26	38	25	9
Chromium (Hexavalent)	mg/kg	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	9
Chromium (Trivalent)	mg/kg	27	25	24	24	28	24	26	38	25	9
Copper	mg/kg	18	16	16	15	17	16	15	23	16	9
Lead	mg/kg	17	14	15	12	17	26	14	32	16	9
Mercury	mg/kg	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.1	9
Nickel	mg/kg	34	33	32	31	32	27	31	37	30	9
Selenium	mg/kg	0.25	0.42	0.35	0.25	0.35	0.24	0.37	0.63	0.31	9
Vanadium	mg/kg	36	35	32	32	38	34	35	46	37	9
Zinc	mg/kg	49	47	44	44	54	48	44	63	55	9
Naphthalene	mg/kg	1.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Acenaphthylene	mg/kg	0.27	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Acenaphthene	mg/kg	0.51	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Fluorene	mg/kg	0.49	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Phenanthrene	mg/kg	4.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Anthracene	mg/kg	1.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Fluoranthene	mg/kg	4.8	0.1	0.1	0.1	0.1	0.35	0.1	0.1	0.1	9
Pyrene	mg/kg	4.7	0.1	0.1	0.1	0.1	0.59	0.1	0.1	0.1	9
Benzo[a]anthracene	mg/kg	1.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Chrysene	mg/kg	1.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Benzo fluoranthene	mg/kg	1.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Benzo[k]fluoranthene	mg/kg	0.75	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Benzo[a]pyrene	mg/kg	5.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Dibenzo[a,h]anthracene	mg/kg	0.19	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Indeno[1,2,3-cd]pyrene	mg/kg	1.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Benzo[g,h,i]perylene	mg/kg	4.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Coronene	mg/kg	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	9
Total of 17 PAHs	mg/kg	35	2	2	2	2	2	2	2	2	9
TPH >C6-C10	mg/kg	1	1	1	1	1	1	1	1	1	9
TPH >C10-C25	mg/kg	1	1	1	1	1	1	12	1	18	9
TPH >C25-C40	mg/kg	1	1	1	1	1	1	6.2	1	4.3	9
Total TPH >C6-C40	mg/kg	10	10	10	10	10	10	19	10	22	9
Asbestos Identification		No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	9
Total Organic Carbon	%	0.69	0.64	0.56	0.46	0.62	3.0	0.56	1.1	0.49	9

Key -

Values in bold are reported at the laboratory limit of detection



Final Report

Report No.: 19-13050-1

Initial Date of Issue: 24-Apr-2019

Client: Applied Geology

Client Address: Unit 23, Abbey Park
Stareton
Kenilworth
Warwickshire
CV8 2LY

Contact(s): Adam Perks
Lab Results

Project: AG2983-19 Haverhill Business Park,
Suffolk

Quotation No.: Q17-09497 **Date Received:** 16-Apr-2019

Order No.: 14281 **Date Instructed:** 16-Apr-2019

No. of Samples: 9

Turnaround (Wkdays): 5 **Results Due:** 24-Apr-2019

Date Approved: 24-Apr-2019

Approved By:



Details: Robert Monk, Technical Manager

Results - Soil

Project: AG2983-19 Haverhill Business Park, Suffolk

Client: Applied Geology		Chemtest Job No.:		19-13050	19-13050	19-13050	19-13050	19-13050	19-13050	19-13050	19-13050	19-13050
Quotation No.: Q17-09497		Chemtest Sample ID.:		811668	811669	811670	811671	811672	811673	811674	811675	811676
		Sample Location:		DCS205	DCS206	DCS207	DCS208	DCS209	TP205	TP207	TP208	TP209
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.30	0.15	0.10	0.40	0.20	0.20	0.80	0.10	0.50
		Date Sampled:		25-Mar-2019	25-Mar-2019	25-Mar-2019	25-Mar-2019	22-Mar-2019	26-Mar-2019	26-Mar-2019	26-Mar-2019	26-Mar-2019
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Arsenic	M	2450	mg/kg	1.0	24	21	22	24	24	23	22	24
Cadmium	M	2450	mg/kg	0.10	0.27	0.22	0.20	0.20	0.27	0.25	0.22	0.31
Chromium	M	2450	mg/kg	1.0	27	25	24	24	28	24	26	38
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chromium (Trivalent)	N	2490	mg/kg	1.0	27	25	24	24	28	24	26	38
Copper	M	2450	mg/kg	0.50	18	16	16	15	17	16	15	23
Lead	M	2450	mg/kg	0.50	17	14	15	12	17	26	14	32
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11
Nickel	M	2450	mg/kg	0.50	34	33	32	31	32	27	31	37
Selenium	M	2450	mg/kg	0.20	0.25	0.42	0.35	0.25	0.35	0.24	0.37	0.63
Zinc	M	2450	mg/kg	0.50	49	47	44	44	54	48	44	63
Naphthalene	M	2700	mg/kg	0.10	1.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	0.27	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	0.51	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2700	mg/kg	0.10	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	4.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	M	2700	mg/kg	0.10	1.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2700	mg/kg	0.10	4.8	< 0.10	< 0.10	< 0.10	< 0.10	0.35	< 0.10	< 0.10
Pyrene	M	2700	mg/kg	0.10	4.7	< 0.10	< 0.10	< 0.10	< 0.10	0.59	< 0.10	< 0.10
Benzo[a]anthracene	M	2700	mg/kg	0.10	1.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	M	2700	mg/kg	0.10	1.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	1.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	0.75	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2700	mg/kg	0.10	5.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz[a,h]Anthracene	M	2700	mg/kg	0.10	0.19	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno[1,2,3-c,d]Pyrene	M	2700	mg/kg	0.10	1.0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	4.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Coronene	N	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 17 PAH's	N	2700	mg/kg	2.0	35	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
TPH >C6-C10	N	2670	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
TPH >C10-C25	N	2670	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] 12	[B] < 1.0
TPH >C25-C40	N	2670	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] 6.2	[B] < 1.0
Total TPH >C6-C40	M	2670	mg/kg	10	[B] < 10	[B] < 10	[B] < 10	[B] < 10	[B] < 10	[B] < 10	[B] 19	[B] < 10
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	17	16	14	15	18	13	17	19

Results - Soil

Project: AG2983-19 Haverhill Business Park, Suffolk

Client: Applied Geology	Chemtest Job No.:		19-13050	19-13050	19-13050	19-13050	19-13050	19-13050	19-13050	19-13050	19-13050	19-13050
Quotation No.: Q17-09497	Chemtest Sample ID.:		811668	811669	811670	811671	811672	811673	811674	811675	811676	
	Sample Location:		DCS205	DCS206	DCS207	DCS208	DCS209	TP205	TP207	TP208	TP209	
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):		0.30	0.15	0.10	0.40	0.20	0.20	0.80	0.10	0.50	
	Date Sampled:		25-Mar-2019	25-Mar-2019	25-Mar-2019	25-Mar-2019	22-Mar-2019	26-Mar-2019	26-Mar-2019	26-Mar-2019	26-Mar-2019	
	Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	
Determinand	Accred.	SOP	Units	LOD								
Soil Colour	N	2040		N/A	Brown,	Brown,	Brown,	Brown,	Brown,	Brown,	Brown,	Brown,
Other Material	N	2040		N/A	Stones,	Stones,	Stones,	nes,	Stones,	Stones,	Stones,	Stones,
Soil Texture	N	2040		N/A	Clay,	Clay	Clay,	Clay,	Clay,	Clay,	Clay,	Clay,
Boron	N	2450	mg/kg	0.40	14	14	15	13	14	12	14	17
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium	U	2450	mg/kg	5.0	36	35	32	32	38	34	35	46
Total Organic Carbon	M	2625	%	0.20	0.69	0.64	0.56	0.46	0.62	3.0	0.56	1.1

