

STANTON DRIVE MIDDLETON

SITE COMPLETION REPORT

Job Number: LKC 20 1060

Date: November 2022

Client: Seddon Construction Ltd



INCREASING LAND VALUE

LK
GROUP

LK Consult Document Verification			
Site Address	Stainton Drive, Langley, Middleton, M24 5PD		
Report Title	Site Completion Report		
Job Number	LKC 22 1020	Document Ref.	CL-602-LKC 22 1020-03
Date Issued	November 2022	Report Version	R0
Prepared By	Hannah Moss	Reviewed By	Catherine Baranek

Revision Record			
Revision No.	Date	Nature of Revision	Approved By

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1 Introduction

1.1 Background

LK Consult Ltd (LKC) has been commissioned by Seddon Constructions Ltd to provide a Site Completion Report for the Stainton Drive, Middleton development site (planning reference 19/00956/FUL). The development comprises 48no. dwellings.

The aim of the Site Completion Report will be to demonstrate to Local Authority that the site has been suitably remediated in line with the Remediation Strategy and in accordance with the National Planning Policy Framework (NPPF)¹, where the site is “suitable for use” for the proposed development.

The Site Completion Report should be sufficient to satisfy relevant contaminated land conditions. Details are provided in the following Sections.

The requirement for remedial works across the site arose as a result of previous site investigations and risk assessments carried out by LKC (Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy, ref. LKC 19 1135-01, dated December 2019).

Selected photographs of the completed site are presented in Appendix A (photographs 1-6).

Individual plot completion reports have been provided to Seddon Construction Ltd for Local Authority approval and provide further details.

1.2 Summary of Required Validation Work

The remediation requirements were as follows:

Localised area in the North:

- i) Option 1: Removal of localised ashy made ground from soft landscaping and gardens in the vicinity of WS101 (north of site) and raise levels, as required, with suitably chemically validated soil.
- ii) Option 2: Provision of minimum 600mm thick ‘clean’ cover system within rear gardens, nominally comprising 450mm of subsoil plus 150mm of topsoil underlain by a suitable geotextile membrane or by 100mm physical break layer (MOT).
- iii) Provision of a minimum 300mm thick ‘clean’ cover system within front gardens and shared soft landscaping areas, nominally comprising 150mm of subsoil plus 150mm of topsoil underlain by a suitable geotextile membrane or 50mm of subsoil, plus 150mm of topsoil underlain by 100mm physical break layer (MOT).
- iv) Chemical analysis of any site won or imported material for use in garden or landscaped areas.

Remainder of the Site:

- v) All garden and soft landscaping areas where no ash is present should have a minimum of 150mm of imported topsoil.
- vi) Chemical analysis of any site won or imported material for use in garden or landscaped areas.

¹ DCL (2021). “National Planning Policy Framework.” Department of Communities and Local Government.

2 Validation of Ashy Made Ground Removal

LKC attended site in June 2022 to visually inspect that all ashy made ground had been removed from the localised area to the north of site, specifically relating to Plots 25-30.

LKC inspected the associated gardens and are satisfied that any ashy material has been removed. 3no. validation samples were taken of the remaining natural strata in order to demonstrate that the contamination has been removed.

The results are provided in Appendix B. The analytical results have been compared to the relevant assessment criteria provided in the LKC report (Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy), and no elevated contaminants were identified.

3 Imported Material

Topsoil

In January 2022, it is assumed that no more than 250m³ of topsoil, supplied from Halewood in Cheshire, was imported to site and used in gardens of Plots 39-48 based on the size of the gardens. The certificates for the imported topsoil are provided in Appendix C.

In total, approximately 250m³ of topsoil, supplied from Landgate Farm in Wigan and Halewood in Cheshire, was imported to site between January and August 2022 and used within the remaining gardens. The certificates for the imported topsoil are provided in Appendix C.

In line with the requirements of the remediation strategy the topsoil was sampled at a rate of 1 sample per 50m³ (minimum of three samples). LKC collected 6no. samples for analysis from the Halewood supplied topsoil directly from the gardens. From the Landgate Lane supplied topsoil, LKC took 3no. samples from a stockpile on site in February 2022, and a further 3no. samples directly from rear gardens in August 2022 (6no. samples in total from Landgate Lane supplied topsoil).

The results are provided in Appendix D.

Subsoil

Site won subsoil was used in the rear gardens of Plots 29-30. It is assumed that no more than 150m³ was used. The subsoil was sampled at a rate of 1 per 150m³ (minimum of three samples) in line with the remedial requirements. LKC collected 3no. samples from rear gardens in June 2022.

The results are provided in Appendix E.

Soil Risk Assessment

The analytical results have been compared to the relevant assessment criteria provided in the LKC report (Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy), and no elevated contaminants were identified.

Further information is provided in individual plot reports, which have been sent to the Local Authority for approval.

Based on the above the topsoil and subsoil are considered 'suitable for use' in the gardens chemically. The laboratory analysis has confirmed that any contamination associated with ashy made ground in the north of site has been removed.

4 Depth of Topsoil Growing Medium

LKC attended site on several occasions between January and August 2022 to inspect the depth of the required minimum 150mm topsoil growing medium across site. LKC consider that all gardens had the required minimum 150mm topsoil placement.

Further details on the depths of topsoil within each plot garden can be found in the individual plot reports.

5 Unexpected Contamination

No unexpected contamination was encountered during groundworks.

6 Conclusion

LKC has undertaken the validation of the remedial works at Stainton Drive, Middleton.

Option 1 – removal of ashy made ground was implemented in the north of site (Plots 25-20). LKC inspected the associated gardens and are satisfied that any ashy material has been removed, and levels raised with suitable, chemically validated soil.

LKC inspected the remainder of plots where no ash was present, and are satisfied that a suitable, chemically validated topsoil growing medium has been laid to a minimum of 150mm depth.

Based on the above information LKC considers the gardens are 'suitable for use' for a residential development.

FIGURES



Figure 1: Site Location Plan, Stainton Drive, Middleton

Drawn: December 2019 Scale: 1:25,000 @ A4 (see scale bar)



Extract from: Google Maps
Drawing Ref: Stainton Drive, Middleton

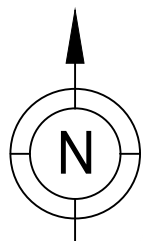
KEY

 Site Boundary

Sampling Locations and features annotated by LK Consult Ltd are approximate and are based upon observed measurements unless otherwise stated. Do not scale from this drawing and work from marked dimensions only. All dimensions and features should be confirmed on site by the Contractor. Where this drawing includes information provided to LK Consult Ltd by others, LK Consult Ltd gives no warranty, representation or assurance as to the accuracy of such information.



Client:		Hive Homes Ltd	
Site:		Stainton Drive, Middleton	
Title:		Site Boundary Plan	
Job No.: LKC 19 1135		Scale (See Scale Bar): See Scale Bar	
Drawn By: AC		Checked By: EK	
		Drawn: Dec 2019	
		Figure: 2	
		Revision:	



KEY

 Site Boundary

Sampling Locations and features annotated by LK Consult Ltd are approximate and are based upon observed measurements unless otherwise stated. Do not scale from this drawing and work from marked dimensions only. All dimensions and features should be confirmed on site by the Contractor. Where this drawing includes information provided to LK Consult Ltd by others, LK Consult Ltd gives no warranty, representation or assurance as to the accuracy of such information.



Client: **Hive Homes Ltd**

Site: **Stainton Drive, Middleton**

Title: **Proposed Site Use**

Job No.: LKC 19 1135	Scale (See Scale Bar): See Scale Bar	Figure: 3	Revision:
Drawn By: AC	Checked By: EK	Drawn: Dec 2019	

Extract from: MCK Associates Ltd
Drawing Ref: Sketch Layout, No.18-120, Rev:C (October 2018)



APPENDIX A

EXAMPLE PHOTOGRAPHS



Photographs 1-6: Selected photographs of completed site.

