



Varley Street Cover System Completion Report

**Job Number
LKC241603**

**Report Date
24th October 2025**

**Client
Keir Construction Ltd**

DOCUMENT QUALITY ASSURANCE

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Report Title	Cover System Completion Report
Job Number	LKC241603
Client	Keir Construction Ltd

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Approved By	Peter Dunn		

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1. Introduction

LK Consult Ltd (LKC) has been commissioned to provide a Cover System Completion Report for Varley Street. The development comprised the erection of a part single, part two storey detached school building with associated sports facilities, access, car parking arrangements, landscaping and boundary treatment.

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

The Completion Report should be sufficient to satisfy Contaminated Land Condition 16b. Details are provided in the following sections.

A summary of the site details is presented in Table 1-1. Figure 1 indicates the site location and boundary plan.

Location	Site is bound by Sawley Road to the north, Vickers Street to the east and James Street to the south. Centred at approximate National Grid Reference 386140E, 399618N.
Area	15,300m ² .
Planning Reference	136645/VO/2023
Proposed Development	Erection of a part single, part two storey detached school building with associated sports facilities, access, car parking arrangements, landscaping and boundary treatment.

Table 1-1: Summary of site details.

1.1. Summary of Previous Work

The following reports have been undertaken for the site:

- Phase 1 Environmental Site Assessment Report, undertaken by EnviroSolution Ltd (Ref: CL101_V1, dated 1st February 2023).
- Phase 2 Geo-Environmental Site Assessment Report undertaken by EnviroSolution Ltd (Ref: CL102_V1, dated 2nd March 2022).
- Shallow Mining and Mine Shaft Investigation Works Report undertaken by LKC (Ref: CL-602-LKC 22 1670-CMSI R1, dated 20th June 2023).
- Final Additional Site Investigation and Updated Remediation Strategy undertaken by LKC (Ref: LKC 22 1670-B1-GI-Varley Street, dated September 2023).

1.2. Summary of Required Validation Work

Based upon the findings of the above the following validation was required:

- Suitable Environmental Cover Layer in soft landscaping (geotextile membrane, 450mm clean soil cover).
- Appropriate testing of imported material for soft landscaped areas.
- Appropriate disposal of waste soil material to a licensed recycling facility (if required for build phase).
- Detail and further assessment of unexpected contamination (if identified during the build phase).
- Validation of Vapour Membrane installation. – Validations were not done by LKC and this is not dealt with in this report.

Selected photographs of the completed site are presented in Appendix A.

2. Imported Material for Soft Landscaped Areas

2.1. Sampling Methodology

2.1.1. Topsoil

Approximately 870m³ of topsoil was imported to site from Freeland Horticultural of Nook Lane Farm, Astley, M29 7LW. In total 6no. samples have been collected.

To comply with the agreed sampling rate for brownfield/unknown source of 1 sample per 150m³ or minimum 3no. samples per source. LKC have collected 6no. samples, 3no. samples were collected from the source on 3rd July 2025 (ref: Topsoil 01-03). 3no. further sample were collected (ref: TS1-TS3) when the material had been imported to site.

To confirm the material was chemically suitable, the samples were tested for soil organic matter (SOM), metals (CLEA metal suite), Polycyclic Aromatic Hydrocarbons (EPA 16 PAHs), Total Petroleum Hydrocarbons (TPH CWC) and asbestos.

Standard sampling protocol and preservation of samples was undertaken as described in the EA guidance on site investigation².

Soil samples of approximately 500g were recovered in amber jars and plastic tubs. All the samples were sent to DETS laboratory for chemical testing.

Many of the contamination tests are UKAS or MCERTS accredited and further details are given in the Certificate of Analysis presented in Appendix B.

2.1.2. Subsoil

Approximately 565m³ of subsoil was imported to site from Marchington Stone Ltd, Shire Hill Quarry, Sheffield Road, Glossop, SK13 7PU. In total 12no. samples have been collected.

To comply with the agreed sampling rate for brownfield/unknown source of 1 sample per 150m³ or minimum 3no. samples per source. LKC have collected 12no. samples, 3no. samples were collected from the source on 2nd July 2025 (ref: Subsoil 01-03). 9no. further sample were collected (ref: SS04-SS12) when the material had been imported to site on the 29th July 2025.

To confirm the material was chemically suitable, the samples were tested for soil organic matter (SOM), metals (CLEA metal suite), Polycyclic Aromatic Hydrocarbons (EPA 16 PAHs), Total Petroleum Hydrocarbons (TPH CWC) and asbestos.

Standard sampling protocol and preservation of samples was undertaken as described in the EA guidance on site investigation³.

Soil samples of approximately 500g were recovered in amber jars and plastic tubs. All the samples were sent to DETS laboratory for chemical testing.

Many of the contamination tests are UKAS or MCERTS accredited and further details are given in the Certificate of Analysis presented in Appendix B.

2.2. Soil Risk Assessment

With regards to the soil validation screening values, LKC will use the following hierarchy:

- Category 4 Screening Levels (C4SLs) ^{4, 5}.
- LQM Suitable 4 Use Levels (S4ULs) ^{6, 7, 8, 9}.

The proposed development is for a new school building with soft landscaping. Therefore, the assessment criteria for residential without plant uptake has been used.

All criteria have been generated using the CLEA V1.06 model¹⁰ based either on 1%, 2.5% and 6% Soil Organic matter (SOM). Results will be compared to the nearest appropriate SOM.

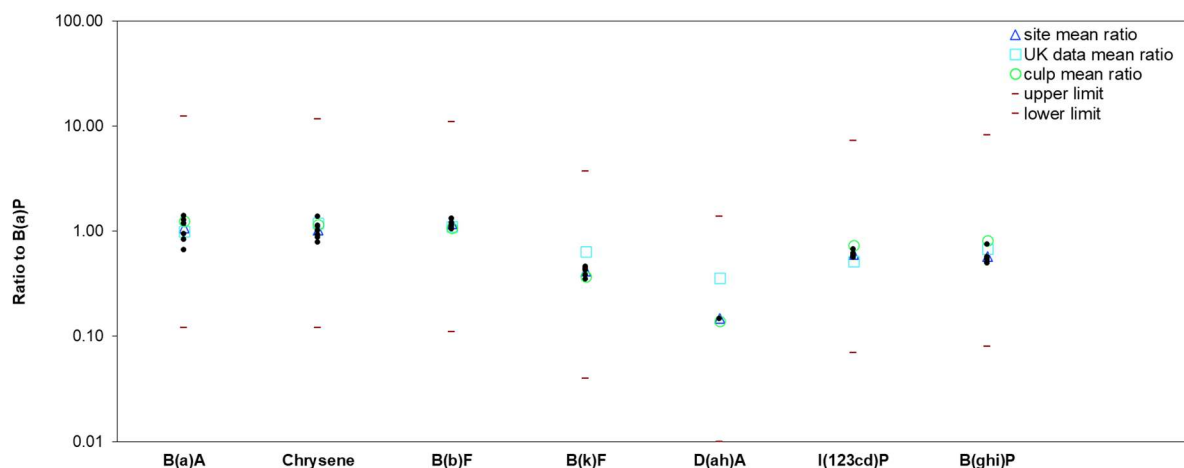
A summary of the Generic Assessment Criteria Values used in this assessment is provided in Appendix C.

