

By Email

Our Ref: 21-763.03L(CC)

Sakhile Majola
Vistry West Yorkshire
1 Redhall Avenue
Paragon Business Village
Wakefield
WF1 2UL

27th August 2025

Dear Sakhile,

Re: Clean Cover Verification - Plots 32 to 42 inclusive, at Hollin Bank, Hollingworth Road, Littleborough

Please find attached the following documents:

- Photographic Record Sheet
- Pre-importation Soil Test Results (Chemtech Analytical Reports Ref. 24-03420 & 24-03423)

As requested by Vistry West Yorkshire, a site visit was undertaken on 19th August 2025, by a representative from Arc Environmental Ltd, to confirm the suitability and thickness of imported topsoil placed within the gardens of Plots 32 to 42 inclusive, at the above referenced site.

In order to negate any potential risk to future site users (i.e., human health), it was recommended that a minimum of 600mm cover soils with basal high-visibility marker / separator layer, be emplaced within garden / soft landscaping areas, where made ground was present, in accordance with the Remediation Statement & Validation Proposal Sheets produced for this site by Arc Environmental Ltd (Report No. 21-763).

During the site visit, trial pits were excavated within the gardens of Plots 34, 35, 39 & 40, which confirmed the placement of a minimum 600mm of imported topsoil (recorded as a dark brown very clayey very sandy silty soil with some rootlets and fine gravel of mudstone, coal and sandstone).

In addition, an orange geotextile was also present below the placed soils. The location of the trial pits and the confirmation of the thickness of emplaced soils is included on the attached Photographic Record Sheet.

Pre-importation testing of the topsoil is attached to this letter report which confirmed that these materials would be suitable for re-use within a residential end use setting.

In addition to the above, additional samples of the emplaced topsoil were also recovered from Plots 34, 35, 39 & 40 during the visit in order to undertake confirmatory laboratory testing. The samples recovered during the site visit were stored at approximately c.2°C to c.8°C using cool boxes and ice packs prior to delivery to a UKAS / MCERTS accredited laboratory.



Arc Environmental Ltd
Solum House
Unit 1 Elliott Court
St John's Road
Meadowfield
Durham
DH7 8PN

T: 0191 378 6380
E: admin@arc-environmental.com
W: www.arc-environmental.com
Registered in England No. 05539784



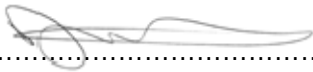
Re: Clean Cover Verification - Plots 32 to 42 inclusive, at Hollin Bank, Hollingworth Road, Littleborough (Cont'd)

The results of the supplementary screening are awaited and will be issued as an addendum report.

From the results of the site visit, it has been confirmed that a minimum of 600mm of imported topsoil has been placed above a high visibility geotextile within garden areas of Plots 32 to 42 inclusive. Pre-importation testing has confirmed that the emplaced topsoil is suitable for re-use within a residential end use setting. In addition, from previous site visits to validate the installation of the clean cover system in Plots 13, 14, 16 & 19 – 31 the validation screening has confirmed the suitability of the soils for use in a residential setting.

We trust this correspondence and attachments are of benefit and if you require any further information or clarification, please do not hesitate to contact us.

Yours sincerely,

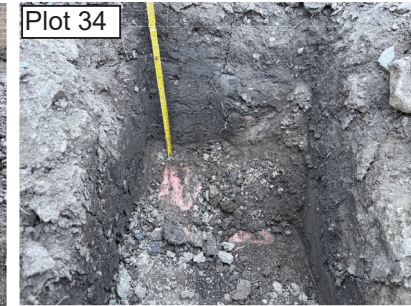
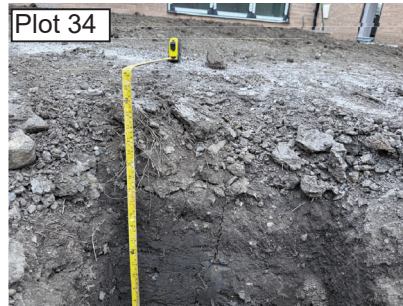
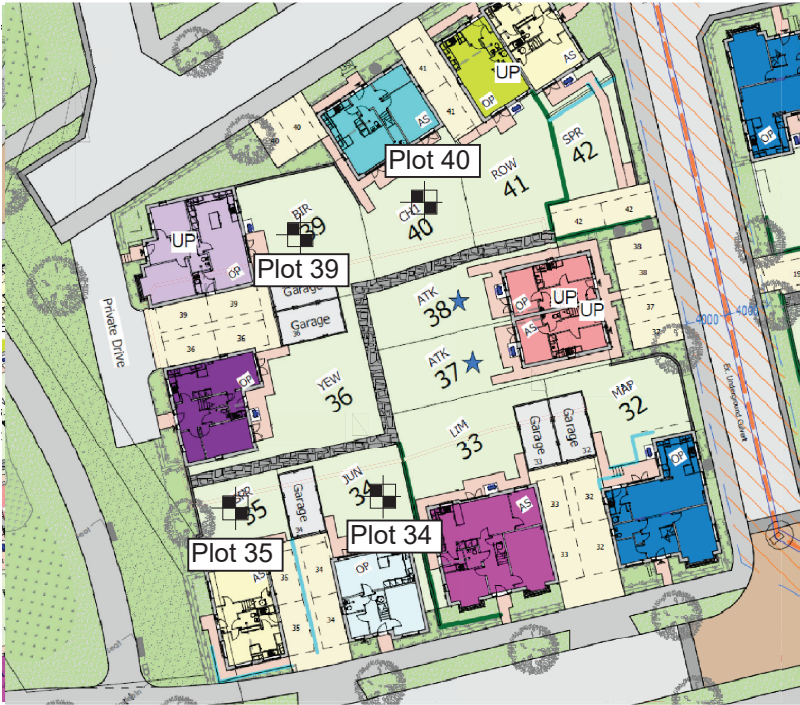