APPENDIX B

CERTIFICATES OF ANALYSIS – NATURAL STRATA

Final Report

Report No.: 22-21966-1

Initial Date of Issue: 22-Jun-2022

Client LK Consult

Client Address: Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Manchester
Lancashire
M26 2ZS

Contact(s): Contaminated Land
Hannah Moss

Project LKC 22 1020 Stainton Drive, Middleton

Quotation No.:		Date Received:	14-Jun-2022
Order No.:	740362	Date Instructed:	17-Jun-2022
No. of Samples:	3		
Turnaround (Wkdays):	5	Results Due:	23-Jun-2022
Date Approved:	22-Jun-2022		

Approved By:



Details: Stuart Henderson, Technical
Manager

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

Client: LK Consult	Chemtest Job No.:				22-21966	22-21966	22-21966
Quotation No.:	Chemtest Sample ID.:				1447336	1447337	1447338
	Client Sample ID.:				Nat1	Nat2	Nat3
	Sample Location:				Nat1	Nat2	Nat3
	Sample Type:				SOIL	SOIL	SOIL
	Date Sampled:				13-Jun-2022	13-Jun-2022	13-Jun-2022
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	17	13	14
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Loam	Loam	Loam
pH	U	2010		4.0	8.6	8.7	8.6
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	0.016	0.012	< 0.010
Arsenic	U	2455	mg/kg	0.5	5.5	3.6	6.0
Cadmium	U	2455	mg/kg	0.10	0.11	< 0.10	< 0.10
Chromium	U	2455	mg/kg	0.5	13	10	14
Copper	U	2455	mg/kg	0.50	11	11	15
Mercury	U	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Nickel	U	2455	mg/kg	0.50	13	11	15
Lead	U	2455	mg/kg	0.50	7.5	7.3	9.1
Selenium	U	2455	mg/kg	0.25	0.87	0.70	0.85
Vanadium	U	2455	mg/kg	0.5	13	10	14
Zinc	U	2455	mg/kg	0.50	26	22	29
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter	U	2625	%	0.40	1.4	1.9	1.6
Naphthalene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	2800	mg/kg	0.10	< 0.10	0.53	< 0.10
Anthracene	U	2800	mg/kg	0.10	< 0.10	0.10	< 0.10
Fluoranthene	U	2800	mg/kg	0.10	< 0.10	0.78	< 0.10
Pyrene	U	2800	mg/kg	0.10	< 0.10	0.60	< 0.10
Benzo[a]anthracene	U	2800	mg/kg	0.10	< 0.10	0.25	< 0.10
Chrysene	U	2800	mg/kg	0.10	< 0.10	0.19	< 0.10
Benzo[b]fluoranthene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	2.5	< 2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
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°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

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"
SOP	Standard operating procedure
LOD	Limit of detection

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 30 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

APPENDIX C

TOPSOIL SUPPLIER CERTIFICATES

Dave B

Cheshire Soils and Aggregates Ltd
Unit 3B, Thelwall Lane
Warrington
Cheshire
WA4 1TB

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

e: dave@cheshiresoils.co.uk

Analytical Report Number : 21-92416

Project / Site name:	Halewood	Samples received on:	11/08/2021
Your job number:		Samples instructed on/ Analysis started on:	11/08/2021
Your order number:		Analysis completed by:	20/08/2021
Report Issue Number:	1	Report issued on:	20/08/2021
Samples Analysed:	1 soil sample		

Signed: *VA. Czerwińska*

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :	soils	- 4 weeks from reporting
	leachates	- 2 weeks from reporting
	waters	- 2 weeks from reporting
	asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

i2 Analytical

7 Woodshots Meadow
Croxley Green Business Park
Watford, WD18 8YS

Telephone: 01923 225404
Fax: 01923 237404
email: reception@i2analytical.com

Certificate of Analysis									
BS 3882:2015 Specification For Topsoil									
	Pass BS 3882 for Multipurpose Topsoil; Calcareous;						client		
Report No:	21-92416					Cheshire Soils and Aggregates Ltd			
Location	Halewood								
Lab Reference (Sample Number)	1969316								
Sampling Date	10/08/2021								
Sample ID	Sample								
Depth (m)	0.00			Compliant with range (Y/N)					
		unit	Result	Multi-P	Acid	Calc	Low-F	Low-F(a)	Low-F(c)
Soil texture	<2mm fraction	%m/m	SANDY LOAM	Y	Y	Y	Y	Y	Y
Maximum coarse fragment content:	>2mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
	>20mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
	>50mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
Mass loss on ignition		%	4.80						
	Clay 5-20%		Y	Y	Y	Y	Y	Y	Y
	Clay 20-35%		-	-	-	-	-	-	-
Soil pH:		pH	7.60	Y	N	Y	Y	N	Y
Carbonate:		%m/m	1.80	-	-	Y	-	-	Y
Available plant nutrients	Nitrogen	%m/m	0.22	Y	Y	Y	-	-	-
	Extractable Phosphate (as P)	mg/l	41.00	Y	Y	Y	N	N	N
	Extractable Potassium	mg/l	189.00	Y	Y	Y	-	-	-
	Extractable Magnesium	mg/l	77.00	Y	Y	Y	-	-	-
Carbon: Nitrogen Ratio:		:1	13.00	Y	Y	Y	Y	Y	Y
Conductivity		us/cm	1900.00	Y	-	-	-	-	-
Phytotoxic contaminants:	** Total Zinc	mg/kg	110.00	Y	Y	Y	Y	Y	Y
	** Total Copper	mg/kg	61.00	Y	Y	Y	Y	Y	Y
	** Total Nickel	mg/kg	27.00	Y	Y	Y	Y	Y	Y
Visible contaminants:	>2mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
	Plastics	%m/m	0.00	Y	Y	Y	Y	Y	Y
	Sharps	no. in 1 kg	0.00	Y	Y	Y	Y	Y	Y
Compliance:				Pass	Fail	Pass	Fail	Fail	Fail
Results are expressed on a dry weight basis, after correction for moisture content where applicable Stated limits are for guidance only and I2 cannot be held responsible for any discrepancies with current legislation									

Results are expressed on a dry weight basis, after correction for moisture content where applicable
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation

** = MCERTS accredited

Analytical Report Number : 21-92416

Project / Site name: Halewood

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1969316	Sample	None Supplied	None Supplied	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 21-92416

Project / Site name: Halewood

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Geotechnical Testing in Soil	See attached geotechnical report	See attached geotechnical report		W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Textural Classification Diagram	Textural classification Diagram	BS3882:2015		D	NONE
Carbon to Nitrogen Ratio (Topsoil - BS3882:2015)	Carbon to Nitrogen ratio (:1) calculated using Loss on Ignition.	BS3882:2015	L01TS2015	W	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Kjeldahl nitrogen in soil	Determination of total nitrogen using the Kjeldahl-digestion method and colorimetric determination.	In house method based on BS 7755-3.7:1995 &	L087-PL	D	NONE
Topsoil	See attached report.	BS 3882: 2015	PL	W	NONE
Mass loss on ignition (Topsoil - BS3882)	Determination of Loss on Ignition as per BS 3882:2015.	BS3882:2015	L047-PL	D	NONE
Carbonate (Topsoil - BS3882)	Determination of Carbonate as per BS 3882:2015.	BS3882:2015	L034-PL	D	NONE
Phosphorus as PO4 (BS3882/BS8601)	Determination of the extractable phosphorus in soil, in accordance with BS3882:2007 methodology.	BS3882:2015 & BS8601:2013	L082-PL	D	NONE
Coarse Fragment and Contaminant Analysis	Determination of >2mm contaminants	BS3882:2007 & BS8601:2013 & PAS 100:2005	L01TS	D	NONE
Nitrogen (TKN)	Determination of total nitrogen by Kjeldahl method.	BS3882:2007	L087-PL	D	NONE
Conductivity (BS3882/BS8601)	Determination of the conductivity of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L099-PL	D	NONE
pH (BS3882/BS8601)	Determination of the pH of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L099-PL	D	NONE
Extractable/Available Metals (BS3882/BS8601)	Determination of the extractable metals in soil, in accordance with BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L038-PL	D	NONE

Analytical Report Number : 21-92416

Project / Site name: Halewood

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sodium (exchangeable %)	Determination of exchangeable sodium (%) by calculation, in accordance with BS3882:2007 methodology.	BS3882:2007	L028-PL	D	NONE
Textural Classification (BS3882/BS8601)	Determination of the textural classification of soil following BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L01TS	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.



Certificate of Analysis

Client: STUART BALDWIN
(T283) SED SERVICES LTD
LANDGATE FARM
LANDGATE LANE
BRYN
WIGAN WN4 0EJ

Originator: TOPSOIL
SOIL

Lab ID: 72036 - 530806
Sample ID: TOPSOIL
Sample Weight: 674g

Date Received: 13/10/2021
Date Reported: 26/10/2021

BS 3882 : 2015 SPECIFICATION FOR TOPSOIL Multipurpose Grade

				Compliant with range (Y/N)					
				Multi-P	Acid	Calc	Low-F	Low-F Acid	Low-F Calc
Texture:	Clay	% w/w	9						
	Silt	% w/w	9						
	Sand	% w/w	82						
	Textural Class		Loamy Sand	Y	Y	Y	Y	Y	Y
					See area of permitted soil textural classes in Fig. 1.				
Organic Matter:		% w/w	5.7	Y	Y	Y	Y	Y	Y
Coarse	>2 mm	% w/w	6.6	Y	Y	Y	Y	Y	Y
Fragment	>20 mm	% w/w	0.0	Y	Y	Y	Y	Y	Y
Content:	>50 mm	% w/w	0.0	Y	Y	Y	Y	Y	Y
Soil pH:			8.1	Y	N	Y	Y	N	Y
Carbonate:		% w/w	<1			N			N
Available	Nitrogen	% w/w	0.505	Y	Y	Y			
Plant	Phosphorus	mg/l	59.2 (4)*	Y	Y	Y	N	N	N
Nutrients:	Potassium	mg/l	1399.4 (6)*	Y	Y	Y			
	Magnesium	mg/l	181.3 (4)*	Y	Y	Y			
Carbon:Nitrogen Ratio:		:1	6.6	Y	Y	Y	Y	Y	Y
Exchangeable Sodium Percentage:		%	7.1						
Phytotoxic	Total Zinc	mg/kg	99.6	Y	Y	Y	Y	Y	Y
Contaminants:	Total Copper	mg/kg	34.9	Y	Y	Y	Y	Y	Y
	Total Nickel	mg/kg	12.5	Y	Y	Y	Y	Y	Y
Visible	> 2mm	% w/w	0.03	Y	Y	Y	Y	Y	Y
Contaminants:	Plastics	% w/w	0.03	Y	Y	Y	Y	Y	Y
	Number of Sharps		0	Y	Y	Y	Y	Y	Y
Additional	Available Sodium	mg/l	212.9						
Analysis:	Available Calcium	mg/l	1414.0						
	Conductivity	uS/cm	3216	Y					
Compliance:				Y	N	N	N	N	N

Results are expressed on a dry matter basis.