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:
811668			DCS205	25-Mar-2019	B	Amber Glass 250ml
811668			DCS205	25-Mar-2019	B	Amber Glass 60ml
811668			DCS205	25-Mar-2019	B	Plastic Tub 500g
811669			DCS206	25-Mar-2019	B	Amber Glass 250ml
811669			DCS206	25-Mar-2019	B	Amber Glass 60ml
811669			DCS206	25-Mar-2019	B	Plastic Tub 500g
811670			DCS207	25-Mar-2019	B	Amber Glass 250ml
811670			DCS207	25-Mar-2019	B	Amber Glass 60ml
811670			DCS207	25-Mar-2019	B	Plastic Tub 500g
811671			DCS208	25-Mar-2019	B	Amber Glass 250ml
811671			DCS208	25-Mar-2019	B	Amber Glass 60ml
811671			DCS208	25-Mar-2019	B	Plastic Tub 500g
811672			DCS209	22-Mar-2019	B	Amber Glass 250ml
811672			DCS209	22-Mar-2019	B	Amber Glass 60ml
811672			DCS209	22-Mar-2019	B	Plastic Tub 500g
811673			TP205	26-Mar-2019	B	Amber Glass 250ml
811673			TP205	26-Mar-2019	B	Amber Glass 60ml
811673			TP205	26-Mar-2019	B	Plastic Tub 500g
811674			TP207	26-Mar-2019	B	Amber Glass 250ml
811674			TP207	26-Mar-2019	B	Amber Glass 60ml
811674			TP207	26-Mar-2019	B	Plastic Bag
811675			TP208	26-Mar-2019	B	Amber Glass 250ml
811675			TP208	26-Mar-2019	B	Amber Glass 60ml
811675			TP208	26-Mar-2019	B	Plastic Tub 500g

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:
811676			TP209	26-Mar-2019	B	Amber Glass 250ml
811676			TP209	26-Mar-2019	B	Amber Glass 60ml
811676			TP209	26-Mar-2019	B	Plastic Tub 500g

SOP	Title	Parameters included	Method summary
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
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
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)

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



Final Report

Report No.: 19-13052-1

Initial Date of Issue: 29-Apr-2019

Client: Applied Geology

Client Address: Unit 23, Abbey Park
Stareton
Kenilworth
Warwickshire
CV8 2LY

Contact(s): Adam Perks
Lab Results

Project: AG2983-19 Haverhill Business Park,
Suffolk

Quotation No.: Q17-09497 **Date Received:** 16-Apr-2019

Order No.: 14281 **Date Instructed:** 16-Apr-2019

No. of Samples: 4

Turnaround (Wkdays): 7 **Results Due:** 26-Apr-2019

Date Approved: 29-Apr-2019

Approved By:

Details: Robert Monk, Technical Manager

Results - 2 Stage WAC

Project: AG2983-19 Haverhill Business Park, Suffolk

Project: AG2983-19 Haverhill Business Park, Suffolk							Landfill Waste Acceptance Criteria Limits			
Chemtest Job No:		19-13052					Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Chemtest Sample ID:		811677								
Sample Ref:										
Sample ID:										
Sample Location:		DCS201								
Top Depth(m):		0.30								
Bottom Depth(m):										
Sampling Date:		22-Mar-2019								
Determinand	SOP	Accred.	Units							
Total Organic Carbon	2625	U	%				0.74	3	5	6
Loss On Ignition	2610	U	%				4.0	--	--	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] < 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg				< 2.0	100	--	--
pH	2010	U					8.1	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg				0.10	--	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	< 0.0010	< 0.0010	< 0.050	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.010	0.013	< 0.50	< 0.50	< 0.50	20	100	300
Cadmium	1450	U	< 0.00010	< 0.00010	< 0.010	< 0.010	< 0.010	0.04	1	5
Chromium	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	0.0011	< 0.0010	< 0.050	< 0.050	< 0.050	2	50	100
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.0050	< 0.0050	0.01	0.2	2
Molybdenum	1450	U	0.0011	0.0032	< 0.050	< 0.050	< 0.050	0.5	10	30
Nickel	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	< 0.050	0.4	10	40
Lead	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	< 0.010	0.5	10	50
Antimony	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	< 0.010	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.0073	< 0.0010	< 0.50	< 0.50	< 0.50	4	50	200
Chloride	1220	U	4.9	1.6	< 10	< 10	20	800	15000	25000
Fluoride	1220	U	0.76	1.1	1.5	11	10	150	500	
Sulphate	1220	U	88	35	170	420	1000	20000	50000	
Total Dissolved Solids	1020	N	180	65	350	790	4000	60000	100000	
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-	-
Dissolved Organic Carbon	1610	U	20	15	< 50	150	500	800	1000	

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	16

Leachate Test Information	
Leachant volume 1st extract/l	0.317
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.227

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: AG2983-19 Haverhill Business Park, Suffolk

Chemtest Job No: 19-13052							Landfill Waste Acceptance Criteria Limits																										
Chemtest Sample ID: 811678							<table border="1"> <tr> <th>Inert Waste Landfill</th> <th>Stable, Non-reactive hazardous waste in non-hazardous Landfill</th> <th>Hazardous Waste Landfill</th> </tr> <tr> <td>3</td> <td>5</td> <td>6</td> </tr> </table>			Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	3	5	6																		
Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill																															
3	5	6																															
Sample Ref:																																	
Sample ID:																																	
Sample Location: TP201																																	
Top Depth(m): 0.50																																	
Bottom Depth(m):				<table border="1"> <tr> <th>Inert Waste Landfill</th> <th>Stable, Non-reactive hazardous waste in non-hazardous Landfill</th> <th>Hazardous Waste Landfill</th> </tr> <tr> <td>3</td> <td>5</td> <td>6</td> </tr> <tr> <td>2.6</td> <td>--</td> <td>10</td> </tr> <tr> <td>[B] < 0.010</td> <td>6</td> <td>--</td> </tr> <tr> <td>< 0.10</td> <td>1</td> <td>--</td> </tr> <tr> <td>[B] < 10</td> <td>500</td> <td>--</td> </tr> <tr> <td>< 2.0</td> <td>100</td> <td>--</td> </tr> <tr> <td>8.3</td> <td>--</td> <td>>6</td> </tr> <tr> <td>0.19</td> <td>--</td> <td>To evaluate</td> </tr> </table>			Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	3	5	6	2.6	--	10	[B] < 0.010	6	--	< 0.10	1	--	[B] < 10	500	--	< 2.0	100	--	8.3	--	>6	0.19	--	To evaluate
Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill																															
3	5	6																															
2.6	--	10																															
[B] < 0.010	6	--																															
< 0.10	1	--																															
[B] < 10	500	--																															
< 2.0	100	--																															
8.3	--	>6																															
0.19	--	To evaluate																															
Sampling Date: 21-Mar-2019																																	
Determinand	SOP	Accred.	Units																														
Total Organic Carbon	2625	U	%																														
Loss On Ignition	2610	U	%																														
Total BTEX	2760	U	mg/kg																														
Total PCBs (7 Congeners)	2815	U	mg/kg																														
TPH Total WAC (Mineral Oil)	2670	U	mg/kg																														
Total (Of 17) PAH's	2700	N	mg/kg																														
pH	2010	U																															
Acid Neutralisation Capacity	2015	N	mol/kg																														
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	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25																								
Barium	1450	U	0.0028	0.0053	< 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	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70																								
Copper	1450	U	< 0.0010	< 0.0010	< 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	< 0.0010	0.0013	< 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	< 0.0010	< 0.0010	< 0.010	< 0.010	0.06	0.7	5																								
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7																								
Zinc	1450	U	0.0075	< 0.0010	< 0.50	< 0.50	4	50	200																								
Chloride	1220	U	1.5	1.3	< 10	13	800	15000	25000																								
Fluoride	1220	U	0.25	0.52	< 1.0	4.8	10	150	500																								
Sulphate	1220	U	15	18	30	180	1000	20000	50000																								
Total Dissolved Solids	1020	N	65	53	130	540	4000	60000	100000																								
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-																								
Dissolved Organic Carbon	1610	U	20	17	< 50	180	500	800	1000																								

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	14

Leachate Test Information	
Leachant volume 1st extract/l	0.321
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.242

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: AG2983-19 Haverhill Business Park, Suffolk

