



DETS

Certificate of Analysis

Certificate Number 20-12437

22-Jul-20

Client Strata Renewables
Jodrell Bank Service Station
Knutsford Road
Cranage
Cheshire
CW4 8HU

Our Reference 20-12437

Client Reference SRL1215

Order No Carl-8720

Contract Title Higgins Lane Farm

Description 2 Soil samples.

Date Received 13-Jul-20

Date Started 13-Jul-20

Date Completed 22-Jul-20

Test Procedures Identified by prefix DETSn (details on request).

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

Approved By



Adam Fenwick
Contracts Manager



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BS 3882:2015 Topsoil Analytical Report

Our Ref 20-12437

Client Ref SRL1215

Contract Title Higgins Lane Farm

Lab No	1696318
Sample ID	HIGGINS LANE FARM
Depth	
Other ID	T2
Sample Type	SOIL
Sampling Date	08/07/2020
Sampling Time	n/s

Parameter	Method	Result	Compliant with multi purpose range?	Compliant with specific purpose range? (Y/N)				
			(Y/N)	Acid.	Calc	Low F.	Low F. acidic	Low F. calc.
Texture								
Clay content %	\$	10	See Figure 1 on Textural class sheet					
Silt content %	\$	22						
Sand content %	\$	68						
Soil texture – (see figure 1)	\$	Sandy Loam						
Soil organic matter content % (varying with clay content)								
Clay 5-20%	DETSC 2002#	6.4	Y	Y	Y	Y	Y	Y
Clay 20-35%	DETSC 2002#		N/A	N/A	N/A	N/A	N/A	N/A
Maximum coarse fragment - Content % m/m								
>2 mm	\$	12	Y	Y	Y	Y	Y	Y
>20 mm	\$	0	Y	Y	Y	Y	Y	Y
>50 mm	\$	0	Y	Y	Y	Y	Y	Y
Soil pH value	DETSC 2008#	7.5	Y	N	Y	Y	N	Y
Carbonate (Calcareous only) %	DETSC 2005	3.4	N/A	N/A	Y	N/A	N/A	Y
Available plant nutrient content								
Total Nitrogen %	DETSC 2121*	0.12	N	N	N	N/A	N/A	N/A
Extractable phosphorous mg/l	DETSC 2310*	75	Y	Y	Y	N	N	N
Extractable potassium mg/l	DETSC 2309*	130	Y	Y	Y	N/A	N/A	N/A
Extractable magnesium mg/l	DETSC 2309*	90	Y	Y	Y	N/A	N/A	N/A
Carbon: Nitrogen ratio		30.93	N	N	N	Y	Y	Y
Electrical Conductivity	DETSC 2009	2400	Y	N/A	N/A	N/A	N/A	N/A
Phytotoxic contaminants (by soil pH) mg/kgDS								
Zinc (Nitric acid extract)	DETSC 2308*	120	Y	Y	Y	Y	Y	Y
Copper (Nitric acid extract)	DETSC 2308*	40	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	DETSC 2308*	10	Y	Y	Y	Y	Y	Y
Visible contaminants % m/m								
>2 mm	*	0	Y	Y	Y	Y	Y	Y
...of which plastics	*	0	Y	Y	Y	Y	Y	Y
...man made sharps	*	0	Y	Y	Y	Y	Y	Y

Additional analytical certificate(s) for particle size distribution analysis are appended.

- MCERTS (accred. only implied if report carries the MCERTS logo). * - unaccredited test. \$ - completed by approved subcontractor.

DECLARATION: I certify that this sample of soil has been analysed in accordance with BS3882:2015

Signature:



BS 3882: Textural Class

Our Ref 20-12437

Client Ref SRL1215

Contract Title Higgins Lane Farm

Results: Proportion in class (%)			Help messages
Clay	Silt	Sand	
10	22	68	

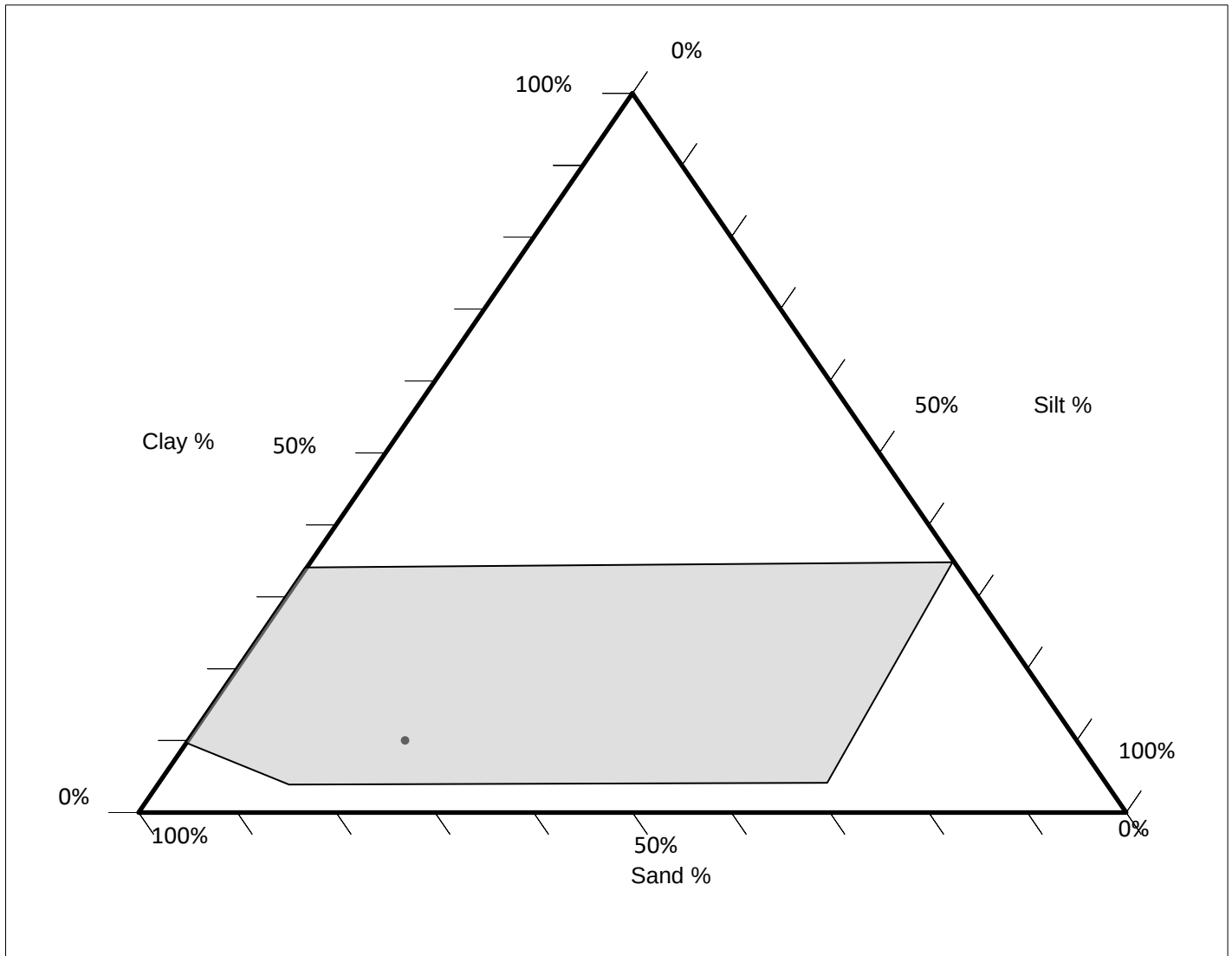


Figure 1

The textural class is required to be in the shaded area to be compliant with BS3882:2015

Results are shown by the grey point in the chart

Plotting parameters		Help messages
Printer correction:	1.1	
Tick interval (0 - 0.5):	0.1	
Tick length (0 - 0.2):	0.03	
Plot lines? (Y or N):	n	

BS 3882:2015 Topsoil Analytical Report

Our Ref 20-12437

Client Ref SRL1215

Contract Title Higgins Lane Farm

Lab No	1696319
Sample ID	GREENS
Depth	
Other ID	T1
Sample Type	SOIL
Sampling Date	08/07/2020
Sampling Time	n/s

