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CERTIFICATE OF ANALYSIS

Date of report Generation: 18 July 2023
Customer: [Redacted]
Sample Delivery Group (SDG): 230708-40
Your Reference: CJB/28367
Location: Stoney Hill
Report No: 696805
Order Number:

This report has been revised and directly supersedes 696804 in its entirety.

We received 8 samples on Saturday July 08, 2023 and 8 of these samples were scheduled for analysis which was completed on Tuesday July 18, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

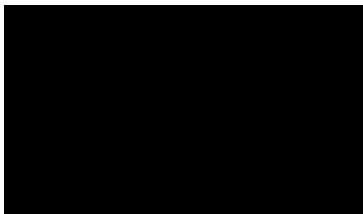
Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:



Operations Manager





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Validated

SDG: 230708-40
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Report Number: 696805
Location: Stoney Hill

Superseded Report: 696804

Received Sample Overview

Lab Sample No(s)	Customer Sample Ref.	AGS Ref.	Depth (m)	Sampled Date
28294359	DS1			06/07/2023
28294360	LD1			06/07/2023
28294363	POND A			06/07/2023
28294365	POND B			06/07/2023
28294368	POND C			06/07/2023
28294356	TW1 L			06/07/2023
28294358	TW1 S			06/07/2023
28294361	US1			06/07/2023

Only received samples which have had analysis scheduled will be shown on the following pages.



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Results Legend

- X Test
- N No Determination Possible

Sample Types -
S - Soil/Solid
UNS - Unspecified Solid
GW - Ground Water
SW - Surface Water
LE - Land Leachate
PL - Prepared Leachate
PR - Process Water
SA - Saline Water
TE - Trade Effluent
TS - Treated Sewage
US - Untreated Sewage
RE - Recreational Water
DW - Drinking Water
Non-regulatory
UNL - Unspecified Liquid
SL - Sludge
G - Gas
OTH - Other

Results Legend	Lab Sample No(s)		Customer Sample Reference		AGS Reference		Depth (m)		Container												Sample Type			
	28294359	28294360	28294363	28294365	DS1	LD1			0.5l glass bottle (ALE227)	ZnAc (ALE246)	Vial (ALE297)	HNO3 Unfiltered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	ZnAc (ALE246)	Vial (ALE297)	HNO3 Unfiltered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	SW		
	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	
Ammoniacal Nitrogen	All	NDPs: 0 Tests: 7																						
Ammonium Soil by Titration	All	NDPs: 0 Tests: 1																						
Anions by Kone (soil)	All	NDPs: 0 Tests: 1																						
Anions by Kone (w)	All	NDPs: 0 Tests: 7																						
COD Unfiltered	All	NDPs: 0 Tests: 7																						
Determination of Dissolved Gases	All	NDPs: 0 Tests: 7																						
Easily Liberated Sulphide	All	NDPs: 0 Tests: 1																						
Metals in solid samples by OES	All	NDPs: 0 Tests: 1																						
Oil, Grease or Solids Visible	All	NDPs: 0 Tests: 7																						
pH	All	NDPs: 0 Tests: 1																						
pH Value	All	NDPs: 0 Tests: 7																						
Phenols by HPLC (S)	All	NDPs: 0 Tests: 1																						
Phenols by HPLC (W)	All	NDPs: 0 Tests: 7																						
Phosphate (Ortho as PO4) (s)	All	NDPs: 0 Tests: 1																						
Phosphate by Kone (w)	All	NDPs: 0 Tests: 7																						



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Results Legend	Lab Sample No(s)	Customer Sample Reference	AGS Reference	Depth (m)	Container	Sample Type														
							0.5l glass bottle (ALE227)	ZnAc (ALE246)	Vial (ALE297)	HNO3 Unfiltered (ALE204)	H2SO4 (ALE244)	500ml Plastic (ALE208)	0.5l glass bottle (ALE227)	ZnAc (ALE246)	Vial (ALE297)	HNO3 Unfiltered (ALE204)	H2SO4 (ALE244)			
X Test N No Determination Possible Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other	28294359	DS1			Vial (ALE297)	SW														
	28294360	LD1			Vial (ALE297)	SW														
	28294363	POND A			ZnAc (ALE246)	SW														
	28294365	POND B			0.5l glass bottle (ALE227)	SW														
Sample description	All	NDPs: 0 Tests: 1																		
Sulphide	All	NDPs: 0 Tests: 7																		
Suspended Solids	All	NDPs: 0 Tests: 7																		
Total Metals by ICP-MS	All	NDPs: 0 Tests: 7																		