B(a)P as Surrogate Marker

LKC consider the main risk drivers for PAHs are benzo(a)pyrene (B(a)P) and naphthalene. This is due to B(a)P possibly being a carcinogen and most toxic of the PAHs^{11,12} and naphthalene the most volatile and soluble¹³. The C4SLs indicate B(a)P as a surrogate marker for carcinogenic PAHs, if it falls within appropriate limits, since the risk from other non-carcinogenic PAHs are considered negligible¹⁴. For B(a)P to be used as a surrogate marker it should follow the profile described by the HPA (2008)¹⁵ and CL:AIRE (2013). Naphthalene will be treated separately using the LQM S4ULs.

LKC undertook an assessment of the PAH data for the site with regards to using B(a)P as a surrogate marker for carcinogenic PAHs as per HPA and CL:AIRE guidelines. The primary toxicological study related to Culp *et al*¹⁶, which was based on coal tar mixtures (>80,000mg/kg of total PAHs) fed in food to mice over a two-year carcinogenicity study.

Graph 2-1 summarises the study site data with respect to how the ratios of carcinogenic PAHs relate to B(a)P, within the confidence limits provided in the HPA document.



Graph 2-1: The ratio of PAH to B(a)P in soil for all available data at the site based on 18no. samples (where values were >LOD to allow the calculation of a ratio).

Notes:

B(a)P=Benzo(a)pyrene; D(ah)A=Dibenzo(ah)anthracene; B(a)A=Benzo(a)anthracene; B(b)F=Benzo(b)fluoranthene; B(k)F=Benzo(k)fluoranthene; I(123cd)P=Indeno(123cd)pyrene; B(ghi)P=Benzo(ghi)perylene.

All the data points that could be used to calculate ratios fall inside the upper or lower limits.

Based on this distribution of data LKC considers B(a)P can be used as a surrogate marker for carcinogenic PAHs and the C4SL criteria is suitable for this dataset.

2.2.1. Soil Results Comparison against Generic Assessment Criteria

All analysis sheets are presented in Appendix B. Results have been compared to the relevant assessment criteria and no elevated contaminants were identified in the imported topsoil and the material is considered suitable for use within the capping layers. No elevated contaminants were identified in the imported grid sand.

2.3. Depth of Cover System

In line with the Remediation Strategy, soft landscaping required 450mm clean cover soils over a demarcation geotextile membrane. Levels have been built up to required level using clean soils in line the remediation strategy.

LKC attended site on 8th September 2025 and the 10th October 2025 to inspect the capping layer construction and depth for the soft landscaping at the site. The locations of the validation pits are shown on Figure 2.

Table 2-1 summarises the depths of cover soils within soft landscaping areas.

Hand Dug Pit No.	Topsoil Depth (mm)	Subsoil Depth (mm)	Soft Landscaping Cover Soils Depth (mm)	Membrane Present (✓ / x)	Compliance (✓ / x)
HD101	250	240	490	✓	✓
HD102	270	200	470	✓	✓
HD103	270	200	470	✓	✓
HD104**	220	200	420	✓	✓
HD105**	300	100	400	✓	✓
HD106	200	430	630	✓	✓
HD107**	200	220	420	✓	✓
HD108	250	300	550	✓	✓
HD109*	230	200	430	✓	X
HD109A	260	200	460	✓	✓
HD110*	300	120	420	✓	X
HD110A	300	200	500	✓	✓
HD111*	150	200	350	✓	X
HD111A	250	200	450	✓	✓
HD112*	220	200	420	✓	X
HD112A	250	220	470	✓	✓
HD113**	180	200	380	✓	✓
HD114**	290	0	290	✓	✓
HD115**	280	0	280	✓	✓
HD116**	150	100	250	✓	✓
HD117***	200	0	200	✓	✓
HD118	200	300	500	✓	✓
HD119	200	250	450	✓	✓

Table 2-1: Summary of cover system depths.

*HD109 to HD112 were inspected on 8th September 2025 and failed due to inadequate depths of clean soils. Site were informed that this area required topping up. LKC returned to site on the 10th October 2025 and re-excavated the pits (HD109A to HD112A). The additional validation pits all passed.

**HD104, HD105, HD107, HD113-HD116 are in areas where services run including electric and drainage are present. Nominal cover depths were installed above the service runs. The small size of the soft landscaping does not illicit expansive use by receptors and therefore the clean cover above the membrane is still considered protective of future site users.

***HD117 is located next to the car park in a thin strip which will be landscaped with trees and woodland meadow mix which will limit access. The small size of the soft landscaping does not illicit expansive use by receptors and therefore the clean cover above the membrane is still considered protective of future site users.

Photographs of the depth validation pits are provided in Appendix D.

3. Disposal Tickets

Approximately 950m³ of made ground was taken offsite to a licenced landfill by Roy Braidwood & Sons Transport Ltd. Selected tickets have been provided in Appendix E as an example.

4. Unexpected Contamination

LKC understand that no unexpected contamination was encountered during development works.