Project: AG2983-19 Haverhill Business Park, Suffolk				Landfill Waste Acceptance Criteria Limits						
Chemtest Job No:	19-13052									
Chemtest Sample ID:	811679									
Sample Ref:										
Sample ID:										
Sample Location:	TP205									
Top Depth(m):	0.70									
Bottom Depth(m):										
Sampling Date:	26-Mar-2019									
Determinand	SOP	Accred.	Units							
Total Organic Carbon	2625	U	%			0.37	3	5	6	
Loss On Ignition	2610	U	%			3.0	--	--	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] < 10	500	--	--	
Total (Of 17) PAH's	2700	N	mg/kg			< 2.0	100	--	--	
pH	2010	U				8.3	--	>6	--	
Acid Neutralisation Capacity	2015	N	mol/kg			0.11	--	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	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25	
Barium	1450	U	0.0018	0.0034	< 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	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70	
Copper	1450	U	< 0.0010	< 0.0010	< 0.050	< 0.050	2	50	100	
Mercury	1450	U	< 0.00050	< 0.00050	< 0.0010	< 0.00050	0.01	0.2	2	
Molybdenum	1450	U	< 0.0010	0.0020	< 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	< 0.0010	< 0.0010	< 0.010	< 0.010	0.06	0.7	5	
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7	
Zinc	1450	U	0.0026	< 0.0010	< 0.50	< 0.50	4	50	200	
Chloride	1220	U	1.4	1.9	< 10	18	800	15000	25000	
Fluoride	1220	U	0.18	0.83	< 1.0	7.5	10	150	500	
Sulphate	1220	U	6.3	6.4	12	64	1000	20000	50000	
Total Dissolved Solids	1020	N	31	40	62	390	4000	60000	100000	
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-	
Dissolved Organic Carbon	1610	U	20	12	< 50	130	500	800	1000	

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	15

Leachate Test Information	
Leachant volume 1st extract/l	0.320
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.217

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: AG2983-19 Haverhill Business Park, Suffolk

Chemtest Job No:	19-13052					Landfill Waste Acceptance Criteria Limits			
Chemtest Sample ID:	811680					Inert Waste Landfill	Stable, Non-reactive hazardous waste in non-hazardous Landfill	Hazardous Waste Landfill	
Sample Ref:									
Sample ID:									
Sample Location:	TP210								
Top Depth(m):	0.30								
Bottom Depth(m):									
Sampling Date:	26-Mar-2019								
Determinand	SOP	Accred.	Units						
Total Organic Carbon	2625	U	%			0.67	3	5	6
Loss On Ignition	2610	U	%			4.2	--	--	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] < 10	500	--	--
Total (Of 17) PAH's	2700	N	mg/kg			< 2.0	100	--	--
pH	2010	U				8.2	--	>6	--
Acid Neutralisation Capacity	2015	N	mol/kg			0.21	--	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	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	2	25
Barium	1450	U	0.0040	0.0049	< 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	< 0.0010	< 0.0010	< 0.050	< 0.050	0.5	10	70
Copper	1450	U	< 0.0010	< 0.0010	< 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	< 0.0010	0.0034	< 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	< 0.0010	< 0.0010	< 0.010	< 0.010	0.06	0.7	5
Selenium	1450	U	< 0.0010	< 0.0010	< 0.010	< 0.010	0.1	0.5	7
Zinc	1450	U	0.011	0.0073	< 0.50	< 0.50	4	50	200
Chloride	1220	U	5.9	3.1	12	35	800	15000	25000
Fluoride	1220	U	0.57	1.4	1.1	13	10	150	500
Sulphate	1220	U	89	61	180	650	1000	20000	50000
Total Dissolved Solids	1020	N	640	78	1300	1600	4000	60000	100000
Phenol Index	1920	U	< 0.030	< 0.030	< 0.30	< 0.50	1	-	-
Dissolved Organic Carbon	1610	U	21	21	< 50	210	500	800	1000

Solid Information	
Dry mass of test portion/kg	0.175
Moisture (%)	16

Leachate Test Information	
Leachant volume 1st extract/l	0.317
Leachant volume 2nd extract/l	1.400
Eluant recovered from 1st extract/l	0.243

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:
811677			DCS201	22-Mar-2019	B	Amber Glass 250ml
811677			DCS201	22-Mar-2019	B	Amber Glass 60ml
811677			DCS201	22-Mar-2019	B	Plastic Tub 500g
811678			TP201	21-Mar-2019	B	Amber Glass 250ml
811678			TP201	21-Mar-2019	B	Amber Glass 60ml
811678			TP201	21-Mar-2019	B	Plastic Tub 500g
811679			TP205	26-Mar-2019	B	Amber Glass 250ml
811679			TP205	26-Mar-2019	B	Amber Glass 60ml
811679			TP205	26-Mar-2019	B	Plastic Tub 500g
811680			TP210	26-Mar-2019	B	Amber Glass 250ml
811680			TP210	26-Mar-2019	B	Amber Glass 60ml
811680			TP210	26-Mar-2019	B	Plastic Tub 500g

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) ICES7 Congeners 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	Compliance Test 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

Applied Geology Ltd
 Unit 23 Abbey Park
 Stareton
 Kenilworth
 Warwickshire
 CV8 2LY
 For the attention of Adam Perks

Report No: B22611
 Issue No 01

LABORATORY TEST REPORT




Project Name		HAVERHILL BUSINESS PARK, SUFFOLK	
Project Number	B22611	Date samples received	17/04/2019
Your Ref		Date written instructions received	17/04/2019
Purchase Order	14282	Date testing commenced	17/04/2019
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
1	14	Client Specified Suite - Soil	Yes
App S1	~	Sample Descriptions - Soil	N/A
App S2	~	Deviating Samples - Soil	N/A
App S3	~	Summary of In-House Analytical Test Methods - Soil	N/A
Remarks :			
Issued by : Stephen Langman		Date of Issue : 03/05/2019	
Approved Signatories :		Key to symbols used in this report S/C : Testing was sub-contracted	
G Wilson (JMD/Laboratories Director), S Langman (Laboratory Coordinator)			
<p style="text-align: center;">Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us</p>			



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birmingham@terratek.co.uk




www.terratek.co.uk

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 Offices in Airdrie, Birmingham, Belfast and Chesham

		Site HAVERHILL BUSINESS PARK, SUFFOLK							Contract No B22611														
		Client Applied Geology Ltd																					
		Engineer																					
Sample Identification																							
Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Sulphate (acid soluble as SO4) %	Sulphate (water soluble in 2:1 extract) as SO4 g/l	pH	Total Sulphur %															
DCS201	1.30		D	488908	0.11	0.28	7.7	0.16															
DCS201	1.90		D	488909	~	0.11	7.9	~															
DCS204	2.30		D	488911	~	1.78	7.4	~															
DCS205	1.20		D	488913	~	0.07	7.6	~															
DCS205	1.90		D	488914	0.04	0.02	7.9	0.03															
DCS206	0.70		D	488915	~	1.62	7.5	~															
DCS207	1.40		D	488918	~	<0.01	7.6	~															
DCS207	2.40		D	488919	0.30	1.44	7.6	0.18															
DCS209	0.50		D	488921	~	0.32	7.7	~															
DCS209	2.40		D	488923	2.11	1.97	7.5	0.58															
					Limits of Detection Terra Tek Analysis Method Accreditation M=Mcerts U=UKAS N=No accreditation		0.01 TP171 M	0.01 TP169 M	~ TP019 M	0.01 TP129 M													
Originator TH		Checked & Approved  03/05/2019		BRE SD1 SUITE - SOIL												 Figure 1 Sheet 1 of 2							

1140 - BRE Suite Soil - B22611.01.xls
Version 011 - 26/07/2012

Lab Project No B22611 : 03/05/2019 16:07:01
Moor Lane, Wilton, Birmingham, BS 7HG

 TERRA TEK <small>■ ■ ■ ■ ■ SITE INVESTIGATION AND LABORATORY SERVICES</small>					Site HAVERHILL BUSINESS PARK, SUFFOLK										Contract No B22611						
					Client Applied Geology Ltd										Engineer						
Sample Identification					Lab Sample ID	Sulphate (acid soluble as SO ₄) %	Sulphate (water soluble in 2:1 extract) as SO ₄ g/l	pH	Total Sulphur %												
Hole	Depth m	Sample Ref	Sample Type																		
DCS210	1.20		D	488925	~	0.56	7.6	~													
DCS211	1.50		D	488926	~	0.09	7.9	~													
DCS212	1.80		D	488927	2.47	2.01	7.5	0.88													
TP205	1.00		D	488929	1.62	2.04	7.5	0.58													
					Limits of Detection	0.01	0.01	~	0.01												
					Terra Tek Analysis Method	TP171	TP169	TP019	TP129												
					Accreditation M=Meets U=UKAS N=No accreditation	M	M	M	M												
Originator		Checked & Approved		BRE SD1 SUITE - SOIL																	
TH		 03/05/2019																			
								Figure 1 Sheet 2 of 2													



