

Phase 2 Intrusive Site Investigation

26 December 2025

Concept Design Architects

Edgegate Farm, Huddersfield Road, Milnrow, OL16 3TJ

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CONTENTS

1. Introduction

- 1.1 Project Overview
- 1.2 Purpose of Investigation
- 1.3 Scope of Work
- 1.4 Limitations

2. Site

- 2.1 Site Description and Location
- 2.2 Proposed Development
- 2.3 Previous Investigations

3. Methodology

- 3.1 Sampling Work
- 3.2 Sampling Strategy
- 3.3 Health & Safety

4. Ground Conditions

5. Evaluation of Results

- 5.1 Screening Values
- 5.2 Summary of Results
- 5.3 Risk Assessment Methodology
- 5.4 Conceptual Site Model

6. Conclusions

- 6.1 Risk Evaluation
- 6.2 Further Investigation

7. References

1. Introduction

The following document is a Phase 2 Intrusive Site Investigation carried out by Oakshire Environmental, and includes details of the site, sampling methodology, ground conditions, an evaluation of risk and an assessment of further investigations.

1.1 Project Overview

The client's proposed project involves prior approval for change of use from agricultural building to 4 no. dwellinghouses (Use Class C3) including installation of new windows and doors at Edgegate Farm, Huddersfield Road, Milnrow, OL16 3TJ. Following the identification of potential contaminant linkages at the site, an intrusive site investigation has been recommended. Oakshire Environmental will carry out a Phase 2 Intrusive Site Investigation, as described below.

1.2 Purpose of Investigation

The objectives of the Phase 2 Intrusive Site Investigation will be to:

- Establish the context and setting of development at the site.
- Identify and assess the nature and extent of contamination risk at the site.
- Determine the requirement for further investigations, remediation or mitigation measures.

1.3 Scope of Work

- Assess the site and previous investigations, to establish the context and setting of development.
- In order to identify the nature and extent of contamination, 6 x samples (3 x trial pits) will be taken down to a maximum depth of ~0.6m and analysed for Metals (As, Be, Cd, Cu, Pb, Hg, Ni, Se, V, Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (USEPA 16), BTEX & MTBE, Total Petroleum Hydrocarbons CWG (Aliphatic/ Aromatic), pH, Organic Matter, Asbestos (Qualified) in a UKAS accredited laboratory.
- Ground conditions encountered at the site, including identification of groundwater and made ground, will be noted and used to inform recommendations and conclusions.
- Results of laboratory testing will be assessed with reference to suitable screening values, including LQM/CIEH Suitable 4 Use Levels (S4ULs), CL:AIRE Category 4 Screening Levels (C4SLs) and Generic Assessment Criteria (GAC).
- This information will be used to update the Conceptual Site Model, produced as part of previous investigations to categorise the severity of consequence and probability of identified contaminant linkages, and conduct an evaluation of contamination risk to determine the requirement for further investigations, remediation or mitigation measures.
- Supporting appendix to include photographs, maps and plans of the site.

1.4 Limitations

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This report excludes consideration of potential hazards arising from any activities at the site other than normal use and occupancy for the intended land uses. Hazards associated with any other activities have not been assessed and must be subject to a specific risk assessment by the parties responsible for those activities. Oakshire Environmental does not warrant or guarantee that the site is free of hazardous or potentially hazardous materials or conditions. It should be noted that this report has been produced for environmental purposes only.

Oakshire Environmental cannot be held responsible for incorrect analysis of samples. The information and conclusions provided in this report are limited to, and representative of, the samples taken and cannot be extended to apply to the whole site, in addition, Oakshire Environmental cannot guarantee the accuracy of analysis for samples not taken at the source by the company or those which deviate due to exceedance of holding time or inappropriate sampling practises. The findings and/or recommendations of this report do not take into account any conditions that may be present but have hitherto not been encountered and as such further investigation and/or a reconsideration of the findings of this report should be undertaken if such conditions are subsequently encountered or an alternative development plan or land use is subsequently proposed.

2. Site

The following section provides a description of the site and location, proposed project and previous investigations, utilising information obtained from the client and publicly available sources.

2.1 Site Description and Location

The site is located at Edgegate Farm off Huddersfield Road to the north east of Oldham and is approximately 0.07ha. The site is comprised of a detached barn constructed of block work and corrugated steel. At time of sampling, there were numerous vehicles and agricultural machinery parked on the adjacent yard area to the barn building, in addition to areas of assorted storage associated with the operation of the site.

The site is bordered by yard areas to the north west, north east and south east including parked caravans to the north west, waste materials in skips and agricultural equipment, machinery and vehicles to the south east. To the south west there are stable buildings, residential dwellings and shipping containers within the wider farm complex. The surrounding area is predominantly agricultural with some isolated residential dwellings and villages.