* Soil indices from RB209

Released by:

Myles Nicholson

Date: 26/10/2021

DECLARATION:

I certify that this sample has been analysed by NRM in accordance with BS 3882 Specification for Topsoil (2015).

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS

Tel: +44 (0) 1344 886338 **Fax:** +44 (0) 1344 890972 **Email:** enquiries@nrm.uk.com **www:** nrm.uk.com



Analytical Report

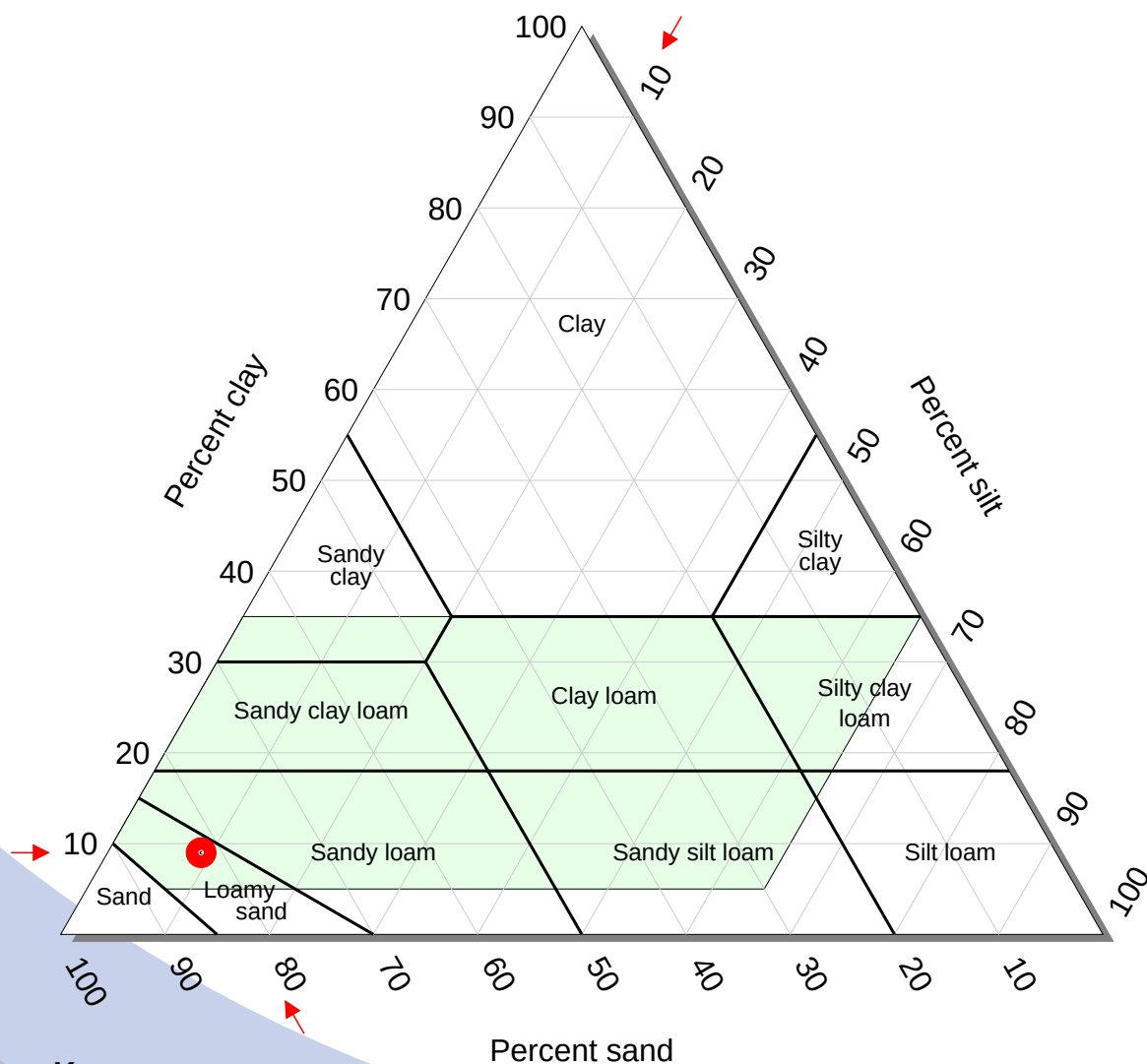
Client: STUART BALDWIN
(T283) SED SERVICES LTD
LANDGATE FARM
LANDGATE LANE
BRYN
WIGAN WN4 0EJ

Originator: TOPSOIL
SOIL

Lab ID: 72036 - 530806
Sample ID: TOPSOIL
Sample Weight: 674g

Date Received: 13/10/2021
Date Reported: 26/10/2021

Fig. 1. Textural Class: Loamy Sand (compliant)



Key



Area within which texture of topsoil is required to fall.

APPENDIX D

CERTIFICATES OF ANALYSIS - TOSPOIL



Amended Report

Report No.:	22-03432-3		
Initial Date of Issue:	22-Feb-2022	Date of Re-Issue:	09-Mar-2022
Client	LK Consult		
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS		
Contact(s):	Catherine Baranek Contaminated Land		
Project	LKC 22 1020 Stainton Drive		
Quotation No.:		Date Received:	01-Feb-2022
Order No.:	739966	Date Instructed:	16-Feb-2022
No. of Samples:	6		
Turnaround (Wkdays):	3	Results Due:	18-Feb-2022
Date Approved:	21-Feb-2022		
Approved By:			

Details: Alison Drinkwater, Inorganics Analyst

Results - Soil

Project: LKC 22 1020 Stainton Drive

Client: LK Consult	Chemtest Job No.:				22-03432	22-03432	22-03432	22-03432	22-03432
Quotation No.:	Chemtest Sample ID.:				1362592	1362593	1362594	1362595	1362597
Order No.: 739966	Client Sample Ref.:				ES1	ES1	ES1	ES1	ES1
	Client Sample ID.:				TS101	TS102	TS103	TS104	TS105
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL
	Date Sampled:				31-Jan-2022	31-Jan-2022	31-Jan-2022	31-Jan-2022	31-Jan-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD					
ACM Type	U	2192		N/A	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	19	19	22	20	22
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones and Roots	Stones and Roots
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay	Clay
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached	See Attached	See Attached
pH	M	2010		4.0	7.5	7.6	8.0	7.8	7.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.63	0.53	0.62	0.44	0.47
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.033	0.056	0.065	0.063	0.051
Cyanide (Free)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Arsenic	M	2450	mg/kg	1.0	10	7.5	13	11	5.2
Cadmium	M	2450	mg/kg	0.10	0.38	0.28	0.44	0.37	0.21
Chromium	M	2450	mg/kg	1.0	33	20	41	33	14
Copper	M	2450	mg/kg	0.50	46	31	58	54	21
Mercury	M	2450	mg/kg	0.10	0.25	0.15	0.29	0.27	< 0.10
Nickel	M	2450	mg/kg	0.50	5.3	< 0.50	12	7.7	< 0.50
Lead	M	2450	mg/kg	0.50	50	45	60	190	38
Selenium	M	2450	mg/kg	0.20	< 0.20	0.28	0.31	0.22	0.31
Vanadium	U	2450	mg/kg	5.0	31	24	40	33	18
Zinc	M	2450	mg/kg	0.50	77	53	95	88	37
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	3.1	4.8	2.8	3.8	5.3
Diesel Present	N	2670		N/A	False	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0