.....
For and on behalf of Arc Environmental Ltd
Darren McGrath MEnvSc FGS Tech IOSH
Director

Photographic Record Sheet

T: 0191 378 6380
E: admin@arc-environmental.com
W: www.arc-environmental.com
Registered in England No. 05539784





ARC ENVIRONMENTAL LTD
 Solum House
 Unit 1 Elliott Court
 St. John's Road
 Meadowfield
 Durham, DH7 8PN
 Tel: (0191) 378 6380
 e-mail: admin@arc-environmental.com
 web: www.arc-environmental.com

The contractor shall check all dimensions on site before commencement of any works. No dimensions to be scaled off this drawing.
 © Copyright Reserved

LEGEND	
	PLOT RANGE COVERED BY VALIDATION WORKS
	CLEAN COVER VALIDATION TRIAL PIT WITHIN REAR GARDEN

rev.	date	amendments		drawn	chckd

Client:
VISTRY PARTNERSHIPS YORKSHIRE

Project Title:
 Proposed Residential Development
 Hollingworth Gate
 Littleborough

Drawing Title:
 Clean Cover Photographic Record Sheet
 - Plot 32 to 42 Inclusive

Scale at A3: As Shown | Date: 27.08.25 | Drawn by: P.D | Approved by: P.B

Job Ref: | Dwg no: | Rev: 21-76

Pre-importation Soil Testing Results

T: 0191 378 6380
E: admin@arc-environmental.com
W: www.arc-environmental.com
Registered in England No. 05539784





ANALYTICAL TEST REPORT

Report Number 24-03420, issue number 2

Contract name: Lower Goliinrod farm

Client reference: Goliinrod farm topsoil stockpile 1

Clients name: Parkhouse Services

Clients address: Parkhouse Services
Lower Gollinrod Farm
Walmersley
Bury
BL9 5NB

Samples received: 28/10/2024

Analysis started: 29/10/2024

Analysis completed: 05/11/2024

Report issued: 05/11/2024
replaces 24-03420-01

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
U/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by: Abbie Neasham-Bourn
Senior Reporting Administrator

Abbie Neasham-Bourn
Senior Reporting
Administrator

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample ID	Depth (m)	Sample description	Material removed	% Removed	% Moisture
19980	SP1 Sample 1	-	Brown Sandy Loam with Gravel and Vegetation.	-	-	40.2

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

- a Sampling date not provided
- b Sampling time not provided (waters only)
- c Sample not received in appropriate containers
- d Storage Temperature
- e Headspace present in sample container
- f Sample exceeded sampling to receipt
- g Sample exceeded holding time(s)

Lab ref	Sample ID	Depth (m)	Deviating	Tests (Reason for deviation)
19980	SP1 Sample 1	-	N	

SOILS

Lab Number					19980
Client Reference					Dry Soil
Sample ID					SP1 Sample 1
Sampling Date					25/10/2024
Test	Method	Accred	LoD	Units	
Asbestos					
Asbestos Identification	SUBCON	SU	0	-	NAD
Metals					
Arsenic	CE264	U	1.8	mg/kg	< 1.8
Barium	CE264	U	1.9	mg/kg	35.7
Cadmium	CE264	M	1.6	mg/kg	< 1.6
Chromium	CE264	U	2	mg/kg	18.8
Copper	CE264	M	1.6	mg/kg	20.3
Lead	CE264	U	2.3	mg/kg	15.6
Mercury	CE264	U	0.7	mg/kg	< 0.7
Nickel	CE264	M	2.1	mg/kg	4.4
Selenium	CE264	U	3	mg/kg	< 3.0
Vanadium	CE264	U	1.8	mg/kg	10.4
Zinc	CE264	M	4	mg/kg	52.0
pH	CE004	M	0.1	pH units	7.2
Acid Soluble Sulphate (SO ₄)	CE062	M	100	mg/kg	1850
Total Monohydric Phenols	CE078	N	0.5	mg/kg	< 0.50
Total Cyanide	CE077	N	1	mg/kg	< 1.0
Free Cyanide	CE077	N	1	mg/kg	< 1.0
TPH Ali/Aro					
>C5-C6 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C6-C8 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C8-C10 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C10-C12 Aliphatic (EH_2D_AL)	CE250	N	1	mg/kg	1.2
>C12-C16 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	7.9
>C16-C21 Aliphatic (EH_2D_AL)	CE250	N	0.7	mg/kg	31.1
>C21-C35 Aliphatic (EH_2D_AL)	CE250	N	4	mg/kg	248
>C35-C44 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	33.1
>C6-C7 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010
>C7-C8 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010
>C8-C10 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010

SOILS

>C10-C12 Aromatic (EH_2D_AR)	CE250	N	0.6	mg/kg	5.6
>C12-C16 Aromatic (EH_2D_AR)	CE250	N	1	mg/kg	27.4
>C16-C21 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	30.4
>C21-C35 Aromatic (EH_2D_AR)	CE250	N	4.5	mg/kg	214
>C35-C44 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	132
Total Aliphatics C5-C44 (HS_1D+EH_2D_AL)	CE250	N	5	mg/kg	321.3
Total Aromatics C5-C44 (HS_1D+EH_2D_AL)	CE250	N	10	mg/kg	409.4
Total Hydrocarbons C5-C44 (HS_1D+EH_2D_AL)	CE250	N	15	mg/kg	730.7
Polyaromatic hydrocarbons					
Naphthalene	CE087	M	0.016	mg/kg	< 0.016
Acenaphthylene	CE087	M	0.015	mg/kg	< 0.015
Acenaphthene	CE087	M	0.013	mg/kg	0.036
Fluorene	CE087	U	0.013	mg/kg	0.032
Phenanthrene	CE087	M	0.014	mg/kg	0.379
Anthracene	CE087	U	0.017	mg/kg	0.113
Fluoranthene	CE087	M	0.017	mg/kg	0.588
Pyrene	CE087	M	0.016	mg/kg	0.487
Benzo(a)anthracene	CE087	U	0.012	mg/kg	0.244
Chrysene	CE087	M	0.028	mg/kg	0.299
Benzo(b)fluoranthene	CE087	M	0.02	mg/kg	0.324
Benzo(k)fluoranthene	CE087	M	0.025	mg/kg	0.133
Benzo(a)pyrene	CE087	U	0.019	mg/kg	0.252
Indeno(1,2,3-cd)pyrene	CE087	M	0.019	mg/kg	0.205
Dibenzo(a,h)anthracene	CE087	M	0.017	mg/kg	0.045
Benzo(g,h,i)perylene	CE087	M	0.019	mg/kg	0.195
Total PAH(16)	CE087	N	0.28	mg/kg	3.33