National Grid Reference: SD 96588 11428

2.2 Proposed Development

The proposed development involves the change of use of the existing agricultural building to four dwellings including the development of lawn areas at the south east and parking at the north west.

2.3 Previous Investigations

A Phase 1 Preliminary Risk Assessment was carried out by Oakshire Environmental in November 2023. This assessment considered the risk to residential end users and controlled waters to be low to moderate and, therefore, recommended that a Phase 2 Intrusive Site Investigation should be undertaken, including sampling of shallow soil in areas of proposed soft landscaping to be tested for a suite of contaminants including heavy metals and hydrocarbons.

Based on the findings of the Phase 1 Preliminary Risk Assessment, Oakshire Environmental has carried out sampling of soil at the site, which has been tested for a comprehensive suite of contaminants including Metals (As,Be,Cd,Cu,Pb,Hg,Ni,Se,V,Zn), Chromium (III & VI), Phenols, Polycyclic Aromatic Hydrocarbons (PAHs), BTEX & MTBE, Total Petroleum Hydrocarbons (TPHs) CWG (Aliphatic/ Aromatic), pH, Organic Matter and Asbestos (Qualitative).

3. Methodology

3.1 Sampling Work

Three trial pits were excavated at the locations shown on plans in the appendix, with ground conditions noted during the sampling process to inform recommendations and conclusions.

Two soil samples were collected from each trial pit, by a qualified Oakshire Environmental consultant, using a window sampler and soil was then collected from the sampler and placed into sealed sample containers. Samples collected for VOC analysis were filled as much as possible to minimise air spaces, as volatile compounds can be lost into these spaces. Sampling equipment was wiped clean between sample locations to minimise cross contamination.

3.2 Sampling Strategy

Six samples was considered to be a sufficient sample size, based on the size of the site, proposed use areas and the levels of contamination expected. Locations were chosen to focus on the proposed soft landscaping and buildings areas, while providing coverage across the site.

Shallow soil in proposed soft landscaping areas at the site were sampled as this will represent the soil that is most likely to impact future site users through inhalation, ingestion and dermal contact pathways. Deeper samples were also taken to determine the risk to future site users and the proposed building from the ingress of vapours and ground gases and allow identification of variability through the soil profile.

3.3 Health & Safety

When collecting soil samples on a potentially contaminated site it must be assumed that the soil is contaminated in order to protect the health of the assessor. Protective rubber gloves were worn at all times as well as substantial footwear. Equipment was washed thoroughly before and after use and kept in a container when transported to avoid the spread of any possible contamination. Sample containers were packed with biodegradable fill for protection and placed in a sealed plastic container for transportation to the laboratory.

4. Ground Conditions

Ground conditions identified in trial pit TP01 comprised made ground including road planings overlying blackish brown gravelly sandy clay with frequent road planings, gravel, brick and concrete and patches of yellow gravelly sand to a depth of 0.20m, made ground including blackish brown gravelly sandy clay with frequent road planings, gravel, brick and concrete to a depth of 0.60m and made ground including blackish brown and medium brown gravelly sandy clay with frequent road planings, gravel, brick and concrete to the bottom of the trial pit at 1.00m.

Ground conditions identified in trial pit TP02 comprised made ground including road planings overlying blackish brown gravelly sandy CLAY with frequent road planings, gravel, brick and concrete and patches of yellow gravelly sand to a depth of 0.30m, made ground including blackish brown gravelly sandy clay with frequent road planings, gravel, brick and concrete to a depth of 0.90m, made ground including blackish brown and medium brown gravelly sandy clay with frequent road planings, gravel, brick and concrete to a depth of 2.00m and blackish brown slightly sandy clay with gravel the bottom of the trial pit at 2.10m.

Surface water pooling was identified in trial pit TP02, due to heavy rainfall at time of sampling and underlying clay soils, however, no groundwater was identified.

Detailed trial pit logs are provided in the Appendix.

5. Evaluation of Results

5.1 Screening Values

Results of laboratory testing of soil samples were analysed by comparing them to industry standard screening levels used for risk assessments. Screening levels used include the DEFRA Category 4 Screening Levels (C4SLs) based on Low Level of Toxicological Risk and the LQM/CIEH S4ULs for Human Health Risk Assessment. These levels cover multiple Soil Organic Matter (SOM) contents (1%, 2% and 6%) and assume a pH of 8. The 'residential with homegrown produce' screening values were used to assess results. This land use considers direct soil and indoor dust ingestion and inhalation, skin contact with soils and dust, inhalation of vapours and ingestion of homegrown produce as exposure pathways. These levels take a conservative approach to assessing potential risk and concentrations below these screening values can be considered to represent 'uncontaminated conditions' which pose 'LOW' risk to human health based on the proposed land use.