Results - Soil

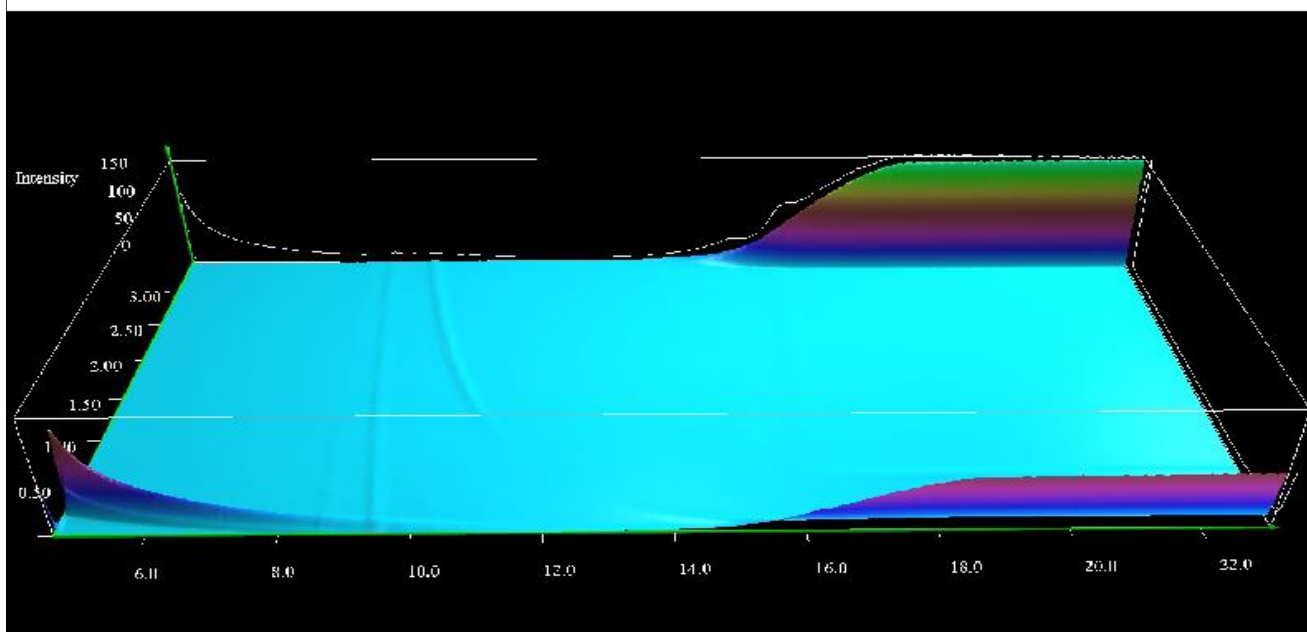
Project: LKC 22 1020 Stainton Drive

Client: LK Consult	Chemtest Job No.:				22-03432	22-03432	22-03432	22-03432	22-03432
Quotation No.:	Chemtest Sample ID.:				1362592	1362593	1362594	1362595	1362597
Order No.: 739966	Client Sample Ref.:				ES1	ES1	ES1	ES1	ES1
	Client Sample ID.:				TS101	TS102	TS103	TS104	TS105
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL
	Date Sampled:				31-Jan-2022	31-Jan-2022	31-Jan-2022	31-Jan-2022	31-Jan-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD					
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	[B] < 10	[B] < 10	[B] < 10	[B] < 10	[B] < 10
Benzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Toluene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.51	< 0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.12	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.36	0.42	0.63	0.45	0.25
Pyrene	M	2800	mg/kg	0.10	0.32	0.35	0.57	0.36	0.30
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.23	0.21	0.35	0.23	0.12
Chrysene	M	2800	mg/kg	0.10	0.22	0.26	0.42	0.30	0.13
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.31	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.18	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	0.40	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	3.5	< 2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

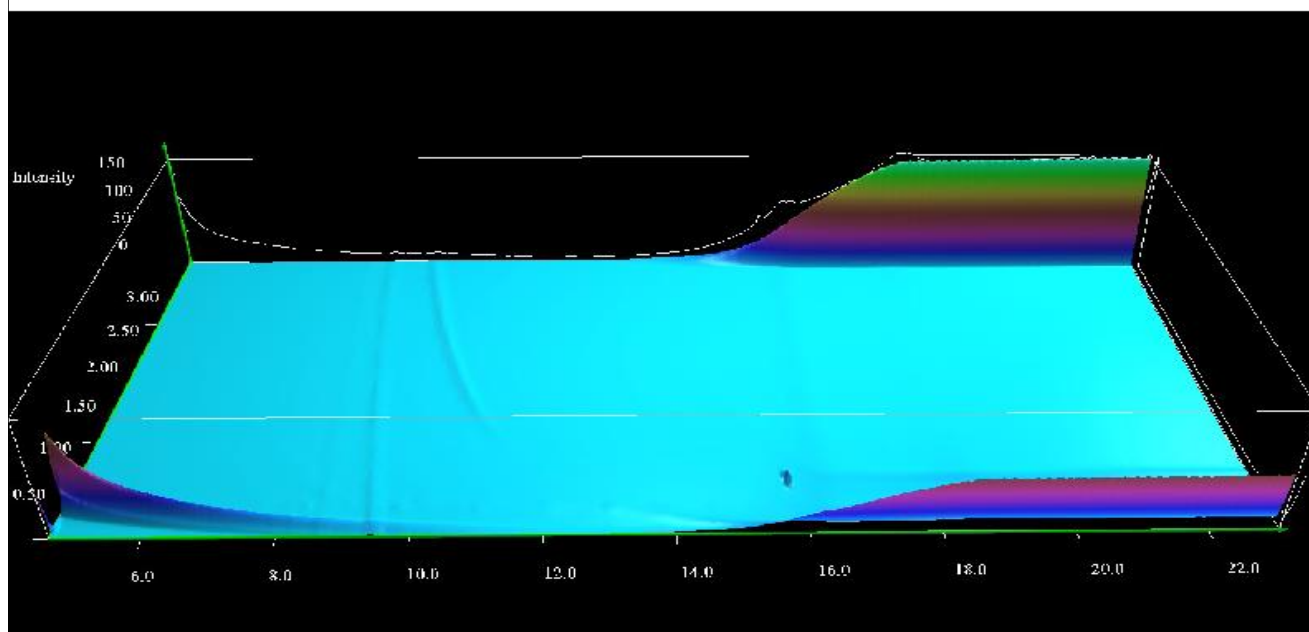
TPH Chromatogram on Soil Sample: 1362592

\\NM-FILESERVER\Job Paperwork\SampData\SOIL\1362592.PDF

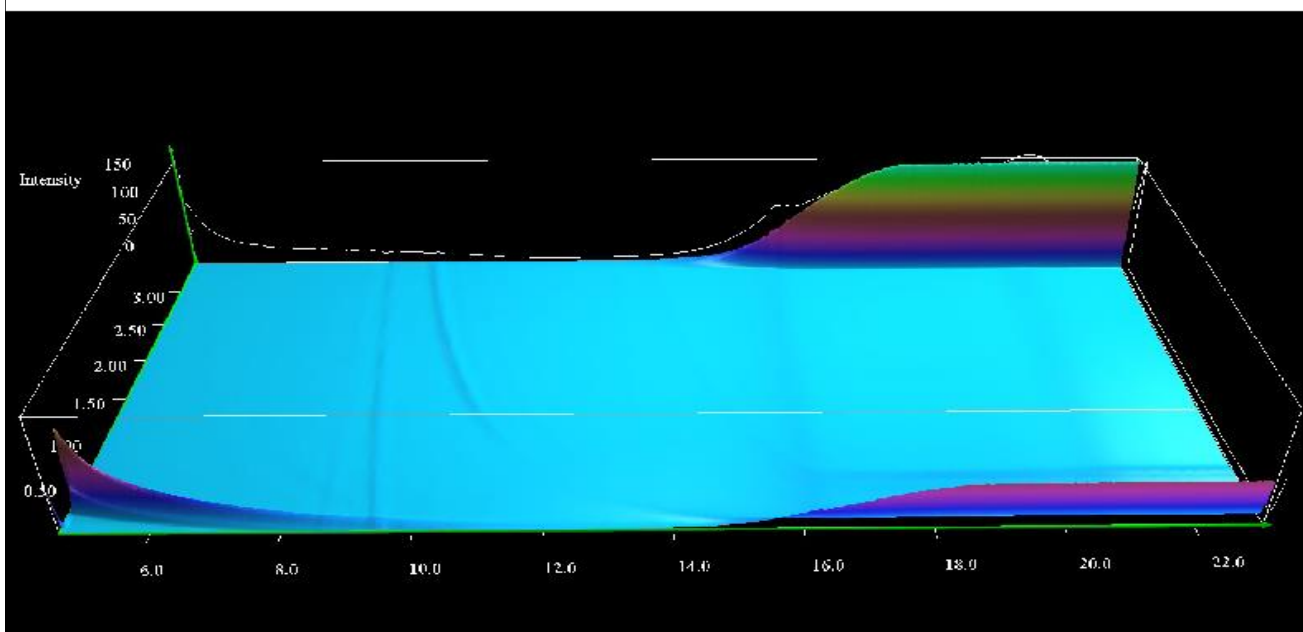
TPH Chromatogram on Soil Sample: 1362593



