

British Geological Survey

Norwest Holst Soil Engineering Ltd.

Borehole No.

1

Contract No. F6141

BOREHOLE LOG

8399 1201

Location Bury and Rochdale Old Road Sewer

Sheet 1 of 1

Client Metropolitan Borough of Rochdale

Chainage

Method of Boring Percussion

Ground Level 134.085 m.A.O.D.

Diameter of Borehole 150 mm

Date 16/10/84

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Type of Sample

- Is S.P.T. ☐ Undisturbed
 Ic. C.P.T. ☐ Vane
 O Jar ☐ Water
 ● Bulk ☐ Piezometer

Remarks (Observations of Ground Water etc.)

Borehole dry
Standpipe installed at 4.00m

Description of Strata	Legend	Depth Below G.L. (m)	O.D. Level (m)	Casing Depth at Sampling	Sampling and Coring	"N"/R.O.D. %	Daily Progress
MADE GROUND: Tarmac and stone fill		1.00	133.1				
MADE GROUND: Grey mottled sandy clay		1.40	132.7				
Medium dense brown and yellow mottled silty clayey SAND with gravel and occasional cobbles		3.50	130.6	150mm to 4.00m	1.50 2.50 3.00	13 22 26	
Dense brown clayey sandy COBBLES		4.50	129.6		4.00	40	

APPENDIX D

COAL AUTHORITY REPORT



The Coal
Authority

Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

TACK LEA WORKS
BURY & ROCHDALE OLD ROAD
BURY
GREATER MANCHESTER



Date of enquiry: 08 June 2016
Date enquiry received: 08 June 2016
Issue date: 08 June 2016

Our reference: 51001180602001
Your reference: 88327429_2 |

CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Client name

LANDMARK INFORMATION GROUP LIMITED

Enquiry address

TACK LEA WORKS, BURY & ROCHDALE OLD ROAD,
BURY, GREATER MANCHESTER

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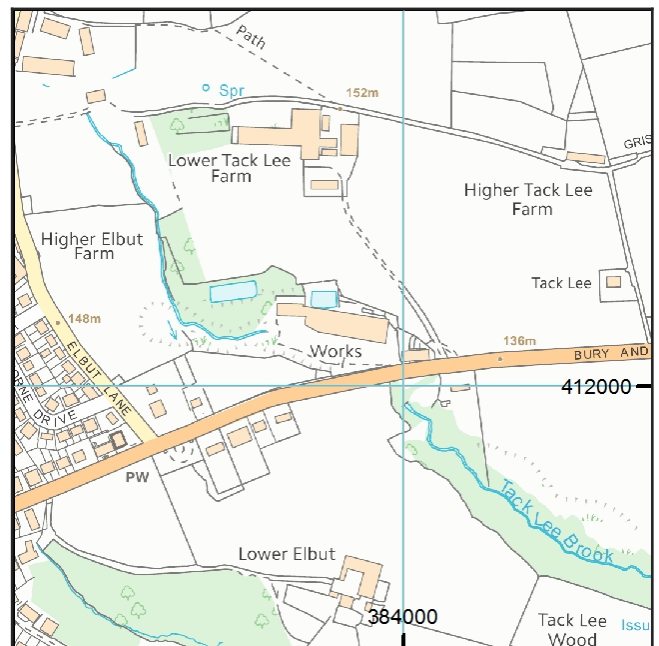
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Approximate position of property



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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	No
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	No
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No
15	Information from the Cheshire Brine Subsidence Compensation Board	No

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is not within a surface area that could be affected by past underground mining.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

There are no known coal mine entries within, or within 20 metres of, the boundary of the property.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres, since 31st October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

15. Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

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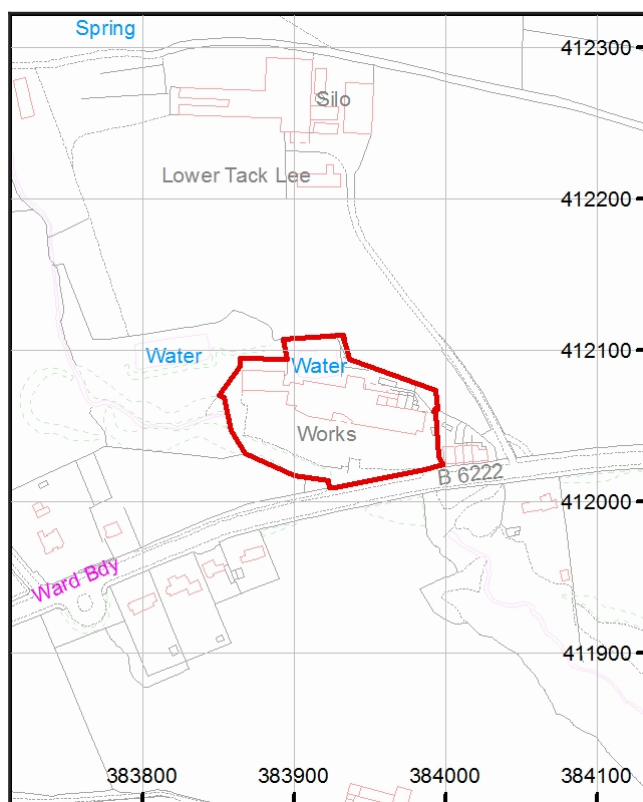
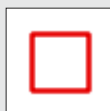
Alternative formats

If you would like this report in an alternative format, please contact our communications team.