It is important to note that exceedance of a relevant screening value does not necessarily constitute evidence of either a 'significant possibility of significant harm' or the need for remediation under the UK's planning regimes. Rather such exceedance should usually trigger a further detailed quantitative risk assessment, where site-specific parameters are used to derive site-specific assessment criteria. Common sense tells us, and a robust risk evaluation reveals, that a gross exceedance is a good indicator that an unacceptable risk is present.

5.2 Summary of Results

- Beryllium concentration was slightly elevated and exceeded the residential with homegrown produce land use screening value in sample S03, taken from shallow made ground in trial pit TP02, however, all other tested heavy metal concentrations were below residential with homegrown produce land use screening values in all samples
- pH was alkaline in all samples
- Phenols and Cresols concentrations were below the laboratory limit of detection in all samples
- Total Organic Carbon value was high in sample S02 and was moderate in all other samples, suggesting the soil has a generally moderate organic matter content
- Polycyclic Aromatic Hydrocarbons (*Benzo(b)fluoranthene*, *Benzo(a)pyrene*, *Dibenzo(a,h)anthracene*) concentrations in samples S02 and S03, taken from deeper made ground in trial pit TP01 and shallow made ground in trial pit TP02, were elevated and exceeded residential with homegrown produce land use screening values
- BTEX & MTBE concentrations were low in sample S04 and were below the laboratory limit of detection in all other samples
- Total Petroleum Hydrocarbons (TPHs) concentrations were elevated but below residential with homegrown produce land use screening values in samples S01, S02 and S03 and concentrations were low in sample S04
 - It should also be noted that due to the elevated hydrocarbon concentrations in samples S01, S02 and S03, these samples should be classified as Hazardous, according to WM3 Technical Guidance, for off-site disposal
 - Concentrations exceeded UK Water Industry Research (UKWIR) thresholds for PE water pipes, therefore, the use of barrier pipes is considered necessary
 - Volatile Petroleum Hydrocarbon concentrations were very low, with concentrations in all samples apart from sample S04 below the laboratory limit of detection
- Chrysotile Asbestos was detected in sample S01, taken from shallow made ground in trial pit TP01

5.3 Risk Assessment Methodology

The potential level of risk posed by a particular source is determined by assessing the potential severity of the impact of the contaminant linkage on the receptor, if it is assumed to be present, and the probability of the contaminant linkage being present.

Severities are categorised from Minor to Severe and probabilities are categorised from Unlikely to High Likelihood to give a potential level of risk output.

Table 1: Risk Matrix

Probability	Severity of Consequence			
	Severe	Medium	Mild	Minor
High Likelihood	Very High Risk	High Risk	Moderate Risk	Low / Moderate Risk
Likely	High Risk	Moderate Risk	Low / Moderate Risk	Low Risk
Low Likelihood	Moderate Risk	Low / Moderate Risk	Low Risk	Very Low Risk
Unlikely	Low / Moderate Risk	Low Risk	Very Low Risk	Very Low Risk

Very High Risk

There is a high probability that severe harm could arise to a designated receptor from an identified source; or there is evidence that severe harm to a designated receptor is currently happening.

High Risk

Harm is likely to arise to a designated receptor from an identified source.

Moderate Risk

It is possible that harm could arise to a designated receptor from an identified source. It is relatively unlikely that any such harm would be severe or if any harm were to occur it is more likely that the harm would be relatively mild.

Low Risk

It is possible that harm could arise to a designated receptor from an identified source, however, it is likely that this harm, if realised, would normally be mild.

Very Low Risk

There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

5.4 Conceptual Site Model

The information in this section has been compiled to produce an initial conceptual site model outlining the potential sources, pathways and receptors to consider at the site. The level of risk was categorised by considering the severity and probability, as outlined in the previous section.

Table 2: Conceptual site model

Sources	Pathways	Receptors	Severity	Probability	Potential Level of Risk
Agricultural/ Commercial Activity and Made Ground	Ingestion/inhalation of contaminated soil dust Dermal contact with contaminated soil Inhalation of soil vapours Ingestion of homegrown produce Permeation into drinking water pipes	Residential end users Construction workers	Severe	Likely	High Identified PAH concentrations in samples S02 and S03, taken from deeper made ground in trial pit TP01 and shallow made ground in trial pit TP02, were elevated and exceeded residential with homegrown produce land use screening values, in addition, Chrysotile Asbestos was detected in sample S01, taken from shallow made ground in trial pit TP01, therefore, the risk to residential end users is considered to be moderate. Furthermore, identified TPH concentrations were elevated and exceeded UK Water Industry Research (UKWIR) thresholds for PE water pipes, therefore, the risk to residential end users through permeation into drinking water pipes is moderate and barrier pipes are considered necessary. Volatile Petroleum Hydrocarbon concentrations were very low, with concentrations in all samples apart from sample S04 below the laboratory limit of detection, therefore, the risk from hydrocarbon vapours is considered to be low, however, it should also be noted that due to the elevated hydrocarbon concentrations in samples S01, S02 and S03, these samples should be classified as Hazardous, according to WM3 Technical Guidance, for off-site disposal.
	Leaching through soil Surface runoff	Controlled waters	Medium	Low Likelihood	Low to Moderate No groundwater was identified in excavated trial pits at the site, however, due to the elevated contaminant concentrations in shallow and deeper soils and the presence of springs and issues in the surrounding area, the risk to potentially shallow groundwater beneath the site is considered to be low to moderate.
	Ground gas permeation into the building	Residential end users	Medium	Low Likelihood	Low to Moderate Identified organic matter concentrations were moderate to high in sampled made ground at the site, presenting a potential risk of on-site ground gas generation from the degradation of material. Made ground was only found to extend to a depth of 2.00mBGL, therefore, the risk of on-site ground gas generation is significantly reduced.

