

7 Conclusions

7.1 Contamination Assessment

A revised contamination conceptual model has been produced by LKC which is summarised in Table 7-1 below (more detailed model provided in Section 5).

Pollutant Linkage		Risk	Recommendations
1	Contaminants posing a risk to site users via dermal contact, ingestion and inhalation (of soil, dust, fibres and vegetables).	Moderate	- Remediation required in garden/soft landscaping areas.
2	Volatile contaminants posing a risk to site users via the inhalation of vapours.	Moderate (SW of site)	- Remediation required to remove or treat the hydrocarbon impacted soils in the south west of the site.
3	Gas posing a risk to buildings and site users via the migration of gas into building causing explosion and asphyxiation.	Moderate / Low	- No gas protection measures required.
4	Mobile contamination posing a risk to controlled waters via the migration through permeable strata.	Moderate / Low	- No specific groundwater remediation. Impacted perched water may need to be removed from site via tanker during excavation of the hydrocarbon hotspot.
5	Sulphate posing a risk to building via direct contact (sulphate attack).	Low	- Concrete classification of DS-1 AC-1.
6	Organic contaminants posing a risk to water pipes.	Moderate	- United Utilities Risk Assessment to be completed once remediation has been undertaken and route of new potable water pipes are known.
7	Phytotoxic metals posing a risk to flora via root uptake.	Low	- Remediation associated with PL1 will be sufficient to mitigate risks to flora

Table 8-1: Summary Risk Table.

Outline remedial recommendations are presented in Section 8.

8 Recommendations and Remedial Strategy

The recommendations provided below are considered appropriate for the site based on the site investigation work undertaken. LKC should stress that no remediation, enabling works or designing works should take place until Regulatory approval has been obtained.

8.1 Remediation and Validation Recommendations

Table 8-1 details the further works and remedial recommendations / requirements. The table shows work required post-demolition of buildings, pre-construction (i.e. during earthworks) and during / post construction.

Phase	PL	Remediation Requirements	Validation Requirements
Post-Demolition Work	1, 2, 5, 6, 7	<u>Post-demolition watching brief</u> A watching brief is recommended during the demolition of the existing buildings. This should be carried out by an appropriately qualified geo-environmental engineer. Testing and sampling may be required if the ground conditions vary significantly from those already observed.	Log of work undertaken including photographs. Details of any sampling undertaken and validation of any potential additional remedial work.
Pre-Construction	ALL	<u>Earthworks Inspections / Unexpected Contamination</u> The relevant contractors should be briefed that during development works at the site should any unusual ground conditions and / or visual or olfactory evidence of contamination (including asbestos containing material) be encountered at the site, LKC and the Local Authority should be informed, and further assessment of the material may be required. Should asbestos be identified during groundworks, precautions should be taken to ensure the safety of the construction workers and nearby land users. It would be advisable to introduce an asbestos management strategy in line with CIRIA C733⁵².	Log of work undertaken including photographs. Details of any sampling undertaken and validation of any potential additional remedial work.
	2	<u>Hydrocarbon Contamination Removal</u> Impacted soils (based on visual / olfactory evidence and the use of a PID) should be excavated and removed. Impacted soils should be placed on an impermeable surface to await removal from site (this may be subject to chemical testing to confirm suitable waste facility). The work should be done under the supervision and instruction of an environmental consultant. If all impacted ground cannot be removed and contamination remains on the ground, further remediation may need to be considered.	Details of work undertaken including photographs. Confirmatory samples of the remaining in-situ soils. Consignment notes confirming the removal of impacted soil

⁵² CIRIA (2014). "Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks". C733.

	1 and 7	Environmental Cover System As made ground is relatively deep, it is unlikely to be viable to remove the contaminated soils. Therefore, an environmental cover system is recommended. The environmental cover system should be as follows: Private Back Gardens: 600mm thick environmental cover system comprising: Either 100mm physical break layer (MOT type 1 material, 20-30mm, minimal fines) and at least 500mm comprising clean inert fill and sufficient topsoil for a growing medium. Or geotextile membrane and at least 600mm comprising clean inert fill and sufficient topsoil for a growing medium. Private Front Garden / Shared Landscaping: 300mm thick environmental cover system comprising: Either 100mm physical break layer (MOT type 1 material, 20-30mm, minimal fines) and at least 200mm comprising clean inert fill and sufficient topsoil for a growing medium. Or geotextile membrane and at least 300mm comprising clean inert fill and sufficient topsoil for a growing medium. The subsoil layer can be replaced by additional topsoil. A diagram of a typical environmental cover system is shown in Appendix G.	Measuring depth of environmental cover system using a staff and providing photographic evidence. Photographic evidence of the granular physical break or geotextile layer will also be collected. Chemical validation of imported soils: See Table 8-2.
	4	Controlled Waters In combination with the hydrocarbon contamination excavation the pumping of shallow ground water to either external tankers for removal from site or IBCs for onsite treatment and discharge to sewer under a discharge consent. Pumping should continue until the ground water runs clear and no sheen is noted.	Confirmatory testing of groundwater samples. Disposal tickets for water removed from site.
	6	Potable Water Pipes It is recommended that a United Utilities Risk Assessment is undertaken once the remediation has been undertaken and the location and depth of potable water pipes are known.	Delivery Notes of Pipe Material. Photographs of the Installed Pipe.
Other Considerations		Grubbing Out of In-Ground Structures and Removal of Tanks It is recommended that in-ground structures are grubbed out as part of the groundworks. Former below ground fuel storage tanks, fuel lines and other infrastructure will need to be removed by an appropriately qualified contractor and validation of any associated hydrocarbon contamination may be required.	
		Re-use of site won material To ensure material is compliant with appropriate waste regulations, any site won material re-used onsite should be in recourse to appropriate exemptions. A U1 and T5 exemption should be registered.	

	This will allow the following to be used onsite or brought in for use onsite (refer to guidance for types of waste that can be used ⁵³): 5,000 tonnes (c. 2,500m³) <u>treatment</u> of crushed concrete / stone. 1,000 tonnes (c. 500³) <u>use of</u> non-hazardous soil 5,000 tonnes (c. 2,500m³) <u>use of</u> clays, sand, gravel, brick, concrete, stone etc. 50,000 tonnes (c. 25,000m³) <u>use of</u> bituminous material to be used in roadways. A Materials Management Plan (MMP) with recourse to the CL:AIRE Code of Practice may be required if volumes exceed exemption limits. This must be registered <u>before</u> material movement starts onsite. If an MMP is required, this needs to be registered by a Qualified Person (QP) and there must be 'certainty of use' for any material re-used onsite or exported to site to ensure there is no 'sham recovery'. For all the above material will need to be tested at the rate and analytical suites presented in Table 9-2. Health and Safety Considerations In working with, removing or treating any contaminating material it is important that any potential risks associated with the actual site works are mitigated by good environmental management of the site during the remedial phases. Standard health and safety precautions (as per HSE guidance⁵⁴) should be adopted by all workers involved with site enabling and construction works. Asbestos Survey A Pre-Demolition and Major Refurbishment Asbestos Survey should be undertaken, and any ACMs removed and properly disposed of, prior to the demolition of the existing buildings, by a suitably qualified professional.
--	--

Table 8-1: Further work, remediation and validation requirements

Notes: See Table 5-4 for pollutant linkage (PL) details.

8.2 Validation of Subsoil / Topsoil

Chemical validation of all imported soils to be used on site in gardens and soft landscaping areas should be undertaken. Imported soils should be accompanied by a certificate of analysis and source details.

A summary of the required imported material sampling requirements is presented in Table 8-2. Ideally, the material should be sampled at source to prevent double handling if soil fails. However, where this is not possible then material imported should be segregated based on source and soil type. Validation samples should be taken prior to placement in gardens to ensure suitability for use.

⁵³ <https://www.gov.uk/guidance/waste-exemptions-using-waste>

⁵⁴ HSE (1991). "Protection of Workers and the General Public During Development of Contaminated Land" London HMSO.

Material Type	Source	Suite of Analysis	Sampling Rate*
Topsoil	Greenfield	Suite A	1 sample per 50m³
	Brownfield / Unknown	Suite B	
Subsoil	Brownfield / Unknown	Suite B	1 sample per 150m³
	Site won natural material / greenfield	Suite A	
	First Generation i.e. quarried sand (subsoil) or stone (break layer)	No testing is required. Certification of material provenance is required.	
Physical Stone Break Layer	Recycled Stone (6F2 / screened)	Suite B	1 sample per 500m³

Table 8-2: Sampling requirements for imported soils.

Notes:

Suite A - Heavy metals, pH, water soluble sulphate, speciated PAH, soil organic matter and asbestos screen.

Suite B - Heavy metals, pH, water soluble sulphate, speciated PAH, phenol, total and free cyanide, soil organic matter, asbestos screen, banded petroleum hydrocarbons (TPH CWG), BTEX, MTBE.

*Minimum sampling rate of 3 samples per source.

Any soil with visual or olfactory evidence of hydrocarbons should be rejected.

In addition, it should be ensured that the matrix of the topsoil is suitable as a growing medium and no undesirable material is present (in line with BS3882⁵⁵). LKC advise this information is provided by the supplier before material is imported onto site.

Imported material to be used in gardens will be compared against residential with plant uptake criteria (as used in the contamination risk assessment (Section 5-1)). Appropriate remedial target criteria are presented in Appendix E.

8.3 Site Completion Report

It is recommended that any remediation carried out on the site is validated by a third party and suitable documentary evidence provided in a Site Completion Report, such as photographs, consignment documents and analytical results. This should include as a minimum:

- » Details of the demolition of the existing buildings within a Pre-Demolition and Major Refurbishment Asbestos Survey.
- » Validation of the hydrocarbon hotspot removal.
- » Provision of waste transfer documents.
- » Validation of environmental cover system.
- » Verification testing of all imported soil for garden and soft landscaping areas.
- » Information on the installation of protective pipes and / or sterile trenches.
- » Details of any unexpected contamination identified onsite, suitably risk assessed and / or validated.