SOIL VOCS

Lab Number					19980
Client Reference					Dry Soil
Sample ID					SP1 Sample 1
Sampling Date					25/10/2024
Test	Method	Accred	LoD	Units	
VOC					
Benzene	CE174	N	0.01	mg/kg	< 0.010
Toluene	CE174	N	0.01	mg/kg	< 0.010
Ethylbenzene	CE174	N	0.01	mg/kg	< 0.010
m,p-Xylene	CE174	N	0.01	mg/kg	< 0.010
o-xylene	CE174	N	0.01	mg/kg	< 0.010
1,1-Dichloroethane	CE174	N	0.01	mg/kg	< 0.010
Chloroform	CE174	N	0.01	mg/kg	< 0.010
Tetrachloromethane	CE174	N	0.01	mg/kg	< 0.010
1,1,1-Trichloroethane	CE174	N	0.01	mg/kg	< 0.010
Trichloroethylene	CE174	N	0.01	mg/kg	< 0.010
Tetrachloroethylene	CE174	N	0.01	mg/kg	< 0.010
Chlorobenzene	CE174	N	0.01	mg/kg	< 0.010
Bromobenzene	CE174	N	0.01	mg/kg	< 0.010
Bromodichloromethane	CE174	N	0.01	mg/kg	< 0.010
1,1-Dichloro-1-propene	CE174	N	0.01	mg/kg	< 0.010
Trans - 1-2 -dichloroethylene	CE174	N	0.01	mg/kg	< 0.010
2,2-Dichloropropane	CE174	N	0.01	mg/kg	< 0.010
Bromochloromethane	CE174	N	0.01	mg/kg	< 0.010
1,2-Dichloroethane	CE174	N	0.01	mg/kg	< 0.010
Dibromomethane	CE174	N	0.01	mg/kg	< 0.010
1,2-Dichloropropane	CE174	N	0.01	mg/kg	< 0.010
1,1,2-Trichloroethane	CE174	N	0.01	mg/kg	< 0.010
Dibromochloromethane	CE174	N	0.01	mg/kg	< 0.010
1,3-Dichloropropane	CE174	N	0.01	mg/kg	< 0.010
1,2-dibromoethane	CE174	N	0.01	mg/kg	< 0.010
Styrene	CE174	N	0.01	mg/kg	< 0.010
Propylbenzene	CE174	N	0.01	mg/kg	< 0.010
2-Chlorotoluene	CE174	N	0.01	mg/kg	< 0.010
1,2,4-Trimethylbenzene	CE174	N	0.01	mg/kg	< 0.010
4-Chlorotoluene	CE174	N	0.01	mg/kg	< 0.010

SOIL VOCS

t-butylbenzene	CE174	N	0.01	mg/kg	< 0.010
1,3,5-Trimethylbenzene	CE174	N	0.01	mg/kg	< 0.010
1,3-Dichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
Butylbenzene	CE174	N	0.01	mg/kg	< 0.010
Hexachlorobutadiene	CE174	N	0.01	mg/kg	< 0.010
1-2-3 - Trichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
Naphthalene	CE174	N	0.01	mg/kg	< 0.010
1-2-4 - Trichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
1,4-Dichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
1,2-Dichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
Bromoform	CE174	N	0.01	mg/kg	< 0.010
1,2-Dibromo-3-Chloropropane	CE174	N	0.01	mg/kg	< 0.010
4-Isopropyltoluene_(p-Cymene)	CE174	N	0.01	mg/kg	< 0.010
1,1,1,2-Tetrachloroethane	CE174	N	0.01	mg/kg	< 0.010
Bromomethane	CE174	N	0.03	mg/kg	< 0.030
Chloroethane	CE174	N	0.01	mg/kg	< 0.010
Chloromethane	CE174	N	0.01	mg/kg	< 0.010
Cis-1,2-Dichloroethene	CE174	N	0.01	mg/kg	< 0.010
cis-1,3-Dichloro-1-Propene	CE174	N	0.01	mg/kg	< 0.010
1,1,2,2-Tetrachloroethane	CE174	N	0.01	mg/kg	< 0.010
Dichlorodifluoromethane_(CFC-12)	CE174	N	0.01	mg/kg	< 0.010
Dichloromethane	CE174	N	0.01	mg/kg	< 0.010
Isopropylbenzene_(Cumene)	CE174	N	0.01	mg/kg	< 0.010
MTBE	CE174	N	0.01	mg/kg	< 0.010
sec-Butylbenzene	CE174	N	0.01	mg/kg	< 0.010
trans-1,3-Dichloro-1-Propene	CE174	N	0.01	mg/kg	< 0.010
Trichlorofluoromethane_(CFC-11)	CE174	N	0.01	mg/kg	< 0.010
Vinyl chloride	CE174	N	0.01	mg/kg	< 0.010
1,1-Dichloroethene	CE174	N	0.01	mg/kg	< 0.010
1,2,3-Trichloropropane	CE174	N	0.01	mg/kg	< 0.010