Parameter	Method	Result	Compliant with multi purpose range?	Compliant with specific purpose range? (Y/N)				
			(Y/N)	Acid.	Calc	Low F.	Low F. acidic	Low F. calc.
Texture								
Clay content %	\$	9	See Figure 1 on Textural class sheet					
Silt content %	\$	20						
Sand content %	\$	71						
Soil texture – (see figure 1)	\$	Sandy Loam						
Soil organic matter content % (varying with clay content)								
Clay 5-20%	DETSC 2002#	3.5	Y	Y	Y	Y	Y	Y
Clay 20-35%	DETSC 2002#		N/A	N/A	N/A	N/A	N/A	N/A
Maximum coarse fragment - Content % m/m								
>2 mm	\$	7	Y	Y	Y	Y	Y	Y
>20 mm	\$	3	Y	Y	Y	Y	Y	Y
>50 mm	\$	0	Y	Y	Y	Y	Y	Y
Soil pH value	DETSC 2008#	7	Y	N	N	Y	N	N
Carbonate (Calcareous only) %	DETSC 2005	2	N/A	N/A	Y	N/A	N/A	Y
Available plant nutrient content								
Total Nitrogen %	DETSC 2121*	0.08	N	N	N	N/A	N/A	N/A
Extractable phosphorous mg/l	DETSC 2310*	28	Y	Y	Y	N	N	N
Extractable potassium mg/l	DETSC 2309*	98	N	N	N	N/A	N/A	N/A
Extractable magnesium mg/l	DETSC 2309*	110	Y	Y	Y	N/A	N/A	N/A
Carbon: Nitrogen ratio		25.38	N	N	N	Y	Y	Y
Electrical Conductivity	DETSC 2009	2400	Y	N/A	N/A	N/A	N/A	N/A
Phytotoxic contaminants (by soil pH) mg/kgDS								
Zinc (Nitric acid extract)	DETSC 2308*	38	Y	Y	Y	Y	Y	Y
Copper (Nitric acid extract)	DETSC 2308*	17	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	DETSC 2308*	9.3	Y	Y	Y	Y	Y	Y
Visible contaminants % m/m								
>2 mm	*	0	Y	Y	Y	Y	Y	Y
...of which plastics	*	0	Y	Y	Y	Y	Y	Y
...man made sharps	*	0	Y	Y	Y	Y	Y	Y

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BS 3882: Textural Class

Our Ref 20-12437

Client Ref SRL1215

Contract Title Higgins Lane Farm

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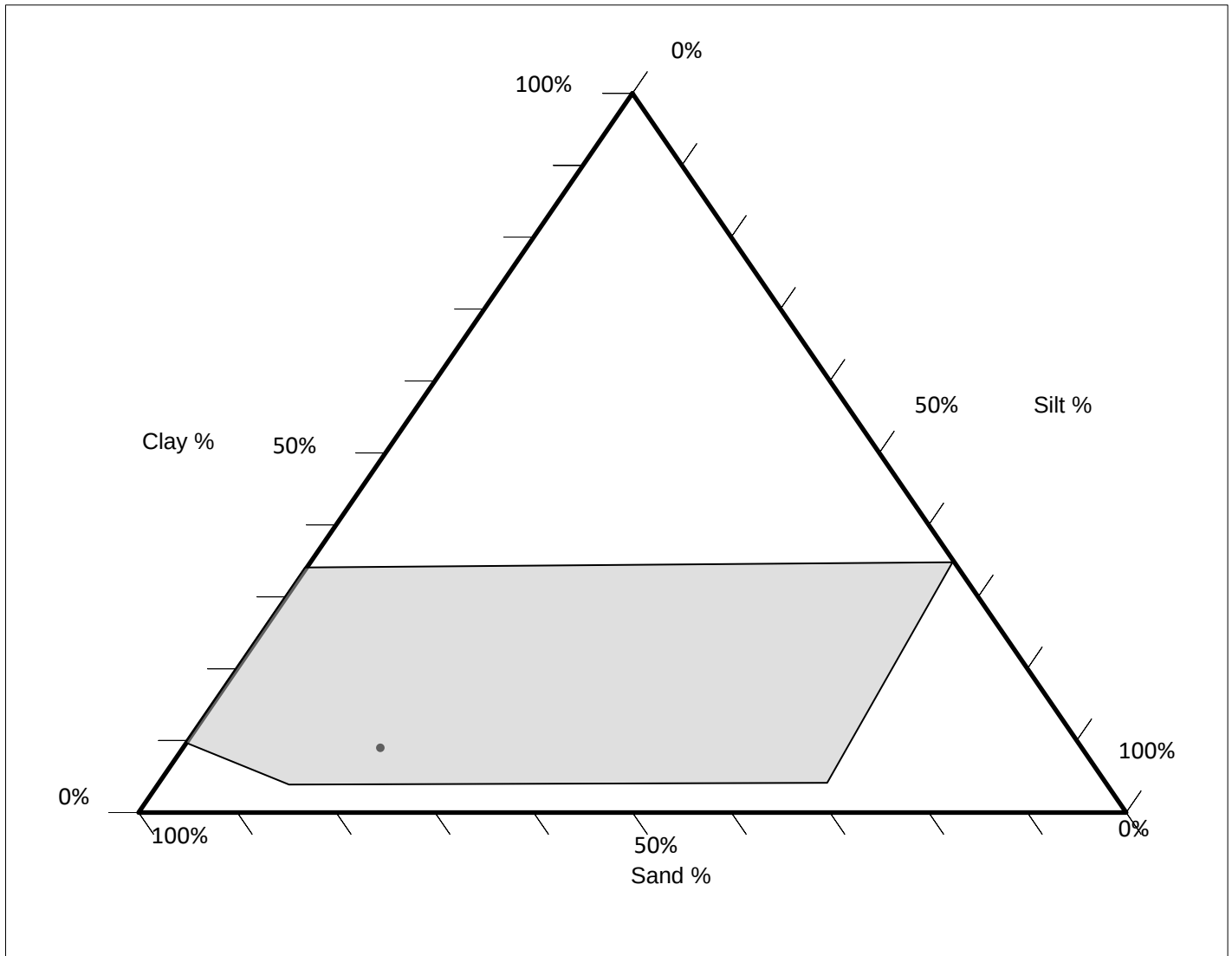