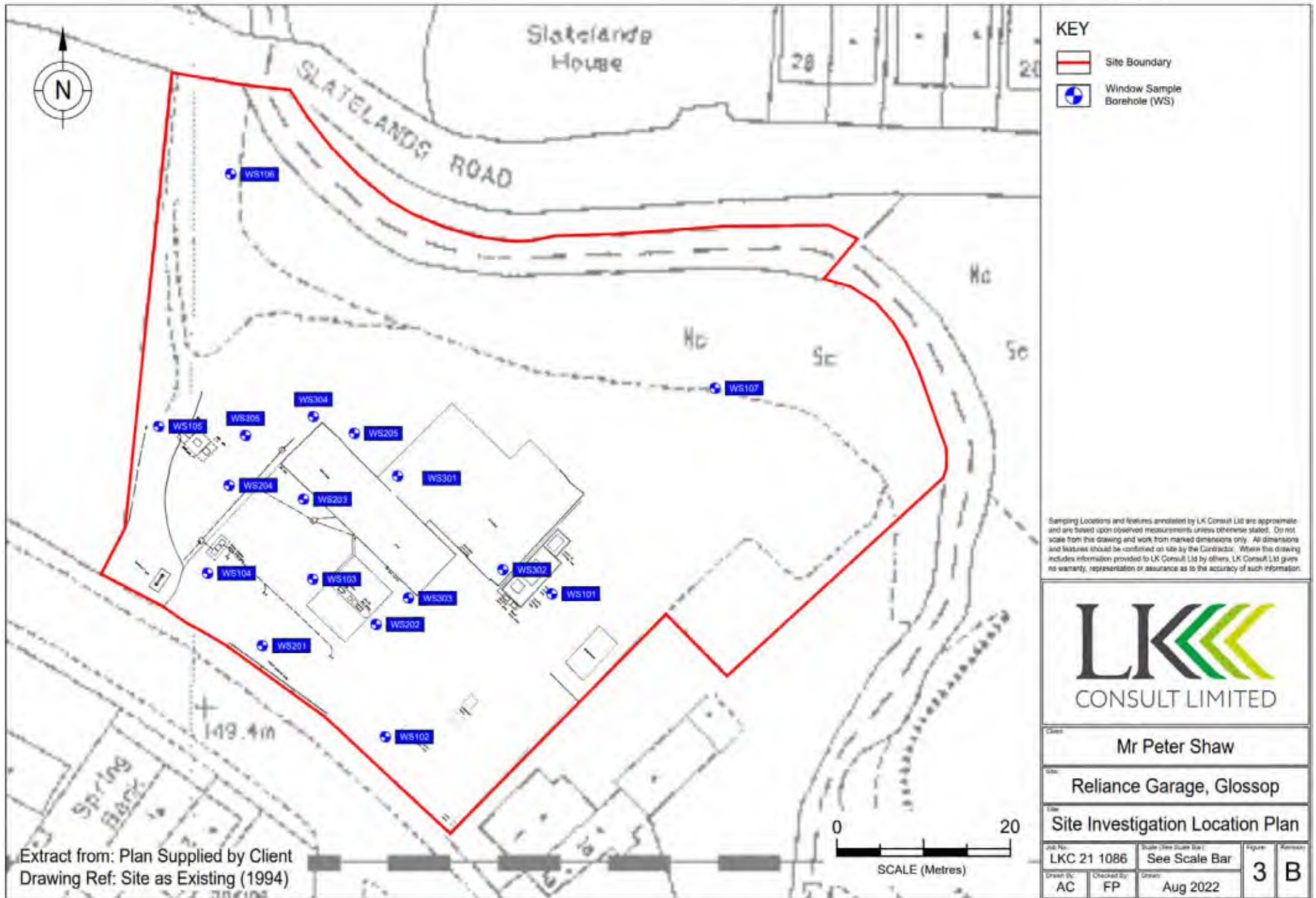
The Site Completion Report will assist the Local Authority in the discharge of any future relevant planning condition and will also be of use to solicitors acting on behalf of any prospective conveyancer who may have concerns over the former use of the site.

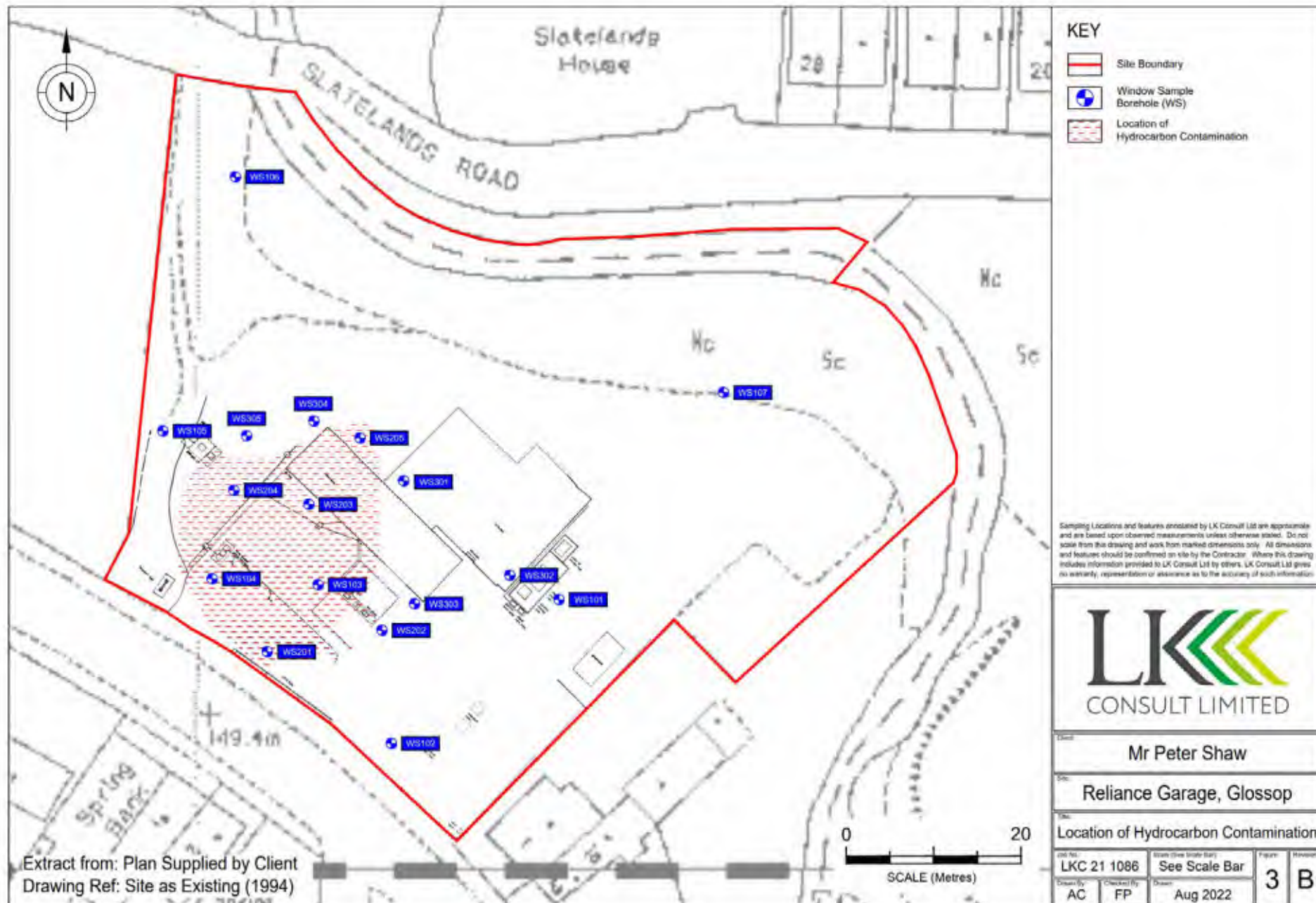
⁵⁵ BS (2015). "Specifications for Topsoil and Requirements for use." BS3882:2015.

Figures



Client: Mr Peter Shaw				File: Site Location & Boundary Plan		
Site: Reliance Garage, Glossop				Scale (see scale bar): 1:25,000 & 1:1,000 @ A4		
Job No.: LKC 21 1086	Drawn By: HM	Checked By: CH	Drawn: Mar 2021	Figure: 1	Revision:	





Appendix A

Risk Matrix

Risk Evaluation

The method for risk evaluation is a qualitative method of interpreting the output from the risk estimation stage of the assessment, based on CIRIA 552⁵⁶. It involves the classification of the:

- Magnitude of the potential consequence (severity) of the risk occurring (Table A).
- Magnitude of the probability (likelihood) of the risk occurring (Table B).

Consequence (Severity)		
Classification	Definition	Example
Severe	- Short term (acute) risk to human health likely to results in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. - Short term risk of pollution (note: water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. - Catastrophic damage to buildings/properties. - A short-term risk to a particular ecosystem, or organism forming part of such ecosystem (note: the definition of ecological systems within the Draft Circular on Contaminated Land, DETR, 2000).	- High Concentrations of cyanide on the surface of an informal recreation area. - Major spillage of contaminants from site into controlled waters. - Explosion, causing building collapse (can also equate to short term human health risk if buildings are occupied).
Medium	- Chronic damage to Human Health ('significant harm' as defined in DETR, 2000). - Pollution of sensitive water resources (note Water Resources Act contains no scope for considering significance of pollution). - A significant change in a particular ecosystem, or organism forming part of such ecosystem.	- Concentrations of a contaminant from site exceed generic, or site-specific assessment criteria. - Leaching of contaminants from a site to a major or minor aquifer (Principal and Secondary). - Death of a species within a designated nature reserve.
Mild	- Pollution of non-sensitive water resources. - Significant damage to crops, buildings, structures and services ('significant harm' as defined in DETR, 2000). - Damage to sensitive buildings/structures/services or the environment.	- Pollution of non-classified groundwater. - Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	- Harm, although not necessarily significant harm, which may result in a financial loss, or expenditure to resolve. - Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc). - Easily repairable damage to buildings, structures and services.	- The presence of contaminants at such concentrations that protective equipment is required during site works. - The loss of plants in a landscaping scheme. - Discoloration of concrete.

Table A. Classification of Consequence

Probability (Likelihood)	
Classification	Definition
High Likelihood	- There is a pollutant linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	- There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. - Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	- There is a pollutant linkage and circumstances are possible under which an event could occur. - However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	- There is a pollutant linkage, but circumstances are such that it is improbable that an event would occur in the very long term.

Table B. Classification of Probability.

⁵⁶ CIRIA C552 (2001) Contaminated Land Risk Assessment - A Guide to Good Practice.