28294361	US1			H2SO4 (ALE244)	SW										
				500ml Plastic (ALE208)	SW										
				0.5l glass bottle (ALE227)	SW										
				500ml Plastic (ALE208)	S		X								
				ZnAc (ALE246)	LE		X								
				Vial (ALE297)	LE										
				HNO3 Unfiltered (ALE204)	LE								X		
				H2SO4 (ALE244)	LE										
				500ml Plastic (ALE208)	LE						X				
				0.5l glass bottle (ALE227)	LE										
28294356	TW1 S			ZnAc (ALE246)	SW										
				Vial (ALE297)	SW										
				HNO3 Unfiltered (ALE204)	SW								X		
				H2SO4 (ALE244)	SW										
				500ml Plastic (ALE208)	SW										
				0.5l glass bottle (ALE227)	SW										
				ZnAc (ALE246)	SW										
				Vial (ALE297)	SW										
				HNO3 Unfiltered (ALE204)	SW										
				H2SO4 (ALE244)	SW										
28294365	POND B			500ml Plastic (ALE208)	SW										
				0.5l glass bottle (ALE227)	SW										
				ZnAc (ALE246)	SW										
				Vial (ALE297)	SW										
				HNO3 Unfiltered (ALE204)	SW										
				H2SO4 (ALE244)	SW										
				500ml Plastic (ALE208)	SW										
				0.5l glass bottle (ALE227)	SW										
				ZnAc (ALE246)	SW										
				Vial (ALE297)	SW										
28294368	POND C			HNO3 Unfiltered (ALE204)	SW										
				H2SO4 (ALE244)	SW										
				500ml Plastic (ALE208)	SW										
				0.5l glass bottle (ALE227)	SW										
				ZnAc (ALE246)	SW										
				Vial (ALE297)	SW										
				HNO3 Unfiltered (ALE204)	SW										
				H2SO4 (ALE244)	SW										
				500ml Plastic (ALE208)	SW										
				0.5l glass bottle (ALE227)	SW										



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Results Legend	Lab Sample No(s)			
<p>X Test</p> <p>N No Determination Possible</p> <p>Sample Types -</p> <p>S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas OTH - Other</p>	28294361			
	US1			
	AGS Reference			
	Depth (m)			
	Container	HNO3 Unfiltered (ALE204)	Vial (ALE297)	ZnAc (ALE246)
	Sample Type	SW	SW	SW
Determination of Dissolved Gases	All	NDPs: 0 Tests: 7	X	
Sulphide	All	NDPs: 0 Tests: 7		X
Total Metals by ICP-MS	All	NDPs: 0 Tests: 7	X	



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Sample Descriptions

Grain Sizes

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0.1mm - 2mm	coarse	2mm - 10mm	very coarse	>10mm
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Lab Sample No(s)	Customer Sample Ref.	Depth (m)	Colour	Description	Inclusions	Inclusions 2
28294358	TW1 S		Dark Brown	Sandy Silt Loam	Vegetation	None

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.



