Chemtest
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UKAS TESTING
2183

Final Report

Report No.:	18-36044-1
Initial Date of Issue:	22-Nov-2018
Client	ASC Contracts Limited
Client Address:	Town Mills Canklow Road Rotherham South Yorkshire S60 2JG
Contact(s):	Crispin Stephenson
Project	Topsoil Analysis

Quotation No.:	Q18-15202	**Date Received:**	16-Nov-2018
Order No.:		**Date Instructed:**	16-Nov-2018
No. of Samples:	3		
Turnaround (Wkdays):	5	**Results Due:**	22-Nov-2018
Date Approved:	22-Nov-2018		

Approved By:



Details: Martin Dyer, Laboratory Manager

Results - Soil

Project: Topsoil Analysis

Client: ASC Contracts Limited				**Chemtest Job No.:**	18-36044	18-36044	18-36044
Quotation No.: Q18-15202				**Chemtest Sample ID.:**	726321	726322	726323
				Client Sample ID.:	1	2	3
				Sample Type:	SOIL	SOIL	SOIL
Determinand	**Accred.**	**SOP**	**Units**	**LOD**			
Moisture	N	2030	%	0.020	14	13	14

Results - Topsoil Report

BS3882:2015

Chemtest Job No.: 18-36044
Chemtest Sample ID.: 726321
Client Sample Ref.:
Sample Location:
Client Sample ID.: 1
Top Depth (m):
Bottom Depth (m):
Date Sampled:
Time Sampled:

Parameter	Units	Multipurpose Range			Result	Compliant with Multipurpose Range? (Y/N)	Compliant with Specific Purpose Range? (Y/N)		
Texture							**Acid**	**Low F**	**Calc.**
Clay content	%				7				
Silt content	%				10				
Sand content	%				83				
Soil texture class		See Attached Chart			Loamy Sand	YES			
Mass Loss on Ignition									
Clay 5-20%		3.0-20			3.8	YES			
Clay 20-35%		5.0-20							
Stone Content	**% m/m**								
>2mm		0-30			20	YES			
>20mm		0-10			< 0.020	YES			
>50mm		0			< 0.020	YES			
Soil pH value		5.5-8.5			[A] 5.6	YES			
Carbonate (Calcareous only)	%				< 0.10				
Electrical Conductivity	µS/cm	If >3300 do ESP			[A] 2000	YES			
Available Nutrient Content									
Nitrogen %		>0.15			0.35	YES			
Extractable phosphorus	mg/l	16-140			37.0	YES			
Extractable potassium	mg/l	121-1500			233	YES			
Extractable magnesium	mg/l	51-600			65	YES			
Carbon : Nitrogen Ratio		<20:1			6.4/1	YES			
Exchangeable sodium	**%**	<15			2.9				
Available Calcium	mg/l				580				
Available Sodium	mg/l				24				
Phytotoxic Contaminants (by soil pH)		**< 6.0**	**6.0-7.0**	**> 7.0**					
Zinc (Nitric Acid extract)	mg/kg	<200	<200	<300	16	YES			
Copper (Nitric Acid extract)	mg/kg	<100	<135	<200	6.3	YES			
Nickel (Nitric Acid extract)	mg/kg	<60	<75	<110	< 5.0	YES			
Visible Contaminants	**% mm**								
>2mm		<0.5			0.000	YES			
..... of which plastics		<0.25			0.000	YES			
..... man-made sharps		zero in 1kg			0.000	YES			

Results - Topsoil Report

BS3882:2015

Chemtest Job No.: 18-36044
Chemtest Sample ID.: 726322
Client Sample Ref.:
Sample Location:
Client Sample ID.: 2
Top Depth (m):
Bottom Depth (m):
Date Sampled:
Time Sampled:

Parameter	Units	Multipurpose Range	Result	Compliant with Multipurpose Range? (Y/N)	Compliant with Specific Purpose Range? (Y/N)		
Texture					**Acid**	**Low F**	**Calc.**
Clay content	%		8				
Silt content	%		11				
Sand content	%		81				
Soil texture class		See Attached Chart	Loamy Sand	YES			
Mass Loss on Ignition							
Clay 5-20%		3.0-20	3.9	YES			
Clay 20-35%		5.0-20					
Stone Content	**% m/m**						
>2mm		0-30	18	YES			
>20mm		0-10	< 0.020	YES			
>50mm		0	< 0.020	YES			
Soil pH value		5.5-8.5	[A] 5.6	YES			
Carbonate (Calcareous only)	%		< 0.10				
Electrical Conductivity	µS/cm	If >3300 do ESP	[A] 190	YES			
Available Nutrient Content							
Nitrogen %		>0.15	0.36	YES			
Extractable phosphorus	mg/l	16-140	48.0	YES			
Extractable potassium	mg/l	121-1500	242	YES			
Extractable magnesium	mg/l	51-600	80	YES			
Carbon : Nitrogen Ratio		<20:1	7.7/1	YES			
Exchangeable sodium	**%**	<15	4.1				
Available Calcium	mg/l		500				
Available Sodium	mg/l		32				
Phytotoxic Contaminants (by soil pH)		**< 6.0** / **6.0-7.0** / **> 7.0**					
Zinc (Nitric Acid extract)	mg/kg	<200 / <200 / <300	14	YES			
Copper (Nitric Acid extract)	mg/kg	<100 / <135 / <200	5.6	YES			
Nickel (Nitric Acid extract)	mg/kg	<60 / <75 / <110	< 5.0	YES			
Visible Contaminants	**% mm**						
>2mm		<0.5	0.000	YES			
..... of which plastics		<0.25	0.000	YES			
..... man-made sharps		zero in 1kg	0.000	YES			