These classifications are then compared to indicate the risk presented by each pollutant linkage (Table C). It is important that this classification is only applied where there is a possibility (which can range from high likelihood to unlikely) of a pollutant linkage existing.

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

Table C. Comparison of Consequence against Probability

Once the risk has been determined the corresponding action can be assessed (Table D).

Risk	Action Required
Very High Risk	- There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. - This risk, if realised, is likely to result in a substantial liability. - Urgent investigation (if not already undertaken) and remediation are likely to be required.
High Risk	- Harm is likely to arise to a designated receptor from an identified hazard. - Realisation of the risk is likely to present a substantial liability. - Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short term and are likely over the longer term.
Moderate Risk	- It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either 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. - Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low Risk	- It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst 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.

Table D. Description of the Classification and Likely Action Required.

Where a very low risk is identified no specific remediation is required.

Where a low risk is identified, some form of remediation may be required depending on the pollutant linkage, the type and concentration of contaminants present and the proposed development.

Where there is a moderate/low risk identified, an assessment will be undertaken to establish what category the pollutant linkage will fall into.

Where LKC identifies a moderate or higher risk, remediation or further investigation work is recommended.

Appendix B

Profile Logs

Excavation Method

Drive-in Windowless Sample
driven to 5.45mbgl.

Dimensions
Location

402942 E 393534 N

Ground Level (mOD)

155.00

Dates

11/03/2021-
12/03/2021

Client

Mr Peter Shaw

Project Contractor

D&I

Job
Number

LKC 21 1086

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.40-1.00	ES1 PID=1.6ppm			154.95	0.05	MADE GROUND: Tarmacadam.			
					(0.35)				
				154.60	0.40	MADE GROUND: Grey sandy GRAVEL with frequent tarmacadam, concrete fragments. Sand is fine to medium. Gravel is fine to coarse and angular to subangular comprising limestone.			
1.20-1.65	SPT N=7		1,2/3,2,1,1		(1.00)	MADE GROUND: Yellowish brown mottled sandy silty GRAVEL with occasional subangular sandstone cobbles, tarmacadam fragments, rare brick fragments, clinker. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone.			
1.40-1.60	ES2 PID=0.8ppm			153.60	1.40				
					(0.20)				
1.60-2.00	B3			153.40	1.60	Soft consistency brown slightly gravelly sandy silty CLAY. Sand is fine to medium. Gravel is fine to medium and subangular comprising sandstone.			
					(0.40)				
				153.00	2.00	Brown slightly clayey gravelly SAND. Sand is fine to coarse. Gravel is fine to medium and rounded to subrounded comprising sandstone and quartzite.			
2.00-2.45	SPT N=27		Water strike(1) at 2.00m. 4,5/6,7,7,7		(1.50)	Medium dense brown and yellow slightly clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse and angular to subangular comprising sandstone.			
3.00-3.45	SPT N=18		2,2/3,5,5,5						
3.50-4.00	B4			151.50	3.50	Firm to stiff consistency high strength brown slightly gravelly slightly sandy silty CLAY. Sand is fine to medium. Gravel is fine to medium and subangular comprising sandstone and mudstone.			
4.00	PP 110.36kPa								
4.00-4.45	SPT N=15		2,3/3,4,4,4		(1.95)				
4.00-4.45	X5								
5.00	PP 98.1kPa								
5.00-5.45	SPT N=14		3,3/3,3,4,4						
5.00-5.45	X6								
				149.55	5.45	Complete at 5.45m			

Remarks

Borehole collapse at 3.00mbgl.
Groundwater strike at 2.00mbgl.
Location accurate to 5.00-8.00m.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>
Scale
(approx)

1:40

Logged
By

HM

Figure No.

lkc 21 1086.WS101

Excavation Method

Drive-in Windowless Sample
driven to 5.45mbgl.

Dimensions
Location

402922 E 393517 N

Ground Level (mOD)

155.00

Dates

11/03/2021-
12/03/2021

Client

Mr Peter Shaw

Project Contractor

D&I

Job
Number

LKC 21 1086

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.20-0.50	ES1 PID=0.9ppm			154.90	(0.10)	MADE GROUND: Tarmacadam.			
0.50-1.00	ES2 PID=0.6ppm			154.50	(0.40)	MADE GROUND: Black slightly silty sandy GRAVEL with frequent ash, occasional concrete fragments, rare brick fragments. Sand is fine to medium. Gravel is fine to coarse and subrounded to angular comprising sandstone, mudstone and limestone.			
1.20-1.65	SPT N=17		7,8/8,3,3,3	153.80	(0.70)	MADE GROUND: Brown very gravelly very sandy CLAY with frequent coal fragments, occasional ash, rare brick fragments. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone. Less gravelly with depth.			
1.40-2.00	ES3 PID=0.7ppm				(0.80)	MADE GROUND: Grey and white mottled slightly silty fine to coarse GRAVEL of predominantly concrete fragments. Possible sandstone cobble at 1.20-1.30mbgl.			
2.00-2.45	SPT N=14		4,5/4,4,3,3	153.00	2.00	Medium dense brown and yellowish brown mottled slightly clayey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse and rounded to subrounded comprising sandstone and quartzite.			
2.00-2.50	ESB4 PID=0.5ppm				(1.00)				
3.00	PP 85.83kPa X5		Water strike(1) at 3.00m.	152.00	3.00	Stiff consistency high strength greyish brown slightly gravelly slightly sandy silty CLAY. Sand is fine to medium. Gravel is fine to medium and subangular to subrounded comprising sandstone and mudstone. Less gravelly with depth.			
3.00-3.45	SPT N=14		3,3/3,3,4,4						
4.00	PP 98.1kPa SPT N=22 X6		3,4/4,5,6,7		(2.45)				
4.00-4.45									
5.00	PP 98.1kPa SPT N=42 X7		6,7/10,10,10,12						
5.00-5.45									
5.00-5.45				149.55	5.45	Complete at 5.45m			

Remarks

Water strike at 3.00mbgl.
Borehole collapsing from 3.00mbgl.
Location accurate to 5.00-8.00m.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>
Scale
(approx)

1:40

Logged
By

HM

Figure No.

LKC 21 1086.WS102

Excavation Method

Drive-in Windowless Sample
driven to 5.45mbgl.

Dimensions
Location

402914 E 393535 N

Ground Level (mOD)

155.00

Dates

11/03/2021-
12/03/2021

Client

Mr Peter Shaw

Project Contractor

D&I

Job
Number
LKC 21 1086

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.80	ES1 PID=13.8ppm			154.95	0.05	MADE GROUND: Tarmacadam.			
					(0.75)	MADE GROUND: Black silty sandy GRAVEL with frequent tarmacadam fragments, ash and occasional coal fragments. Sand is fine to coarse. Gravel is fine to coarse and subrounded to angular comprising mudstone and sandstone.			
0.80-1.20	ES2 PID=4.8ppm			154.20	0.80				
					(0.40)	MADE GROUND: Dark brown and yellow mottled gravelly sandy CLAY with occasional ash, brick fragments. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone.			
1.20-1.65	SPT N=6		2,2/1,1,2,2	153.80	1.20				
1.20-2.00	ES3 PID=542ppm					MADE GROUND: Dark grey slightly gravelly slightly sandy silty CLAY with occasional ash, organic material and rare brick fragments. Sand is fine to medium. Gravel is fine to medium and subangular comprising sandstone. Strong hydrocarbon odour and oily sheen.			
					(1.50)				
2.00-2.45	SPT N=41		Water strike(1) at 2.00m. 6,7/7,10,10,14						
				152.30	2.70				
2.70-3.00	ES4 PID=480ppm					MADE GROUND: Black clayey very sandy GRAVEL with occasional ash. Sand is fine to coarse. Gravel is fine to coarse and subangular to subrounded comprising sandstone and mudstone. Strong hydrocarbon odour and oily sheen.			
3.00-3.45	SPT N=9		Water strike(2) at 3.00m. 1,1/1,2,3,3		(1.00)				
				151.30	3.70				
3.70-4.00	ESB5 PID=0.9ppm					Stiff consistency medium to high strength brown slightly gravelly silty CLAY. Gravel is fine to medium and subangular comprising mudstone.			
4.00	PP 73.57kPa		2,2/3,3,3,4						
4.00-4.45	SPT N=13				(1.75)				
4.00-4.45	X6								
				149.55	5.45	Complete at 5.45m			
5.00	PP 98.1kPa		1,1/2,3,4,4						
5.00-5.45	SPT N=13								
5.00-5.45	X7								

Remarks

Borehole collapsing from 3.00mbgl.
Strong hydrocarbon odour and oily sheen between 1.20-3.70mbgl.
Groundwater strike at 2.00mbgl and 3.00mbgl.
Location accurate to 5.00-8.00mbgl.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>
Scale
(approx)

1:40

Logged
By

HM

Figure No.

LKC 21 1086.WS103

Excavation Method

Drive-in Windowless Sample
driven to 5.45mbgl.

Dimensions
Location

402902 E 393536 N

Ground Level (mOD)

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086

Project Contractor

D&I

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.20-1.00	ES1 PID=5.4ppm			154.95	0.05	MADE GROUND: Tarmacadam.			
					(1.05)	MADE GROUND: Grey to dark brown gravelly silty SAND with frequent ash, occasional clinker, brick fragments and rare metal fragments. Sand is fine to coarse. Gravel is fine to coarse and angular to subrounded comprising sandstone and mudstone.			
1.10-2.00 1.20-1.65	ES2 PID=71.9ppm SPT N=6		2,3/3,1,1,1	153.90	1.10	MADE GROUND: Dark grey slightly gravelly slightly sandy silty CLAY with occasional brick fragments, rare rootlets, metal fragments. Sand is fine to medium. Gravel is fine to medium and subrounded comprising sandstone. Moderate hydrocarbon odour and oil.			
					(1.20)				
2.00-2.45	SPT N=11		Water strike(1) at 2.00m. 1,2/2,3,3,3	152.70	2.30	MADE GROUND: Dark grey gravelly clayey SAND with rare brick fragments. Sand is fine to coarse. Gravel is fine to coarse and rounded to subangular comprising sandstone and mudstone. Moderate hydrocarbon odour noted.			
2.30-3.00	ES3 PID=782ppm				(0.80)				
3.00-3.45	SPT N=7		Water strike(2) at 3.00m. 1,1/1,2,2,2	151.90	3.10	Firm to stiff consistency medium to high strength brown slightly gravelly silty CLAY. Gravel is fine to coarse and rounded to subangular comprising sandstone and mudstone.			
3.40-4.00	ESB4 PID=0.5ppm								
4.00 4.00-4.45 4.00-4.45	PP 67.43kPa SPT N=19 X5		2,3/4,5,5,5		(2.35)				
5.00 5.00-5.45 5.00-5.45	PP 98.01kPa SPT N=45 X6		7,8/10,12,12,11	149.55	5.45	Complete at 5.45m			

Remarks

Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>
Location accurate to 5.00-8.00m.
Groundwater strikes at 2.00-3.00mbgl.
Borehole collapsing from 3.00mbgl.