DECLARATION OF COMPLIANCE (BS3882:2015)

Lab ref	19980	Date received	28/10/2024
Contract name	24-03420	Analysis started	01/11/2024
Sample ID		Analysis completed	30/10/2024
OS Grid reference	Not supplied	Report issued	05/11/2024
Date sampled	25/10/2024		

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	5						
Silt content	% w/w	10						
Sand content	% w/w	85						
Soil texture	class							

Stone content								
>2mm	% w/w	4.2	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y

Mass loss on ignition								
Clay 5-20%	% w/w	12.4	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH ¹	pH units	7.2	Y	N	N	Y	N	N
Carbonate (calcareous only)	% w/w CaCO ₃	21.0			Y			Y
Nitrogen (total)	% w/w N	0.83	Y	Y	Y			
Carbon:Nitrogen ratio	-	16.8	Y	Y	Y	Y	Y	Y
Phosphorus (extractable)	mg/l P	84	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	1400	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	238	Y	Y	Y			
Electrical conductivity ²	µS/cm	1950	Y					

Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	37	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	7	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	102	Y	Y	Y	Y	Y	Y

VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	<0.1	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	None	Y	Y	Y	Y	Y	Y

¹ Results are accredited to MCERTS if matrix confirmed as soil

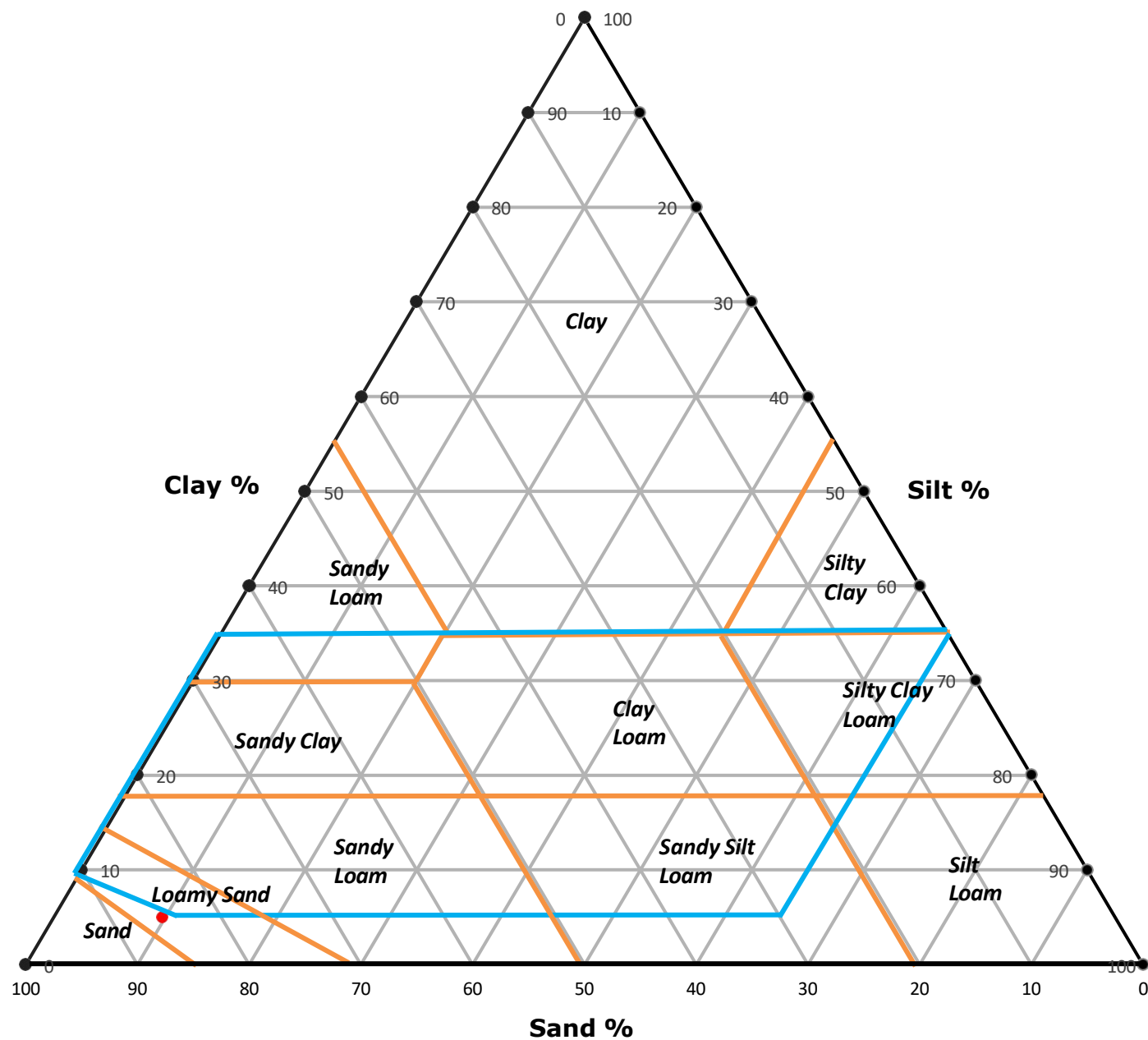
² Results in leachate are accredited to ISO17025

Disclaimer: The limits in this report are provided for guidance only and values are transcribed from BS3882:2015

Chemtech Environmental Ltd does not take responsibility for any errors or omissions in the transcription, and all data should be verified by the end user.

Any assessments made are based on the published results from the Laboratory and make no assessment of uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. Method uncertainty levels can be provided independently upon request.

Assessment is outside the scope of the laboratory's UKAS accreditation.