Enquiry boundary

Key

Approximate position of enquiry boundary shown



How to contact us

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APPENDIX E

SITE RECONNAISSANCE

Site Reconnaissance – Tack Lea Works, Bury



Photograph 1 (P1)
Concrete yard in the south of the site.



Photograph 2 (P2)
Electrical substation to the east of the former Works building.



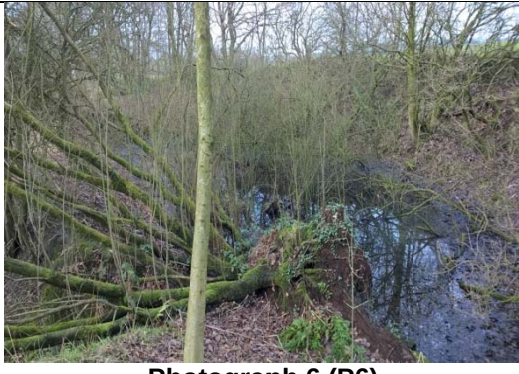
Photograph 3 (P3)
Former hydraulic oil storage area in the west of the site.



Photograph 4 (P4)
Open section of Tack Lea Brook to the west of the site.



Photograph 5 (P5)
Area immediately to the north of the buildings showing waterlogging.



Photograph 6 (P6)
Upper area with partially silted up and overgrown former reservoir.



Photograph 7 (P7)
Former hydraulic press area with visible evidence of contamination.



Photograph 8 (P8)
Sumps with hydraulic oil were noted in former hydraulic press area.



Photograph 9 (P9)
Former Works building is significantly damaged and mostly inaccessible.



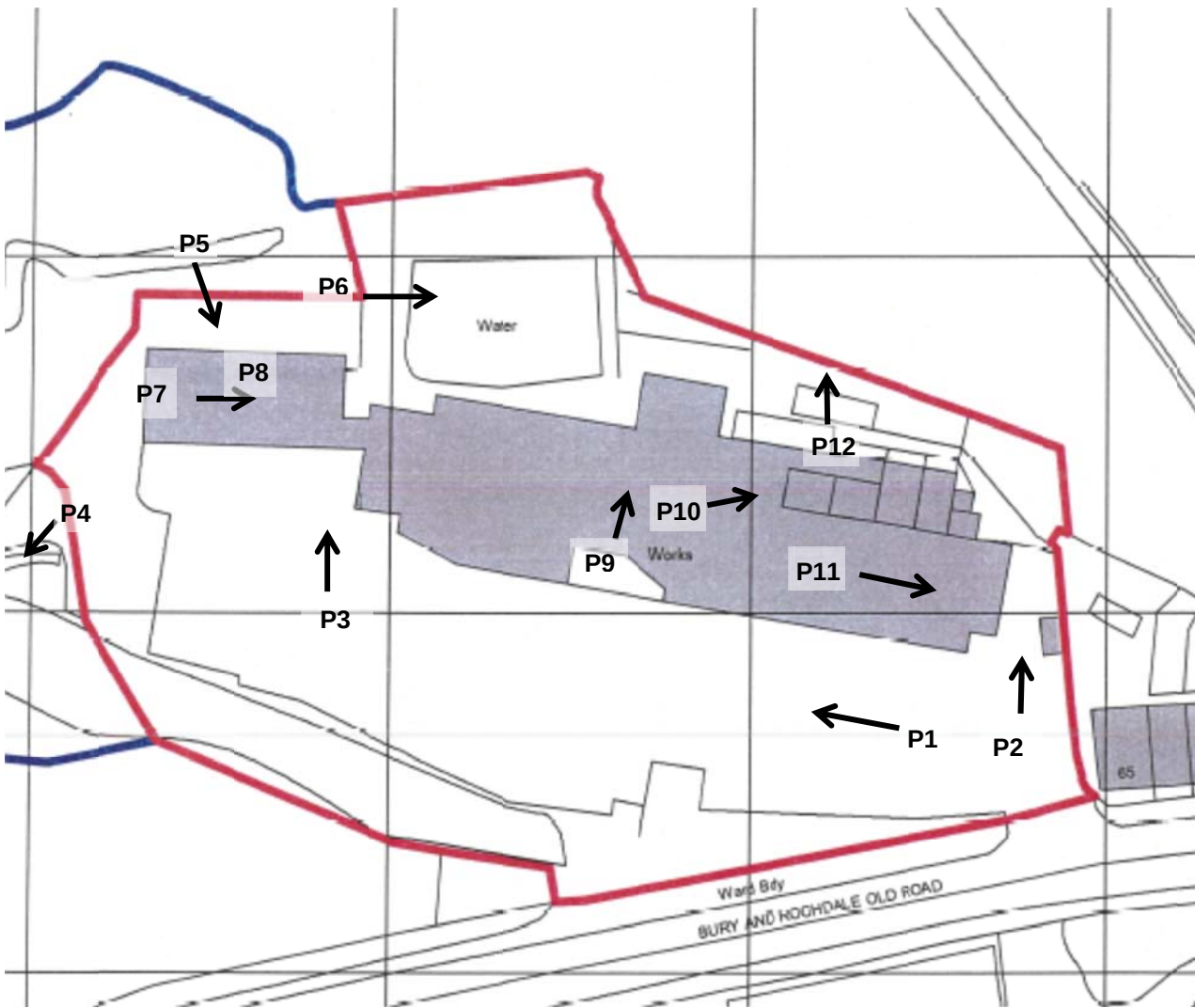
Photograph 10 (P10)
Suspected ACM such as pipe lagging were noted to be in poor condition.