6. Conclusions

6.1 Risk Evaluation

The conceptual site model has identified the following contaminant linkages present at the site and the following conclusions have been drawn:

- There is a **high risk** to residential end users and construction workers from the ingestion/inhalation of contaminated soil dust, dermal contact with contaminated soil, inhalation of soil vapours, ingestion of homegrown produce and permeation into drinking water pipes from agricultural activity and made ground on and in the vicinity of the site.
- There is a **low to moderate risk** to controlled waters from the leaching and surface runoff of contaminants from agricultural activity and made ground on and in the vicinity of the site.
- There is a **low to moderate risk** to residential end users from ground gas generation and permeation into the building from made ground at the site.

6.2 Further Investigation

Based on laboratory testing of soil samples from the site, the updated conceptual site model and the currently proposed development plan, the risk to residential end users and construction workers is considered to be high and the risk to controlled waters is considered to be moderate from identified asbestos, heavy metal and hydrocarbon contamination in made ground at the site, therefore, it is recommended that a Phase 3 Remediation Options Appraisal & Strategy is produced, to include analysis of feasible remediation options to address contamination risk at the site.

It should also be noted that due to the elevated hydrocarbon concentrations in samples S01, S02 and S03, these samples should be classified as Hazardous, according to WM3 Technical Guidance, for off-site disposal.

7. References

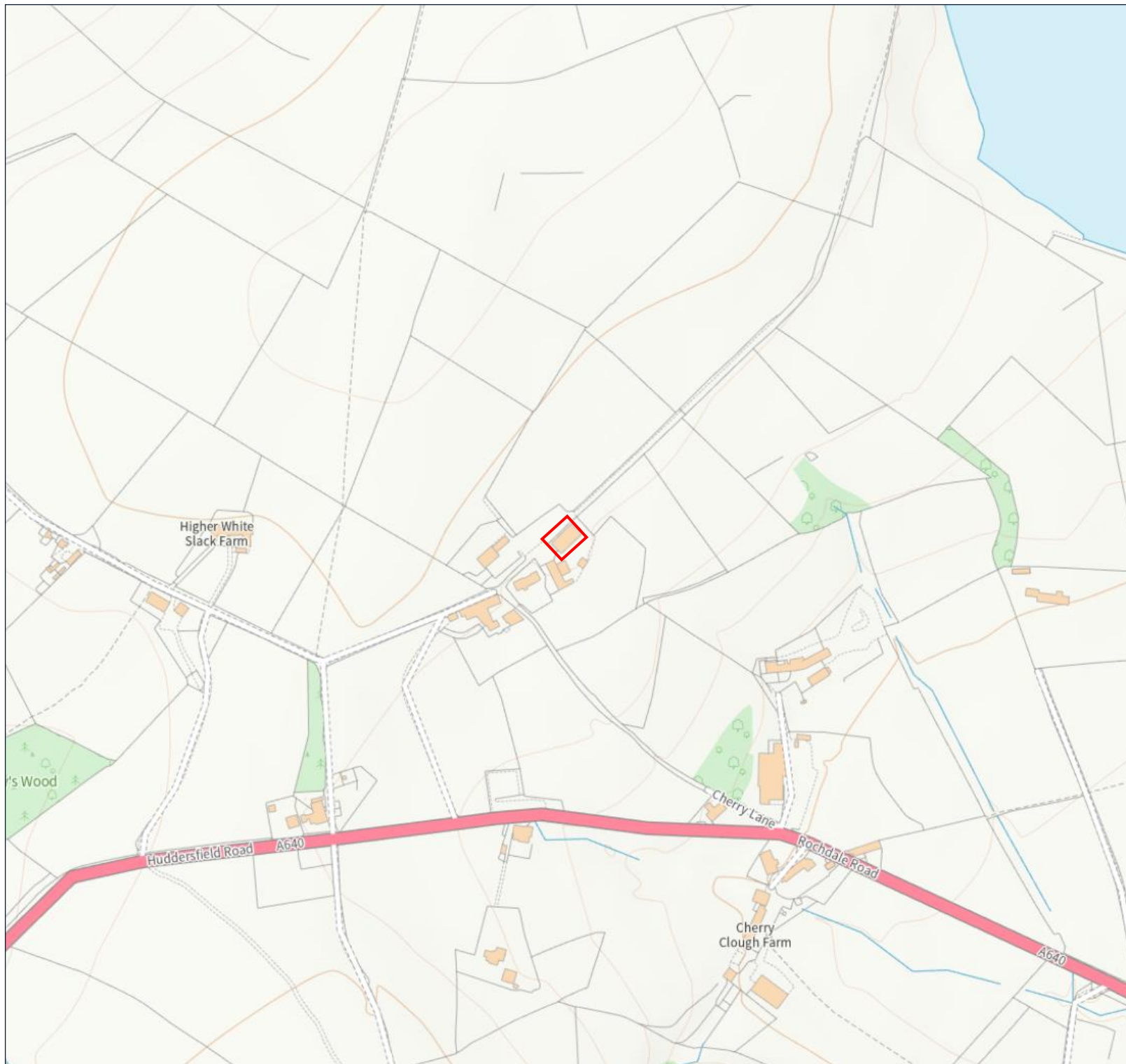
CL:AIRE, 2014. *Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination*. London: Department for the Environmental and Rural Affairs