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Tick length (0 - 0.2):	0.03	
Plot lines? (Y or N):	n	

BS 3882:2015 Topsoil

Threshold Values

Parameter	Multipurpose Topsoil	Specific purpose topsoil				
		Acidic	Calcareous	Low fertility	Low fertility acidic	Low fertility calcareous
Soil texture <2mm fraction % m/m						
Clay content %	10 to 35					
Silt content %	0 to 65					
Sand content %	35 to 85					
Maximum coarse fraction % m/m						
>2 mm	30					
>20mm	10					
>50mm	0					
Mass loss on Ignition %						
Clay 5% to 20%	3 to 20	3 to 30	3 to 20	2 to 20	2 to 30	2 to 20
Clay 20% to 35%	5 to 20	5 to 30	5 to 20	2 to 20	2 to 30	2 to 20
Soil pH	5.5 to 8.5	3.5 to5.5	7.5 to 9.0	3.5 to 9.0	3.5 to 5.5	7.5 to 9.0
Carbonate % m/m			>1			>1
Plant nutrient content						
Total nitrogen % m/m	>0.15	>0.15	>0.15	-	-	-
Extractable phosphate mg/l	16 to 140	16 to 140	16 to 140	≤20	≤20	≤20
Extractable potasium mg/l	121 to 1500	121 to 1500	121 to 1500	-	-	-
Extractable magnesium mg/l	51 to 600	51 to 600	51 to 600	-	-	-
Carbon : Nitrogen ratio	<20:1	<20:1	<20:1	<35:1	<35:1	<20:1
Electrical conductivity μS.cm-1	If greater than 3 300, carry out exchangeable sodium					

Multi purpose and specific purpose topsoils			
Potentially Phytotoxic elements (mg/kg dry basis)	Soil pH <6.0	Soil pH 6.0 to 7.0	Soil pH >7.0
Zn	<200	<200	<300
Cu	<100	<135	<200
Ni	<60	<75	<110
Visible contaminants %m/m			
of which plastics	<0.5		
Sharps, number	<0.25		

Information in Support of the Analytical Results

Our Ref 20-12437
 Client Ref SRL1215
 Contract Higgins Lane Farm

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1696318	HIGGINS LANE FARM SOIL	08/07/20	GJ 250ml, GJ 60ml x2, PG, PT 1L		
1696319	GREENS SOIL	08/07/20	GJ 250ml, GJ 60ml x2, PG, PT 1L		

Key: G-Glass P-Plastic J-Jar G-Bag T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months