Site HAVERHILL BUSINESS PARK, SUFFOLK

Contract No E13009/1

Client Applied Geology Ltd

Engineer

Sample Identification				Lab Sample ID	Date Sampled	Temperature on receipt °C	PRIMARY MATRIX	Secondary Matrix	Additional matrix	% Loss at 30C	% Retained 2mm
Exploratory Hole	Depth m	Sample Ref	Sample Type								
DCS201	1.90		D	488909	22/03/19	10.5	CLAY	Fine to medium gravel		13.4	29.8
DCS204	2.30		D	488911	25/03/19	10.5	CLAY	Fine to medium gravel		13.6	24.9
DCS205	1.20		D	488913	25/03/19	10.5	CLAY	Fine to medium gravel		16.7	26
DCS205	1.90		D	488914	25/03/19	10.5	CLAY	Fine to medium gravel		15.2	17.9
DCS206	0.70		D	488915	25/03/19	10.5	CLAY	Fine to medium gravel		16.1	16.6
DCS207	1.40		D	488918	25/03/19	10.5	CLAY	Fine to medium gravel		15.6	31.5
DCS207	2.40		D	488919	25/03/19	10.5	CLAY	Fine to medium gravel		14.3	31.3
DCS209	0.50		D	488921	22/03/19	10.5	CLAY	Fine to medium gravel		15.1	28.8
DCS209	2.40		D	488923	22/03/19	10.5	CLAY	Fine to medium gravel		13.4	26.3
DCS210	1.20		D	488925	25/03/19	10.5	CLAY	Fine to medium gravel		12.9	26.5
DCS211	1.50		D	488926	25/03/19	10.5	CLAY	Fine to medium gravel		15.4	26.7
DCS212	1.80		D	488927	27/03/19	10.5	CLAY	Fine to medium gravel		11.5	27.4
TP205	1.00		D	488929	26/03/19	10.5	CLAY	Fine to medium gravel		16.2	21.2
DCS201	1.30		D	488908	22/03/19	10.5	CLAY	Fine to medium gravel		20.8	26.9

Notes


Terra Tek are accredited for clay, sand and loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials such as gravel, are not accredited where they comprise the major component of the sample.

Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated.

The laboratory removes any material > 2mm prior to analysis. The quantity and nature of the material is shown as the secondary and additional matrix types in the above table.

Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors List, which is subject to performance assessment, will be selected.



Originator	Checked & Approved	SAMPLE DESCRIPTIONS	Appendix S1
TGH	<i>S. Dargan</i> 03/05/2019		Sheet 1 of 1



				Site HAVERHILL BUSINESS PARK, SUFFOLK		Contract No B22611					
				Client Applied Geology Ltd							
				Engineer							
Sample Identification						Deviating conditions					Preservatives used
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Date Sampled	Sampling date has not been provided	Exceeded maximum holding time for selected test(s)	Presence of headspace in sample vial	Poorly fitting cap or lid	Damaged container	
DCS201	1.90		D	488909	22/03/19						
DCS204	2.30		D	488911	25/03/19						
DCS205	1.20		D	488913	25/03/19						
DCS205	1.90		D	488914	25/03/19						
DCS206	0.70		D	488915	25/03/19						
DCS207	1.40		D	488918	25/03/19						
DCS207	2.40		D	488919	25/03/19						
DCS209	0.50		D	488921	22/03/19						
DCS209	2.40		D	488923	22/03/19						
DCS210	1.20		D	488925	25/03/19						
DCS211	1.50		D	488926	25/03/19						
DCS212	1.80		D	488927	27/03/19						
TP205	1.00		D	488929	26/03/19						
DCS201	1.30		D	488908	22/03/19						

NOTES

- Results reported for samples classified as deviating may be compromised. Deviation types are shown as "X" or "Yes" in the table above.
- The absence of "X" or "Yes" in the table above indicates no reported deviations.
- Deviations due to use of incorrect sample container are shown on result tables.
- Deviating results are indicated within result tables.

Originator	Checked & Approved	DEVIATING SAMPLES - SOIL	 Appendix S2
TGH	 03/05/2019		

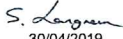
 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>		Site HAVERHILL BUSINESS PARK, SUFFOLK	Contract No B22611		
		Client Applied Geology Ltd			
		Engineer			
Method Code	Reference	Description of Method	ISO17025 Accredited	MCERTS Accredited	Wet/Dry Sample Tested
GP001	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Preparation of soil samples for chemical analysis	Yes	Yes	N/A
GP012	BS EN 12457-3: Characterisation of Waste - Compliance test for leaching of granular waste materials and sludges (two-stage batch test)	Preparation of soil samples for two-stage leachate test			Dry
TP019	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of pH in 2.5:1 water/soil extract using pH meter.	Yes	Yes	Dry
TP032	MAFF Book 427: The Analysis of Agricultural Materials: Method 8	Determination of water soluble boron by colorimetry	Yes		Dry
TP040	APHA/AWWA, 19th edition: Method 3500Cr-D	Determination of hexavalent chromium by colorimetry.	Yes		Dry
TP041	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of organic matter by titrimetry.	Yes		Dry
TP042	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of loss on ignition at 50-440°C by gravimetry	Yes	Yes	Dry
TP045	GACHAMJA A.M. Chromatography and Analysis: 1992 9-11 (modified)	Determination of polyaromatic hydrocarbons extractable in dichloromethane, by GC/MS	Yes	Yes	Dry
TP046	MEWAM method: Phenols in water and Effluents: 4-aminoantipyrine method	Determination of monohydric phenols by steam distillation/colorimetry	Yes	Yes	Dry
TP047	MEWAM method: Cyanide in Waters etc	Determination of free cyanide by steam distillation/colorimetry	Yes		Dry
TP048	MEWAM method: Cyanide in Waters etc	Determination of total cyanide by steam distillation/colorimetry.	Yes	Yes	Dry
TP049	MEWAM method: Cyanide in Waters etc	Determination of complex cyanide by calculation	Yes		Dry
TP050	MEWAM method: Determination of Thiocyanate ,1985	Determination of thiocyanate by colorimetry	Yes	Yes	Dry
TP051	USEPA Method 9030B	Determination of acid soluble sulphides by steam distillation/colorimetry.	Yes	Yes	Wet
TP067	TNRCC Method 1005: 2001 (modified)	Determination of pentane/acetone extractable petroleum hydrocarbons (C8 - C40) by GC/FID	Yes	Yes	Wet
TP072	In-house documented method	Determination of ammoniacal nitrogen by colorimetry			Dry
TP073	In-house documented method	Determination of anionic detergent (MBAS) by colorimetry			Dry
TP074	In-house documented method	Determination of water soluble fluoride by ion selective electrode			Dry
TP098	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of acid soluble chloride by titrimetry			Dry
TP099	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of water soluble chloride by titrimetry	Yes	Yes	Dry
Notes 1. Terra Tek (Birmingham) are MCERTS accredited for clay, sand & loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials, ie gravel, are not accredited where they comprise the major component of the sample. 2. Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated. 3. The laboratory removes any material >2mm prior to analysis. The quantity and nature of any material removed from samples is recorded and the information is available on request. 4. The laboratory records the date of analysis of each parameter. This information is available on request. 5. Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors list, which is subject to performance assessment, will be selected.					
Originator	Checked & Approved	SUMMARY OF IN-HOUSE ANALYTICAL TEST METHODS (SOIL)			Appendix S3
N/A	N/A				
Sheet 1 of 2					