Environment Agency, 2025. *Land contamination: risk management*. [online] Available at: <gov.uk/guidance/land-contamination-how-to-manage-the-risks>.

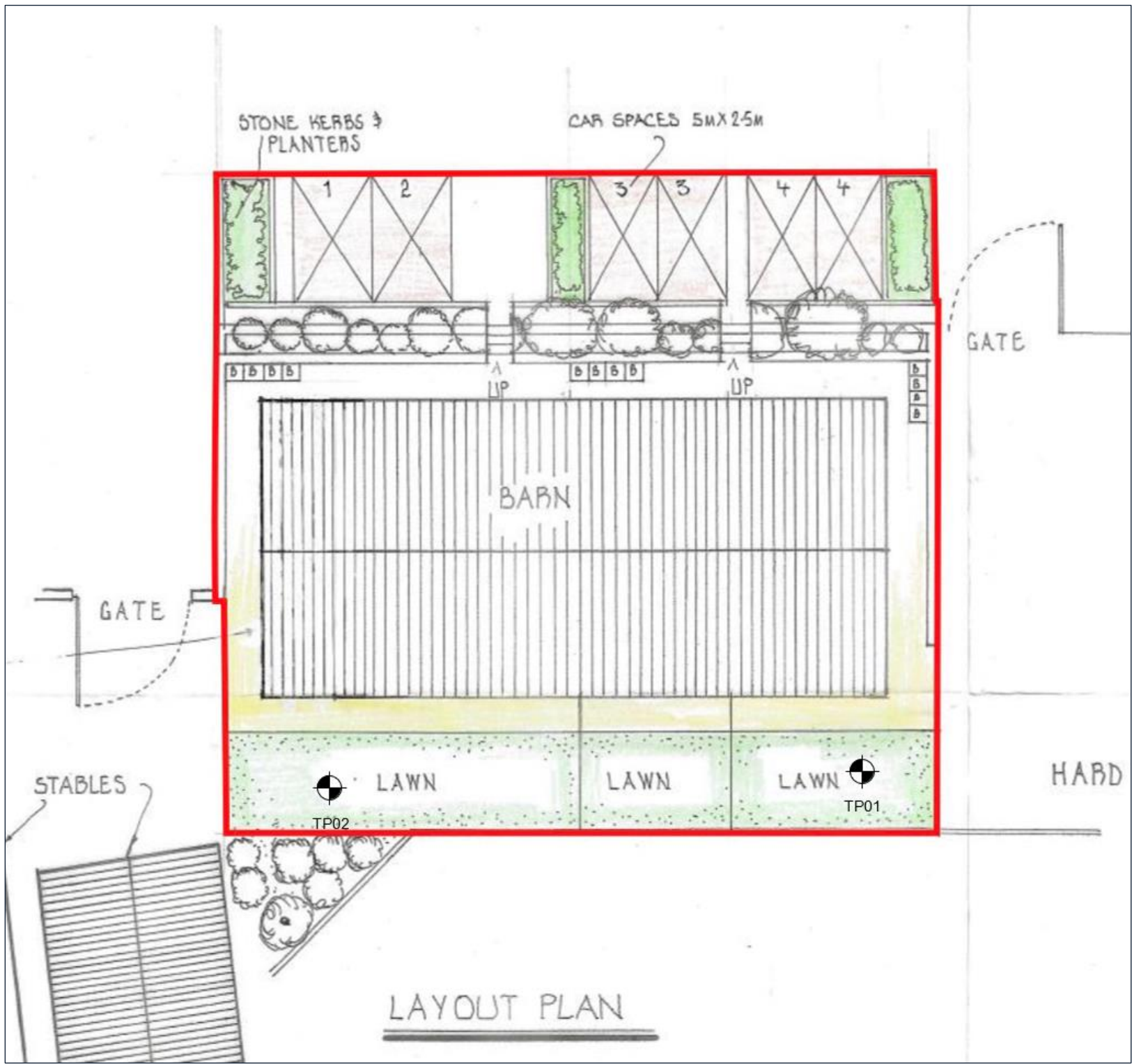
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Oakshire Environmental. Available at: <oakshireenvironmental.co.uk>.