METHOD DETAILS

METHOD	TESTNAME	METHOD SUMMARY	ANALYSIS BASIS
CE267	VPH in Soil	HS-GCFID	As submitted sample
SUBCON	Asbestos Solid	HSG248	Air Dried Sample
CE007	Electrical conductivity of Solids	Potentiometric	As submitted sample
CE088	Extractable Cations - BS3882	Ammonium Nitrate Extraction and ICPOES	Air dried sample
CE174	VOC in solids	HS-GCMS	As submitted sample
CE089	Extractable Phosphorus - BS3882	Sodium Hydrogen Carbonate extraction and ICPOES	Air dried sample
CE062	Acid Soluble Sulphate in Solids	Primacs	Air dried sample
CE264	Metals by ICP in Soil	ICPOES	Air dried sample
CE250	GCXGC in Solids	DCM Extraction and GCxGC-FID	As submitted sample
CE087	PAH in Soil	DCM Extraction and GCMS	As submitted sample
CE078	Phenols in Solids	Continuous Flow Analyser	As submitted sample
CE077	Cyanides in Solids	Continuous Flow Analyser	As submitted sample
CE197	Primacs in Solids	Primacs	Air dried sample
CE006	Loss on ignition at 440 deg C	Gravimetric	Air dried sample

REPORT INFORMATION

Report No.:24-03420, issue number 2

Key

U	ISO17025 Accredited Result
M	ISO17025 and MCERTS Accredited Result
N	Do not currently hold accreditation
^	MCERTS accreditation not applicable for sample matrix
*	ISO17025 accreditation not applicable for sample matrix
S	Subcontracted
I/S	Insufficient Sample
U/S	Unsuitable sample
N/T	Not tested
<	Means "less than"
>	Means "greater than"

LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

This report shall not be reproduced except in full, without prior written approval.

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

The results relate only to the sample received.

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Moisture Content Calculated on a Wet Weight basis

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

Sampling was undertaken by Chemtech Environmental Limited and is outside the UKAS accreditation scope.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

BTEX compounds are identified by retention time only and may include interference from co-eluting compounds.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying

For soils and solids, analytical results are inclusive of stones, where applicable.

Sample Retention and Disposal

All soil samples will be retained for a period of 4 weeks from the point of receipt

All water samples will be retained for a period of 2 weeks from the point of Reporting

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

Statement of Conformity

Statement of Conformity

Where Chemtech reports a statement of conformity to a specification, the decision rules applied are derived from the Ilac document ILAC G8:09/2019.

Acceptance limits (AL), applied are derived from the tolerance limits (TL) by you the client or applicable standard (e.g. 2003.33.EC Council Decision, BS3882, BS8601)

Agreed and reported Decision Rule:

"PASS" if the result < TL, and the bias / precision values for the process meet the targets defined within the methodology and/or applied accreditation.

Reported Decisions:

Result < TL for determinands: PASS

Result > TL for determinands: FAIL

Definitions Used:

Acceptance limit (AL) Specified upper or lower bounds of permissible measured quantity values.

Tolerance limit (TL) Specified upper or lower bound of permissible values of a property.

Accreditation of WAC/BS3882/BS8601

Accreditation in Soil to MCERTS is only applicable for specific matrix types identified as soil (Sand/Loam/Clay) during the sample assessment

If the sample is classified as not soil, not accreditation is conveyed



ANALYTICAL TEST REPORT

Report Number 24-03423, issue number 2

Contract name: Lower Goliinrod farm

Client reference: Goliinrod farm topsoil stockpile 2

Clients name: Parkhouse Services

Clients address: Parkhouse Services
Lower Gollinrod Farm
Walmersley
Bury
BL9 5NB

Samples received: 28/10/2024

Analysis started: 29/10/2024

Analysis completed: 05/11/2024

Report issued: 05/11/2024
Replaces 24-03423-01

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
U/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by: Abbie Neasham-Bourn
Senior Reporting Administrator

Abbie Neasham-Bourn
Senior Reporting
Administrator

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample ID	Depth (m)	Sample description	Material removed	% Removed	% Moisture
19983	SP2 Sample 1	-	Brown Sandy Loam with Gravel and Vegetation.	-	-	19.0

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

- a Sampling date not provided
- b Sampling time not provided (waters only)
- c Sample not received in appropriate containers
- d Storage Temperature
- e Headspace present in sample container
- f Sample exceeded sampling to receipt
- g Sample exceeded holding time(s)

Lab ref	Sample ID	Depth (m)	Deviating	Tests (Reason for deviation)
19983	SP2 Sample 1	-	N	

SOILS

Lab Number					19983
Client Reference					dry soil
Sample ID					SP2 Sample 1
Sampling Date					25/10/2024
Test	Method	Accred	LoD	Units	
Asbestos					
Asbestos Identification	SUBCON	SU	0	-	NAD
Metals					
Arsenic	CE264	U	1.8	mg/kg	15.4
Barium	CE264	U	1.9	mg/kg	171
Cadmium	CE264	M	1.6	mg/kg	< 1.6
Chromium	CE264	U	2	mg/kg	68.6
Copper	CE264	M	1.6	mg/kg	72.0
Lead	CE264	U	2.3	mg/kg	110
Mercury	CE264	U	0.7	mg/kg	< 0.7
Nickel	CE264	M	2.1	mg/kg	19.8
Selenium	CE264	M	3	mg/kg	< 3.0
Vanadium	CE264		1.8	mg/kg	37.3
Zinc	CE264	M	4	mg/kg	98.4
pH	CE004	M	0.1	pH units	5.9
Acid Soluble Sulphate (SO ₄)	CE062	M	100	mg/kg	1190
Total Monohydric Phenols	CE078	N	0.5	mg/kg	0.53
Total Cyanide	CE077	N	1	mg/kg	< 1.0
Free Cyanide	CE077	N	1	mg/kg	< 1.0
TPH Ali/Aro					
>C5-C6 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C6-C8 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C8-C10 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10
>C10-C12 Aliphatic (EH_2D_AL)	CE250	N	1	mg/kg	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	2.2
>C16-C21 Aliphatic (EH_2D_AL)	CE250	N	0.7	mg/kg	6
>C21-C35 Aliphatic (EH_2D_AL)	CE250	N	4	mg/kg	22.5
>C35-C44 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	3.7
>C6-C7 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010
>C7-C8 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010