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Results Legend			Customer Sample Ref.	DS1	LD1	POND A	POND B	POND C	TW1 L
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)			Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Surface Water (SW) 06/07/2023 17:20:00 08/07/2023 230708-40 28294359	Surface Water (SW) 06/07/2023 17:35:00 08/07/2023 230708-40 28294360	Surface Water (SW) 06/07/2023 14:40:00 08/07/2023 230708-40 28294363	Surface Water (SW) 06/07/2023 15:55:00 08/07/2023 230708-40 28294365	Surface Water (SW) 06/07/2023 15:30:00 08/07/2023 230708-40 28294368	Land Leachate (LE) 06/07/2023 14:45:00 08/07/2023 230708-40 28294356
Component	LOD/Units	Method							
Oil or Grease, Visible		PM095	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Visible Solids		PM095	Present	Present	Present	Present	Present	Present	Present
Suspended solids, Total	<2 mg/l	TM022	36.6 #	6.7 #	15.1 #	8.7 #	5.65 #	802 #	
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099	0.474 #	<0.2 #	<0.2 #	0.23 #	0.224 #	128 #	
Sulphide	<0.01 mg/l	TM101	<0.01 #	0.0484 #	0.119 #	0.0176 #	0.109 #	<0.01 #	
COD, unfiltered	<7 mg/l	TM107	16.8 #	<7 #	68.7 #	26.1 #	32.6 #	359 #	
Aluminium (tot.unfilt)	<10 µg/l	TM152	33 #	28.4 #	50.7 #	25.8 #	82.6 #	576 #	
Phosphorus (tot.unfilt)	<20 µg/l	TM152	45.1 #	<20 #	200 #	62.6 #	99.1 #	597 #	
Zinc (tot.unfilt)	<5 µg/l	TM152	346 #	24 #	42.9 #	9.95 #	47.2 #	35.2 #	
Iron (Tot. Unfilt.)	<0.024 mg/l	TM152	12 #	0.264 #	0.703 #	0.0772 #	0.19 #	18.6 #	
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184	<0.05 #	<0.05 #	<0.05 #	0.526 #	<0.05 #	<0.05 #	
Sulphate	<2 mg/l	TM184	324 #	172 #	36.9 #	81.5 #	82 #	<2 #	
Methane, dissolved	<1 µg/l	TM223	3.04 #	<1 #	<1 #	2.07 #	<1 #	3360 #	
pH	<1 pH Units	TM256	7.01 #	8.22 #	7.53 #	7.29 #	7.33 #	7.13 #	
Phenol	<0.002 mg/l	TM259	<0.002 #	<0.002 #	<0.002 #	<0.002 #	<0.002 #	0.01 #	
Cresols	<0.006 mg/l	TM259	<0.006 #	<0.006 #	<0.006 #	<0.006 #	<0.006 #	<0.006 #	
Xylenols	<0.008 mg/l	TM259	<0.008 #	<0.008 #	<0.008 #	<0.008 #	<0.008 #	<0.008 #	
Phenols, Total Detected monohydric	<0.016 mg/l	TM259	<0.016 #	<0.016 #	<0.016 #	<0.016 #	<0.016 #	<0.016 #	



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Results Legend		Customer Sample Ref.	TW1 S	US1			
# ISO17025 accredited. M mCERTS accredited. aq Aqueous / settled sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample. * Subcontracted - refer to subcontractor report for accreditation status. ** % recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds within samples aren't corrected for the recovery (F) Trigger breach confirmed 1-4*\$@Sample deviation (see appendix)		Depth (m) Sample Type Date Sampled Sample Time Date Received SDG Ref Lab Sample No.(s) AGS Reference	Soil/Solid (S) 06/07/2023 16:15:00 08/07/2023 230708-40 28294358	Surface Water (SW) 06/07/2023 16:45:00 08/07/2023 230708-40 28294361			
Component	LOD/Units	Method					
Oil or Grease, Visible		PM095		Absent			
Visible Solids		PM095		Present			
Suspended solids, Total	<2 mg/l	TM022		2.55	#		
Ammoniacal Nitrogen as N	<0.2 mg/l	TM099		<0.2	#		
Sulphide	<0.01 mg/l	TM101		0.0103			
COD, unfiltered	<7 mg/l	TM107		13	#		
Aluminium (tot.unfilt)	<10 µg/l	TM152		48.9	#		
Phosphorus (tot.unfilt)	<20 µg/l	TM152		33.8	#		
Zinc (tot.unfilt)	<5 µg/l	TM152		22.2	#		
Iron (Tot. Unfilt.)	<0.024 mg/l	TM152		0.231	#		
Phosphate (Ortho as PO4)	<0.05 mg/l	TM184		0.05	#		
Sulphate	<2 mg/l	TM184		122	#		
Methane, dissolved	<1 µg/l	TM223		<1			
pH	<1 pH Units	TM256		8.32	#		
Phenol	<0.002 mg/l	TM259		<0.002			
Cresols	<0.006 mg/l	TM259		<0.006			
Xylenols	<0.008 mg/l	TM259		<0.008			
Phenols, Total Detected monohydric	<0.016 mg/l	TM259		<0.016			
Moisture Content Ratio (% of as received sample)	%	PM024	36				
Exchangeable Ammonia as N	<12 mg/kg	TM024	<12	M			
Phenol	<0.01 mg/kg	TM062 (S)	<0.01	M			
Cresols	<0.01 mg/kg	TM062 (S)	0.0157	M			
Xylenols	<0.015 mg/kg	TM062 (S)	<0.015	M			
Phenols, Total Detected monohydric	<0.035 mg/kg	TM062 (S)	<0.035	M			
pH	1 pH Units	TM133	8.27	M			
Sulphide, Easily liberated	<15 mg/kg	TM180	<15	M			
Aluminium	<11 mg/kg	TM181	5850				
Iron	<1000 mg/kg	TM181	44900	#			
Phosphorus	<1 mg/kg	TM181	682				
Zinc	<1.9 mg/kg	TM181	285	M			
Phosphate (ortho) as PO4	<1 mg/kg	TM243	<1				
Water Soluble Sulphate as SO4 2:1 Extract	<0.004 g/l	TM243	0.0224	M			