Scale
(approx)

1:40

Logged
By

HM

Figure No.

lkc 21 1086.WS104

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS105**Excavation Method**Drive-in Windowless Sample
driven to 5.45mbgl.**Dimensions****Location**

402896 E 393553 N

Ground Level (mOD)

156.00

Client

Mr Peter Shaw

Job
Number

LKC 21 1086

Dates11/03/2021-
12/03/2021**Project Contractor**

D&I

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.30	ES1 PID=0.2ppm				(0.40)	MADE GROUND: Brown gravelly sandy silty CLAY with occasional brick fragments. Sand is fine to medium. Gravel is fine to coarse and angular to subangular comprising sandstone.		
0.40-1.00	ESB2 PID=0.1ppm			155.60	0.40	Soft to firm consistency low strength brown to grey slightly gravelly slightly sandy silty CLAY with rare subangular sandstone cobbles. Sand is fine to medium. Gravel is fine to coarse and subangular to subrounded comprising sandstone.		
1.20-1.65	PP 30.66kPa SPT N=0 X3		1,0/0,0,0,0		(2.30)			
1.70-2.00	B4							
2.00-2.45	PP 24.53kPa SPT N=8 X5		5,3/5,1,1,1			Grey gravelly sandy silty CLAY between 2.00-2.70mbgl.		
3.00-3.45	PP 61.31kPa X6 SPT N=12		Water strike(1) at 3.00m. 2,3/3,3,3,3	153.30	2.70	Stiff consistency medium to high strength brown slightly gravelly CLAY. Gravel is fine to medium and subangular comprising sandstone and mudstone.		V1
4.00-4.45	PP 94.01kPa SPT N=19 X7		4,4/4,4,5,6		(2.75)			
5.00-5.45	PP 98.1kPa SPT N=27 X8		6,6/6,7,7,7	150.55	5.45	Complete at 5.45m		

RemarksGroundwater strike at 3.00mbgl.
Borehole stable.
Location accurate to 5.00-8.00m.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>
Installation of monitoring well not possible due to flooding at surface level.**Scale**
(approx)

1:40

Logged
By

HM

Figure No.

LKC 21 1086.WS105

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS106**Excavation Method**

Drive-in Windowless Sampler

Dimensions**Ground Level (mOD)**

156.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location**

402905 E 393582 N

Dates11/03/2021-
12/03/2021**Project Contractor**

D&I

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.40	ES1 PID=0.1ppm				(0.40)	MADE GROUND: Brown slightly gravelly sandy silty CLAY with occasional brick fragments, rootlets, rare plastic and subangular sandstone cobbles. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone.		
0.40-1.00	ESB2 PID=0.1ppm			155.60	0.40	Stiff consistency medium to high strength brown gravelly sandy CLAY with rare coal fragments. Sand is fine to medium. Gravel is fine to coarse and angular to subangular comprising sandstone.		
1.20 1.20-1.65 1.20-1.65 1.50	PP 73.58kPa SPT N=9 X3 PP 85.84kPa		2,2/2,2,2,3		(2.02)			
1.70-1.90	B4					Very gravelly below 1.90mbgl.		
2.00-2.42	SPT 50/270		9,9/11,15,15,9	153.58	2.42	Refusal on sandstone cobble at 2.42mbgl. Complete at 2.42m		

RemarksNo monitoring installation.
Borehole dry and stable.
Location accurate to 5.00-8.00m.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>**Scale**
(approx)

1:40

Logged
By

HM

Figure No.

LKC 21 1086.WS106

Excavation Method

Drive-in Windowless Sample
driven to 5.45mbgl.

Dimensions
Location

402961 E 393557 N

Ground Level (mOD)

158.00

Dates

11/03/2021-
12/03/2021

Client

Mr Peter Shaw

Project Contractor

D&I

Job
Number

LKC 21 1086

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.10-0.90	ES1 PID=0.9ppm				(0.90)	MADE GROUND: Dark grey slightly clayey sandy GRAVEL with occasional concrete fragments, rare ash and clay inclusions. Sand is fine to medium. Gravel is fine to coarse and subangular to angular comprising sandstone and mudstone.			
0.90-1.20	ES2 PID=0.7ppm			157.10	0.90				
1.20-1.65	SPT N=8		2,2/2,2,2,2	156.70	1.30	MADE GROUND: Dark brown and orange mottled gravelly sandy CLAY with frequent ash, concrete fragments, rare wood fragments. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone.			
1.20-1.90	ES3 PID=0.6ppm				(0.80)	MADE GROUND: Brown and black mottled gravelly silty SAND with frequent ash. Sand is fine to medium. Gravel is fine to medium and subrounded to subangular comprising sandstone and mudstone.			
2.00-2.50	ESB4 PID=0.3ppm		Water strike(1) at 2.00m.	155.90	2.10	Dark brown mottled CLAY with occasional ash between 1.90-2.00mbgl. Possible sandstone cobble between 2.00--2.10mbgl.			
2.00-2.45	SPT N=36		6,8/10,10,8,8	155.50	2.50	Medium dense brown sandy clayey GRAVEL. Sand is fine to coarse. Gravel is fine to coarse and subrounded to angular comprising sandstone.			
					(0.50)				
3.00-3.45	SPT N=27		4,4/6,7,7,7	155.00	3.00	Medium dense brown and orange mottled silty SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse and subangular to subrounded comprising sandstone.			
3.00-3.45	X5					Stiff consistency high strength brown slightly gravelly sandy CLAY. Sand is fine to medium. Gravel is fine to medium and subangular comprising mudstone. Less sand content with depth.			
4.00	PP 98.1kPa		3,7/7,7,7,6		(2.45)				
4.00-4.45	SPT N=27								
4.00-4.45	X6								
5.00	PP 110.36kPa		7,7/7,8,8,9						
5.00-5.45	SPT N=32								
5.00-5.45	X7								
				152.55	5.45	Complete at 5.45m			

Remarks

Groundwater strike at 2.00mbgl.
Borehole collapsing from 3.00mbgl.
Location accurate to 5.00-8.00mbgl.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>
Scale
(approx)

1:40

Logged
By

HM

Figure No.

LKC 21 1086.WS107

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS201**Excavation Method**Drive-in Windowless Sample
driven to 4.0mbgl.**Dimensions****Ground Level (mOD)**

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location****Dates**

26/04/2021

Project Contractor

D&I

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.20-1.20	ES1			154.95	0.05	MADE GROUND: Tarmacadam.		
					(0.85)	MADE GROUND: Black silty sandy GRAVEL with ash and occasional coal fragments. Sand is fine to coarse. Gravel is fine to coarse and subrounded to angular comprising mudstone and sandstone.		
				154.10	0.90			
				153.90	(0.20)	MADE GROUND: Dark orange brown gravelly sandy CLAY with occasional ash, brick fragments. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone.		
1.80-2.00	ES2				(0.90)	MADE GROUND: Dark grey brown slightly gravelly slightly sandy silty CLAY. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone. Slight hydrocarbon odour.		
				153.00	2.00	Dark grey brown gravelly silty SAND. Sand is fine to coarse. Gravel is fine to coarse and subangular to subrounded comprising sandstone and mudstone. Moderate hydrocarbon odour.		Σ1
2.50-2.50	ES3		Water strike(1) at 2.20m.		(1.20)			
				151.80	3.20	Stiff consistency dark grey brown silty CLAY. No hydrocarbon odour.		
					(0.80)			
3.50-3.50	ES4			151.00	4.00	Complete at 4.00m		

RemarksSlight to moderate hydrocarbon odour between 1.1-3.20mbgl.
Groundwater strike at 2.20mbgl.**Scale**
(approx)

1:40

Logged
By

CH

Figure No.

LKC 21 1086.WS103

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS202**Excavation Method**Drive-in Windowless Sample
driven to 3.0mbgl.**Dimensions****Ground Level (mOD)**

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location****Dates**

26/04/2021

Project Contractor

D&I

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.50-1.50	ES1			154.95	0.05	MADE GROUND: Tarmacadam.		
					(0.85)	MADE GROUND: Black silty sandy GRAVEL with ash and occasional coal fragments. Sand is fine to coarse. Gravel is fine to coarse and subrounded to angular comprising mudstone and sandstone.		
				154.10	(0.80)	MADE GROUND: Dark orange brown gravelly sandy CLAY with occasional ash, brick fragments. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone.		
				154.00	(1.00)			
					(0.80)	MADE GROUND: Dark grey brown slightly gravelly slightly sandy silt. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone. Slight hydrocarbon odour.		
				153.20	1.80			
					(0.60)	Dark orange brown slightly gravelly silty SAND. Sand is fine to coarse. Gravel is fine to coarse and subangular to subrounded comprising sandstone and mudstone. No hydrocarbon odour.		
				152.60	2.40			
					(0.60)	Stiff consistency orange brown silty CLAY. No hydrocarbon odour.		
				152.00	3.00	Complete at 3.00m		

RemarksSlight hydrocarbon odour between 1.0-1.8mbgl.
Borehole dry.**Scale**
(approx)

1:40

Logged
By

CH

Figure No.