 TERRA TEK <small>SITE INVESTIGATION AND LABORATORY SERVICES</small>		Site HAVERHILL BUSINESS PARK, SUFFOLK	Contract No B22611		
		Client Applied Geology Ltd			
		Engineer			
Method Code	Reference	Description of Method	ISO17025 Accredited	MCERTS Accredited	Wet/Dry Sample Tested
TP100	Wisconsin DNR Modified GRO method, Method for Determining Gasoline Range Organics	Determination of Volatile Petroleum Hydrocarbons/GRO.	Yes	Yes	Wet
TP110	USEPA Methods 8082A & 3665A	Determination of Total & Speciated 7 PCB Congeners by GC/MS SIM	Yes	Yes	Wet
TP114	BS1377, Part 3, 1990: Soils for Civil Engineering Purposes.	Determination of carbonate in soil (rapid titration method)			Dry
TP126	TNRCC Method 1006 (modified)	Extracted petroleum hydrocarbons from TP067 split into aromatic and aliphatic fractions. Analysed by GC/FID.	Yes		Wet
TP129	In-house documented method	Determination of total sulphur by ICP-OES spectroscopy	Yes	Yes	Dry
TP134	In-house documented method	Determination of water soluble chloride by titrimetry	Yes	Yes	Dry
TP135	USEPA Methods 8100 & 8270D. In-house method TP045	Determination of polyaromatic hydrocarbons extractable in dichloromethane, by GC/MS (with concentration stage)			Dry
TP137	BS7755: Section 3.9: 1995/ISO 11466:1995	Determination of acid extractable metals in soil by ICP-OES	Selected	Selected	Dry
TP145	USEPA Methods 3550C & 8270D	Determination of Semi-Volatile Organic Compounds by GC/MS	Yes	Yes	Wet
TP147	USEPA Methods 8082A & 3665A	Determination of total & speciated WHO 12 PCB Congeners by GC/MS SIM.			Wet
TP150	USEPA Methods 8081B & 8141B	Determination of pesticides and herbicides in soil by GC/MS SIM			Dry
TP152	USEPA Method 556	Determination of carbonyls by GC/MS.			Wet
TP154	USEPA Method 5021. Wisconsin DNR modified GRO method	Determination of volatiles in by GC/MS headspace	Yes	Selected	Wet
TP158	USEPA Method 1671	Determination of glycols by GC/FID DI			Wet
TP169	In-house documented method	Determination of water soluble sulphate in 2:1 water/soil extract by ICP-OES spectroscopy	Yes	Yes	Dry
TP171	In-house documented method	Determination of acid soluble sulphate by ICP-OES spectroscopy	Yes	Yes	Dry
TP178	In-house documented method	Determination of water soluble nitrate by ion selective electrode			Dry
Notes 1. Terra Tek (Birmingham) are MCERTS accredited for clay, sand & loam matrix types only, where they constitute the major component of the sample. Other coarse granular materials, ie gravel, are not accredited where they comprise the major component of the sample. 2. Results are expressed on a dry-weight basis (samples dried at 30°C ± 5°C) except where stated. 3. The laboratory removes any material >2mm prior to analysis. The quantity and nature of any material removed from samples is recorded and the information is available on request. 4. The laboratory records the date of analysis of each parameter. This information is available on request. 5. Where a parameter cannot be determined in house it is our policy to use a UKAS/MCERTS accredited laboratory wherever possible. Terra Tek will assume responsibility for the quality of subcontracted tests and the performance of the subcontractor chosen. Where there is no known UKAS/MCERTS laboratory for a particular parameter, a laboratory listed within the Terra Tek Approved Subcontractors list, which is subject to performance assessment, will be selected.					
Originator	Checked & Approved	SUMMARY OF IN-HOUSE ANALYTICAL TEST METHODS (SOIL)			Appendix S3 Sheet 2 of 2
N/A	N/A				

Applied Geology Ltd
 Unit 23 Abbey Park
 Stareton
 Kenilworth
 Warwickshire
 CV8 2LY
 For the attention of Adam Perks

Report No: B22611
 Issue No 02


LABORATORY TEST REPORT

Project Name		HAVERHILL BUSINESS PARK, SUFFOLK	
Project Number	B22611	Date samples received	17/04/2019
Your Ref		Date written instructions received	17/04/2019
Purchase Order	14282	Date testing commenced	17/04/2019
Please find enclosed the results as summarised below			
Figure / Table	Test Quantity	Description	ISO 17025 Accredited
1	12	Summary of Geotechnical Tests	Yes
2-13	12	Atterberg Limit	Yes
Remarks :			
Issued by : Stephen Langman		Date of Issue : 30/04/2019	
Approved Signatories :		Key to symbols used in this report S/C : Testing was sub-contracted	
 30/04/2019			
G Wilson (JMD/Laboratories Director), S Langman (Laboratory Coordinator)			
Unless we are notified to the contrary, samples will be disposed after a period of one month from this date. The results reported relate to samples received in the laboratory only. All results contained in this report are provisional unless signed by an approved signatory This report should not be reproduced except in full without the written approval of the laboratory. Under multisite accreditation the testing contained in this report may have been performed at another Terra Tek laboratory. The enclosed results remain the property of Terra Tek Limited and we reserve the right to withdraw our report if we have not received cleared funds in accordance with our standard terms and conditions Only those results indicated in this report are UKAS accredited and any opinions or interpretations expressed are outside the scope of UKAS accreditation. Feedback on the this report may be left via our website www.terratek.co.uk/contact-us			






Moor Lane, Wilton, Birmingham, B6 7HG
 Tel: +44 (0)121 344 4838 Fax: +44 (0)121 356 3599
birmingham@terratek.co.uk
www.terratek.co.uk


Terra Tek Ltd is registered in Scotland No. 121594
 Offices in Airdrie, Birmingham, Belfast and Chesham



TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site HAVERHILL BUSINESS PARK, SUFFOLK		Contract No B22611											
				Client Applied Geology Ltd													
				Engineer													
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Atterberg limits					Density		Total Stress		Other Tests		
Exploratory Hole	Depth m	Sample Ref	Sample Type			Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m ³	Bulk Mg/m ³	Dry Mg/m ³		Shear Strength kPa	Apparent Cohesion C kPa
DCS201	1.30		D	488908												BRE SD1 Suite	
DCS201	1.90		D	488909	Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.	18	48	20	28	6	Cl					BRE SD1 Suite	
DCS204	1.80		D	488910	Brown slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.	20	48	20	28	9	Cl					BRE SD1 Suite	
DCS204	2.30		D	488911												BRE SD1 Suite	
DCS205	0.60		D	488912	Brown / grey slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.	17	46	19	27	7	Cl					BRE SD1 Suite	
Notes				Opinions and Interpretations are outside the scope of UKAS accreditation		Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets	
				UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y
Originator	Approved		SUMMARY OF GEOTECHNICAL TESTS														 Figure 1 Sheet 1 of 5
PM	S. Layman 30/04/2019																




1121 - Geotechnical Test Summary - B22611.xls
Version 074 - 14/11/2013

Lab Project No B22611 : 30/04/2019 17:42:22
Moor Lane, Witton, Birmingham, B6 7HG

				Site		HAVERHILL BUSINESS PARK, SUFFOLK										Contract No		B22611	
				Client		Applied Geology Ltd													
				Engineer															
Sample Identification				Lab Sample ID	Non Engineering Sample Description	Moisture Content	Atterberg limits					Particle Density	Density		Total Stress			Other Tests	
Exploratory Hole	Depth m	Sample Ref	Sample Type				Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification		Bulk	Dry	Shear Strength	Apparent Cohesion C	Angle of Shearing Resistance Phi		
						%	%	%	%		Mg/m ³	Mg/m ³	Mg/m ³	kPa	kPa				
DCS205	1.20		D	488913														BRE SD1 Suite	
DCS205	1.90		D	488914														BRE SD1 Suite	
DCS206	0.70		D	488915														BRE SD1 Suite	
DCS206	1.30		D	488916	Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.	20	46	19	27	5	Cl								
DCS207	0.60		D	488917	Brown slightly sandy CLAY with some gravel. Gravel is fine to medium.	19	48	19	29	7	Cl								
Notes				Opinions and interpretations are outside the scope of UKAS accreditation		Test details are given on the 'Notes on Laboratory Procedures' sheet										See individual report sheets			
				UKAS Accredited Test Y/N		Y	Y	Y	Y	Y	-	Y	Y	Y	Y	Y	Y	Y	
Originator		Approved		SUMMARY OF GEOTECHNICAL TESTS														 Figure 1 Sheet 2 of 5	
PM		 30/04/2019																	