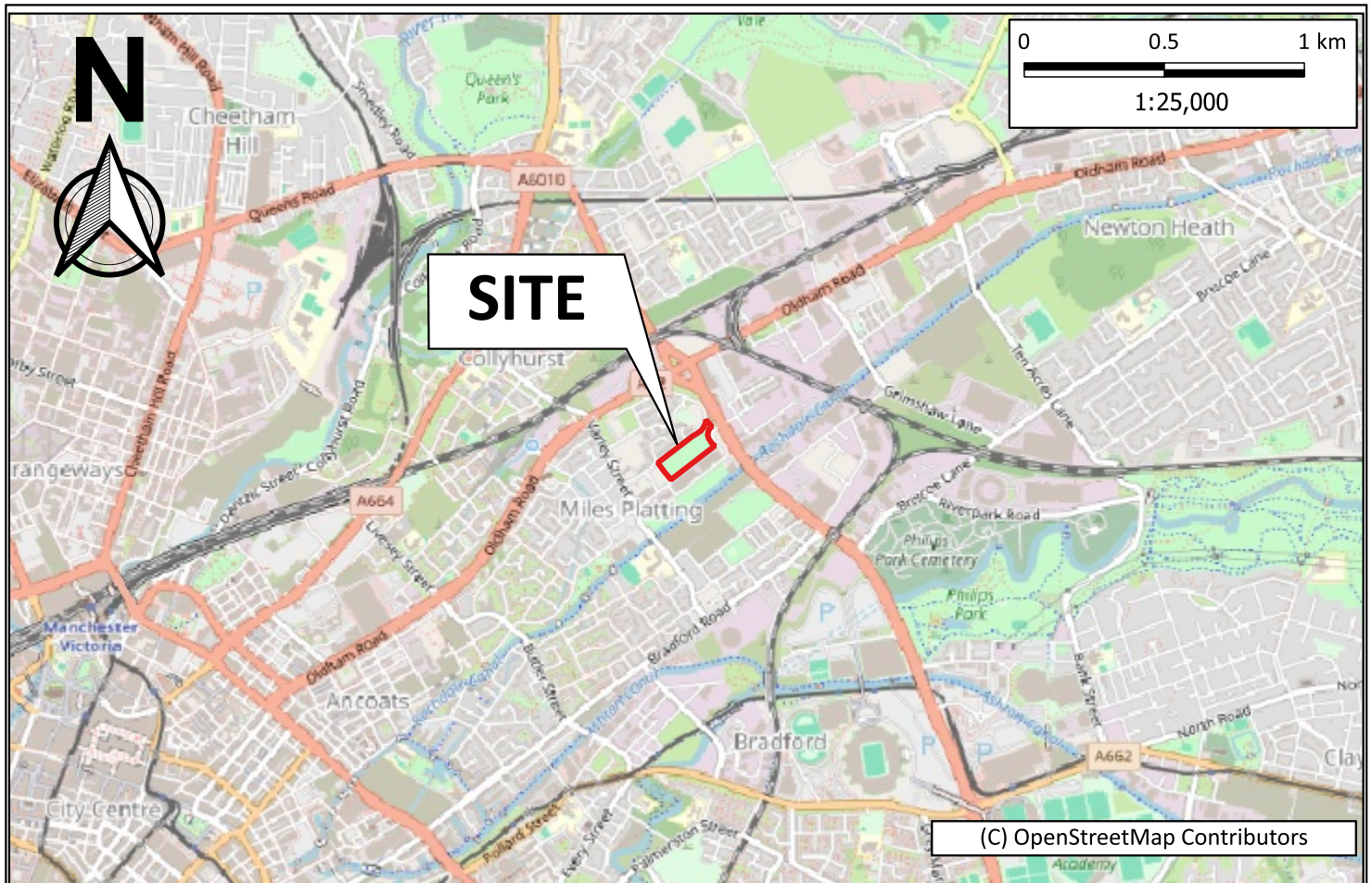
5. Conclusions

LKC consider that the work onsite to date has been validated in accordance with the agreed Remediation Strategy.

Based on the above information LKC considers the Varley Street site is 'suitable for use' for a school development.

LKC considers there is sufficient information to discharge the outstanding contaminated land planning Condition 16b by Manchester City Council.

Figures



Client: Keir Construction Ltd				Title: Site Location & Boundary Plan			 LK CONSULT	
Site: Varley Street, Manchester								
Scale (see scale bar): 1:25,000 & 1:2,000 @ A4				Figure: 1	Revision:			
D o b No.: LKC 241603	Drawn By: MB	Checked By: PD	Drawn: Sept 2025					

LEGEND

Surfaces

- Pedestrian asphalt to footpaths and hard play area
- Vehicular asphalt to parking area, access roads and service yard
- Porous pedestrian asphalt surface to hard surface games court

Boundaries

- Secure Line: 2.4m height weldmesh fence (Colour TBC)
- 2.0m Close-boarded timber fence
- 1.2m Vertical bar railings (Colour TBC)
- 1.2m Timber post and rail fencing

Soft Landscaping

- Existing trees to be retained (TBC)
- Existing trees to be removed (TBC)
- Proposed tree planting - 14-16cm girth
- Proposed tree planting - 10-12cm girth
- Native hedge 60-80cm height
- Ornamental planting beds, 2-3L stock
- Grass seeding: Eco-rich amenity seed mix
- Grass seeding: Flowering meadow mix

Landscape Features

- External benches TBC
- Cycle store
- EV Charging 8No.
- Accessible parking bay 8No.
- Parking bay 60No.

Key:

Potential area of investigation

Line between Ground Bearing and Suspended Slab

KEY



Site Boundary



Hand Dug Trial Pit (HD)

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.



LK CONSULT

Client: Keir Construction Ltd

Site: Varley Street

Title: Validation Hole Location Plan

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
LKC241603	See Scale Bar	2	A
Drawn By:	Checked By:	Drawn:	
AC	MB	Oct 2025	

Appendix A – Photographs of Completed Site



Photographs 1-4: Selected photographs of completed site.

Appendix B – Soil Analysis Certificates

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Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 25-06939

Site Reference: Varley Street, Manchester

Project / Job Ref: LKC241603

Order No: PO-C001615

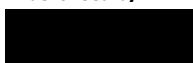
Sample Receipt Date: 29/07/2025

Sample Scheduled Date: 29/07/2025

Report Issue Number: 1

Reporting Date: 04/08/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

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

Soil Analysis Certificate						
DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	28/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street, Manchester	~TP / BH No	SS04	SS05	SS06	SS07	SS08
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 04/08/2025	DETS Sample No	784422	784423	784424	784425	784426

Determinand	Unit	RL	Accreditation					
Asbestos Screen ⁽⁵⁾	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.2	7.0	6.9	6.8	6.9
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	< 10	< 10	12	< 10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	< 0.01	< 0.01	0.01	< 0.01
Organic Matter (SOM)	%	< 0.1	MCERTS	1.1	1	0.4	1.2	1
Arsenic (As)	mg/kg	< 2	MCERTS	3	3	< 2	3	3
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.4	0.4	< 0.2	0.4	0.4
Chromium (Cr)	mg/kg	< 2	MCERTS	26	24	10	25	24
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	19	16	6	18	16
Lead (Pb)	mg/kg	< 3	MCERTS	17	12	5	15	13
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	27	25	10	24	24
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	26	24	9	24	24
Zinc (Zn)	mg/kg	< 3	MCERTS	82	73	29	75	73
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Soil Analysis Certificate						
DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Varley Street, Manchester	~TP / BH No	SS09	SS10	SS11	SS12	
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	
Reporting Date: 04/08/2025	DETS Sample No	784427	784428	784429	784430	