SOILS

>C8-C10 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010
>C10-C12 Aromatic (EH_2D_AR)	CE250	N	0.6	mg/kg	3.4
>C12-C16 Aromatic (EH_2D_AR)	CE250	N	1	mg/kg	15.7
>C16-C21 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	61.3
>C21-C35 Aromatic (EH_2D_AR)	CE250	N	4.5	mg/kg	198
>C35-C44 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	59.1
Toatl Aliphatics C5-C44 (HS_1D+EH_2D_AL)	CE250	N	5	mg/kg	34.4
Toatl Aromatics C5-C44 (HS_1D+EH_2D_AL)	CE250	N	10	mg/kg	337.5
Toatl Hydrocarbons C5-C44 (HS_1D+EH_2D_AL)	CE250	N	15	mg/kg	371.9
Polyaromatic hydrocarbons					
Naphthalene	CE087	M	0.016	mg/kg	0.352
Acenaphthylene	CE087	M	0.015	mg/kg	< 0.015
Acenaphthene	CE087	M	0.013	mg/kg	0.864
Fluorene	CE087	U	0.013	mg/kg	0.493
Phenanthrene	CE087	M	0.014	mg/kg	5.11
Anthracene	CE087	U	0.017	mg/kg	1.32
Fluoranthene	CE087	M	0.017	mg/kg	7.84
Pyrene	CE087	M	0.016	mg/kg	7.12
Benzo(a)anthracene	CE087	U	0.012	mg/kg	3.04
Chrysene	CE087	M	0.028	mg/kg	3.41
Benzo(b)fluoranthene	CE087	M	0.02	mg/kg	2.1
Benzo(k)fluoranthene	CE087	M	0.025	mg/kg	1.55
Benzo(a)pyrene	CE087	U	0.019	mg/kg	1.57
Indeno(1,2,3-cd)pyrene	CE087	M	0.019	mg/kg	2.71
Dibenzo(a,h)anthracene	CE087	M	0.017	mg/kg	0.210
Benzo(g,h,i)perylene	CE087	M	0.019	mg/kg	2.45
Total PAH(16)	CE087	N	0.28	mg/kg	44.1

SOIL VOCS

Lab Number					19983
Client Reference					dry soil
Sample ID					SP2 Sample 1
Sampling Date					25/10/2024
Test	Method	Accred	LoD	Units	
VOC					
Benzene	CE174	N	0.01	mg/kg	< 0.010
Toluene	CE174	N	0.01	mg/kg	< 0.010
Ethylbenzene	CE174	N	0.01	mg/kg	< 0.010
m,p-Xylene	CE174	N	0.01	mg/kg	< 0.010
o-xylene	CE174	N	0.01	mg/kg	< 0.010
1,1-Dichloroethane	CE174	N	0.01	mg/kg	< 0.010
Chloroform	CE174	N	0.01	mg/kg	< 0.010
Tetrachloromethane	CE174	N	0.01	mg/kg	< 0.010
1,1,1-Trichloroethane	CE174	N	0.01	mg/kg	< 0.010
Trichloroethylene	CE174	N	0.01	mg/kg	< 0.010
Tetrachloroethylene	CE174	N	0.01	mg/kg	< 0.010
Chlorobenzene	CE174		0.01	mg/kg	< 0.010
Bromobenzene	CE174	N	0.01	mg/kg	< 0.010
Bromodichloromethane	CE174	N	0.01	mg/kg	< 0.010
1,1-Dichloro-1-propene	CE174	N	0.01	mg/kg	< 0.010
Trans - 1-2 -dichloroethylene	CE174	N	0.01	mg/kg	< 0.010
2,2-Dichloropropane	CE174	N	0.01	mg/kg	< 0.010
Bromochloromethane	CE174	N	0.01	mg/kg	< 0.010
1,2-Dichloroethane	CE174	N	0.01	mg/kg	< 0.010
Dibromomethane	CE174	N	0.01	mg/kg	< 0.010
1,2-Dichloropropane	CE174	N	0.01	mg/kg	< 0.010
1,1,2-Trichloroethane	CE174	N	0.01	mg/kg	< 0.010
Dibromochloromethane	CE174	N	0.01	mg/kg	< 0.010
1,3-Dichloropropane	CE174	N	0.01	mg/kg	< 0.010
1,2-dibromoethane	CE174	N	0.01	mg/kg	< 0.010
Styrene	CE174	N	0.01	mg/kg	< 0.010
Propylbenzene	CE174	N	0.01	mg/kg	< 0.010
2-Chlorotoluene	CE174	N	0.01	mg/kg	< 0.010