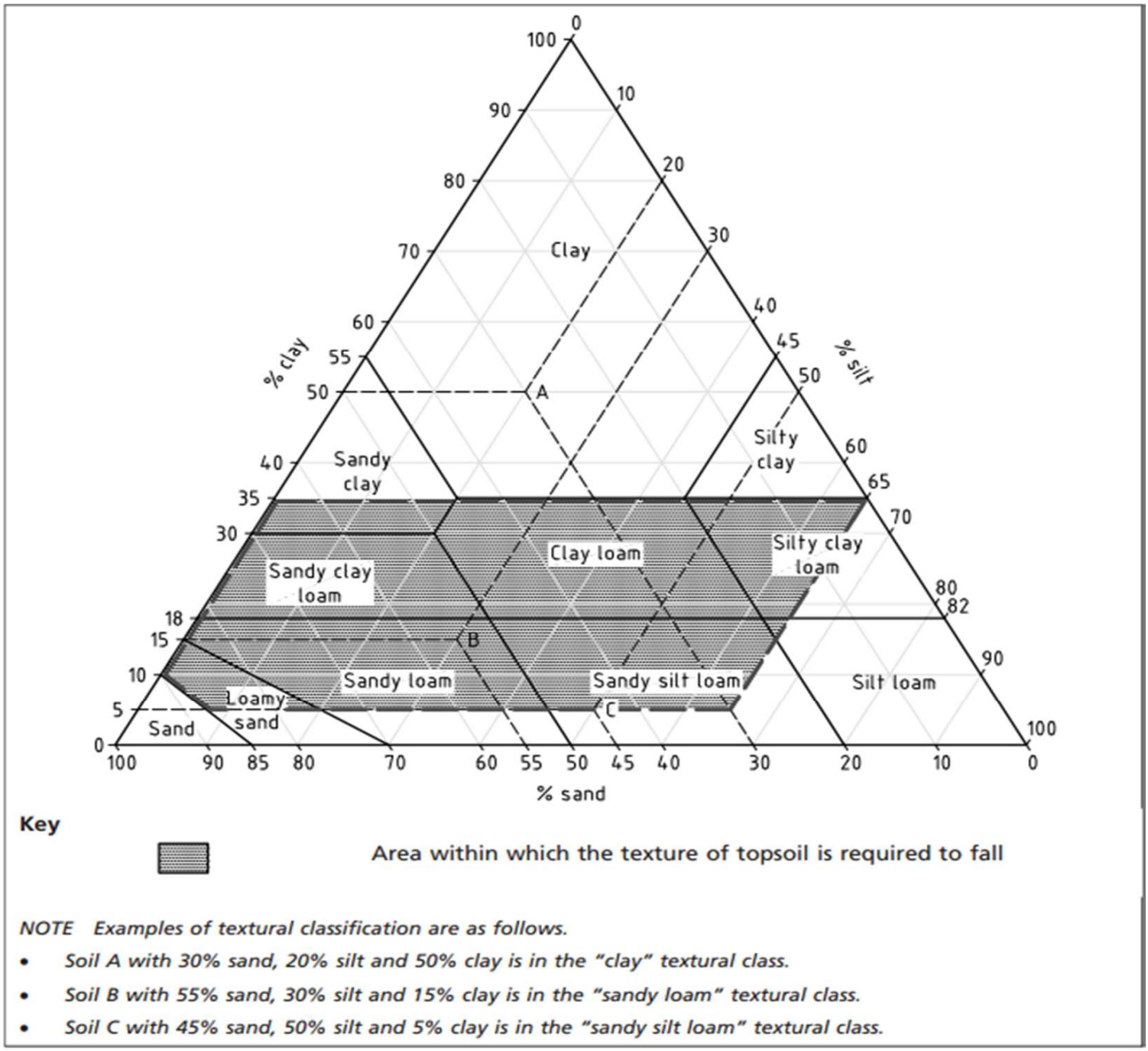
Results - Topsoil Report

BS3882:2015

Chemtest Job No.: 18-36044
Chemtest Sample ID.: 726323
Client Sample Ref.:
Sample Location:
Client Sample ID.: 3
Top Depth (m):
Bottom Depth (m):
Date Sampled:
Time Sampled:

Parameter	Units	Multipurpose Range			Result	Compliant with Multipurpose Range? (Y/N)	Compliant with Specific Purpose Range? (Y/N)		
Texture							**Acid**	**Low F**	**Calc.**
Clay content	%				8				
Silt content	%				10				
Sand content	%				82				
Soil texture class		See Attached Chart			Loamy Sand	YES			
Mass Loss on Ignition									
Clay 5-20%		3.0-20			3.8	YES			
Clay 20-35%		5.0-20							
Stone Content	**% m/m**								
>2mm		0-30			11	YES			
>20mm		0-10			< 0.020	YES			
>50mm		0			< 0.020	YES			
Soil pH value		5.5-8.5			[A] 5.6	YES			
Carbonate (Calcareous only)	%				< 0.10				
Electrical Conductivity	µS/cm	If >3300 do ESP			[A] 2100	YES			
Available Nutrient Content									
Nitrogen %		>0.15			0.42	YES			
Extractable phosphorus	mg/l	16-140			46.0	YES			
Extractable potassium	mg/l	121-1500			247	YES			
Extractable magnesium	mg/l	51-600			95	YES			
Carbon : Nitrogen Ratio		<20:1			6.3/1	YES			
Exchangeable sodium	**%**	<15			4.1				
Available Calcium	mg/l				580				
Available Sodium	mg/l				37				
Phytotoxic Contaminants (by soil pH)		**< 6.0**	**6.0-7.0**	**> 7.0**					
Zinc (Nitric Acid extract)	mg/kg	<200	<200	<300	15	YES			
Copper (Nitric Acid extract)	mg/kg	<100	<135	<200	5.8	YES			
Nickel (Nitric Acid extract)	mg/kg	<60	<75	<110	< 5.0	YES			
Visible Contaminants	**% mm**								
>2mm		<0.5			0.000	YES			
..... of which plastics		<0.25			0.000	YES			
..... man-made sharps		zero in 1kg			0.000	YES			

Topsoil: Texture Classification Chart



Key

Area within which the texture of topsoil is required to fall

NOTE Examples of textural classification are as follows.

- *Soil A with 30% sand, 20% silt and 50% clay is in the "clay" textural class.*
- *Soil B with 55% sand, 30% silt and 15% clay is in the "sandy loam" textural class.*
- *Soil C with 45% sand, 50% silt and 5% clay is in the "sandy silt loam" textural class.*

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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:
726321		1			A	Plastic Bag
726322		2			A	Plastic Bag
726323		3			A	Plastic Bag

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2020	Electrical Conductivity	Electrical conductivity (EC) of aqueous extract or calcium sulphate solution for topsoil	Measurement of the electrical resistance of a 2:1 water/soil extract.
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℃.
2115	Total Nitrogen in Soils	Nitrogen	Determination by elemental analyser
2260	Carbonate	Carbonate	Titration
2400	Cations	Cations	ICP-MS
2420	Phosphate	Phosphate	Spectrophotometry - Discrete analyser
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2620	LOI 440	LOI 440	Determination of the proportion by mass that is lost from a soil by ignition at 440℃.

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