

APPENDIX A

CERTIFICATE OF ANALYSIS

For analysis of: **Concrete**
Sample ID: **2024-07-01-01**
Sample Description: **Concrete**
Sample Location: **Concrete**
Sample Size: **100g**
Sample Number: **2024-07-01-01**

This report has been reviewed and signed by the analyst.

The sample was received on Thursday June 28, 2024 and the analysis was completed on Tuesday July 2nd, 2024. All results are reported as defined unless otherwise noted. The results are reported as defined unless otherwise noted. The results are reported as defined unless otherwise noted.

Results from this report require incorporation into client reports. It is the responsibility of the client to ensure that the results are reported as defined unless otherwise noted.

Chemical testing (unless subcontracted) performed in ALS Laboratory Limited (UK) Laboratory.

All sample data is provided by the customer. The results are reported as defined unless otherwise noted. The results are reported as defined unless otherwise noted.

The customer is not permitted to reproduce the results of this report without the written permission of the laboratory.



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CERTIFICATE OF ANALYSIS

Date of report Generation:	09 July 2024
Customer:	Apex Testing Solutions Limited
Sample Delivery Group (SDG):	240621-45
Your Reference:	D24240
Location:	89 Wenallt Road
Report No:	734042
Order Number:	ATS 1951

This report has been revised and directly supersedes 733196 in its entirety.

We received 2 samples on Thursday June 20, 2024 and 2 of these samples were scheduled for analysis which was completed on Tuesday July 09, 2024. 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:

Sonia McWhan
Operations Manager



ALS Laboratories (UK) Limited. Registered Office: Torrington Avenue, Coventry CV4 9GU. Registered in England and Wales No. 02391955.

Version: 3.6 Version Issued: 09/07/2024

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



CERTIFICATE OF ANALYSIS

Validated

SDG: 240621-45
Client Ref.: D24240

Report Number: 734042
Location: 89 Wenallt Road

Superseded Report: 733196

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	Lab Sample No(s)		29964641	29964645
	Customer Sample Reference		T1	T2
	AGS Reference			
	Depth (m)		0.00 - 0.00	0.00 - 0.00
	Container		250g Amber Jar (ALE210) 1kg TUB with Handle (ALE260)	60g VOC (ALE215) 250g Amber Jar (ALE210) 1kg TUB with Handle (ALE260) 60g VOC (ALE215)
	Sample Type		S	S
VOC MS (S)	All	NDPs: 0 Tests: 2	X	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
29964641	T1	0.00 - 0.00	Dark Brown	Sandy Loam	Crushed Brick	Vegetation
29964645	T2	0.00 - 0.00	Dark Brown	Sandy Loam	Vegetation	Stones

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.

SDG: 240621-45
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[illegible]



CERTIFICATE OF ANALYSIS

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SDG: 240621-45
Client Ref: D24240

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Location: 89 Wenallt Road

Superseded Report: 733196

Asbestos Quantification - Full

Results Legend

ISO17025 accredited.
M mCERIS accredited.
* Subcontracted test.
(F) Trigger breach confirmed
1-5@ Sample deviation (see appendix)

Additional Asbestos Components	Analysts Comments	Asbestos Quantification - Gravimetric - %	Asbestos Quantification - PCOM	Asbestos Quantification - Total - %
None (#)	N/A	<0.001 (#)	<0.001 (#)	<0.001 (#)
Cust. Sample Ref.	T1			
Depth (m)	0.00 - 0.00			
Sample Type	SOLID			
Date Sampled	20/06/2024 00:00:00			
Date Received	20/06/2024 09:00:00			
SDG	240621-45			
Original Sample	29964641			
Method Number	TM304			



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Location: 89 Wenallt Road

PAH by GCMS

Results Legend			Customer Sample Ref.		T1	T2				
1	ISO17825 accredited		Depth (m)		0.00 - 0.00	0.00 - 0.00				
2	mCERTS accredited		Sample Type		Soil/Solid (S)	Soil/Solid (S)				
3	Aqueous / settled sample		Date Sampled		20/06/2024	20/06/2024				
4	dist./0.000000 / filtered sample		Sample Time							
5	Subcontracted - refer to subcontractor report for accreditation status		Date Received		20/06/2024	20/06/2024				
6	% recovery of the surrogate standard to check the efficiency of the method. The results of individual compounds while samples aren't corrected for the recovery		SDG Ref		240621-45	240621-45				
7	Trigger breach confirmed		Lab Sample No. (s)		29964641	29964645				
8	1-44@ Sample deviation (see appendix)		AGS Reference							
Component	LOD/Units	Method								
Naphthalene-d8 % recovery**	%	TM218	78.7	81						
Acenaphthene-d10 % recovery**	%	TM218	77.3	80.6						
Phenanthrene-d10 % recovery**	%	TM218	75.7	78.7						
Chrysene-d12 % recovery**	%	TM218	71	72.7						
Perylene-d12 % recovery**	%	TM218	70	70.4						
Naphthalene	<9 µg/kg	TM218	10.4	23.6						
Acenaphthylene	<12 µg/kg	TM218	<12	64						
Acenaphthene	<8 µg/kg	TM218	<8	29.7						
Fluorene	<10 µg/kg	TM218	<10	49.5						
Phenanthrene	<15 µg/kg	TM218	67.6	1120						
Anthracene	<16 µg/kg	TM218	<16	60.7						
Fluoranthene	<17 µg/kg	TM218	89.8	1530						
Pyrene	<15 µg/kg	TM218	73.4	1090						
Benz(a)anthracene	<14 µg/kg	TM218	45.8	302						
Chrysene	<10 µg/kg	TM218	84.9	648						
Benzo(b)fluoranthene	<15 µg/kg	TM218	93.8	733						
Benzo(k)fluoranthene	<14 µg/kg	TM218	25.1	240						
Benzo(a)pyrene	<15 µg/kg	TM218	47.2	389						
Indeno(1,2,3-cd)pyrene	<18 µg/kg	TM218	41.5	334						
Dibenzo(a,h)anthracene	<23 µg/kg	TM218	<23	58.4						
Benzo(g,h,i)perylene	<24 µg/kg	TM218	43.3	284						
PAH, Total Detected USEPA 16	<116 µg/kg	TM218	623	6970						