LKC 21 1086.WS103

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS203**Excavation Method**Drive-in Windowless Sample
driven to 4.0mbgl.**Dimensions****Ground Level (mOD)**

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location****Dates**

26/04/2021

Project Contractor

D&I

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.50-1.50	ES1			154.95	0.05	MADE GROUND: Tarmacadam.		
					(0.75)	MADE GROUND: Black silty sandy GRAVEL with ash and occasional coal fragments. Sand is fine to coarse. Gravel is fine to coarse and subrounded to angular comprising mudstone and sandstone.		
				154.20	0.80	MADE GROUND: Dark orange brown gravelly sandy CLAY with occasional ash, brick fragments. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone.		
				153.90	1.10	MADE GROUND: Dark grey brown slightly gravelly slightly sandy silty CLAY. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone. Moderate hydrocarbon odour.		
					(1.10)			
			Water strike(1) at 2.20m.	152.80	2.20	Dark grey slightly silty coarse SAND. Moderate hydrocarbon odour.		▽1
				152.60	2.40	Dark grey brown and light grey brown sandy GRAVEL of sandstone and mudstone. Slight hydrocarbon odour.		
					(0.80)			
				151.80	3.20	Stiff consistency dark grey brown silty CLAY. No hydrocarbon odour.		
					(0.80)			
3.50-3.50	ES2			151.00	4.00	Complete at 4.00m		

RemarksSlight to moderate hydrocarbon odour between 1.1-3.20mbgl.
Groundwater strike at 2.20mbgl.**Scale**
(approx)

1:40

Logged
By

CH

Figure No.

LKC 21 1086.WS103

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS204**Excavation Method**Drive-in Windowless Sample
driven to 3.0mbgl.**Dimensions****Ground Level (mOD)**

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location****Dates**

26/04/2021

Project Contractor

D&I

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
2.20-2.20	ES1		Water strike(1) at 2.20m.	154.95	0.05	MADE GROUND: Tarmacadam.		
					(1.05)	MADE GROUND: Black silty sandy GRAVEL with ash and occasional coal fragments. Sand is fine to coarse. Gravel is fine to coarse and subrounded to angular comprising mudstone and sandstone.		
				153.90	1.10	MADE GROUND: Dark grey brown slightly gravelly slightly sandy silt. Sand is fine to medium. Gravel is fine to coarse and subangular comprising sandstone. Moderate hydrocarbon odour.		
					(0.80)			
				153.10	1.90	Dark grey brown sandy GRAVEL. Sand is fine to medium. Gravel is fine to medium and subangular comprising sandstone. Moderate hydrocarbon odour.		Σ1
					(0.70)			
				152.40	2.60	Stiff consistency dark grey brown silty CLAY. No hydrocarbon odour.		
					(0.40)			
				152.00	3.00	Complete at 3.00m		

RemarksSlight to moderate hydrocarbon odour between 1.1-2.6mbgl.
Groundwater strike at 1.8mbgl.**Scale**
(approx)

1:40

Logged
By

CH

Figure No.

LKC 21 1086.WS103

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS205**Excavation Method**Drive-in Windowless Sample
driven to 2.7mbgl.**Dimensions****Ground Level (mOD)**

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location****Dates**

26/04/2021

Project Contractor

D&I

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
1.70-1.70	ES1		Water strike(1) at 1.70m.	154.95 154.80 154.50	0.05 (0.15) (0.20) (0.30) 0.50	MADE GROUND: Tarmacadam. MADE GROUND: Dark grey and black gravel of ash. MADE GROUND: Dark brown and orange gravelly clay. Gravel is fine to medium and subangular of brick, concrete and sandstone. MADE GROUND: Dark brownish grey slightly sandy gravelly silt. Sand is fine to medium. Gravel is fine to medium and subangular of sandstone. Becoming sandier. Slight hydrocarbon odour.	                                       	
				152.40 152.30	2.60 (2.70)	Light orange brown sandy GRAVEL. Sand is fine to medium. Gravel is fine to coarse and subrounded to subangular of sandstone and mudstone. No hydrocarbon odour. Complete at 2.70m		

RemarksSlight hydrocarbon odour between 1.6-2.6mbgl.
Groundwater strike at 2.0mbgl.
Borehole refused on sand and gravel at 2.7mbgl**Scale**
(approx)

1:40

Logged
By

CH

Figure No.

LKC 21 1086.WS103

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS301**Excavation Method**

Drive-in Windowless Sampler

Dimensions

101mm to 3.00m

Ground Level (mOD)

155.00

Client

Mr Peter Shaw

Job Number
LKC 21 1086**Location** (Observed measurements)

402924 E 393548 N

Dates

25/08/2022

Project Contractor

D&I

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.40-1.40	ESD PID: 0.2ppm			154.85 154.60	(0.15) 0.15 (0.25) 0.40	MADE GROUND: CONCRETE. 6mm rebar present in mesh at 0.11mbgl. MADE GROUND: Light brown sandy GRAVEL with rare ash and brick fragments. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.	 	
1.40-2.00	ESD PID: 0.5ppm			153.60	(1.00) 1.40	MADE GROUND: Black gravelly silty SAND with frequent ash and clinker. Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded comprising ash and clinker.		
2.00-2.40	ESD PID: 0.2ppm		Water strike(1) at 2.00m.	153.00	(0.60) 2.00	MADE GROUND: Dark greish brown slightly gravelly sandy SILT with rare ash, clinker and brick fragments. Sand is fine to coarse. Gravel is fine, subangular to subrounded comprising ash, clinker and brick fragments.		
2.40-3.00	ESD PID: 0.2ppm			152.60	(0.40) 2.40	Orangish brown gravelly sandy SILT. Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded comprising various lithologies.		
4.00-5.00	D PID: 0.3ppm				(2.60) 5.00	Firm consistency brown gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising sandstone and various other lithologies.		
				150.00		Complete at 5.00m		

RemarksGroundwater encountered at 2.00mbgl.
Borehole was stable.
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Grid reference estimated using www.gridreferencefinder.com**Scale (approx)**

1:40

Logged By

FP

Figure No.

LKC 21 1086.WS301

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS302**Excavation Method**

Drive-in Windowless Sampler

Dimensions

101mm to 2.00m

Ground Level (mOD)

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location** (Observed measurements)

402935 E 393537 N

Dates

25/08/2022

Project Contractor

D&I

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20-1.00	ESD PID: 3.2ppm			154.85 154.80	(0.15) 0.15 0.20	MADE GROUND: CONCRETE. 6mm rebar encountered at 0.11mbgl.		
					(0.80)	MADE GROUND: Light brown sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
				154.00	1.00	MADE GROUND: Dark brown gravelly sandy SILT with occasional ash, clinker and brick fragments. Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded comprising various lithologies.		
					(1.00)	Cobbles struck at 1.00mbgl pushed down to 2.00mbgl.		
2.00-2.30	ESD PID: 2.1ppm			153.00 152.70	2.00 (0.30) 2.30	Grey sandy silty GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
						Complete at 2.30m		

RemarksSampler refusal at 2.30mbgl.
Cobble encountered at 1.00mbgl and pushed down to 2.00mbgl.
Borehole was dry and stable.
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Grid reference estimated using www.gridreferencefinder.com**Scale**
(approx)

1:40

Logged
By

FP

Figure No.

LKC 21 1086.WS302

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**

Reliance Garage, Glossop

Number
WS303**Excavation Method**

Drive-in Windowless Sampler

Dimensions

101mm to 2.00m

Ground Level (mOD)

155.00

Client

Mr Peter Shaw

Job
Number
LKC 21 1086**Location** (Observed measurements)

402923 E 393533 N

Dates

25/08/2022

Project Contractor

D&I

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-1.00	ESD PID: 3.7ppm			154.95 154.90	0.05 0.10	MADE GROUND: TARMACADAM		
					(0.90)	MADE GROUND: Light brown sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
1.00-1.30	ESD PID: 2.9ppm			154.00	1.00	MADE GROUND: Dark brown gravelly sandy SILT with frequent ash, occasional brick fragments, rare glass, clinker and metal. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
1.30-1.80	ESD PID: 63.7ppm			153.70	1.30	MADE GROUND: Dark brown gravelly sandy SILT. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
					(0.50)	MADE GROUND: Greyish brown gravelly silty SAND with hydrocarbon odour. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
1.80-2.80	ESD PID: 2.7ppm			153.20	1.80	Brown sandy silty GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
2.30-3.00	D PID: 1.0ppm		Water strike(1) at 2.00m.		(1.20)			
				152.00	3.00	Complete at 3.00m		

RemarksHydrocarbon odour noted between 1.30 - 1.80mbgl.
Grid reference estimated using www.gridreferencefinder.com
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Borehole was stable.
Groundwater encountered at 2.00mbgl.**Scale**
(approx)

1:40

Logged
By

FP

Figure No.

LKC 21 1086.WS303

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**
Reliance Garage, Glossop**Number**
WS304**Excavation Method**
Drive-in Windowless Sampler**Dimensions**
101mm to 2.00m**Ground Level (mOD)**
155.00**Client**
Mr Peter Shaw**Job Number**
LKC 21 1086**Location** (Observed measurements)
402911 E 393554 N**Dates**
25/08/2022**Project Contractor**
D&I**Sheet**
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-1.00	ESD PID: 0.5ppm			154.90	(0.10)	MADE GROUND: Black sandy GRAVEL with frequent tarmacadam fragments. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising tarmacadam fragments.		
					(0.90)	MADE GROUND: Brown gravelly sandy CLAY with rare coal and brick fragments. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
				154.00	1.00	Dark brown gravelly sandy SILT with low cobble content. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies. Cobbles comprising sandstone.		
2.00-3.00	ESD PID: 0.1ppm				(1.30)			
				152.70	2.30	Slightly greenish grey silty SAND. Sand is fine to coarse.		
					(0.70)			
				152.00	3.00	Greyish brown gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded comprising various lithologies.		
3.00-4.00	ESD PID: 0.4ppm				(1.00)			
				151.00	4.00	Grey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising sandstone and various other lithologies.		
					(1.00)			
				150.00	5.00	Complete at 5.00m		

RemarksBorehole was dry and stable.
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Grid reference estimated using www.gridreferencefinder.com**Scale (approx)**

1:40

Logged By

FP

Figure No.