Appendix - Site Maps & Plans	
Description	
Site location plan	
Sources	
Contains OS data © Crown copyright and database rights	
Key	
	Site boundary
	North



Appendix - Site Maps & Plans

Description

Proposed site plan showing trial pit locations

Sources

S. Ingram & Associates

Key

Site boundary

Trial pit location

North



Appendix - Site Photos

Description

Photo showing the location of trial pit TP01

Sources

Oakshire Environmental



Appendix - Site Photos

Description

Photo showing the depth of trial pit TP01

Sources

Oakshire Environmental



Appendix - Site Photos

Description

Photo showing the location of trial pit TP02

Sources

Oakshire Environmental



Appendix - Site Photos

Description

Photo showing the depth of trial pit TP02

Sources

Oakshire Environmental



Appendix - Site Photos

Description

Photo showing the depth of trial pit TP02

Sources

Oakshire Environmental

Site	Edgegate Farm, Huddersfield Road, Milnrow, OL16 3TJ		Reference	TP01	Appendix - Ground Conditions		
Samples		Description of Strata	Thickness (m)	Depth (m)	Symbol		
Depth (m)	ID						
0.30	S01	Road planings overlying blackish brown gravelly sandy CLAY with frequent road planings, gravel, brick and concrete and patches of yellow gravelly SAND (MADE GROUND)	0.20	0.20			
		Blackish brown gravelly sandy CLAY with frequent road planings, gravel, brick and concrete (MADE GROUND)	0.40	0.60			
0.80	S02						
		Blackish brown and medium brown gravelly sandy CLAY with frequent road planings, gravel, brick and concrete (MADE GROUND)	0.40	1.00			
Remarks and comments							
No groundwater identified							

Site	Edgegate Farm, Huddersfield Road, Milnrow, OL16 3TJ		Reference	TP02	Appendix - Ground Conditions		
Samples		Description of Strata	Thickness (m)	Depth (m)	Symbol		
Depth (m)	ID						
0.30	S03	Road planings overlying blackish brown gravelly sandy CLAY with frequent road planings, gravel, brick and concrete and patches of yellow gravelly SAND (MADE GROUND)	0.30	0.30			
0.80	S04						
		Blackish brown gravelly sandy CLAY with frequent road planings, gravel, brick and concrete (MADE GROUND)	0.60	0.90			
		Blackish brown and medium brown gravelly sandy CLAY with frequent road planings, gravel, brick and concrete (MADE GROUND)	1.10	2.00			
		Blackish brown slightly sandy CLAY with gravel	0.10	2.10			
Remarks and comments							
No groundwater identified, however, surface water pooling water identified due to recent heavy rain prior to sampling and the generally impermeable underlying soils							

ANALYTICAL TEST REPORT

Report Number 25-10754, issue number 1

Contract name: Concept Design Architects

Client reference: Not Supplied

Clients name: Oakshire Environmental

Clients address: Oakshire Environmental
6 Vine Close
Bottesford
Nottingham
NG13 0FW

Samples received: 03/11/2025

Analysis started: 03/11/2025

Analysis completed: 10/11/2025

Report issued: 10/11/2025

Key

U UKAS accredited test

M MCERTS & UKAS accredited test

(B) Analysis performed at Southampton Site

I/S Insufficient sample to carry out test

U/S Sample not suitable for testing

NAD No Asbestos Detected

Full key available on Information page



Approved by: Sam Rogerson
Receipt and Reporting Manager

SAMPLE INFORMATION

MCERTS (Soils):

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

% Moisture reported as MCERTS drying at 30°C

Lab ref	Sample ID	Depth (m)	Sample description	Material removed	% Removed	% Moisture
74877	S01	0.30	Brown Loamy Sand Clay with Gravel.	-	-	13.1
74878	S02	0.80	Brown Loamy Sand Clay with Gravel.	-	-	17.0
74879	S03	0.30	Brown Loamy Sand Clay with Gravel.	-	-	12.6
74880	S04	0.80	Brown Loamy Sand Clay with Gravel.	-	-	22.2