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TPH CWG (3)

#		Customer Sample Ref	T1	T2			
#	B017684 approved						
M	cc-MS/MS approved						
sq	Aqueous / solid sample:	Dupe(s) (w)	0.00 - 0.00	0.00 - 0.00			
	also, for dissolved / liquid sample,	Sample Type	Diluted (D)	Diluted (D)			
	not collected / collected sample,	Date Sampled	20/06/2024	20/06/2024			
	1. Referenced: refer to subcommittee report for	Sample Time	-	-			
	recruitment status.	Date Received	20/06/2024	20/06/2024			
	2. Recovery of the recovery standard to check the	SBO Ref	240621-45	240621-45			
	effectivity of the method. The results of individual	Lab Sample No.(s)	20064611	20064645			
	compounds which samples aren't corrected for the	ADS Reference					
	recovery						
#	Village branch confirmed						
1	Sample duplicate from approval						
Component	LOD/Units	Method					
CRO Surrogate % recovery ¹	%	TM009	89.9	73.8			
Aliphatics >C5-C6 (HS_ID_AL)	<10 µg/kg	TM009	<10	<10			
Aliphatics >C6-C8 (HS_ID_AL)	<10 µg/kg	TM009	<10	<10			
Aliphatics >C8-C10 (HS_ID_AL)	<10 µg/kg	TM009	<10	<10			
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	#	#	
Aliphatics >C12-C16 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	#	#	
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000	#	#	
Aliphatics >C21-C35 (EH_2D_AL_#1)	<1000 µg/kg	TM414	7290	5920	#	#	
Aliphatics >C35-C44 (EH_2D_AL_#1)	<1000 µg/kg	TM414	<1000	<1000			
Total Aliphatics >C10-C44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	8250	6210			
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10000 µg/kg	TM414	17500	20300			
Aromatics >EC5-EC7 (HS_ID_AR)	<10 µg/kg	TM009	<10	<10			
Aromatics >EC7-EC8 (HS_ID_AR)	<10 µg/kg	TM009	<10	<10			
Aromatics >EC8-EC10 (HS_ID_AR)	<10 µg/kg	TM009	<10	<10			
Aromatics > EC10-EC12 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	#	#	
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000	#	#	
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	1950	#	#	
Aromatics > EC21-EC35 (EH_2D_AR_#1)	<1000 µg/kg	TM414	7730	11200	#	#	
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000			
Aromatics > EC40-EC44 (EH_2D_AR_#1)	<1000 µg/kg	TM414	<1000	<1000			
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5000 µg/kg	TM414	9290	14100			
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_ID_Total)	<10000 µg/kg	TM414	17500	20300			
Total Aliphatics >C5-C10 (HS_ID_AL_TOTAL)	<50 µg/kg	TM009	<50	<50			
Total Aromatics >EC5-EC10 (HS_ID_AR_TOTAL)	<50 µg/kg	TM009	<50	<50			
CRO >C5-C10 (HS_ID_TOTAL)	<20 µg/kg	TM009	<20	<20			

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Client Ref.: D24240

Location: 89 Wenallt Road

VOC MS (S)

[illegible]



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Superseded Report: 733196

Appendix

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 L.O.I, 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 15 days 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 effect.

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.

General

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 Adenoma	-
Fibrous Anthrophyllite	-
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.

CERTIFICATE OF ANALYSIS

Validated

SDG: 240621-45
Client Ref.: D24240

Report Number: 734042
Location: 89 Wenallt Road

Superseded Report: 733196

Asbestos Identification - Solid Samples

Results Legend

#	ISO17025 accredited.
M	mCERTS accredited.
*	Subcontracted test.
(F)	Trigger breach confirmed
1-5&+5@	Sample deviation (see appendix)

[illegible]



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Test Completion Dates

Lab Sample No(s)	29964641	29964645
Customer Sample Ref.	T1	T2
AGS Ref.		
Depth	0.00 - 0.00	0.00 - 0.00
Type	Soil/Solid (S)	Soil/Solid (S)
Asbestos ID in Solid Samples	25-Jun-2024	25-Jun-2024
Asbestos Quantification - Full	09-Jul-2024	
Cyanide Comp/Free/Total/Thiocyanate	24-Jun-2024	24-Jun-2024
Easily Liberated Sulphide	26-Jun-2024	26-Jun-2024
EPH CWG GC (S)	27-Jun-2024	27-Jun-2024
GRO by GC-FID (S)	26-Jun-2024	25-Jun-2024
Hexavalent Chromium (s)	25-Jun-2024	25-Jun-2024
Metals in solid samples by OES	26-Jun-2024	27-Jun-2024
PAH by GCMS	26-Jun-2024	26-Jun-2024
pH	26-Jun-2024	26-Jun-2024
Phenols by HPLC (S)	25-Jun-2024	25-Jun-2024
Sample description	21-Jun-2024	21-Jun-2024
Total Sulphate	27-Jun-2024	27-Jun-2024
Total Sulphur	27-Jun-2024	28-Jun-2024
TPH CWG GC (S)	27-Jun-2024	27-Jun-2024
VOC MS (S)	25-Jun-2024	25-Jun-2024