Photograph 11 (P11)
Only small areas of the former Works building were safe to access.



Photograph 12 (P12)
Retaining wall in the north and possible former tank location.



Not to Scale

APPENDIX F

RISK EVALUATION

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 552⁵⁹. It involves the classification of the:

- Magnitude of the potential consequence (severity) of the risk occurring (Table 1).
- Magnitude of the probability (likelihood) of the risk occurring (Table 2).

Consequence (Severity)		
Classification	Definition	Example
Severe	- Short term (acute) risk to human health likely to result 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 1: Classification of Consequence.

⁵⁹ CIRIA C552 (2001) Contaminated Land Risk Assessment - A guide to good practice.

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 2: Classification of Probability.

These classifications are then compared to indicate the risk presented by each pollutant linkage (Table 3). 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 3: Comparison of Consequence against Probability.

APPENDIX G

PROFILE LOGS

Window Sample Logs
Trial Pit Logs

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

Tack Lea Works, Bury

Number
WS102**Excavation Method**

Drive-in Windowless Sampler

Dimensions**Ground Level (mOD)****Client**

Ainsworth Estates Ltd.

Job
Number
LKC 16 1018**Location****Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

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 0.20-0.50	ES1 PID <0.1 ppm				(0.20) 0.20	MADE GROUND: Concrete.			
					(0.30) 0.50	MADE GROUND: Soft grey slightly sandy gravelly clay. Gravel is fine to medium sub-angular to sub-rounded of brick fragments, sandstone, concrete, mudstone and rare coal.			
0.70-0.70 0.70-0.70	ES2 PID 0.2 ppm				(0.40) 0.90	MADE GROUND: Grey slightly clayey sandy gravel. Gravel is fine to coarse angular to sub-rounded of brick fragments, sandstone, mudstone and rare glass and ash/clinker. Hydraulic oil noted within made ground.			
1.00-1.45 1.00-1.00 1.00-1.00	SPT N=15 ES3 PID <0.1 ppm		4,5/5,4,3,3		(1.55) 2.45	Grey soft to firm consistency medium to high strength slightly sandy gravelly CLAY. Gravel is fine to coarse angular to sub-rounded of sandstone and coal. Hydrocarbon odour and staining to 1.5m. No hydrocarbon odour and staining below 1.5m.			
1.90-2.00 2.00-2.45	B1 SPT N=16		3,3/3,3,5,5			Complete at 2.45m			

RemarksNo groundwater encountered during drilling.
Breaking out from 0.00m to 0.20m.**Scale**
(approx)

1:25

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Figure No.

LKC 16 1018.TP101

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

Tack Lea Works, Bury

Number
WS103**Excavation Method**

Drive-in Windowless Sampler

Dimensions**Ground Level (mOD)****Client**

Ainsworth Estates Ltd.