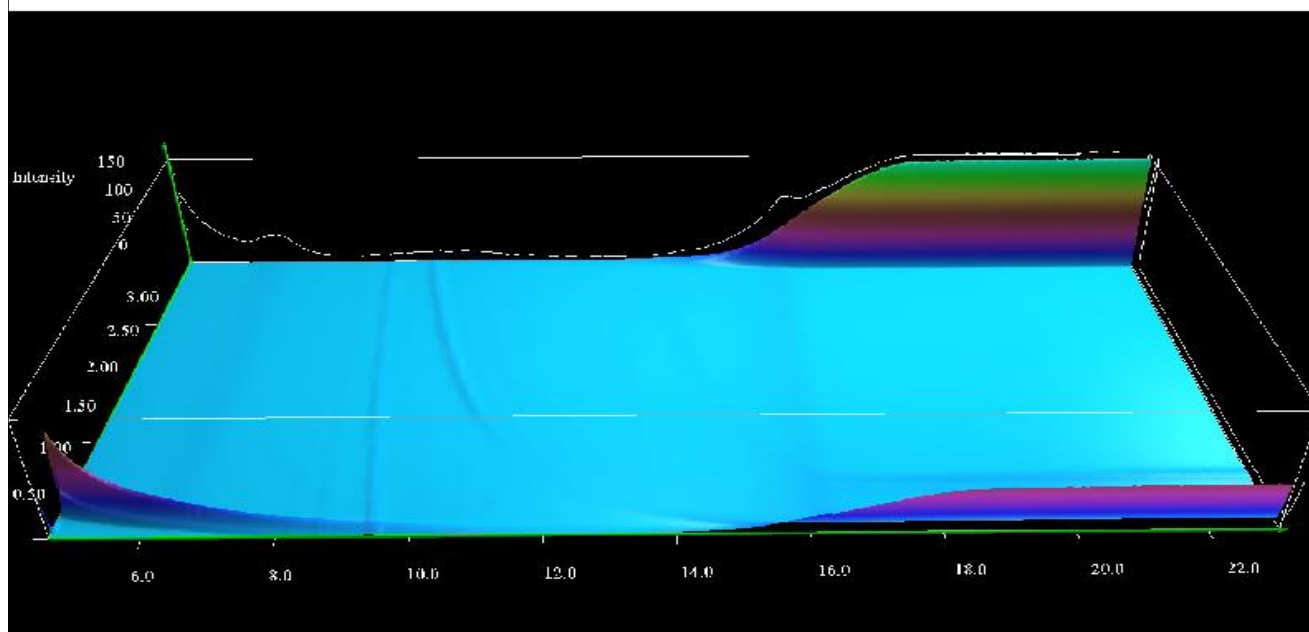
TPH Chromatogram on Soil Sample: 1362594



TPH Chromatogram on Soil Sample: 1362595



TPH Chromatogram on Soil Sample: 1362597



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-03432	1362592	S		ES1	TS101		No	N/A
22-03432	1362593	S		ES1	TS102		No	N/A
22-03432	1362594	S		ES1	TS103		No	N/A
22-03432	1362595	S		ES1	TS104		No	N/A
22-03432	1362597	S		ES1	TS105		No	N/A

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:
1362592	ES1	TS101		31-Jan-2022	B	Amber Glass 250ml
1362592	ES1	TS101		31-Jan-2022	B	Amber Glass 60ml
1362592	ES1	TS101		31-Jan-2022	B	Plastic Tub 500g
1362593	ES1	TS102		31-Jan-2022	B	Amber Glass 250ml
1362593	ES1	TS102		31-Jan-2022	B	Amber Glass 60ml
1362593	ES1	TS102		31-Jan-2022	B	Plastic Tub 500g
1362594	ES1	TS103		31-Jan-2022	B	Amber Glass 250ml
1362594	ES1	TS103		31-Jan-2022	B	Amber Glass 60ml
1362594	ES1	TS103		31-Jan-2022	B	Plastic Tub 500g
1362595	ES1	TS104		31-Jan-2022	B	Amber Glass 250ml
1362595	ES1	TS104		31-Jan-2022	B	Amber Glass 60ml
1362595	ES1	TS104		31-Jan-2022	B	Plastic Tub 500g
1362597	ES1	TS105		31-Jan-2022	B	Amber Glass 250ml
1362597	ES1	TS105		31-Jan-2022	B	Amber Glass 60ml
1362597	ES1	TS105		31-Jan-2022	B	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
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°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection 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.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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"
SOP	Standard operating procedure
LOD	Limit of detection

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 30 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



Amended Report

Report No.:	22-07740-2		
Initial Date of Issue:	08-Mar-2022	Date of Re-Issue:	09-Mar-2022
Client	LK Consult		
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS		
Contact(s):	Catherine Baranek Contaminated Land		
Project	LKC 22 1020 Stainton Drive, Middleton		
Quotation No.:		Date Received:	02-Mar-2022
Order No.:	740063	Date Instructed:	02-Mar-2022
No. of Samples:	6		
Turnaround (Wkdays):	5	Results Due:	08-Mar-2022
Date Approved:	08-Mar-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

Client: LK Consult	Chemtest Job No.:		22-07740		
Quotation No.:	Chemtest Sample ID.:		1382559		
	Client Sample ID.:		Plot 41-1		
	Sample Type:		SOIL		
	Top Depth (m):		0.00		
	Bottom Depth (m):		0.20		
	Date Sampled:		01-Mar-2022		
	Asbestos Lab:		DURHAM		
Determinand	Accred.	SOP	Units	LOD	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	35
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Roots
Soil Texture	N	2040		N/A	Loam
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	7.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.059
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	2.0
Cadmium	M	2450	mg/kg	0.10	0.12
Chromium	M	2450	mg/kg	1.0	6.0
Copper	M	2450	mg/kg	0.50	9.3
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	4.8
Lead	M	2450	mg/kg	0.50	20
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	8.6
Zinc	M	2450	mg/kg	0.50	46
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	5.7
Diesel Present	N	2670		N/A	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	60
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	60
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

Client: LK Consult	Chemtest Job No.:		22-07740		
Quotation No.:	Chemtest Sample ID.:		1382559		
	Client Sample ID.:		Plot 41-1		
	Sample Type:		SOIL		
	Top Depth (m):		0.00		
	Bottom Depth (m):		0.20		
	Date Sampled:		01-Mar-2022		
	Asbestos Lab:		DURHAM		
Determinand	Accred.	SOP	Units	LOD	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	15
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	15
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	75
Benzene	M	2760	µg/kg	1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.76
Pyrene	M	2800	mg/kg	0.10	0.64
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.33
Chrysene	M	2800	mg/kg	0.10	0.30
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.43
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.13
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.41
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	3.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10

TPH Chromatogram on Soil Sample: 1382559

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TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-07740	1382559	S			Plot 41-1	0.00	No	PAH

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
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°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection 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.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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"
SOP	Standard operating procedure
LOD	Limit of detection

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 30 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



Final Report

Report No.: 22-06403-1

Initial Date of Issue: 25-Feb-2022

Client LK Consult

Client Address: Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Manchester
Lancashire
M26 2ZS

Contact(s): Catherine Baranek
Contaminated Land

Project LKC 22 1020 Stainton Drive, Middleton

Quotation No.: **Date Received:** 21-Feb-2022

Order No.: 740030 **Date Instructed:** 21-Feb-2022

No. of Samples: 3

Turnaround (Wkdays): 5 **Results Due:** 25-Feb-2022

Date Approved: 25-Feb-2022

Approved By:

Details: Stuart Henderson, Technical
Manager

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

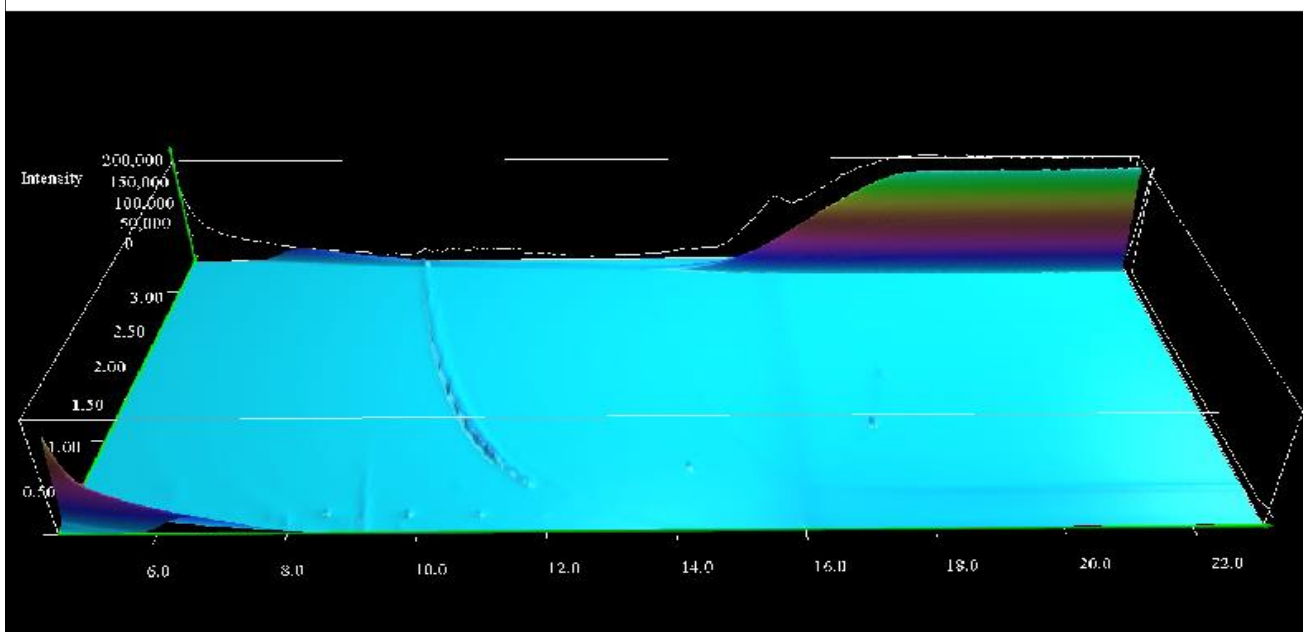
Client: LK Consult	Chemtest Job No.:				22-06403	22-06403	22-06403
Quotation No.:	Chemtest Sample ID.:				1376254	1376255	1376256
Order No.: 740030	Client Sample Ref.:				ES1	ES1	ES1
	Client Sample ID.:				TS101	TS102	TS103
	Sample Type:				SOIL	SOIL	SOIL
	Date Sampled:				18-Feb-2022	18-Feb-2022	18-Feb-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	29	29	28
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones and Roots	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached
pH	M	2010		4.0	8.8	8.7	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.3	1.3	1.3
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.14	0.14	0.14
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	0.60	0.60	0.60
Arsenic	M	2450	mg/kg	1.0	6.4	5.2	4.1
Cadmium	M	2450	mg/kg	0.10	0.44	0.47	0.28
Chromium	M	2450	mg/kg	1.0	11	10	9.0
Copper	M	2450	mg/kg	0.50	21	24	19
Mercury	M	2450	mg/kg	0.10	0.13	0.11	< 0.10
Nickel	M	2450	mg/kg	0.50	11	11	9.5
Lead	M	2450	mg/kg	0.50	35	38	30
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	11	9.9	9.2
Zinc	M	2450	mg/kg	0.50	61	79	56
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	3.6	6.2	7.6
Diesel Present	N	2670		N/A	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	19	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	19	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