SOIL VOCS

1,2,4-Trimethylbenzene	CE174	N	0.01	mg/kg	< 0.010
4-Chlorotoluene	CE174	N	0.01	mg/kg	< 0.010
t-butylbenzene	CE174	N	0.01	mg/kg	< 0.010
1,3,5-Trimethylbenzene	CE174	N	0.01	mg/kg	< 0.010
1,3-Dichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
Butylbenzene	CE174	N	0.01	mg/kg	< 0.010
Hexachlorobutadiene	CE174	N	0.01	mg/kg	< 0.010
1-2-3 - Trichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
Naphthalene	CE174	N	0.01	mg/kg	< 0.010
1-2-4 - Trichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
1,4-Dichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
1,2-Dichlorobenzene	CE174	N	0.01	mg/kg	< 0.010
Bromoform	CE174	N	0.01	mg/kg	< 0.010
1,2-Dibromo-3-Chloropropane	CE174	N	0.01	mg/kg	< 0.010
4-Isopropyltoluene_(p-Cymene)	CE174	N	0.01	mg/kg	< 0.010
1,1,1,2-Tetrachloroethane	CE174	N	0.01	mg/kg	< 0.010
Bromomethane	CE174	N	0.03	mg/kg	< 0.030
Chloroethane	CE174	N	0.01	mg/kg	< 0.010
Chloromethane	CE174	N	0.01	mg/kg	< 0.010
Cis-1,2-Dichloroethene	CE174	N	0.01	mg/kg	< 0.010
cis-1,3-Dichloro-1-Propene	CE174	N	0.01	mg/kg	< 0.010
1,1,2,2-Tetrachloroethane	CE174	N	0.01	mg/kg	< 0.010
Dichlorodifluoromethane_(CFC-12)	CE174	N	0.01	mg/kg	< 0.010
Dichloromethane	CE174	N	0.01	mg/kg	< 0.010
Isopropylbenzene_(Cumene)	CE174	N	0.01	mg/kg	< 0.010
MTBE	CE174	N	0.01	mg/kg	< 0.010
sec-Butylbenzene	CE174	N	0.01	mg/kg	< 0.010
trans-1,3-Dichloro-1-Propene	CE174	N	0.01	mg/kg	< 0.010
Trichlorofluoromethane_(CFC-11)	CE174	N	0.01	mg/kg	< 0.010
Vinyl chloride	CE174	N	0.01	mg/kg	< 0.010
1,1-Dichloroethene	CE174	N	0.01	mg/kg	< 0.010
1,2,3-Trichloropropane	CE174	N	0.01	mg/kg	< 0.010

DECLARATION OF COMPLIANCE (BS3882:2015)

Lab ref 19983
Contract name 24-03423
Sample ID
OS Grid reference Not supplied
Date sampled 25/10/2024

Date received 28/10/2024
Analysis started 01/11/2024
Analysis completed 30/10/2024
Report issued 05/11/2024

Test	Units	Result	Compliant with Multipurpose? (Y/N)	Compliant with specific purpose? (Y/N)				
				Acidic	Calcareous	Low Fertility	Low F Acidic	Low F Calcareous
Texture								
Clay content	% w/w	15						
Silt content	% w/w	31						
Sand content	% w/w	55						
Soil texture	class	SANDY LOAM	Y	Y	Y	Y	Y	Y

Stone content								
>2mm	% w/w	7	Y	Y	Y	Y	Y	Y
>20mm	% w/w	0	Y	Y	Y	Y	Y	Y
>50mm	% w/w	0	Y	Y	Y	Y	Y	Y

Mass loss on ignition								
Clay 5-20%	% w/w	13.0	Y	Y	Y	Y	Y	Y
Clay 20-35%	% w/w	-	-	-	-	-	-	-
pH ¹	pH units	5.9	Y	N	N	Y	N	N
Carbonate (calcareous only)	% w/w CaCO ₃	3.8			Y			Y
Nitrogen (total)	% w/w N	0.31	Y	Y	Y			
Carbon:Nitrogen ratio	-	18.4	Y	Y	Y	Y	Y	N
Phosphorus (extractable)	mg/l P	95	Y	Y	Y	N	N	N
Potassium (extractable)	mg/l K	261	Y	Y	Y			
Magnesium (extractable)	mg/l Mg	117	Y	Y	Y			
Electrical conductivity ²	µS/cm	483	Y					

Phytotoxic contaminants (by soil pH)								
Copper (Nitric acid extract)	mg/kg Cu	76	Y	Y	Y	Y	Y	Y
Nickel (Nitric acid extract)	mg/kg Ni	18	Y	Y	Y	Y	Y	Y
Zinc (Nitric acid extract)	mg/kg Zn	102	Y	Y	Y	Y	Y	Y

VISIBLE CONTAMINANTS								
(air-dried soil)	% w/w	<0.1	Y	Y	Y	Y	Y	Y
...of which plastics	% w/w	0	Y	Y	Y	Y	Y	Y
Sharps	% w/w	None	Y	Y	Y	Y	Y	Y