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site HAVERHILL BUSINESS PARK, SUFFOLK		Contract No B22611															
				Client Applied Geology Ltd																	
				Engineer																	
Sample Identification					Atterberg limits					Density		Total Stress		Other Tests							
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID	Non Engineering Sample Description	Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Particle Density	Bulk		Dry	Shear Strength	Apparent Cohesion C	Angle of Shearing Resistance Phi			
						%	%	%		%		Mg/m³	Mg/m³	Mg/m³	kPa	kPa					
DCS207	1.40		D	488918	Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.	20	46	20	26	11	Cl							BRE SD1 Suite			
DCS207	2.40		D	488919														BRE SD1 Suite			
DCS208	0.90		D	488920	Brown / grey mottled CLAY with some gravel of chalk. Gravel is fine to coarse.	20	46	19	27	7	Cl							BRE SD1 Suite			
DCS209	0.50		D	488921														BRE SD1 Suite			
DCS209	1.40		D	488922	Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.	17	45	20	25	13	Cl							BRE SD1 Suite			
Notes					Opinions and interpretations are outside the scope of UKAS accreditation					UKAS Accredited Test Y/N					Test details are given on the 'Notes on Laboratory Procedures' sheet					See individual report sheets	
Originator		Approved		SUMMARY OF GEOTECHNICAL TESTS														 Figure 1 Sheet 3 of 5			
PM		<i>S. Logan</i> 30/04/2019																			

TERRA TEK SITE INVESTIGATION AND LABORATORY SERVICES				Site HAVERHILL BUSINESS PARK, SUFFOLK		Contract No B22611														
				Client Applied Geology Ltd																
				Engineer																
Sample Identification					Non Engineering Sample Description	Atterberg limits					Density		Total Stress		Other Tests					
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID		Moisture Content	Liquid Limit	Plastic Limit	Plasticity Index	Percentage retained 425µm	Atterberg Classification	Particle Density	Bulk	Dry		Shear Strength	Apparent Cohesion C	Angle of Shearing Resistance Phi		
					%	%	%		%		Mg/m ³	Mg/m ³	Mg/m ³	kPa	kPa					
DCS209	2.40		D	488923													BRE SD1 Suite			
DCS210	0.70		D	488924	16	44	19	25	7	CI							BRE SD1 Suite			
DCS210	1.20		D	488925													BRE SD1 Suite			
DCS211	1.50		D	488926													BRE SD1 Suite			
DCS212	1.80		D	488927													BRE SD1 Suite			
Notes Opinions and interpretations are outside the scope of UKAS accreditation					Test details are given on the 'Notes on Laboratory Procedures' sheet											See individual report sheets				
					UKAS Accredited Test Y/N															
Originator		Approved			SUMMARY OF GEOTECHNICAL TESTS														 Figure 1 Sheet 4 of 5	
PM		 30/04/2019																		

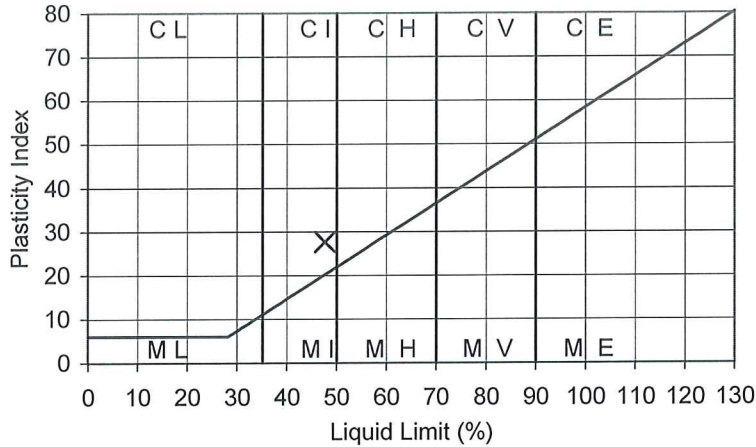
					Site HAVERHILL BUSINESS PARK, SUFFOLK					Contract No B22611														
					Client Applied Geology Ltd					Engineer														
Sample Identification					Non Engineering Sample Description	Atterberg limits					Density		Total Stress		Other Tests									
Exploratory Hole	Depth m	Sample Ref	Sample Type	Lab Sample ID		Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity Index	Percentage retained 425µm %	Atterberg Classification	Particle Density Mg/m ³	Bulk Mg/m ³	Dry Mg/m ³		Shear Strength kPa	Apparent Cohesion C kPa	Angle of Shearing Resistance Phi						
TP202	1.00		D	488928	Brown / grey mottled CLAY with some gravel of chalk. Gravel is fine to medium.	19	47	21	26	5	CI						BRE SD1 Suite							
TP205	1.00		D	488929																				
TP208	1.00		D	488930	Brown slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.	24	51	19	32	5	CH													
TP209	2.00		D	488931	Brown / grey slightly sandy CLAY with some gravel. Gravel is fine to medium.	19	53	22	31	9	CH													
Notes					Opinions and Interpretations are outside the scope of UKAS accreditation					UKAS Accredited Test Y/N					Test details are given on the 'Notes on Laboratory Procedures' sheet					See individual report sheets				
Originator		Approved		SUMMARY OF GEOTECHNICAL TESTS															Figure 1 Sheet 5 of 5					
PM		 30/04/2019																						



Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
Client	Applied Geology Ltd	Hole ID	DCS201
Engineer		Sample Ref	
		Depth (m)	1.90
		Sample Type	D

Non Engineering Description : Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

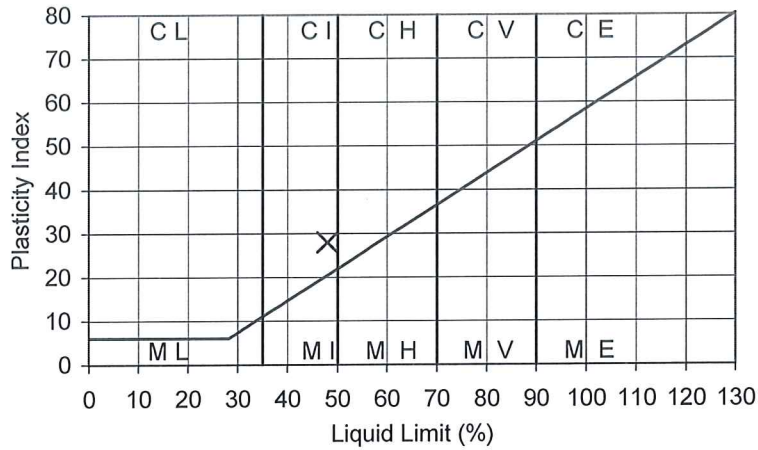
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	18 %
Percentage retained on 425µm sieve :	6 %
Liquid Limit :	48 %
Plastic Limit :	20 %
Plasticity Index :	28
Equivalent moisture content of material passing 425µm sieve :	19 %
Liquidity Index :	-0.04

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990		Figure 2 Sheet 1 of 1
CR	<i>S. Langman</i> 30/04/2019			

 SITE INVESTIGATION AND LABORATORY SERVICES	Site	Haverhill Business Park, Suffolk	Contract No.	B22611
	Client	Applied Geology Ltd	Hole ID	DCS204
	Engineer		Sample Ref	
			Depth (m)	1.80
			Sample Type	D


Non Engineering Description : Brown slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

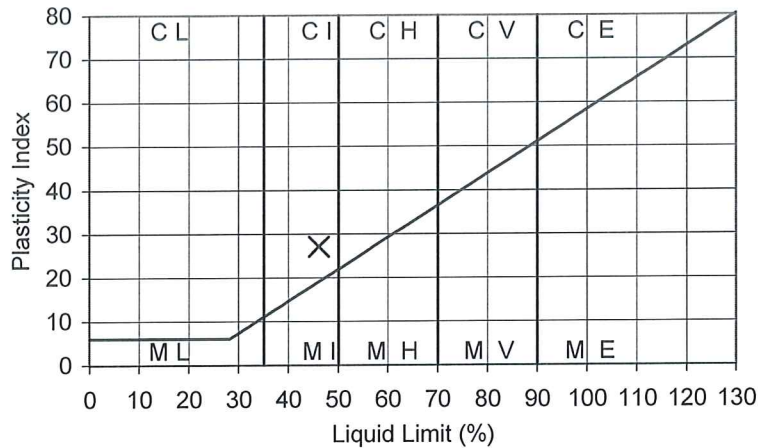
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	20 %
Percentage retained on 425µm sieve :	9 %
Liquid Limit :	48 %
Plastic Limit :	20 %
Plasticity Index :	28
Equivalent moisture content of material passing 425µm sieve :	22 %
Liquidity Index :	0.07

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	 Figure 3 Sheet 1 of 1
IG	<i>S. Layman</i> 30/04/2019		

	Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
	Client	Applied Geology Ltd	Hole ID	DCS205
	Engineer		Sample Ref	
			Depth (m)	0.60
			Sample Type	D