Determinand	Unit	RL	Accreditation				
Asbestos Screen ⁽⁵⁾	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	6.8	6.7	6.8	6.8
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	< 10	< 10	< 10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	< 0.01	< 0.01	< 0.01
Organic Matter (SOM)	%	< 0.1	MCERTS	0.9	0.5	1.2	0.9
Arsenic (As)	mg/kg	< 2	MCERTS	3	< 2	3	3
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.4	< 0.2	0.4	0.3
Chromium (Cr)	mg/kg	< 2	MCERTS	22	12	26	20
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	16	8	17	13
Lead (Pb)	mg/kg	< 3	MCERTS	13	6	13	11
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	23	12	26	20
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	21	11	25	20
Zinc (Zn)	mg/kg	< 3	MCERTS	67	36	75	61
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	28/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street, Manchester	~TP / BH No	SS04	SS05	SS06	SS07	SS08
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 04/08/2025	DETS Sample No	784422	784423	784424	784425	784426

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.38	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.56	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.50	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.19	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.22	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.21	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.16	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	2.2	< 1.6	< 1.6

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Varley Street, Manchester	~TP / BH No	SS09	SS10	SS11	SS12	
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	
Reporting Date: 04/08/2025	DETS Sample No	784427	784428	784429	784430	

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Phenanthrene	mg/kg	< 0.1	MCERTS	0.24	< 0.1	< 0.1	< 0.1	
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Fluoranthene	mg/kg	< 0.1	MCERTS	0.15	< 0.1	< 0.1	< 0.1	
Pyrene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	< 0.1	< 0.1	
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	28/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street, Manchester	~TP / BH No	SS04	SS05	SS06	SS07	SS08
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 04/08/2025	DETS Sample No	784422	784423	784424	784425	784426

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aliphatic >C34 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	< 10
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	< 10
Aromatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	< 21
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	< 42

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street, Manchester	~TP / BH No	SS09	SS10	SS11	SS12
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 04/08/2025	DETS Sample No	784427	784428	784429	784430

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
Aliphatic >C34 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10	
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10	
Aromatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21	
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42	

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	28/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street, Manchester	~TP / BH No	SS04	SS05	SS06	SS07	SS08
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 04/08/2025	DETS Sample No	784422	784423	784424	784425	784426

Determinand	Unit	RL	Accreditation					
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	5	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	3	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-06939	~Date Sampled	28/07/25	28/07/25	28/07/25	28/07/25	
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Varley Street, Manchester	~TP / BH No	SS09	SS10	SS11	SS12	
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: PO-C001615	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	
Reporting Date: 04/08/2025	DETS Sample No	784427	784428	784429	784430	

Determinand	Unit	RL	Accreditation					
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-06939	
LK Consult Limited	
~Site Reference: Varley Street, Manchester	
~Project / Job Ref: LKC241603	
~Order No: PO-C001615	
Reporting Date: 04/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
784422	SS04	None Supplied	None Supplied	6.5	Brown sandy clay with stones
784423	SS05	None Supplied	None Supplied	5.8	Brown sandy clay with stones
784424	SS06	None Supplied	None Supplied	5.3	Brown sandy clay with stones
784425	SS07	None Supplied	None Supplied	6.4	Brown sandy clay with stones
784426	SS08	None Supplied	None Supplied	5.5	Brown sandy clay with stones
784427	SS09	None Supplied	None Supplied	5.7	Brown sandy clay with stones
784428	SS10	None Supplied	None Supplied	4.2	Brown sandy clay with stones
784429	SS11	None Supplied	None Supplied	4.1	Brown sandy clay
784430	SS12	None Supplied	None Supplied	2.4	Brown sandy clay with stones

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-06939
LK Consult Limited
~Site Reference: Varley Street, Manchester
~Project / Job Ref: LKC241603
~Order No: PO-C001615
Reporting Date: 04/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators
DETS Report No: 25-06939
LK Consult Limited
~Site Reference: Varley Street, Manchester
~Project / Job Ref: LKC241603
~Order No: PO-C001615
Reporting Date: 04/08/2025

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
 Ethylbenzene - HS_1D_MS
 MTBE - HS_1D_MS
 TPH - Aliphatic >C34 - C44 - raw data - EH_CU_1D_AL
 TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
 TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
 TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
 TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
 TPH CWG - Aliphatic >C34 - C44 - EH_CU_1D_AL
 TPH CWG - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
 TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
 TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
 TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
 TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
 TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
 TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
 TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
 TPH CWG - Aromatic >C35 - C44 - EH_CU_1D_AR
 TPH CWG - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
 TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
 TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
 TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
 TPH CWG - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
 Toluene - HS_1D_MS
 m & p-xylene - HS_1D_MS
 o-Xylene - HS_1D_MS

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenz(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

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ME17 2JN
t: 01622 850410

DETS Report No: 25-07471

Site Reference: Varlev Street

Project / Job Ref: LKC241603

Order No: C001714

Sample Receipt Date: 19/08/2025

Sample Scheduled Date: 19/08/2025

Report Issue Number: 1

Reporting Date: 27/08/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

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

Soil Analysis Certificate						
DETS Report No: 25-07471	~Date Sampled	18/08/25	18/08/25	18/08/25		
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: Varley Street	~TP / BH No	TS1	TS2	TS3		
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: C001714	~Depth (m)	None Supplied	None Supplied	None Supplied		
Reporting Date: 27/08/2025	DETS Sample No	786791	786792	786793		

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	
pH	pH Units	N/a	MCERTS	8.2	8.0	7.6	
Total Cyanide	mg/kg	< 1	NONE	1	1	1	
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	428	417	368	
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.43	0.42	0.37	
Organic Matter (SOM)	%	< 0.1	MCERTS	8.8	6	6.3	
Arsenic (As)	mg/kg	< 2	MCERTS	8	8	7	
W/S Boron	mg/kg	< 1	NONE	1.1	< 1	< 1	
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.2	0.2	0.3	
Chromium (Cr)	mg/kg	< 2	MCERTS	12	12	12	
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	
Copper (Cu)	mg/kg	< 4	MCERTS	48	38	45	
Lead (Pb)	mg/kg	< 3	MCERTS	73	69	65	
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	
Nickel (Ni)	mg/kg	< 3	MCERTS	14	14	14	
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	
Vanadium (V)	mg/kg	< 1	MCERTS	17	19	16	
Zinc (Zn)	mg/kg	< 3	MCERTS	73	68	72	
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion
Analysis carried out on the dried sample is corrected for the stone content