¹ Results are accredited to MCERTS if matrix confirmed as soil

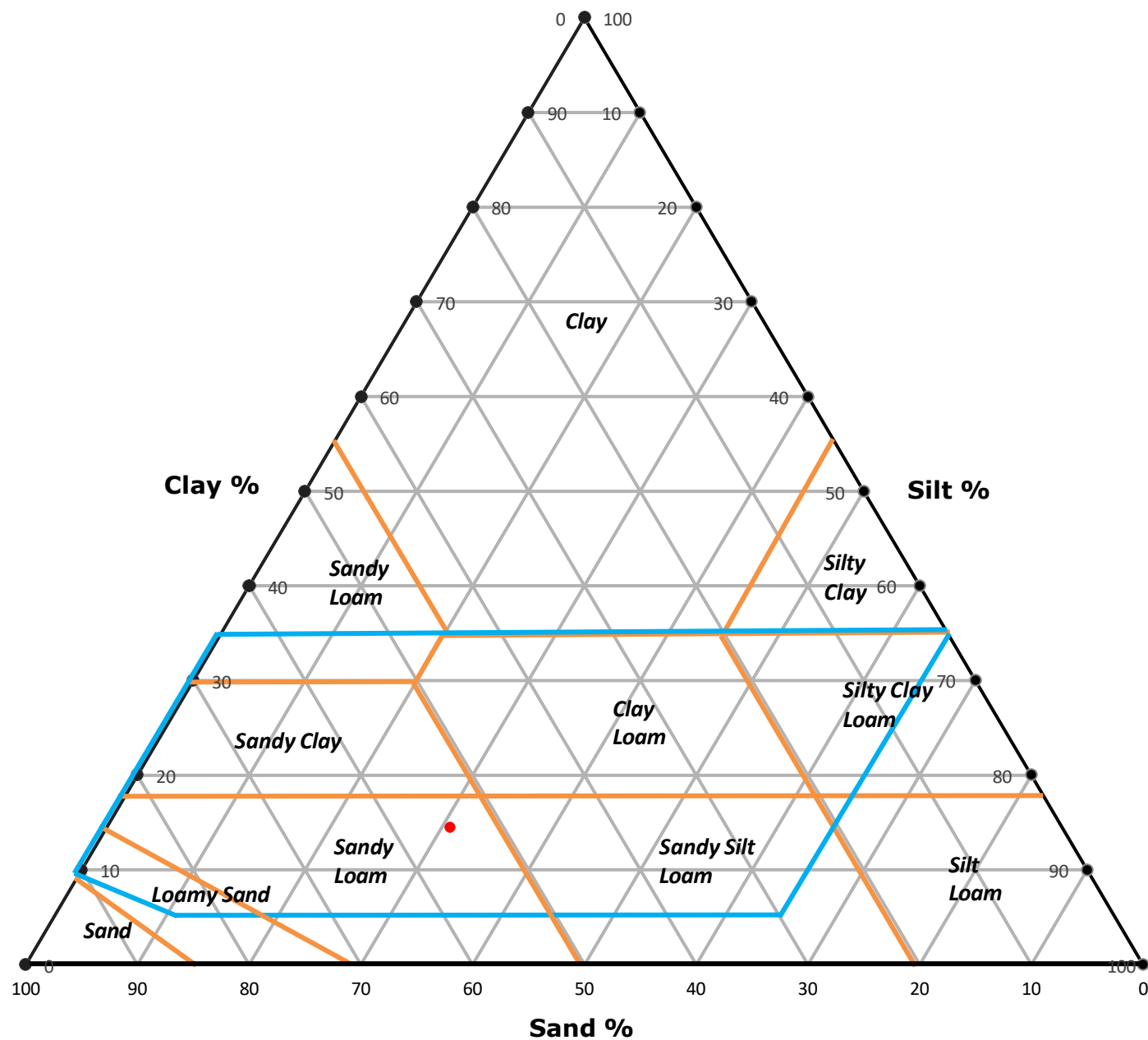
² Results in leachate are accredited to ISO17025

Disclaimer: The limits in this report are provided for guidance only and values are transcribed from BS3882:2015

Chemtech Environmental Ltd does not take responsibility for any errors or omissions in the transcription, and all data should be verified by the end user.

Any assessments made are based on the published results from the Laboratory and make no assessment of uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. Method uncertainty levels can be provided independently upon request.

Assessment is outside the scope of the laboratory's UKAS accreditation.



METHOD DETAILS

METHOD	TESTNAME	METHOD SUMMARY	ANALYSIS BASIS
CE267	VPH in Soil	HS-GCFID	As submitted sample
SUBCON	Asbestos Solid	HSG248	Air Dried Sample
CE007	Electrical conductivity of Solids	Potentiometric	As submitted sample
CE088	Extractable Cations - BS3882	Ammonium Nitrate Extraction and ICPOES	Air dried sample
CE174	VOC in solids	HS-GCMS	As submitted sample
CE089	Extractable Phosphorus - BS3882	Sodium Hydrogen Carbonate extraction and ICPOES	Air dried sample
CE062	Acid Soluble Sulphate in Solids	Primacs	Air dried sample
CE264	Metals by ICP in Soil	ICPOES	Air dried sample
CE250	GCXGC in Solids	DCM Extraction and GCxGC-FID	As submitted sample
CE087	PAH in Soil	DCM Extraction and GCMS	As submitted sample
CE078	Phenols in Solids	Continuous Flow Analyser	As submitted sample
CE077	Cyanides in Solids	Continuous Flow Analyser	As submitted sample
CE197	Primacs in Solids	Primacs	Air dried sample
CE006	Loss on ignition at 440 deg C	Gravimetric	Air dried sample

REPORT INFORMATION

Report No.:24-03423, issue number 2

Key

U	ISO17025 Accredited Result
M	ISO17025 and MCERTS Accredited Result
N	Do not currently hold accreditation
^	MCERTS accreditation not applicable for sample matrix
*	ISO17025 accreditation not applicable for sample matrix
S	Subcontracted
I/S	Insufficient Sample
U/S	Unsuitable sample
N/T	Not tested
<	Means "less than"
>	Means "greater than"

LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

This report shall not be reproduced except in full, without prior written approval.

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

The results relate only to the sample received.

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Moisture Content Calculated on a Wet Weight basis

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

Sampling was undertaken by Chemtech Environmental Limited and is outside the UKAS accreditation scope.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

BTEX compounds are identified by retention time only and may include interference from co-eluting compounds.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying

For soils and solids, analytical results are inclusive of stones, where applicable.

Sample Retention and Disposal

All soil samples will be retained for a period of 4 weeks from the point of receipt

All water samples will be retained for a period of 2 weeks from the point of Reporting

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

Statement of Conformity

Statement of Conformity

Where Chemtech reports a statement of conformity to a specification, the decision rules applied are derived from the Ilac document ILAC G8:09/2019.

Acceptance limits (AL), applied are derived from the tolerance limits (TL) by you the client or applicable standard (e.g. 2003.33.EC Council Decision, BS3882, BS8601)

Agreed and reported Decision Rule:

"PASS" if the result < TL, and the bias / precision values for the process meet the targets defined within the methodology and/or applied accreditation.

Reported Decisions:

Result < TL for determinands: PASS

Result > TL for determinands: FAIL

Definitions Used:

Acceptance limit (AL) Specified upper or lower bounds of permissible measured quantity values.

Tolerance limit (TL) Specified upper or lower bound of permissible values of a property.

Accreditation of WAC/BS3882/BS8601

Accreditation in Soil to MCERTS is only applicable for specific matrix types identified as soil (Sand/Loam/Clay) during the sample assessment

If the sample is classified as not soil, not accreditation is conveyed