LKC 21 1086.WS304

**LK CONSULT LTD**Eton Business Park, Eton Hill Road, Radcliffe, M26 2ZS
Tel: 0161 763 7200 web: www.thelkgroup.com**Site**
Reliance Garage, Glossop**Number**
WS305

Excavation Method Drive-in Windowless Sampler	Dimensions 101mm to 2.00m	Ground Level (mOD) 155.00	Client Mr Peter Shaw	Job Number LKC 21 1086
	Location (Observed measurements) 402903 E 393552 N	Dates 25/08/2022	Project Contractor D&I	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.60-1.00	ESD PID: 0.9ppm			154.80	(0.20) 0.20	MADE GROUND: Black sandy GRAVEL with frequent tarmacadam fragments. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising tarmacadam fragments.		
				154.40	(0.40) 0.60	MADE GROUND: Pinkish brown sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
					(1.50)	MADE GROUND: Brown gravelly sandy SILT with rare ash, coal and brick fragments. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
2.10-2.80	ESD PID: 4.0ppm			152.90	2.10	Orangish greenish brown gravelly silty SAND. Sand is fine to coarse. Gravel is fine to coarse, subangular to subrounded comprising various lithologies.		
					(0.70)			
2.80-3.50	D PID: 1.9ppm			152.20	2.80	Greyish brown gravelly sandy silty CLAY. Sand is fine to coarse. Gravel is fine to medium, subangular to subrounded comprising various lithologies.		
					(1.20)			
				151.00	4.00	Complete at 4.00m		

RemarksBorehole was dry and stable.
Elevation estimated using www.freemaptools.com/elevation-finder.htm
Grid reference estimated using www.gridreferencefinder.com**Scale (approx)**

1:40

Logged By

FP

Figure No.

LKC 21 1086.WS305

Appendix C

Certificates of Analysis – Soil



Final Report

Report No.: 21-08180-1
Initial Date of Issue: 22-Mar-2021
Client LK Consult
Client Address: Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Manchester
Lancashire
M26 2ZS
Contact(s): Chris Hughes
Contaminated Land
Project LKC 2 1086 Reliance Garage, Glossop

Quotation No.:		Date Received:	16-Mar-2021
Order No.:		Date Instructed:	16-Mar-2021
No. of Samples:	10		
Turnaround (Wkdays):	5	Results Due:	22-Mar-2021
Date Approved:	22-Mar-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKC 2 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:				21-08180	21-08180	21-08180	21-08180	21-08180	21-08180	21-08180	21-08180
Quotation No.:	Chemtest Sample ID.:				1160237	1160239	1160242	1160243	1160245	1160246	1160247	1160249
Order No.:	Client Sample Ref.:				WS101	WS102	WS102	WS103	WS103	WS103	WS103	WS104
	Client Sample ID.:				ES1	ES1	ES3	ES1	ES3	ES4	ES5	ES2
	Sample Location:				WS101	WS102	WS102	WS103	WS103	WS103	WS103	WS104
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.40	0.20	2.00	0.00	1.20	2.70	3.70	1.10
	Bottom Depth (m):				1.00	0.50	2.50	0.80	2.00	3.00	4.00	2.00
	Date Sampled:				11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021
	Asbestos Lab:				COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-		Fibres/Clumps	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected		Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-		Stereo Microscopy	-	-	-	-
Asbestos by Gravimetry	U	2192	%	0.001				<0.001				
Total Asbestos	U	2192	%	0.001				<0.001				
Moisture	N	2030	%	0.020	6.6	4.4	12	10	31	13	19	35
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	None	None	Stones	None	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Sand	Clay	Clay
Chromatogram (TPH)	N			N/A					See Attached			See Attached
pH	M	2010		4.0	8.6	8.8	9.0	10.3	6.6			6.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40					1.6			1.8
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.021	< 0.010	0.099	0.065	0.021			0.18
Cyanide (Free)	M	2300	mg/kg	0.50					< 0.50			< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50					< 0.50			0.90
Arsenic	M	2450	mg/kg	1.0	7.3	7.3		19	29			30
Cadmium	M	2450	mg/kg	0.10	0.25	0.35		1.0	0.86			1.5
Chromium	M	2450	mg/kg	1.0	16	16		41	34			32
Copper	M	2450	mg/kg	0.50	46	18		62	98			4400
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10		0.18	0.80			0.47
Nickel	M	2450	mg/kg	0.50	15	24		61	39			49
Lead	M	2450	mg/kg	0.50	82	27		91	240			510
Selenium	M	2450	mg/kg	0.20	< 0.20	< 0.20		< 0.20	1.2			2.1
Vanadium	U	2450	mg/kg	5.0	21	40		48	43			32
Zinc	M	2450	mg/kg	0.50	60	41		130	530			310
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50		< 0.50	< 0.50			< 0.50
Organic Matter	M	2625	%	0.40	3.3	9.5		11	7.1	< 0.40	1.1	11
Diesel Present	N	2670		N/A					False	True	False	True
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0					< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0					< 1.0	< 1.0	< 1.0	11
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0					76	23	< 1.0	260
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0					100	16	< 1.0	710
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0					55	24	< 1.0	1900
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0					100	22	< 1.0	820

Results - Soil

Project: LKC 2 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:				21-08180	21-08180	21-08180	21-08180	21-08180	21-08180	21-08180	21-08180	21-08180
Quotation No.:	Chemtest Sample ID.:				1160237	1160239	1160242	1160243	1160245	1160246	1160247	1160249	
Order No.:	Client Sample Ref.:				WS101	WS102	WS102	WS103	WS103	WS103	WS103	WS104	
	Client Sample ID.:				ES1	ES1	ES3	ES1	ES3	ES4	ES5	ES2	
	Sample Location:				WS101	WS102	WS102	WS103	WS103	WS103	WS103	WS104	
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top Depth (m):				0.40	0.20	2.00	0.00	1.20	2.70	3.70	1.10	
	Bottom Depth (m):				1.00	0.50	2.50	0.80	2.00	3.00	4.00	2.00	
	Date Sampled:				11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	
	Asbestos Lab:				COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD									
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0					320	34	< 1.0	49000	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0					< 1.0	< 1.0	< 1.0	6700	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0					650	120	< 5.0	59000	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0					< 1.0	< 1.0	< 1.0	< 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0					44	< 1.0	< 1.0	49	
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0					250	9.7	< 1.0	26	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0					350	15	< 1.0	21	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0					91	24	< 1.0	31	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0					67	25	< 1.0	65	
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0					420	170	< 1.0	15000	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0					< 1.0	< 1.0	< 1.0	13000	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0					1200	250	< 5.0	28000	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0					1900	370	< 10	88000	
Benzene	M	2760	µg/kg	1.0					20	18	< 1.0	< 1.0	
Toluene	M	2760	µg/kg	1.0					< 1.0	< 1.0	< 1.0	< 1.0	
Ethylbenzene	M	2760	µg/kg	1.0					8100	230	4.4	2.2	
m & p-Xylene	M	2760	µg/kg	1.0					31000	1800	< 1.0	< 1.0	
o-Xylene	M	2760	µg/kg	1.0					11	12	< 1.0	2.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0					< 1.0	< 1.0	< 1.0	< 1.0	
Naphthalene	M	2800	mg/kg	0.10	0.48	< 0.10		3.8	< 0.10			1.1	
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10		0.78	< 0.10			0.14	
Acenaphthene	M	2800	mg/kg	0.10	0.22	< 0.10		5.4	0.13			0.57	
Fluorene	M	2800	mg/kg	0.10	0.16	< 0.10		4.7	0.32			0.65	
Phenanthrene	M	2800	mg/kg	0.10	1.3	0.16		51	0.98			3.0	
Anthracene	M	2800	mg/kg	0.10	0.29	< 0.10		17	0.34			0.66	
Fluoranthene	M	2800	mg/kg	0.10	1.8	0.30		100	1.3			4.7	
Pyrene	M	2800	mg/kg	0.10	1.6	0.30		97	1.1			< 0.10	
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.75	< 0.10		53	0.66			2.4	
Chrysene	M	2800	mg/kg	0.10	0.71	< 0.10		44	0.69			2.3	
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.91	< 0.10		54	0.92			3.4	
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.39	< 0.10		22	0.34			1.1	
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.77	< 0.10		46	0.70			2.6	
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.60	< 0.10		30	0.77			2.2	
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	0.18	< 0.10		5.6	0.15			0.41	
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.56	< 0.10		25	0.62			2.5	
Total Of 16 PAH's	N	2800	mg/kg	2.0	11	< 2.0		560	9.0			28	

Results - Soil

Project: LKC 2 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:		21-08180	21-08180	21-08180	21-08180	21-08180	21-08180	21-08180	21-08180
Quotation No.:	Chemtest Sample ID.:		1160237	1160239	1160242	1160243	1160245	1160246	1160247	1160249
Order No.:	Client Sample Ref.:		WS101	WS102	WS102	WS103	WS103	WS103	WS103	WS104
	Client Sample ID.:		ES1	ES1	ES3	ES1	ES3	ES4	ES5	ES2
	Sample Location:		WS101	WS102	WS102	WS103	WS103	WS103	WS103	WS104
	Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):		0.40	0.20	2.00	0.00	1.20	2.70	3.70	1.10
	Bottom Depth (m):		1.00	0.50	2.50	0.80	2.00	3.00	4.00	2.00
	Date Sampled:		11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021	11-Mar-2021
	Asbestos Lab:		COVENTRY	COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD						
Total Phenols	M	2920	mg/kg	0.30				< 0.30		< 0.30

Results - Soil

Project: LKC 2 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:				21-08180	21-08180
Quotation No.:	Chemtest Sample ID.:				1160251	1160252
Order No.:	Client Sample Ref.:				WS104	WS105
	Client Sample ID.:				ES4	ES1
	Sample Location:				WS104	WS105
	Sample Type:				SOIL	SOIL
	Top Depth (m):				3.40	0.00
	Bottom Depth (m):				4.00	0.30
	Date Sampled:				11-Mar-2021	12-Mar-2021
	Asbestos Lab:				COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD		
ACM Type	U	2192		N/A	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-
Asbestos by Gravimetry	U	2192	%	0.001		
Total Asbestos	U	2192	%	0.001		
Moisture	N	2030	%	0.020	18	22
Soil Colour	N	2040		N/A	Brown	Brown
Other Material	N	2040		N/A	None	Stones
Soil Texture	N	2040		N/A	Clay	Sand
Chromatogram (TPH)	N			N/A		
pH	M	2010		4.0	8.9	7.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40		
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010	< 0.010
Cyanide (Free)	M	2300	mg/kg	0.50		
Cyanide (Total)	M	2300	mg/kg	0.50		
Arsenic	M	2450	mg/kg	1.0		11
Cadmium	M	2450	mg/kg	0.10		0.74
Chromium	M	2450	mg/kg	1.0		25
Copper	M	2450	mg/kg	0.50		86
Mercury	M	2450	mg/kg	0.10		0.29
Nickel	M	2450	mg/kg	0.50		29
Lead	M	2450	mg/kg	0.50		110
Selenium	M	2450	mg/kg	0.20		0.45
Vanadium	U	2450	mg/kg	5.0		31
Zinc	M	2450	mg/kg	0.50		120
Chromium (Hexavalent)	N	2490	mg/kg	0.50		< 0.50
Organic Matter	M	2625	%	0.40	1.1	2.6
Diesel Present	N	2670		N/A	False	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	