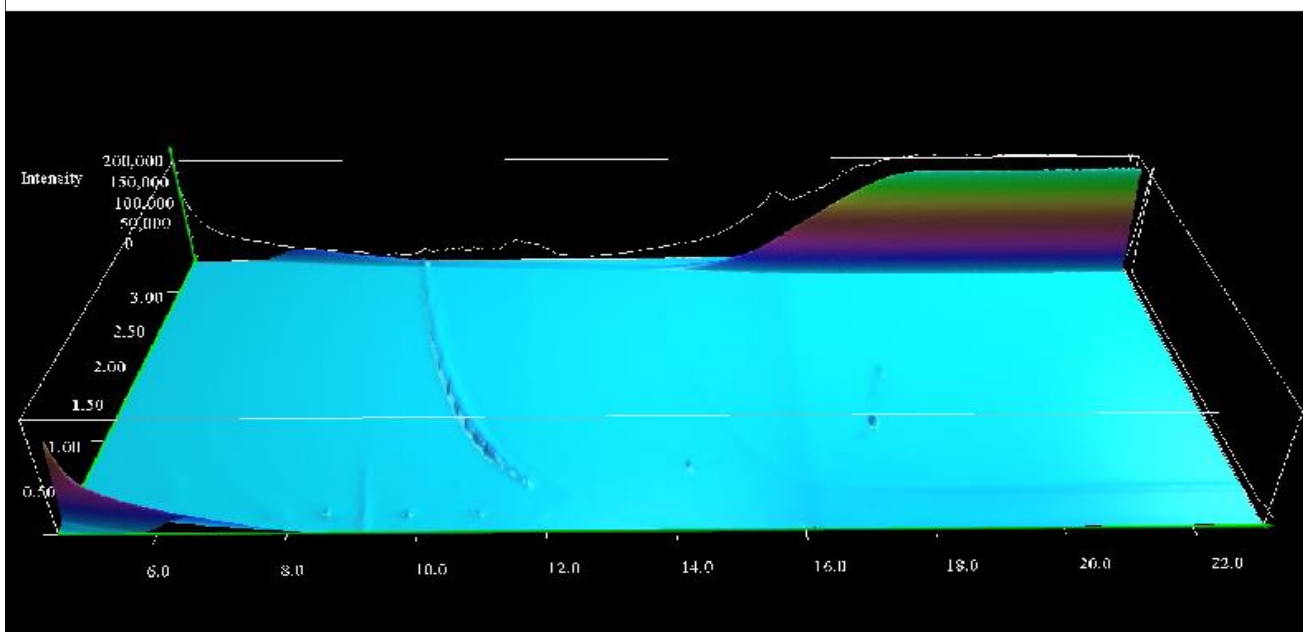
Project: LKC 22 1020 Stainton Drive, Middleton

Client: LK Consult	Chemtest Job No.:				22-06403	22-06403	22-06403
Quotation No.:	Chemtest Sample ID.:				1376254	1376255	1376256
Order No.: 740030	Client Sample Ref.:				ES1	ES1	ES1
	Client Sample ID.:				TS101	TS102	TS103
	Sample Type:				SOIL	SOIL	SOIL
	Date Sampled:				18-Feb-2022	18-Feb-2022	18-Feb-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	55	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	55	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	74	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	0.13	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	0.11	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	0.17	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	0.12	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.54	0.87	0.36
Anthracene	M	2800	mg/kg	0.10	0.16	0.23	0.12
Fluoranthene	M	2800	mg/kg	0.10	0.84	1.3	0.70
Pyrene	M	2800	mg/kg	0.10	0.65	1.2	0.59
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.32	0.68	0.40
Chrysene	M	2800	mg/kg	0.10	0.17	0.55	0.22
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.43	0.59	0.52
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.15	0.31	0.17
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.52	0.78	0.44
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.42	0.38	0.30
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.13	0.16	0.18
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.15	0.33	0.31
Total Of 16 PAH's	N	2800	mg/kg	2.0	4.5	7.9	4.3
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

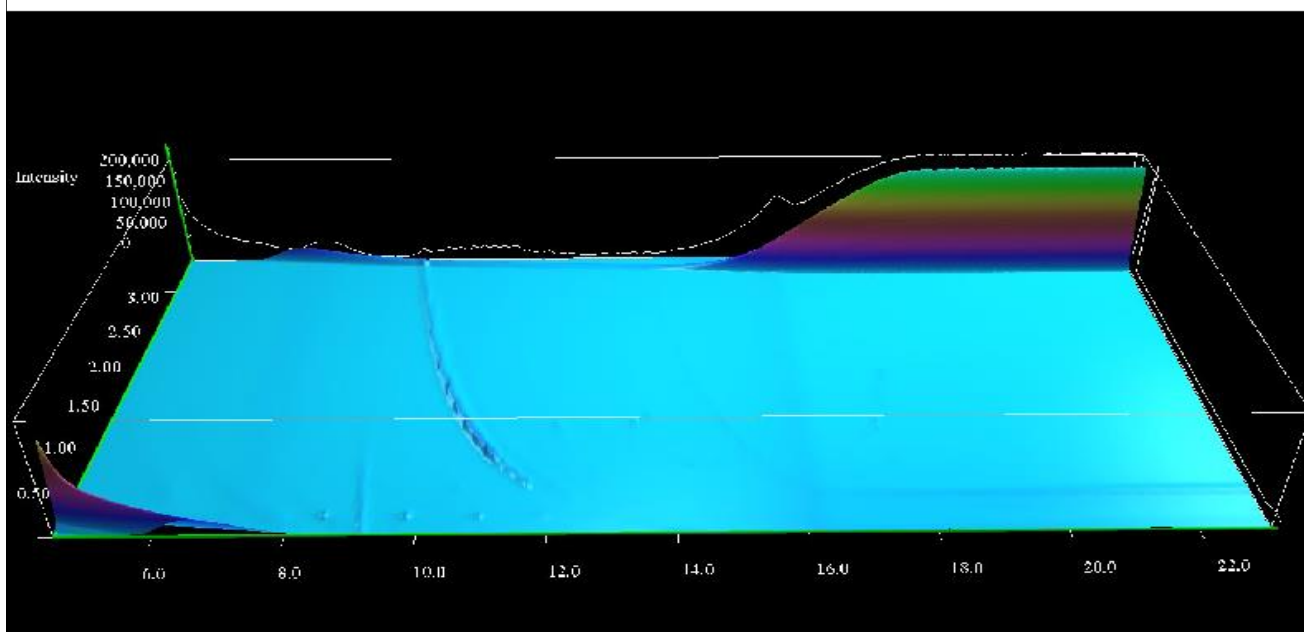
TPH Chromatogram on Soil Sample: 1376254



TPH Chromatogram on Soil Sample: 1376255



TPH Chromatogram on Soil Sample: 1376256



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-06403	1376254	S		ES1	TS101		No	N/A
22-06403	1376255	S		ES1	TS102		No	PAH
22-06403	1376256	S		ES1	TS103		No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
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°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection 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.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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
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I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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 30 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



Final Report

Report No.: 22-30216-1

Initial Date of Issue: 15-Aug-2022

Client LK Consult

Client Address: Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Manchester
Lancashire
M26 2ZS

Contact(s): Contaminated Land
Hannah Moss

Project LKC 22 1020 Stainton Drive, Middleton

Quotation No.: **Date Received:** 10-Aug-2022

Order No.: 740403 **Date Instructed:** 10-Aug-2022

No. of Samples: 3

Turnaround (Wkdays): 5 **Results Due:** 16-Aug-2022

Date Approved: 15-Aug-2022

Approved By:

Details: Stuart Henderson, Technical
Manager

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

Client: LK Consult	Chemtest Job No.:				22-30216	22-30216	22-30216
Quotation No.:	Chemtest Sample ID.:				1484195	1484196	1484197
	Client Sample ID.:				TS204	TS205	TS206
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.0	0.0	0.0
	Bottom Depth (m):				0.2	0.2	0.2
	Date Sampled:				05-Aug-2022	05-Aug-2022	05-Aug-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	16	22	21
Soil Colour	N	2040		N/A	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	None	None
Soil Texture	N	2040		N/A	Loam	Loam	Loam
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached
pH	M	2010		4.0	8.1	8.3	8.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	2.0	2.3	2.3
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.17	0.087	0.14
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2455	mg/kg	0.5	2.7	2.9	3.7
Cadmium	M	2455	mg/kg	0.10	< 0.10	0.13	0.11
Chromium	M	2455	mg/kg	0.5	4.8	4.4	5.3
Copper	M	2455	mg/kg	0.50	12	12	12
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	5.5	4.0	4.9
Lead	M	2455	mg/kg	0.50	18	17	22
Selenium	M	2455	mg/kg	0.25	< 0.25	< 0.25	< 0.25
Vanadium	U	2455	mg/kg	0.5	5.6	5.0	6.0
Zinc	M	2455	mg/kg	0.50	37	32	37
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	5.7	6.4	5.3
Diesel Present	N	2670		N/A	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

Client: LK Consult	Chemtest Job No.:				22-30216	22-30216	22-30216
Quotation No.:	Chemtest Sample ID.:				1484195	1484196	1484197
	Client Sample ID.:				TS204	TS205	TS206
	Sample Type:				SOIL	SOIL	SOIL
	Top Depth (m):				0.0	0.0	0.0
	Bottom Depth (m):				0.2	0.2	0.2
	Date Sampled:				05-Aug-2022	05-Aug-2022	05-Aug-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	< 10
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	0.31	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.38	0.44	0.40
Pyrene	M	2800	mg/kg	0.10	0.31	0.47	0.39
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	0.26	0.30
Chrysene	M	2800	mg/kg	0.10	< 0.10	0.25	0.27
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	< 2.0	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10	0.23	0.18

TPH Chromatogram on Soil Sample: 1484195

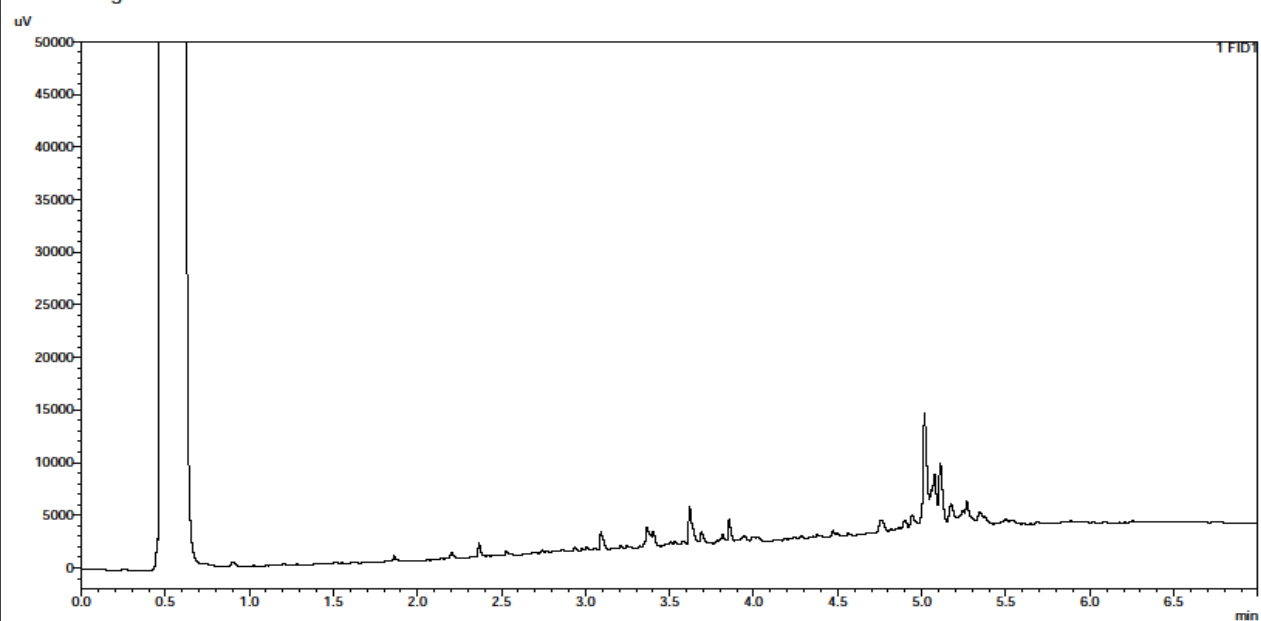
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Sample # : 39
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Date Processed : 11/08/2022



Chemtest

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TPH Chromatogram on Soil Sample: 1484196

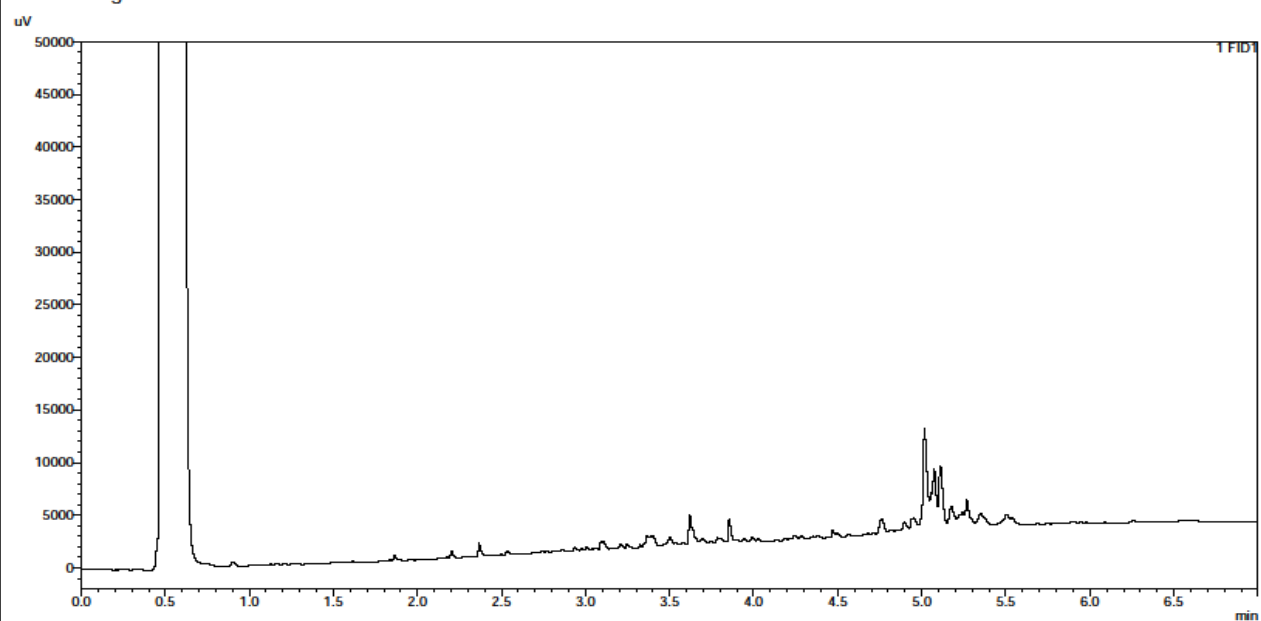
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Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 40
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Date Processed : 11/08/2022