Soil Analysis Certificate - Speciated PAHs

DETS Report No: 25-07471	~Date Sampled	18/08/25	18/08/25	18/08/25		
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: Varley Street	~TP / BH No	TS1	TS2	TS3		
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: C001714	~Depth (m)	None Supplied	None Supplied	None Supplied		
Reporting Date: 27/08/2025	DETS Sample No	786791	786792	786793		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	0.18	0.13	0.14		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	0.20	0.17	0.22		
Fluorene	mg/kg	< 0.1	MCERTS	0.14	< 0.1	0.21		
Phenanthrene	mg/kg	< 0.1	MCERTS	1.17	0.88	1.52		
Anthracene	mg/kg	< 0.1	MCERTS	0.31	0.23	0.45		
Fluoranthene	mg/kg	< 0.1	MCERTS	1.99	1.50	2.48		
Pyrene	mg/kg	< 0.1	MCERTS	1.79	1.34	2.04		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.90	0.59	1.29		
Chrysene	mg/kg	< 0.1	MCERTS	1.06	0.66	1.18		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	1.47	0.82	1.43		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.58	0.25	0.60		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	1.35	0.71	1.36		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.91	0.40	0.80		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.20	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	1.02	0.39	0.73		
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	13.3	8.1	14.4		

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-07471	~Date Sampled	18/08/25	18/08/25	18/08/25		
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: Varley Street	~TP / BH No	TS1	TS2	TS3		
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: C001714	~Depth (m)	None Supplied	None Supplied	None Supplied		
Reporting Date: 27/08/2025	DETS Sample No	786791	786792	786793		

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS 1D MS AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aliphatic >C6 - C8 : HS 1D MS AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aliphatic >C8 - C10 : EH CU 1D AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aliphatic >C10 - C12 : EH CU 1D AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aliphatic >C12 - C16 : EH CU 1D AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3		
Aliphatic >C16 - C21 : EH CU 1D AL	mg/kg	< 3	MCERTS	10	< 3	< 3		
Aliphatic >C21 - C34 : EH CU 1D AL	mg/kg	< 10	MCERTS	99	< 10	14		
Aliphatic >C34 - C44 : EH CU 1D AL	mg/kg	< 10	NONE	< 10	< 10	< 10		
Aliphatic (C5 - C44) : HS 1D MS+EH CU 1D AL	mg/kg	< 21	NONE	109	< 21	< 21		
Aromatic >C5 - C7 : HS 1D MS AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aromatic >C7 - C8 : HS 1D MS AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aromatic >C8 - C10 : EH CU 1D AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aromatic >C10 - C12 : EH CU 1D AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aromatic >C12 - C16 : EH CU 1D AR	mg/kg	< 2	MCERTS	4	4	3		
Aromatic >C16 - C21 : EH CU 1D AR	mg/kg	< 3	MCERTS	21	10	13		
Aromatic >C21 - C35 : EH CU 1D AR	mg/kg	< 10	MCERTS	125	23	37		
Aromatic >C35 - C44 : EH CU 1D AR	mg/kg	< 10	NONE	< 10	< 10	< 10		
Aromatic (C5 - C44) : HS 1D MS+EH CU 1D AR	mg/kg	< 21	NONE	151	36	54		
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	259	< 42	67		

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-07471	~Date Sampled	18/08/25	18/08/25	18/08/25		
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied		
~Site Reference: Varley Street	~TP / BH No	TS1	TS2	TS3		
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied		
~Order No: C001714	~Depth (m)	None Supplied	None Supplied	None Supplied		
Reporting Date: 27/08/2025	DETS Sample No	786791	786792	786793		

Determinand	Unit	RL	Accreditation					
Benzene : HS 1D MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2		
Toluene : HS 1D MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5		
Ethylbenzene : HS 1D MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2		
p & m-xylene : HS 1D MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2		
o-xylene : HS 1D MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2		
MTBE : HS 1D MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5		

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-07471	
LK Consult Limited	
~Site Reference: Varley Street	
~Project / Job Ref: LKC241603	
~Order No: C001714	
Reporting Date: 27/08/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
786791	TS1	None Supplied	None Supplied	10.1	Brown loamy sand with stones and vegetation
786792	TS2	None Supplied	None Supplied	12.1	Brown loamy sand with stones and vegetation
786793	TS3	None Supplied	None Supplied	13.7	Brown loamy sand with stones and vegetation

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-07471
LK Consult Limited
~Site Reference: Varley Street
~Project / Job Ref: LKC241603
~Order No: C001714
Reporting Date: 27/08/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (all: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators

DETS Report No: 25-07471

LK Consult Limited

~Site Reference: Varley Street

~Project / Job Ref: LKC241603

~Order No: C001714

Reporting Date: 27/08/2025

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH - Aliphatic >C34 - C44 - raw data - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C34 - C44 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Normec DETS Limited
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Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
^	No sampling date provided; unable to confirm if samples are within acceptable holding times
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

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DETS Report No: 25-06343

Site Reference: Varlev Street

Project / Job Ref: LKC241603

Order No: PO-C001531

Sample Receipt Date: 04/07/2025

Sample Scheduled Date: 04/07/2025

Report Issue Number: 1

Reporting Date: 14/07/2025

Authorised by:



Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

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

Soil Analysis Certificate						
DETS Report No: 25-06343	~Date Sampled	02/07/25	02/07/25	02/07/25	03/07/25	03/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street	~TP / BH No	Subsoil 01	Subsoil 02	Subsoil 03	Topsoil 01	Topsoil 02
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001531	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 14/07/2025	DETS Sample No	781962	781963	781964	781965	781966

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(n)
Asbestos Screen ⁽⁵⁾	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.3	7.1	7.2	7.8	7.9
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	< 10	< 10	200	191
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	< 0.01	< 0.01	0.20	0.19
Organic Matter (SOM)	%	< 0.1	MCERTS	1.1	1.3	1	6.3	5.6
Arsenic (As)	mg/kg	< 2	MCERTS	3	3	3	5	6
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.3	0.3	0.3	0.2	0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	27	23	26	10	11
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	20	16	17	25	27
Lead (Pb)	mg/kg	< 3	MCERTS	15	12	14	54	60
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	30	26	29	9	10
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	26	22	25	11	13
Zinc (Zn)	mg/kg	< 3	MCERTS	82	68	77	56	62
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Soil Analysis Certificate						
DETS Report No: 25-06343	~Date Sampled	03/07/25				
LK Consult Limited	~Time Sampled	None Supplied				
~Site Reference: Varley Street	~TP / BH No	Topsoil 03				
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied				
~Order No: PO-C001531	~Depth (m)	None Supplied				
Reporting Date: 14/07/2025	DETS Sample No	781967				