Results - Soil

Project: LKC 2 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:				21-08180	21-08180
Quotation No.:	Chemtest Sample ID.:				1160251	1160252
Order No.:	Client Sample Ref.:				WS104	WS105
	Client Sample ID.:				ES4	ES1
	Sample Location:				WS104	WS105
	Sample Type:				SOIL	SOIL
	Top Depth (m):				3.40	0.00
	Bottom Depth (m):				4.00	0.30
	Date Sampled:				11-Mar-2021	12-Mar-2021
	Asbestos Lab:				COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD		
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	
Benzene	M	2760	µg/kg	1.0	2.2	
Toluene	M	2760	µg/kg	1.0	< 1.0	
Ethylbenzene	M	2760	µg/kg	1.0	7.2	
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	
o-Xylene	M	2760	µg/kg	1.0	1.2	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	
Naphthalene	M	2800	mg/kg	0.10		0.14
Acenaphthylene	N	2800	mg/kg	0.10		0.25
Acenaphthene	M	2800	mg/kg	0.10		0.67
Fluorene	M	2800	mg/kg	0.10		0.75
Phenanthrene	M	2800	mg/kg	0.10		9.9
Anthracene	M	2800	mg/kg	0.10		2.8
Fluoranthene	M	2800	mg/kg	0.10		14
Pyrene	M	2800	mg/kg	0.10		11
Benzo[a]anthracene	M	2800	mg/kg	0.10		5.2
Chrysene	M	2800	mg/kg	0.10		4.5
Benzo[b]fluoranthene	M	2800	mg/kg	0.10		5.5
Benzo[k]fluoranthene	M	2800	mg/kg	0.10		2.0
Benzo[a]pyrene	M	2800	mg/kg	0.10		4.6
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10		3.1
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10		0.50
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10		2.6
Total Of 16 PAH's	N	2800	mg/kg	2.0		68

Results - Soil

Project: LKC 2 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:		21-08180	21-08180
Quotation No.:	Chemtest Sample ID.:		1160251	1160252
Order No.:	Client Sample Ref.:		WS104	WS105
	Client Sample ID.:		ES4	ES1
	Sample Location:		WS104	WS105
	Sample Type:		SOIL	SOIL
	Top Depth (m):		3.40	0.00
	Bottom Depth (m):		4.00	0.30
	Date Sampled:		11-Mar-2021	12-Mar-2021
	Asbestos Lab:		COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD
Total Phenols	M	2920	mg/kg	0.30

TPH Chromatogram on Soil Sample: 1160245

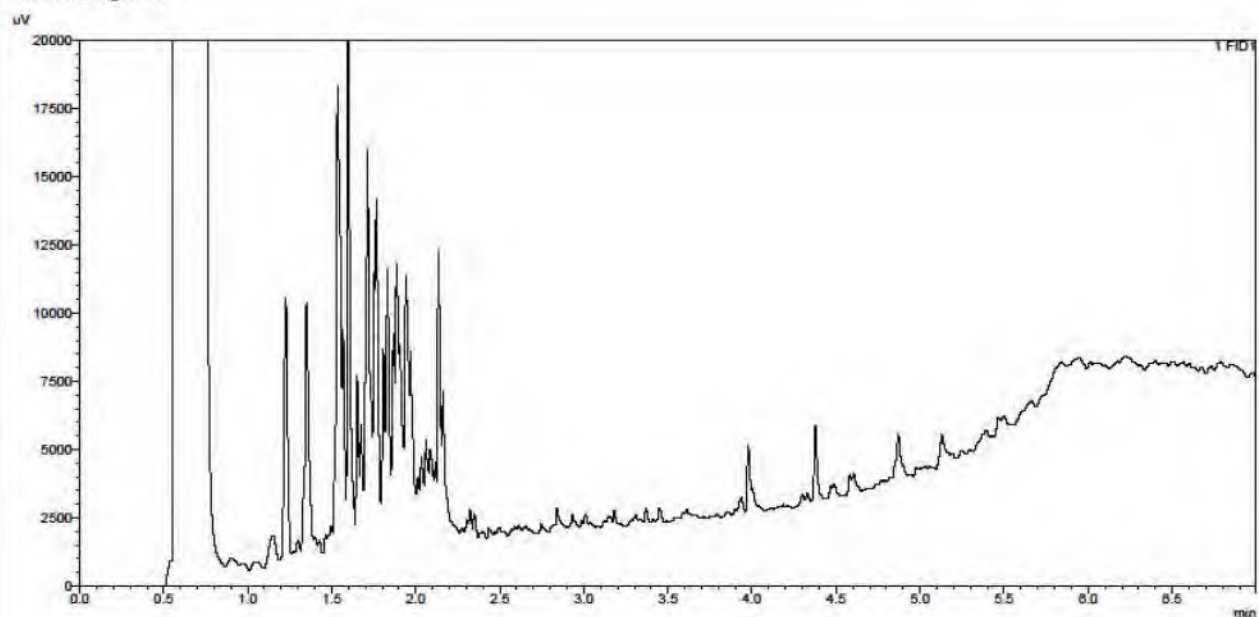
<Sample Information>

Sample Name : 1160245 21-08180
Data Filename : 2021-03-17_17032021_1160245 21-08180_037.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 19
Date Acquired : 17/03/2021 18:57:11
Date Processed : 17/03/2021



Chemtest

<Chromatogram>



TPH Chromatogram on Soil Sample: 1160249

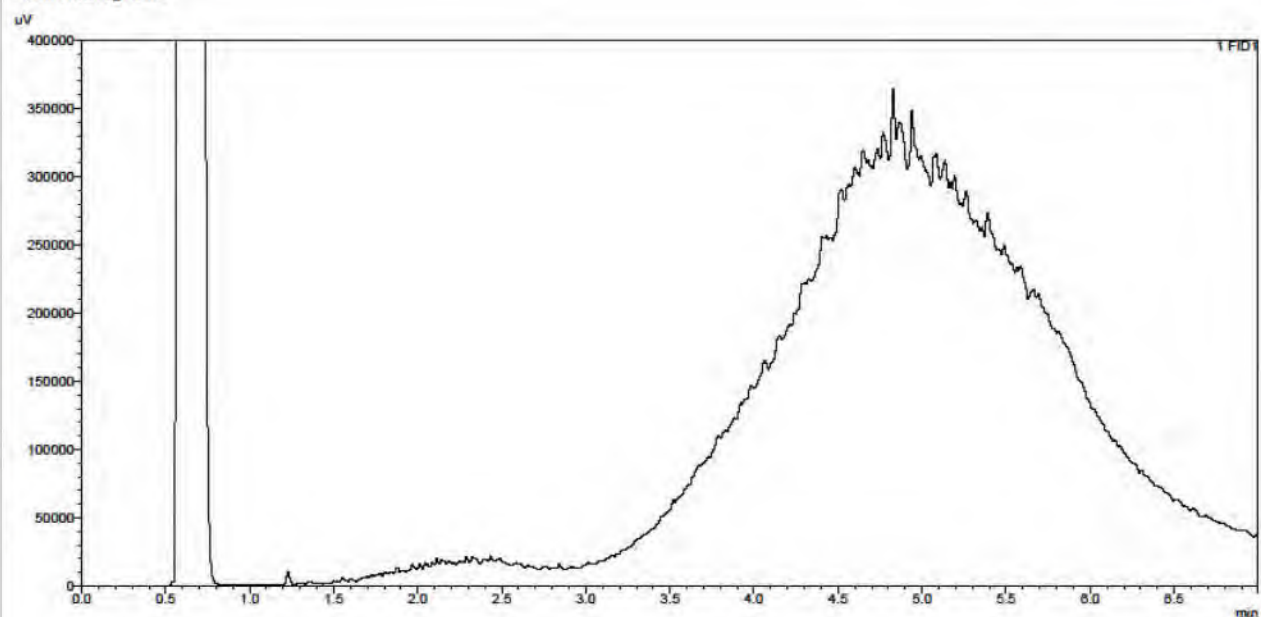
<Sample Information>

Sample Name : 1160249 21-08180
Data Filename : 2021-03-17_17032021_1160249 21-08180_029.gcd
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 15
Date Acquired : 17/03/2021 18:06:49
Date Processed : 22/03/2021



Chemtest

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-08180	1160245	S	WS103	WS103	ES3	1.20	No	Kerosene
21-08180	1160246	S	WS103	WS103	ES4	2.70	Yes	Kerosene and Weathered Diesel
21-08180	1160247	S	WS103	WS103	ES5	3.70	No	N/A
21-08180	1160249	S	WS104	WS104	ES2	1.10	Yes	Heavy Oil and Weathered Diesel
21-08180	1160251	S	WS104	WS104	ES4	3.40	No	N/A

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com



Final Report

Report No.: 21-13880-1
Initial Date of Issue: 05-May-2021
Client LK Consult
Client Address: Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Manchester
Lancashire
M26 2ZS
Contact(s): Chris Hughes
Contaminated Land
Project LKC 21 1086 Reliance Garage,
Glossop

Quotation No.:	Date Received:	28-Apr-2021
Order No.:	Date Instructed:	28-Apr-2021
No. of Samples: 8		
Turnaround (Wkdays): 5	Results Due:	05-May-2021
Date Approved: 05-May-2021		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Soil