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Table of Results - Appendix

Method No	Description
TM062 (S)	Determination of Phenols in Soils by HPLC
TM152	Analysis of Aqueous Samples by ICP-MS
TM223	Determination of Dissolved C1-7 Hydrocarbon gases in waters
TM256	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
PM095	Preparation of Water Samples for Analysis
TM180	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique
TM184	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
PM024	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
TM024	Determination of Exchangeable Ammonium and Ammoniacal Nitrogen as N by titration on solids
TM107	Determination of Chemical Oxygen Demand using COD Dr Lange Kit
TM181	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM022	Determination of total suspended solids in waters
TM099	Determination of Ammonium in Water Samples using the Kone Analyser
TM101	Determination of Sulphide in soil and water samples using the Kone Analyser
TM133	Determination of pH in Soil and Water using the GLpH pH Meter
TM243	Mixed Anions In Soils By Kone
TM259	Determination of Phenols in Waters and Leachates by HPLC

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



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Test Completion Dates

Lab Sample No(s) Customer Sample Ref.	28294359	28294360	28294363	28294365	28294368	28294356	28294358	28294361
AGS Ref.								
Depth								
Type	Surface Water	Surface Water	Surface Water	Surface Water	Surface Water	Land	Soil/Solid (S)	Surface Water
Ammoniacal Nitrogen	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023		17-Jul-2023
Ammonium Soil by Titration							12-Jul-2023	
Anions by Kone (soil)							18-Jul-2023	
Anions by Kone (w)	13-Jul-2023	13-Jul-2023	13-Jul-2023	13-Jul-2023	13-Jul-2023	13-Jul-2023		13-Jul-2023
COD Unfiltered	14-Jul-2023	14-Jul-2023	17-Jul-2023	17-Jul-2023	14-Jul-2023	14-Jul-2023		14-Jul-2023
Determination of Dissolved Gases	14-Jul-2023	12-Jul-2023	13-Jul-2023	14-Jul-2023	13-Jul-2023	14-Jul-2023		13-Jul-2023
Easily Liberated Sulphide							11-Jul-2023	
Metals in solid samples by OES							13-Jul-2023	
Oil, Grease or Solids Visible	12-Jul-2023	12-Jul-2023	13-Jul-2023	13-Jul-2023	13-Jul-2023	12-Jul-2023		12-Jul-2023
pH							12-Jul-2023	
pH Value	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023		14-Jul-2023
Phenols by HPLC (S)							12-Jul-2023	
Phenols by HPLC (W)	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023		14-Jul-2023
Phosphate (Ortho as PO4) (s)							17-Jul-2023	
Phosphate by Kone (w)	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023	14-Jul-2023		14-Jul-2023
Sample description							10-Jul-2023	
Sulphide	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023		17-Jul-2023
Suspended Solids	16-Jul-2023	16-Jul-2023	15-Jul-2023	16-Jul-2023	16-Jul-2023	16-Jul-2023		13-Jul-2023
Total Metals by ICP-MS	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023	17-Jul-2023		17-Jul-2023



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Appendix

General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 15 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

3. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. **Surrogate recoveries** - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report.

18. **Tentatively Identified Compounds (TICs)** are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.

19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
♦	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbestos Type	Common Name
Chrysotile	White Asbestos
Amosite	Brown Asbestos
Crocidolite	Blue Asbestos
Fibrous Actinolite	-
Fibrous Anorthophyllite	-
Fibrous Tremolite	-

Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

Respirable Fibres

Respirable fibres are defined as fibres of <3 µm diameter, longer than 5 µm and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.