Non Engineering Description : Brown / grey slightly sandy CLAY with some gravel of chalk.
 Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

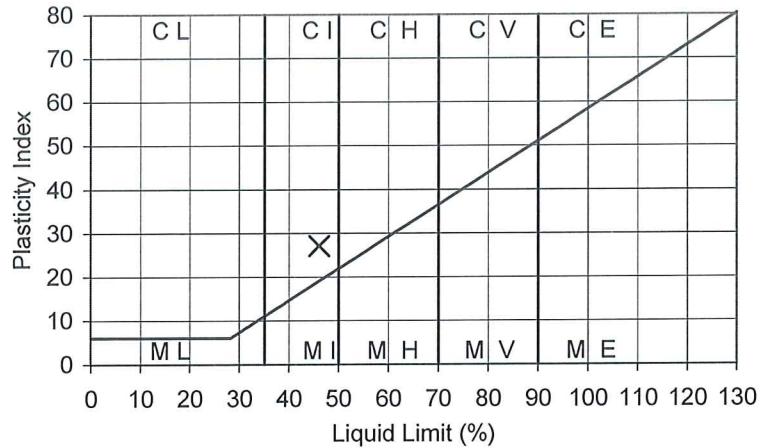
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	17 %
Percentage retained on 425µm sieve :	7 %
Liquid Limit :	46 %
Plastic Limit :	19 %
Plasticity Index :	27
Equivalent moisture content of material passing 425µm sieve :	18 %
Liquidity Index :	-0.04

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990		Figure 4 Sheet 1 of 1
CR	<i>S. Layman</i> 30/04/2019			

	Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
	Client	Applied Geology Ltd	Hole ID	DCS206
	Engineer		Sample Ref	
			Depth (m)	1.30
			Sample Type	D


Non Engineering Description : Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

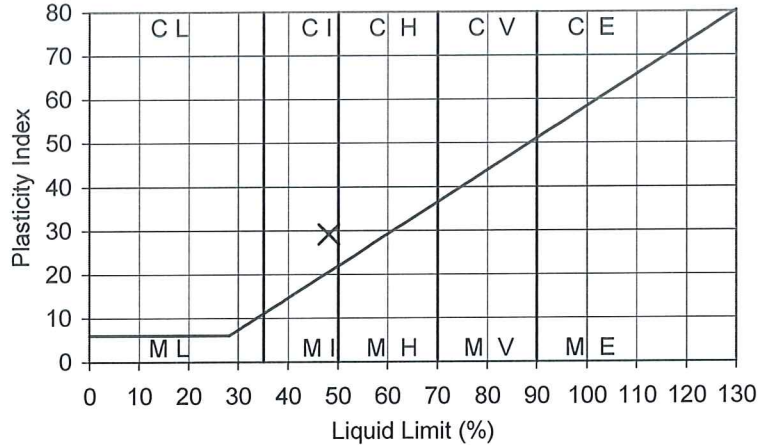
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	20 %
Percentage retained on 425µm sieve :	5 %
Liquid Limit :	46 %
Plastic Limit :	19 %
Plasticity Index :	27
Equivalent moisture content of material passing 425µm sieve :	21 %
Liquidity Index :	0.07

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990		Figure 5 Sheet 1 of 1
CR	<i>S. Langman</i> 30/04/2019			

 SITE INVESTIGATION AND LABORATORY SERVICES	Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
	Client	Applied Geology Ltd	Hole ID	DCS207
	Engineer		Sample Ref	
			Depth (m)	0.60
			Sample Type	D


Non Engineering Description : Brown slightly sandy CLAY with some gravel. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	19 %
Percentage retained on 425µm sieve :	7 %
Liquid Limit :	48 %
Plastic Limit :	19 %
Plasticity Index :	29
Equivalent moisture content of material passing 425µm sieve :	20 %
Liquidity Index :	0.03

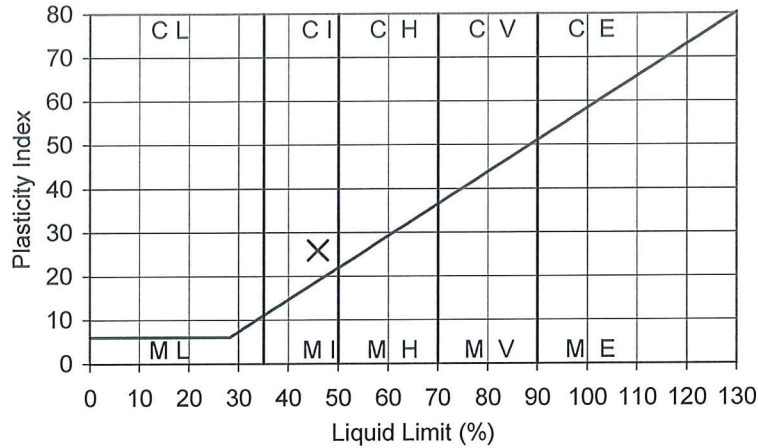
Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	 Figure 6 Sheet 1 of 1
CR	<i>S. Layman</i> 30/04/2019		



Site	Haverhill Business Park, Suffolk	Contract No.	B22611
Client	Applied Geology Ltd	Hole ID	DCS207
Engineer		Sample Ref	
		Depth (m)	1.40
		Sample Type	D

Non Engineering Description : Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

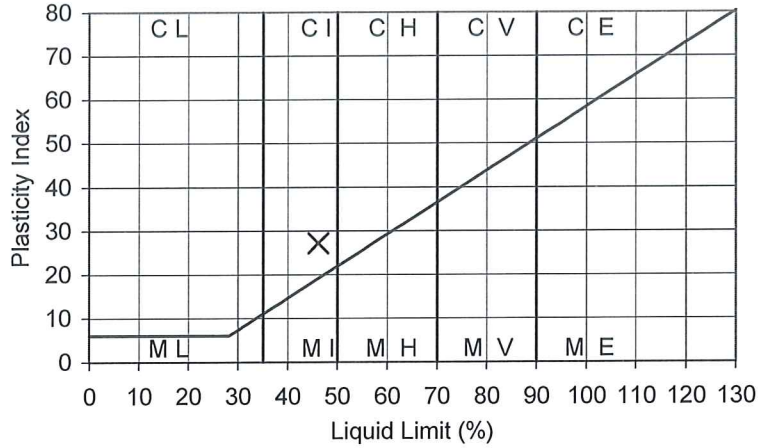
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	20 %
Percentage retained on 425µm sieve :	11 %
Liquid Limit :	46 %
Plastic Limit :	20 %
Plasticity Index :	26
Equivalent moisture content of material passing 425µm sieve :	22 %
Liquidity Index :	0.08

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	Figure 7 Sheet 1 of 1
IG	<i>S. Longman</i> 30/04/2019		

	Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
	Client	Applied Geology Ltd	Hole ID	DCS208
	Engineer		Sample Ref	
			Depth (m)	0.90
			Sample Type	D


Non Engineering Description : Brown / grey mottled CLAY with some gravel of chalk. Gravel is fine to coarse.

Preparation : Sample washed and air dried



Results :

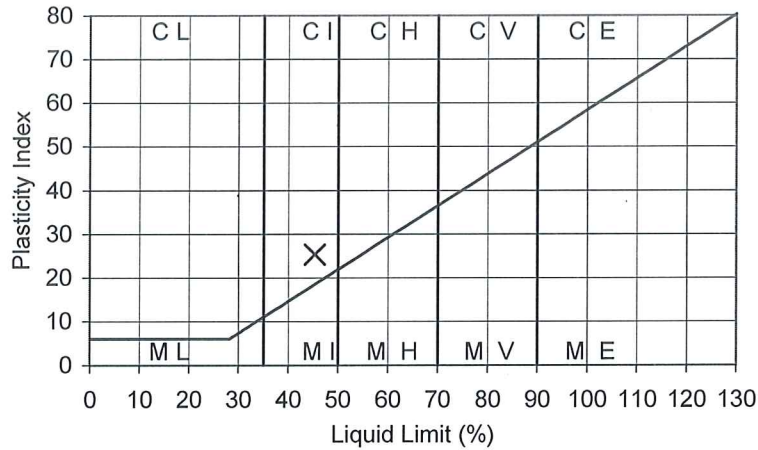
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	20 %
Percentage retained on 425µm sieve :	7 %
Liquid Limit :	46 %
Plastic Limit :	19 %
Plasticity Index :	27
Equivalent moisture content of material passing 425µm sieve :	22 %
Liquidity Index :	0.11