Determinand	Unit	RL	Accreditation				
Asbestos Screen ⁽⁵⁾	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	7.9			
Total Cyanide	mg/kg	< 1	NONE	< 1			
Free Cyanide	mg/kg	< 1	NONE	< 1			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	225			
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.23			
Organic Matter (SOM)	%	< 0.1	MCERTS	6.3			
Arsenic (As)	mg/kg	< 2	MCERTS	8			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS	11			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	30			
Lead (Pb)	mg/kg	< 3	MCERTS	63			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	10			
Selenium (Se)	mg/kg	< 2	MCERTS	< 2			
Vanadium (V)	mg/kg	< 1	MCERTS	13			
Zinc (Zn)	mg/kg	< 3	MCERTS	67			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-06343	~Date Sampled	02/07/25	02/07/25	02/07/25	03/07/25	03/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street	~TP / BH No	Subsoil 01	Subsoil 02	Subsoil 03	Topsoil 01	Topsoil 02
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001531	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 14/07/2025	DETS Sample No	781962	781963	781964	781965	781966

Determinand	Unit	RL	Accreditation	(n)		(n)	
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.17
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.17
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.14
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.86
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.18
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	1.39
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	1.36
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.81
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.69
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.76
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.26
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.68
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.42
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.34
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	8.2

Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 25-06343	~Date Sampled	03/07/25				
LK Consult Limited	~Time Sampled	None Supplied				
~Site Reference: Varley Street	~TP / BH No	Topsoil 03				
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied				
~Order No: PO-C001531	~Depth (m)	None Supplied				
Reporting Date: 14/07/2025	DETS Sample No	781967				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	0.12			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	0.81			
Anthracene	mg/kg	< 0.1	MCERTS	0.17			
Fluoranthene	mg/kg	< 0.1	MCERTS	1.40			
Pyrene	mg/kg	< 0.1	MCERTS	1.40			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.78			
Chrysene	mg/kg	< 0.1	MCERTS	0.68			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.73			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.27			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.61			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.35			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.35			
**Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	7.7			

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-06343	~Date Sampled	02/07/25	02/07/25	02/07/25	03/07/25	03/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street	~TP / BH No	Subsoil 01	Subsoil 02	Subsoil 03	Topsoil 01	Topsoil 02
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001531	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 14/07/2025	DETS Sample No	781962	781963	781964	781965	781966

Determinand	Unit	RL	Accreditation	(n)		(n)	
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	< 10	< 10	< 10
Aliphatic >C34 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	4
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3	< 3	5
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10	< 10	10
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10	< 10	< 10	< 10
Aromatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21	< 21	< 21
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42	< 42	< 42	< 42

Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 25-06343	~Date Sampled	03/07/25				
LK Consult Limited	~Time Sampled	None Supplied				
~Site Reference: Varley Street	~TP / BH No	Topsoil 03				
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied				
~Order No: PO-C001531	~Depth (m)	None Supplied				
Reporting Date: 14/07/2025	DETS Sample No	781967				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10			
Aliphatic >C34 - C44 : EH_CU_1D_AL	mg/kg	< 10	NONE	< 10			
Aliphatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	8			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	15			
Aromatic >C35 - C44 : EH_CU_1D_AR	mg/kg	< 10	NONE	< 10			
Aromatic (C5 - C44) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	25			
Total >C5 - C44 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42			

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-06343	~Date Sampled	02/07/25	02/07/25	02/07/25	03/07/25	03/07/25
LK Consult Limited	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Varley Street	~TP / BH No	Subsoil 01	Subsoil 02	Subsoil 03	Topsoil 01	Topsoil 02
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: PO-C001531	~Depth (m)	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Reporting Date: 14/07/2025	DETS Sample No	781962	781963	781964	781965	781966

Determinand	Unit	RL	Accreditation	(n)	(n)	(n)	(n)	(n)
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 25-06343	~Date Sampled	03/07/25				
LK Consult Limited	~Time Sampled	None Supplied				
~Site Reference: Varley Street	~TP / BH No	Topsoil 03				
~Project / Job Ref: LKC241603	~Additional Refs	None Supplied				
~Order No: PO-C001531	~Depth (m)	None Supplied				
Reporting Date: 14/07/2025	DETS Sample No	781967				

Determinand	Unit	RL	Accreditation				
Benzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
Toluene : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			
Ethylbenzene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
p & m-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
o-xylene : HS_1D_MS	µg/kg	< 2	MCERTS	< 2			
MTBE : HS_1D_MS	µg/kg	< 5	MCERTS	< 5			

Soil Analysis Certificate - Sample Descriptions

DETS Report No: 25-06343	
LK Consult Limited	
~Site Reference: Varley Street	
~Project / Job Ref: LKC241603	
~Order No: PO-C001531	
Reporting Date: 14/07/2025	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
781962	Subsoil 01	None Supplied	None Supplied	8.7	Brown sandy clay with stones
781963	Subsoil 02	None Supplied	None Supplied	8.9	Brown sandy gravel with stones
781964	Subsoil 03	None Supplied	None Supplied	8.7	Brown sandy gravel with stones
781965	Topsoil 01	None Supplied	None Supplied	11.3	Brown loamy sand with vegetation
781966	Topsoil 02	None Supplied	None Supplied	14.1	Brown loamy sand with vegetation
781967	Topsoil 03	None Supplied	None Supplied	11.3	Brown loamy sand with vegetation

Moisture content is part of procedure E003 & is not an accredited test

Soil Analysis Certificate - Methodology & Miscellaneous Information
DETS Report No: 25-06343
LK Consult Limited
~Site Reference: Varley Street
~Project / Job Ref: LKC241603
~Order No: PO-C001531
Reporting Date: 14/07/2025

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of FOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

List of HWOL Acronyms and Operators

DETS Report No: 25-06343

LK Consult Limited

~Site Reference: Varley Street

~Project / Job Ref: LKC241603

~Order No: PO-C001531

Reporting Date: 14/07/2025

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
TPH - Aliphatic >C34 - C44 - raw data - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C34 - C44 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C35 - C44 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C44 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C44 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Certificate Key

Symbol	Description
F	Filtered sample
UF	Unfiltered sample
D	Dried sample
AR	As received sample
RL	Reporting limit
~	Sample details provided by customer and can affect the validity of results
M/S	Missing Sample
*	The Dutch 10 PAH compounds consist of Naphthalene, Anthracene, Phenanthrene, Fluoranthene, Benz(a)anthracene, Chrysene, Benzo(k)fluoranthene, Benzo(a)pyrene, Benzo(g,h,i)perylene, and Indeno(1,2,3-cd)pyrene
**	Total EPA-16 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, and Benzo(ghi)perylene.
***	Total WAC-17 PAHs consist of the following polycyclic aromatic hydrocarbons: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene and Coronene.
n	Please note that we are MCERTS soil accredited (UK soils only) for sand, loam, and clay, and UKAS accredited for groundwater, tap water, surface water, and generated leachates. Other matrices are outside our scope of accreditation.
S	Subcontracted analysis
M	MCERTS accredited test
U	UKAS accredited test

Appendix C – Generic Assessment Criteria

Appendix D – Validation Pit Photographs

HD101



View of area around HD101.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD101 (*circa 490mm* soil cover over membrane).