Project: LKC 21 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:				21-13880	21-13880	21-13880	21-13880	21-13880	21-13880	21-13880	21-13880
Quotation No.:	Chemtest Sample ID.:				1188941	1188942	1188943	1188944	1188945	1188946	1188947	1188948
	Client Sample ID.:				WS201	WS201	WS201	WS202	WS203	WS203	WS204	WS205
	Sample Location:				WS201	WS201	WS201	WS202	WS203	WS203	WS204	WS205
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				1.80	2.50	3.50	1.50	1.50	3.50	2.20	1.70
	Bottom Depth (m):				2.00	2.50	3.50	1.50	1.50	3.50	2.20	1.70
	Date Sampled:				26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	16	13	17	18	33	14	16	14
Soil Colour	N	2040		N/A	Grey	Brown	Brown	Black	Black	Brown	Black	Brown
Other Material	N	2040		N/A	Stones	Stones	None	None	Stones	None	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Sand	Clay	Sand	Sand	Clay	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached			See Attached				
pH	M	2010		4.0	8.0			8.0				
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40			< 0.40				
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010			< 0.010				
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50			< 0.50				
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50			< 0.50				
Arsenic	M	2450	mg/kg	1.0	6.2			5.5				
Cadmium	M	2450	mg/kg	0.10	0.27			0.26				
Chromium	M	2450	mg/kg	1.0	25			20				
Copper	M	2450	mg/kg	0.50	26			18				
Mercury	M	2450	mg/kg	0.10	< 0.10			< 0.10				
Nickel	M	2450	mg/kg	0.50	28			22				
Lead	M	2450	mg/kg	0.50	30			22				
Selenium	M	2450	mg/kg	0.20	0.24			< 0.20				
Vanadium	U	2450	mg/kg	5.0	27			22				
Zinc	M	2450	mg/kg	0.50	98			58				
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50			< 0.50				
Organic Matter	M	2625	%	0.40	1.2	0.55	1.4	2.1	9.7	0.78	< 0.40	1.6
Diesel Present	N	2670		N/A	False	False	False	False	False	False	False	False
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	58	< 1.0	< 1.0	84	< 1.0	150	68
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	24	100	< 1.0	< 1.0	35	< 1.0	220	280
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	45	120	< 1.0	< 1.0	< 1.0	< 1.0	450	680
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	95	< 1.0	< 1.0	< 1.0	< 1.0	450	720
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	64	< 1.0	< 1.0	< 1.0	71	< 1.0	170	220
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	130	370	< 5.0	< 5.0	190	< 5.0	1400	2000
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Results - Soil

Project: LKC 21 1086 Reliance Garage, Glossop

Client: LK Consult	Chemtest Job No.:				21-13880	21-13880	21-13880	21-13880	21-13880	21-13880	21-13880	21-13880
Quotation No.:	Chemtest Sample ID.:				1188941	1188942	1188943	1188944	1188945	1188946	1188947	1188948
	Client Sample ID.:				WS201	WS201	WS201	WS202	WS203	WS203	WS204	WS205
	Sample Location:				WS201	WS201	WS201	WS202	WS203	WS203	WS204	WS205
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				1.80	2.50	3.50	1.50	1.50	3.50	2.20	1.70
	Bottom Depth (m):				2.00	2.50	3.50	1.50	1.50	3.50	2.20	1.70
	Date Sampled:				26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021	26-Apr-2021
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	25	84	< 1.0	< 1.0	230	< 1.0	320	170
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	37	220	< 1.0	< 1.0	170	< 1.0	510	670
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	180	< 1.0	< 1.0	46	< 1.0	560	950
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	440	770
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	550	620
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	62	480	< 5.0	< 5.0	440	< 5.0	2400	3200
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	200	850	< 10	< 10	630	< 10	3800	5200
Benzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	6.9	< 1.0	38	< 1.0	74	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	41	< 1.0	23	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	32	40	200	9.8	6300	150
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	19	8400	380
o-Xylene	M	2760	µg/kg	1.0	39	< 1.0	< 1.0	< 1.0	74	< 1.0	190	13
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.5	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10			1.4				
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10			< 0.10				
Acenaphthene	M	2800	mg/kg	0.10	< 0.10			0.64				
Fluorene	M	2800	mg/kg	0.10	< 0.10			0.94				
Phenanthrene	M	2800	mg/kg	0.10	0.25			3.1				
Anthracene	M	2800	mg/kg	0.10	< 0.10			0.86				
Fluoranthene	M	2800	mg/kg	0.10	0.44			2.4				
Pyrene	M	2800	mg/kg	0.10	0.29			1.6				
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.21			0.87				
Chrysene	M	2800	mg/kg	0.10	0.27			0.77				
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.25			0.75				
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10			0.42				
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.17			0.77				
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.14			0.38				
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10			< 0.10				
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.12			0.36				
Total Of 16 PAH's	N	2800	mg/kg	2.0	2.1			15				
Total Phenols	M	2920	mg/kg	0.10	0.76			< 0.10				

TPH Chromatogram on Soil Sample: 1188941

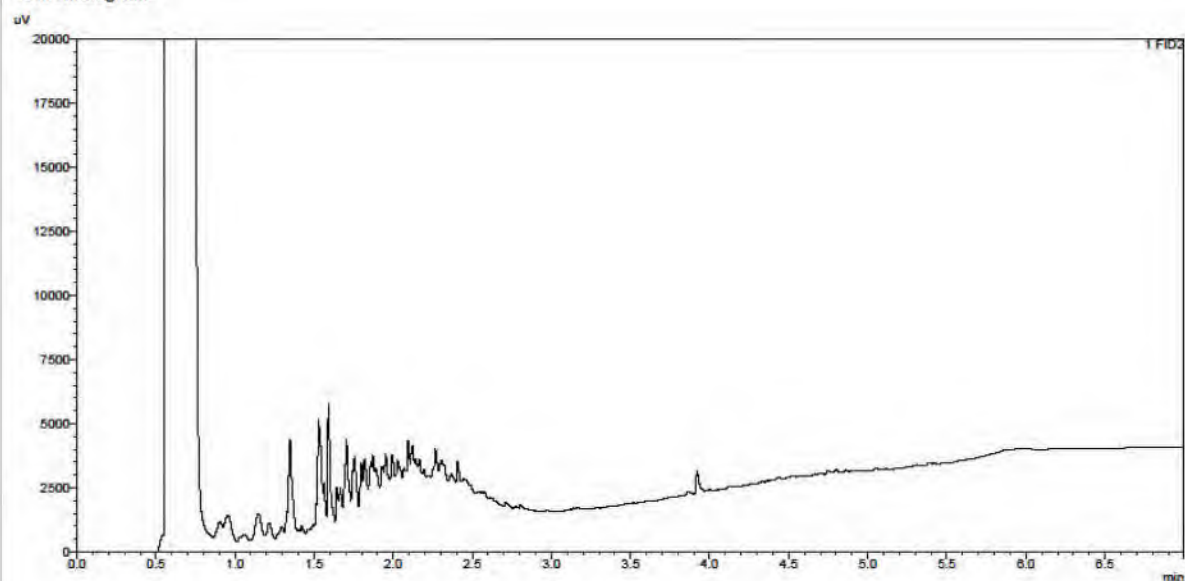
<Sample Information>

Sample Name : 1188941 21-13880
Data Filename : 29 April 2021_26042021_1188941 21-13880_072.god
Method Filename : TPH 12m Fast OSv2.gcm
Sample # : 111
Date Acquired : 30/04/2021 00:54:20
Date Processed : 30/04/2021



Chemtest

<Chromatogram>



TPH Chromatogram on Soil Sample: 1188944

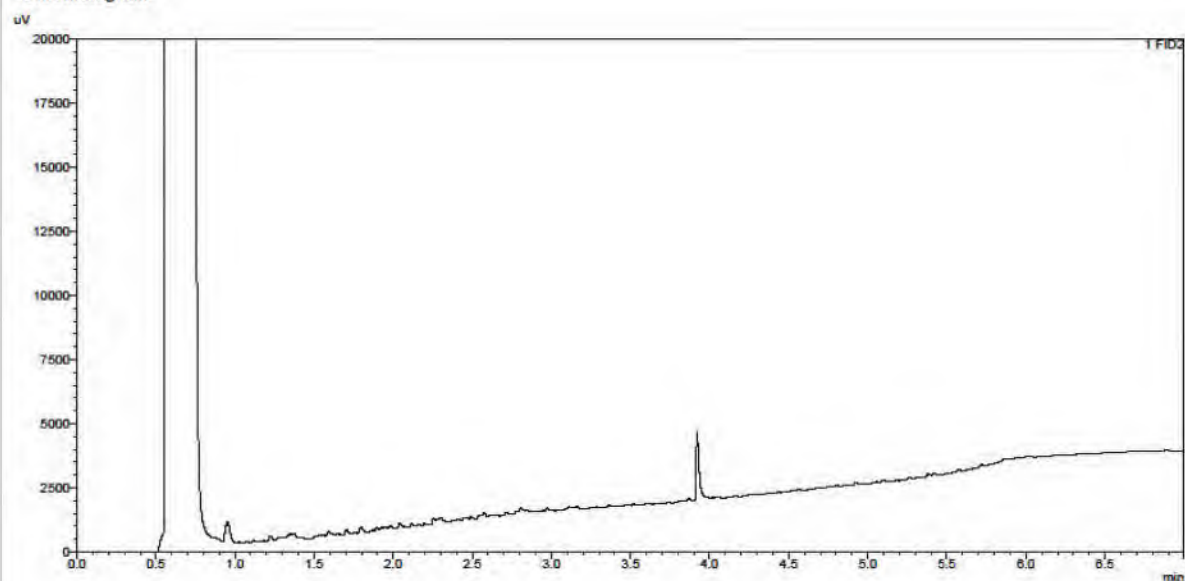
<Sample Information>

Sample Name : 1188944 21-13880
Data Filename : 29 April 2021_26042021_1188944 21-13880_078.god
Method Filename : TPH 12m Fast OSv2.gcm
Sample #: 114
Date Acquired : 30/04/2021 01:32:23
Date Processed : 30/04/2021



Chemtest

<Chromatogram>



TPH Interpretation

Job	Sample	Matrix	Location	Sample Ref	Sample ID	Sample Depth (m)	Gasoline / Diesel Present	TPH Interpretation
21-13880	1188941	S	WS201		WS201	1.80	No	Kerosene
21-13880	1188942	S	WS201		WS201	2.50	No	Kerosene
21-13880	1188943	S	WS201		WS201	3.50	No	N/A
21-13880	1188944	S	WS202		WS202	1.50	No	N/A
21-13880	1188945	S	WS203		WS203	1.50	No	Kerosene
21-13880	1188946	S	WS203		WS203	3.50	No	N/A
21-13880	1188947	S	WS204		WS204	2.20	No	Kerosene
21-13880	1188948	S	WS205		WS205	1.70	No	Kerosene

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.com