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990		Figure 8 Sheet 1 of 1
IG	<i>S. Longman</i> 30/04/2019			

	Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
	Client	Applied Geology Ltd	Hole ID	DCS209
	Engineer		Sample Ref	
			Depth (m)	1.40
			Sample Type	D


Non Engineering Description : Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	17 %
Percentage retained on 425µm sieve :	13 %
Liquid Limit :	45 %
Plastic Limit :	20 %
Plasticity Index :	25
Equivalent moisture content of material passing 425µm sieve :	20 %
Liquidity Index :	0.00

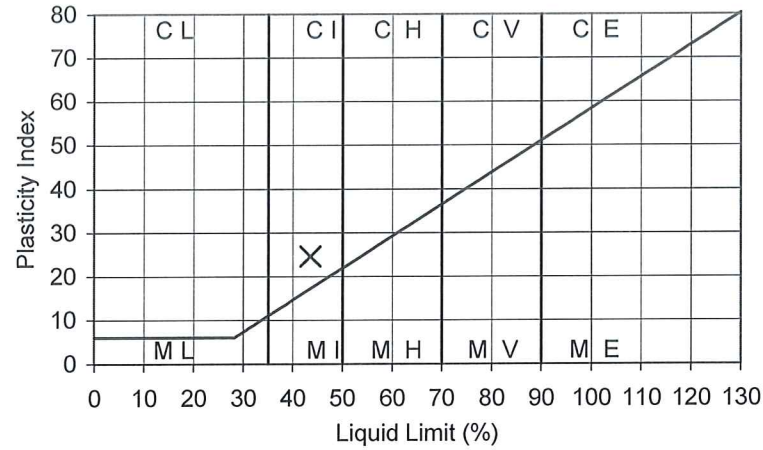
Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990		Figure 9 Sheet 1 of 1
CR	<i>S. Longman</i> 30/04/2019			



Site	Haverhill Business Park, Suffolk	Contract No.	B22611
Client	Applied Geology Ltd	Hole ID	DCS210
Engineer		Sample Ref	
		Depth (m)	0.70
		Sample Type	D

Non Engineering Description : Brown / grey mottled slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	16 %
Percentage retained on 425µm sieve :	7 %
Liquid Limit :	44 %
Plastic Limit :	19 %
Plasticity Index :	25
Equivalent moisture content of material passing 425µm sieve :	17 %
Liquidity Index :	-0.08

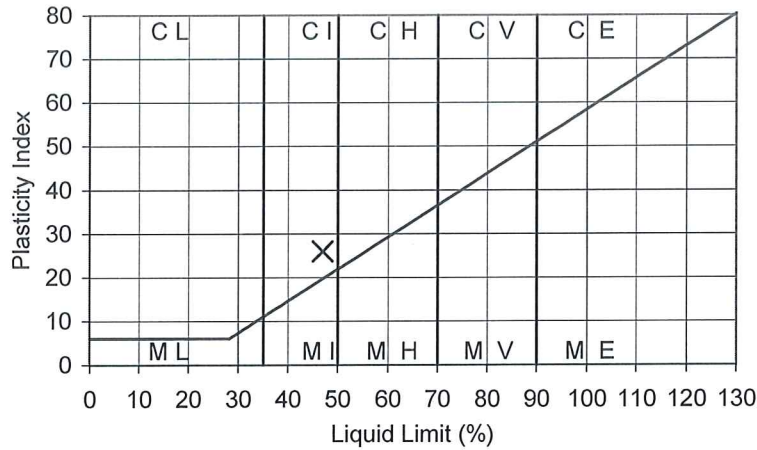
Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990		Figure 10 Sheet 1 of 1
CR	<i>S. Langman</i> 30/04/2019			



Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
Client	Applied Geology Ltd	Hole ID	TP202
Engineer		Sample Ref	
		Depth (m)	1.00
		Sample Type	D

Non Engineering Description : Brown / grey mottled CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

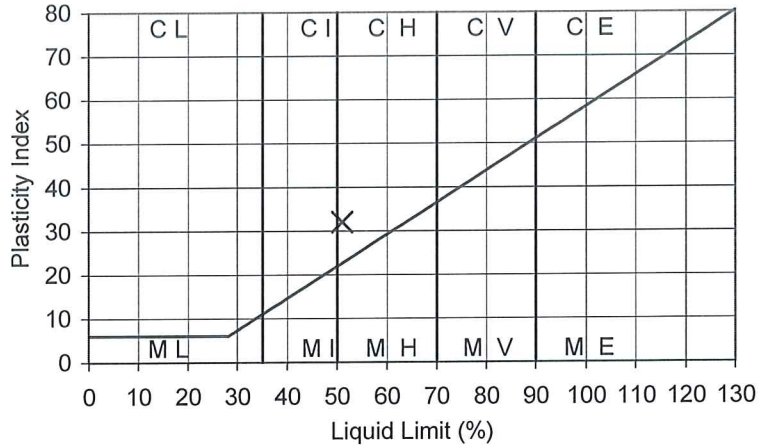
As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	19 %
Percentage retained on 425µm sieve :	5 %
Liquid Limit :	47 %
Plastic Limit :	21 %
Plasticity Index :	26
Equivalent moisture content of material passing 425µm sieve :	20 %
Liquidity Index :	-0.04

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	Figure 11 Sheet 1 of 1
CR	<i>S. Langman</i> 30/04/2019		

 SITE INVESTIGATION AND LABORATORY SERVICES	Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
	Client	Applied Geology Ltd	Hole ID	TP208
	Engineer		Sample Ref	
			Depth (m)	1.00
			Sample Type	D


Non Engineering Description : Brown slightly sandy CLAY with some gravel of chalk. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	24 %
Percentage retained on 425µm sieve :	5 %
Liquid Limit :	51 %
Plastic Limit :	19 %
Plasticity Index :	32
Equivalent moisture content of material passing 425µm sieve :	25 %
Liquidity Index :	0.19

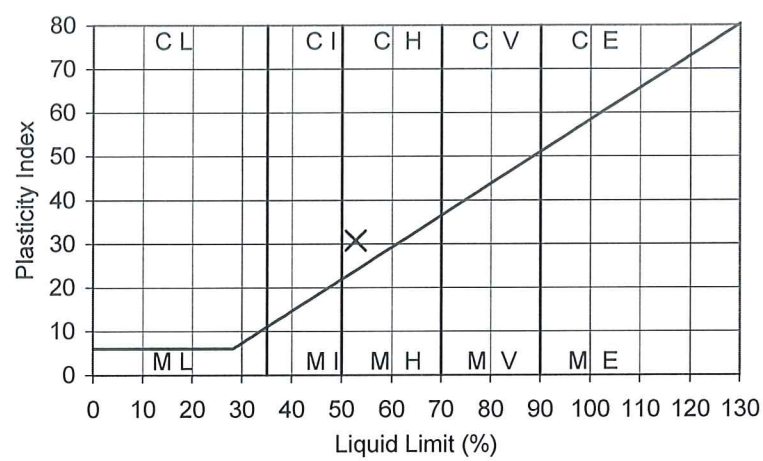
Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	 Figure 12 Sheet 1 of 1
CR	<i>S. Layman</i> 30/04/2019		



Site	HAVERHILL BUSINESS PARK, SUFFOLK	Contract No.	B22611
Client	Applied Geology Ltd	Hole ID	TP209
Engineer		Sample Ref	
		Depth (m)	2.00
		Sample Type	D

Non Engineering Description : Brown / grey slightly sandy CLAY with some gravel. Gravel is fine to medium.

Preparation : Sample washed and air dried



Results :

As Received Moisture Content : (BS1377:Part 2:Clause 3:1990)	19 %
Percentage retained on 425µm sieve :	9 %
Liquid Limit :	53 %
Plastic Limit :	22 %
Plasticity Index :	31
Equivalent moisture content of material passing 425µm sieve :	21 %
Liquidity Index :	-0.03

Originator	Checked & Approved	Liquid Limit (One Point Cone Penetrometer Method) Plastic Limit, Plasticity Index & Liquidity Index BS 1377:Part 2:Clause 4.4:1990 BS 1377:Part 2:Clause 5:1990	Figure 13 Sheet 1 of 1
CR	<i>S. Langman</i> 30/04/2019		