HD102



View of area around HD102.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD102 (*circa 470mm soil cover over membrane*).

HD103

View of area around HD103.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD103 (*circa 470mm* soil cover over membrane).

HD104



View of area around HD104.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD104 (*circa 420mm* soil cover over membrane).

HD105



View of area around HD105.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD105 (*circa* 400mm soil cover over membrane).

HD106



View of area around HD106.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD106 (*circa* 630mm soil cover over membrane).

HD107



View of area around HD107.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD107 (*circa* 420mm soil cover over membrane).

HD108



View of area around HD108.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD108 (*circa* 550mm soil cover over membrane).

HD109A

View of area around HD109A. Re-check of HD109.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD109A (*circa* 460mm soil cover over membrane).

HD110A



View of area around HD110A. Recheck of HD110.

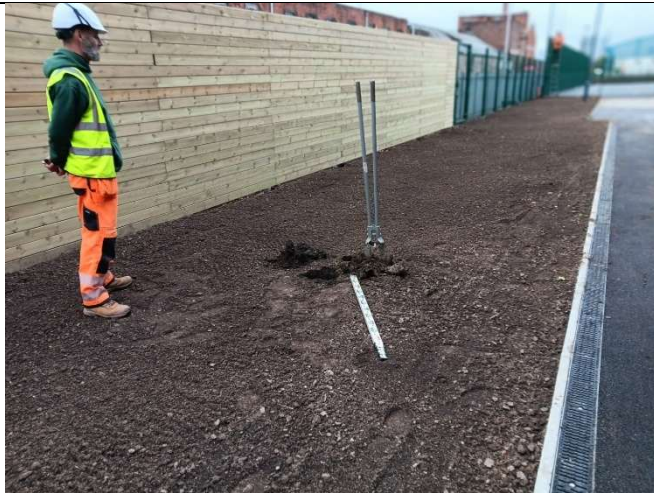


View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD110A (*circa* 500mm soil cover over membrane).

HD111A



View of area around HD111A. Re-check of HD111.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD111A (*circa* 450mm soil cover over membrane).

HD112A



View of area around HD112A. Re-check of HD112.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD112A (*circa* 470mm soil cover over membrane).

HD113



View of area around HD113.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD113 (*circa* 380mm soil cover over membrane).

HD114



View of area around HD114.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD114 (*circa 290mm* soil cover over membrane).

HD115



View of area around HD115.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD115 (*circa* 280mm soil cover over membrane).

HD116

View of area around HD116.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD116 (circa 250mm soil cover over membrane).

HD117



View of area around HD117.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD117 (*circa* 200mm soil cover over membrane).

HD118



View of area around HD118.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD118 (circa 500mm soil cover over membrane).

HD119



View of area around HD119.



View of soil in capping layer excavation in soft landscaping. Demarcation membrane at base.



Depth measurement HD119 (*circa* 450mm soil cover over membrane).

Appendix E – Example Waste Disposal Tickets

Customer: CHELTENHAM CIVILS		<h1>BRAIDWOOD</h1> <p>DON'T BE LATE IN THE MORNING</p> <p>☎ 0161 799 3801 ✉ enquiries@braidwood.info 🌐 www.braidwood.info Worsley Trading Estate, Lester Road, Little Hulton, Manchester, M38 0PT</p>	
Site Address: VARLEY 5 th MANCHESTER			
Material Description: 1 x 8W MUCK OFF SITE		Gross	
EWC Code	SIC Code	Tare	
1 x 8 Wheel Load (Please Tick) ☐		Nett	
I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011		Signed:	
This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.		Time On Site	Time Off Site
I have read, understood and signed for acceptance of the above.		Total Waiting Agreed	
Signed: [REDACTED]		Haulier: GARAGES	Load Accepted By: [REDACTED]
Subject to Transport Licensing which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.		Registration No: [REDACTED]	Print: [REDACTED]
Waste Carrier Licence: CBDU91464		Office Ref No:	No: 328119

White - Office Copy Yellow - Customer Copy Blue - Haulier Copy

Customer:

CHELTENHAM GREEN CURRS

Site Address:

VALEYS STREET
MANC

BRAIDWOOD

DON'T BE LATE IN THE MORNING

☎ 0161 799 3801 ✉ enquiries@braidwood.info ● www.braidwood.info
Worsley Trading Estate, Lester Rd, Little Hulton, Manchester, M38 0PT

Date:

28/5/25

Order No:

Waiting Time Agreed By:

Print:

Material Description:

NON HAZ
OFF SITE

Gross

Tare

Nett

Signed:

Time On Site

Time Off Site

Total Waiting Agreed

1 x 8 Wheel Load (Please Tick)



Load Accepted By:

Haulier:

GAENERS

Registration No:

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

I have read, understood and signed for acceptance of the above.

Print:

Signed:

Driver:

Bevan

Signed:

Office Ref No:

No: 324315

Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.

White - Office Copy

Yellow - Customer Copy

Blue - Haulier Copy

Customer:

Site Address:

CILCUMHAM GREEN
CIVILS

BRAIDWOOD

DON'T BE LATE IN THE MORNING

0161 799 3801 enquiries@braidwood.info www.braidwood.info
Worsley Trading Estate, Lester Rd, Little Hulton, Manchester, M38 0PT

Date:

28/5/25

Order No:

Waiting Time Agreed By:

Material Description:

NON HAZ
OFF SITE

Gross

Tare

Signed:

Time On Site

Time Off Site

Total Waiting Agreed

1 x 8 Wheel Load (Please Tick)

☐

Nett

Load Accepted By:

Haulier:

Registration No:

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Print:

I have read, understood and signed for acceptance of the above.

Signed:

Driver:

Signed:

Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.

Office Ref No:

No: 324343

White - Office Copy

Yellow - Customer Copy

Blue - Haulier Copy

Customer:

CHELTENHAM GREEN
CIVIS

Site Address:

VALLEY ST

MANCHESTER

Material Description:

1 x 8w Muck
off site

Gross

Tare

EWC Code

SIC Code

Nett

1 x 8 Wheel Load (Please Tick) ☐

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

I have read, understood and signed for acceptance of the above.

Signed:

Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.