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.
For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.
Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

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

Lab ref	Sample ID	Depth (m)	Deviating	Tests (Reason for deviation)
74877	S01	0.30	N	
74878	S02	0.80	N	
74879	S03	0.30	N	
74880	S04	0.80	N	

SOILS

Lab Number					74877	74878	74879	74880
Client Reference					SOIL	SOIL	SOIL	SOIL
Sample ID					S01	S02	S03	S04
Depth (m)					0.30	0.80	0.30	0.80
Sampling Date					30/10/2025	30/10/2025	30/10/2025	30/10/2025
Test	Method	Accred	LoD	Units				
Asbestos								
Asbestos Identification	SUBCO N	SU	0	-	Chrysotile	n/t	NAD	n/t
Metals								
Arsenic	CE264	U	1.8	mg/kg	4.8	20.8	9.4	10.6
Beryllium	CE264	M	0.2	mg/kg	0.3	1.2	2.0	0.9
Cadmium	CE264	M	1.6	mg/kg	< 1.6	< 1.6	3.2	< 1.6
Chromium	CE264	U	2	mg/kg	22.5	21.8	31.2	18.3
Copper	CE264	U	1.6	mg/kg	30.7	67.9	80.1	204
Lead	CE264	U	2.3	mg/kg	26.3	143	92.9	93.6
Mercury	CE264	U	0.7	mg/kg	< 0.7	< 0.7	< 0.7	< 0.7
Nickel	CE264	M	2.1	mg/kg	30.3	33.9	51.0	22.5
Selenium	CE264	U	3	mg/kg	< 3.0	< 3.0	< 3.0	< 3.0
Vanadium	CE264	N	1.8	mg/kg	73.0	72.4	117	46.7
Zinc	CE264	M	4	mg/kg	84.8	114	113	360
Colourimetric								
Water Soluble Chromium VI	CE263	N	0.04	mg/kg	< 0.040	< 0.040	< 0.040	< 0.040
Total Monohydric Phenols	CE078	N	0.5	mg/kg	< 0.50	< 0.50	< 0.50	< 0.50
Chromium III	CE208	N	2	mg/kg	22.5	21.8	31.2	18.3
Combustion								
Moisture Content	CE001	N	0.1	%	13.1	17.0	12.6	22.2
Total Organic Carbon	CE197	M	0.1	%	3.88	6.33	5.06	5.09
Polyaromatic hydrocarbons								
Naphthalene	CE087	M	0.016	mg/kg	0.058	0.827	0.199	0.073
Acenaphthylene	CE087	M	0.015	mg/kg	0.034	0.816	0.127	< 0.015
Acenaphthene	CE087	M	0.013	mg/kg	0.033	1.16	0.746	0.270
Fluorene	CE087	U	0.013	mg/kg	0.024	1.43	0.440	0.208
Phenanthrene	CE087	M	0.014	mg/kg	0.289	12.4	3.07	1.41
Anthracene	CE087	U	0.017	mg/kg	0.096	3.63	0.997	0.320
Fluoranthene	CE087	M	0.017	mg/kg	0.732	23.1	8.32	2.00
Pyrene	CE087	M	0.016	mg/kg	0.676	20.7	6.78	1.77
Benzo(a)anthracene	CE087	U	0.012	mg/kg	0.358	10.1	3.04	0.866