Chemtest

<Chromatogram>



TPH Chromatogram on Soil Sample: 1484197

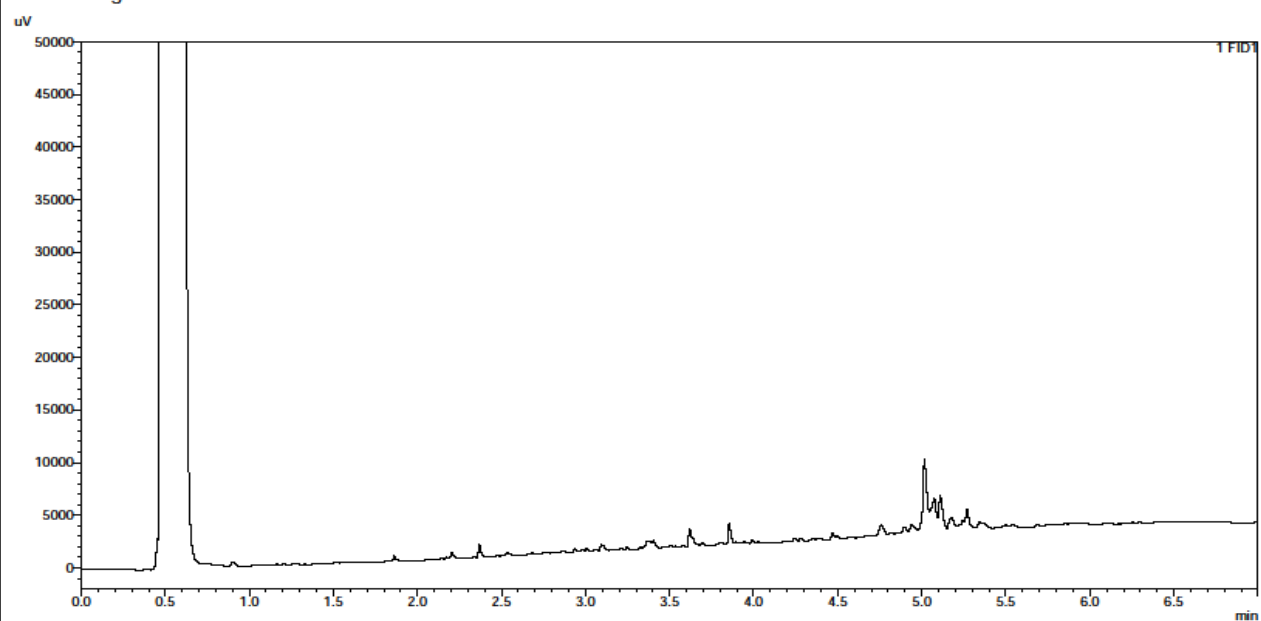
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Sample Name : Front 1484197 22-30216
Data Filename : 2022-08-10_10082022_Front 1484197 22-30216_081.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 41
Date Acquired : 11/08/2022 00:38:24
Date Processed : 11/08/2022



Chemtest

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-30216	1484195	S			TS204	0.0	No	N/A
22-30216	1484196	S			TS205	0.0	No	N/A
22-30216	1484197	S			TS206	0.0	No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
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°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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"
SOP	Standard operating procedure
LOD	Limit of detection

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 30 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

APPENDIX E

CERTIFICATES OF ANALYSIS – SUBSOIL



Amended Report

Report No.:	22-21971-2		
Initial Date of Issue:	23-Jun-2022	Date of Re-Issue:	04-Aug-2022
Client	LK Consult		
Client Address:	Unit 29 Eton Business Park Eton Hill Road Radcliffe Manchester Lancashire M26 2ZS		
Contact(s):	Contaminated Land Hannah Moss		
Project	LKC 22 1020 Stainton Drive, Middleton		
Quotation No.:		Date Received:	14-Jun-2022
Order No.:	740362	Date Instructed:	17-Jun-2022
No. of Samples:	3		
Turnaround (Wkdays):	5	Results Due:	23-Jun-2022
Date Approved:	23-Jun-2022		
Approved By:			
Details:	Stuart Henderson, Technical Manager		

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

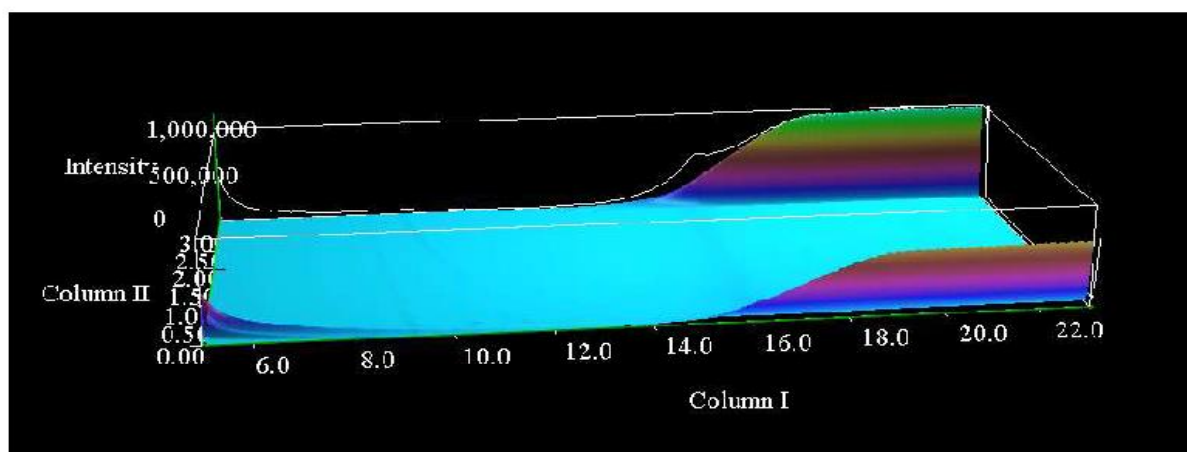
Client: LK Consult	Chemtest Job No.:				22-21971	22-21971	22-21971
Quotation No.:	Chemtest Sample ID.:				1447345	1447346	1447347
	Client Sample ID.:				SS1	SS2	SS3
	Sample Location:				SS1	SS2	SS3
	Sample Type:				SOIL	SOIL	SOIL
	Date Sampled:				13-Jun-2022	13-Jun-2022	13-Jun-2022
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD			
ACM Type	U	2192		N/A	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	15	20	14
Soil Colour	N	2040		N/A	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Loam	Loam	Loam
Chromatogram (TPH)	N			N/A	See Attached	See Attached	See Attached
pH	M	2010		4.0	8.9	9.2	9.1
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.63	< 0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.25	0.32	0.16
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2455	mg/kg	0.5	4.8	3.5	4.0
Cadmium	M	2455	mg/kg	0.10	0.11	0.11	0.10
Chromium	M	2455	mg/kg	0.5	15	10	10
Copper	M	2455	mg/kg	0.50	13	9.2	9.5
Mercury	M	2455	mg/kg	0.05	< 0.05	< 0.05	< 0.05
Nickel	M	2455	mg/kg	0.50	13	7.7	8.9
Lead	M	2455	mg/kg	0.50	14	13	9.8
Selenium	M	2455	mg/kg	0.25	0.72	0.53	0.52
Vanadium	U	2455	mg/kg	0.5	14	9.4	9.8
Zinc	M	2455	mg/kg	0.50	33	29	26
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.7	2.1	2.4
Diesel Present	N	2670		N/A	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	6.4
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	4.8
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	77
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	88
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: LKC 22 1020 Stainton Drive, Middleton

Client: LK Consult	Chemtest Job No.:				22-21971	22-21971	22-21971
Quotation No.:	Chemtest Sample ID.:				1447345	1447346	1447347
	Client Sample ID.:				SS1	SS2	SS3
	Sample Location:				SS1	SS2	SS3
	Sample Type:				SOIL	SOIL	SOIL
	Date Sampled:				13-Jun-2022	13-Jun-2022	13-Jun-2022
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD			
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	140
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	< 5.0	140
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	< 10	230
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	0.99	< 0.10
Anthracene	M	2800	mg/kg	0.10	< 0.10	0.36	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.25	3.5	0.40
Pyrene	M	2800	mg/kg	0.10	0.24	3.1	0.44
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	1.6	< 0.10
Chrysene	M	2800	mg/kg	0.10	< 0.10	1.9	< 0.10
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	3.4	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	1.1	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	3.0	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	2.0	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.34	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	1.8	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	23	< 2.0
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10

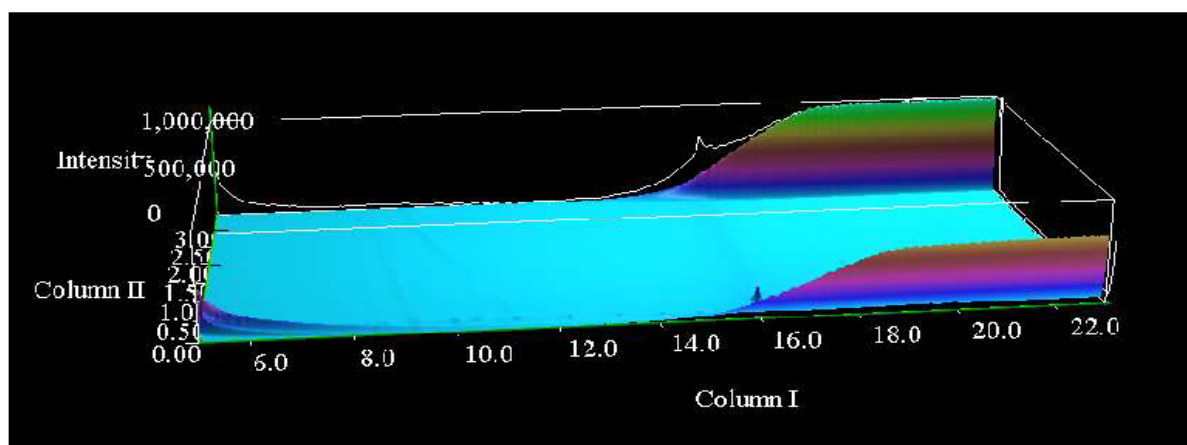
TPH Chromatogram on Soil Sample: 1447345



TPH Chromatogram on Soil Sample: 1447346

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TPH Chromatogram on Soil Sample: 1447347



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
22-21971	1447345	S	SS1		SS1		No	N/A
22-21971	1447346	S	SS2		SS2		No	N/A
22-21971	1447347	S	SS3		SS3		No	Lube Oil

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
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°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

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"
SOP	Standard operating procedure
LOD	Limit of detection

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 30 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

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