BRAIDWOOD

DON'T BE LATE IN THE MORNING

0161 799 3801

enquiries@braidwood.info

www.braidwood.info

Worsley Trading Estate, Lester Road, Little Hulton, Manchester, M38 0PT

Date:

28/05/25

Order No:

Waiting Time Agreed By:

Print:

Signed:

Time On Site	Time Off Site	Total Waiting Agreed

Haulier:

Registration No:

C929FES

Load Accepted By:

Print:

NICK COOPE

Driver:

[REDACTED]

Signed

[REDACTED]

Waste Carrier Licence:

CBDU91464

Office Ref No:

No: 328120

White - Office Copy

Yellow - Customer Copy

Blue - Haulier Copy

Customer:

Site Address:

CHURCHMAN GREEN
CIVILS

BRAIDWOOD

DON'T BE LATE IN THE MORNING

0161 799 3801 enquiries@braidwood.info www.braidwood.info
Worsley Trading Estate, Lester Rd, Little Hulton, Manchester, M38 0PT

Date:

28/5/25

Order No:

Waiting Time Agreed By:

Material Description:

NON HAZ
OFF SITE

Gross

Tare

Nett

1 x 8 Wheel Load (Please Tick)

☐

Load Accepted By:

Haulier:

GUARD

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Print:

have read, understood and signed for acceptance of the above.

Signed:

[Redacted Signature]

Signature

Signed:

Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.

Office Ref No:

No: 324344

White - Office Copy

Yellow - Customer Copy

Blue - Haulier Copy

Customer:

CHICOTNHAM GREEN CIVICS

Site Address:

VALECY STREET
MANN

BRAIDWOOD

DON'T BE LATE IN THE MORNING

0161 799 3801

enquiries@braidwood.info

www.braidwood.info

Worsley Trading Estate, Lester Rd, Little Hulton, Manchester, M38 0PT

Date:

28/5/25

Order No:

Waiting Time Agreed By:

Material Description:

NON HAZ
OFF SITE

Gross

Tare

Nett

1 x 8 Wheel Load (Please Tick)



Load Accepted By:

Haulier:

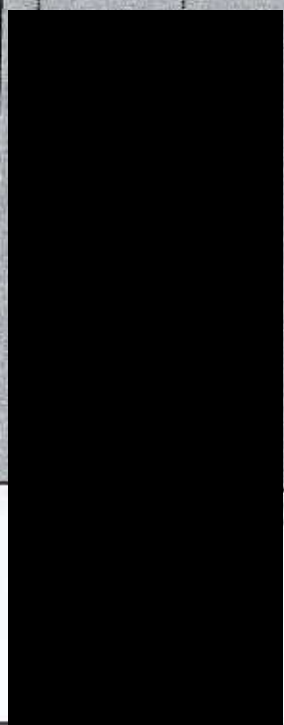
Time On Site

Time Off Site

Total Waiting Agreed

Print:

Signed:



Signed:

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

I have read, understood and signed for acceptance of the above.

Office Ref No:

Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.

No: 324316

White - Office Copy

Yellow - Customer Copy

Blue - Haulier Copy

Customer: CHIDSTONHAM GREEN CIVILS		<h1>BRAIDWOOD</h1> <p>DON'T BE LATE IN THE MORNING</p> <p>☎ 0161 799 3801 ✉ enquiries@braidwood.info 🌐 www.braidwood.info Worsley Trading Estate, Lester Road, Little Hulton, Manchester, M38 0PT</p>	
Site Address: MARLEY ST MANCHESTER			
Material Description: 1 x 8W MUCK OF SITE		Gross	
EWC Code	SIC Code	Tare	
1 x 8 Wheel Load (Please Tick) ☐		Nett	
I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011			
This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.		Haulier:	
I have read, understood and signed for acceptance of the above.		Load Accepted By:	
Signed:		Signed:	
Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.		Waiting Time Agreed By:	
		Print:	
		Date: 28/05/25	Order No:
Waste Carrier Licence: CBDU91464		Time On Site	Time Off Site
Office Ref No:		Total Waiting Agreed	
No: 328121			

White - Office Copy

Yellow - Customer Copy

Blue - Haulier Copy

Customer:

CHEITENHAM GREEN CIVILS

Site Address:

VALEY STREET
MANC

BRAIDWOOD

DON'T BE LATE IN THE MORNING

0161 799 3801 enquiries@braidwood.info www.braidwood.info
Worsley Trading Estate, Lester Rd, Little Hulton, Manchester, M38 0PT

Date:

28.5.25

Order No:

Waiting Time Agreed By:

Material Description:

NON HAZ
OFF SITE

Gross

Tare

Nett

1 x 8 Wheel Load (Please Tick)

☒

Load Accepted By:

Haulier:

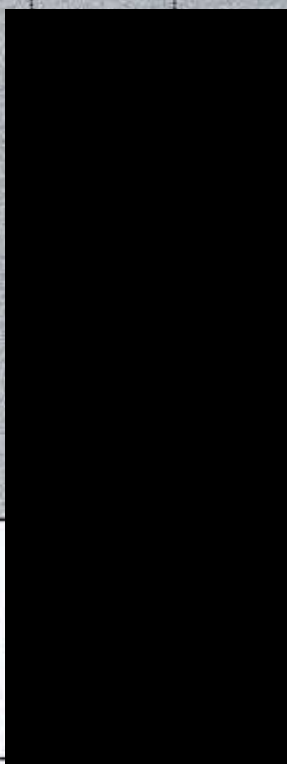
Time On Site

Time Off Site

Total Waiting Agreed

Print:

Signed:



Signed:

Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.

Office Ref No:

No: 324317

Customer:

Site Address:

CHELTENHAM GREEN
CIVILS

UNIVERSITY ST

MANCHESTER

BRAIDWOOD

DON'T BE LATE IN THE MORNING

0161 799 3801 enquiries@braidwood.info www.braidwood.info
Worsley Trading Estate, Lester Rd, Little Hulton, Manchester, M38 0PT

Date: 25/5/25

Order No:

Waiting Time Agreed By:

Material Description:

Gross

Tare

Nett

NON HITE
OFF SITE

1 x 8 Wheel Load (Please Tick)

☐

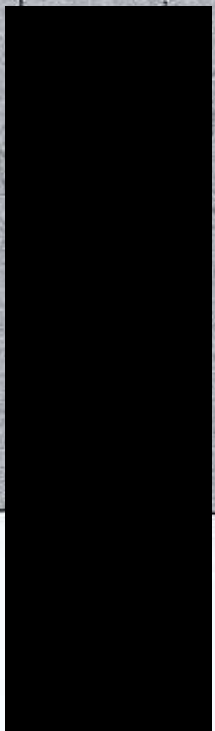
Load Accepted By:

Haulier:

GREEN

Print:

Signed:



I have read, understood and signed for acceptance of the above.
Signed:

Subject to the Conditions of Sale of Roy Braidwood and Sons Transport Limited, which can be made available on request. Any queries relating to any aspect of this load must be made in writing within 3 days from receipt of goods.

Office Ref No:

No: 324345

Appendix F - References

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