SOILS

Lab Number					74877	74878	74879	74880
Client Reference					SOIL	SOIL	SOIL	SOIL
Sample ID					S01	S02	S03	S04
Depth (m)					0.30	0.80	0.30	0.80
Sampling Date					30/10/2025	30/10/2025	30/10/2025	30/10/2025
Test	Method	Accred	LoD	Units				
Chrysene	CE087	M	0.028	mg/kg	0.315	8.45	2.85	0.809
Benzo(b)fluoranthene	CE087	M	0.02	mg/kg	0.697	10.6	6.98	1.08
Benzo(k)fluoranthene	CE087	M	0.025	mg/kg	0.246	4.18	2.35	0.354
Benzo(a)pyrene	CE087	U	0.019	mg/kg	0.680	11.4	6.76	0.918
Indeno(1,2,3-cd)pyrene	CE087	M	0.019	mg/kg	0.831	8.72	6.92	0.689
Dibenzo(a,h)anthracene	CE087	M	0.017	mg/kg	0.143	1.61	1.27	0.140
Benzo(g,h,i)perylene	CE087	M	0.019	mg/kg	0.820	6.84	5.71	0.591
Total PAH(16)	CE087	N	0.28	mg/kg	6.03	126	56.5	11.5
BTEX								
Benzene	CE267	U	0.001	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	CE267	U	0.001	mg/kg	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	CE267	U	0.001	mg/kg	< 0.001	< 0.001	< 0.001	0.003
MTBE	CE267	N	0.002	mg/kg	< 0.002	< 0.002	< 0.002	< 0.002
Total BTEX	CE267	N	0.007	mg/kg	< 0.007	< 0.007	< 0.007	0.008
m,p-Xylene	CE267	U	0.002	mg/kg	< 0.002	< 0.002	< 0.002	0.003
oXylenes	CE267	U	0.002	mg/kg	< 0.002	< 0.002	< 0.002	0.002
Total Petroleum Hydrocarbons								
>C5-C6 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10
>C6-C8 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10
>C8-C10 Aliphatic (HS_1D_AL)	CE267	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	0.39
>C10-C12 Aliphatic (EH_2D_AL)	CE250	N	1	mg/kg	6.7	5.8	7.1	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	6.0	6.5	7.9	3.5
>C16-C21 Aliphatic (EH_2D_AL)	CE250	N	0.7	mg/kg	9.4	10.0	14.1	4.9
>C21-C35 Aliphatic (EH_2D_AL)	CE250	N	4	mg/kg	195	54.5	330	53.9
>C35-C40 Aliphatic (EH_2D_AL)	CE250	N	0.5	mg/kg	43.1	7.5	90.5	7.4
>C5-C7 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	< 0.010	< 0.010	< 0.010
>C7-C8 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	< 0.010	< 0.010	< 0.010
>C8-C10 Aromatic (HS_1D_AR)	CE267	N	0.01	mg/kg	< 0.010	< 0.010	< 0.010	0.019
>C10-C12 Aromatic (EH_2D_AR)	CE250	N	0.6	mg/kg	42.7	38.6	47.2	3.9
>C12-C16 Aromatic (EH_2D_AR)	CE250	N	1	mg/kg	113	117	132	14.6
>C16-C21 Aromatic (EH_2D_AR)	CE250	N	2	mg/kg	78.9	237	131	18.6

SOILS

Lab Number					74877	74878	74879	74880
Client Reference					SOIL	SOIL	SOIL	SOIL
Sample ID					S01	S02	S03	S04
Depth (m)					0.30	0.80	0.30	0.80
Sampling Date					30/10/2025	30/10/2025	30/10/2025	30/10/2025
Test	Method	Accred	LoD	Units				
>C21-C35 Aromatic (EH_2D_AR)	CE250	N	4.5	mg/kg	917	562	1070	84.2
>C35-C40 Aromatic (EH_2D_AR)	CE250	N	1.5	mg/kg	362	88.0	328	18.6
Wet Chem								
pH	CE004	M	0.1	pH units	8.4	8.3	8.5	7.5

SOIL SVOCS

Lab Number					74877	74878	74879	74880
Client Reference					SOIL	SOIL	SOIL	SOIL
Sample ID					S01	S02	S03	S04
Depth (m)					0.30	0.80	0.30	0.80
Sampling Date					30/10/2025	30/10/2025	30/10/2025	30/10/2025
Test	Method	Accred	LoD	Units				
SVOC								
Phenol	CE189	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10
Cresols	CE189	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10
Xylenols	CE189	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10
Naphthols	CE189	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10
Trimethylphenols	CE189	N	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10

METHOD DETAILS

METHOD	TESTNAME	METHOD SUMMARY	ANALYSIS BASIS
CE267	VPH in Soil	HS-GCFID	As submitted sample
CE250	GCXGC in Soil	DCM Extraction and GCxGC-FID	As submitted sample
SUBCON	Asbestos Soil	HSG248	Air Dried Sample
CE189	SVOC in solids	DCM Extraction and GCMS	As submitted sample
CE264	Metals by ICP in Soil	ICPOES	Air dried sample
CE267	BTEX in Soils	Analysis by HSGCFID	As submitted sample
CE263	ChromiumVI by Discrete Analyser in Soil	Gallery	Air dried sample
CE087	PAH in Soil	DCM Extraction and GCMS	As submitted sample
CE078	Phenols in Soil	Continuous Flow Analyser	As submitted sample
CE208	Chromium Hexavalent in Soil	Colorimetry	Air dried sample
CE197	Primacs in Soil	Primacs	Air dried sample

REPORT INFORMATION

Report No.:25-10754, issue number 1

Key

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

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

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

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

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

The results relate only to the sample received.

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

Moisture Content Calculated on a Wet Weight basis (at 30°C)

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

Where sampling was undertaken by Chemtech Environmental Limited it is outside the UKAS accreditation scope.

Methods, procedures and performance data are available on request.

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

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

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

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

'Client Reference', 'Sample ID', 'Sample Location', 'Sample Type', 'Depth', 'Sample Date' and 'Sample Time' information is provided by the customer

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

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

Unless specifically identified (noted as "(B)" in analyte name) all internal analysis performed at Durham site

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