Job
Number
LKC 16 1018**Location****Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
1.00-1.45	SPT N=9		4,4/3,3,2,1		(0.20) 0.20 (0.30) 0.50	MADE GROUND: Concrete. MADE GROUND: Grey clayey very gravelly fine to medium sand. Gravel is fine to coarse angular to sub-rounded of sandstone and mudstone with occasional plastic and rare rubber. MADE GROUND: Greyish brown clayey gravelly fine to medium sand. Gravel is fine to coarse angular to sub-rounded of brick fragments, coal, mudstone, ash/clinker and concrete.			
1.50-2.00 1.50-2.00	ES1 PID <0.1 ppm				(1.50)				
2.00-2.45	SPT N=6		4,3/2,1,2,1		2.00 (0.80)	MADE GROUND: Soft brown mottled black sandy gravelly clay. Gravel is fine to coarse angular to sub-rounded of brick fragments, coal, sandstone and rare ash/clinker.			
2.80-2.80 2.80-2.80 3.00-3.45	ES2 PID <0.1 ppm SPT N=2		1,1/0,1,0,1		2.80 (1.00)	MADE GROUND: Black slightly clayey gravelly fine to coarse sand. Gravel is fine to coarse sub-angular to sub-rounded of wood fragments with occasional brick fragments and sandstone and rare ash/clinker and glass. Hydrocarbon odour and staining at 2.8m.			
3.80-3.80 3.80-3.80 4.00-4.45	ES3 PID <0.1 ppm SPT N=2		Water strike(1) at 3.80m. 1,0/1,0,0,1		3.80 (0.70)	MADE GROUND: Soft grey slightly sandy gravelly clay. Gravel is fine to coarse sub-angular to sub-rounded of sandstone, coal and rare ash/clinker. Hydrocarbon odour and staining in groundwater encountered at 3.8m.		Σ1	
4.50-5.00	B1				4.50	Soft consistency low to medium strength brown mottled grey slightly sandy gravelly CLAY. Gravel is fine to medium angular to rounded of sandstone and coal.			
5.00-5.45	SPT N=8		2,1/2,2,2,2		(0.95) 5.45	No hydrocarbon odour or staining beyond 4.5m.			
						Complete at 5.45m			

Remarks

Breaking out from 0.00m to 0.20m.

Scale
(approx)

1:40

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By

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Figure No.

LKC 16 1018.TP101

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

Tack Lea Works, Bury

Number
WS104**Excavation Method**

Drive-in Windowless Sampler

Dimensions**Ground Level (mOD)****Client**

Ainsworth Estates Ltd.

Job
Number
LKC 16 1018**Location****Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.20-0.40 0.20-0.40	ES1 PID <0.1 ppm				(0.20) 0.20	MADE GROUND: Concrete.			
0.40-1.20 0.40-1.20	ES2 PID <0.1 ppm				(0.20) 0.40	MADE GROUND: Grey slightly clayey sandy gravel. Gravel is fine to coarse angular to sub-rounded of concrete and sandstone.			
					(0.80)	MADE GROUND: Light brown clayey gravelly fine to coarse sand. Gravel is fine to coarse sub-angular to sub-rounded of sandstone, ash/clinker and coal. Thin band of woody material at 1.2m.			
1.00-1.45	SPT N=13		2,2/4,3,3,3		1.20	Soft consistency very low to very high strength light brown slightly sandy slightly gravelly CLAY. Gravel is fine to coarse sub-angular to rounded of sandstone, mudstone and coal.			
1.50-1.50 1.50-1.50	ES3 PID 0.2 ppm								
2.00-2.45	SPT N=0		0,0/0,0,0,0		(2.24)				
3.00-3.44 3.00-3.00	SPT 50/285 B1		5,4/9,12,14,15		3.44	Complete at 3.44m			

RemarksNo groundwater encountered during drilling.
Breaking out from 0.00m to 0.20m.**Scale**
(approx)

1:25

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By

AT

Figure No.

LKC 16 1018.TP101

Excavation Method
Drive-in Windowless Sampler

Dimensions

Ground Level (mOD)

Client	Ainsworth Estates Ltd.
---------------	------------------------

Job Number	LKC 16 1018
------------	-------------

Location

Dates	15-07-2016
--------------	------------

Project Contractor
D & I Drilling Ltd

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.50-0.50 0.50-0.50	ES1 PID <0.1 ppm				(0.20) 0.20 (0.20) 0.40	MADE GROUND: Concrete. MADE GROUND: Reddish grey sandy gravel. Gravel is fine to coarse sub-angular to sub-rounded of brick fragments and ash/clinker. MADE GROUND: Soft brown mottled orange slightly sandy gravelly clay. Gravel is fine to coarse angular to sub-angular of brick fragments, ash/clinker, coal and sandstone. Thin band of woody material at 1.2m.			
1.00-1.45	SPT N=16		2,4/4,5,4,3		(1.50)				
1.90-1.90 1.90-1.90 2.00-2.45 2.00-2.00 2.00-2.00	ES2 PID 0.1 ppm SPT N=15 ES3 PID <0.1 ppm		2,2/4,4,3,4		1.90	Soft to firm consistency medium to very high strength brown mottled orange/grey slightly gravelly CLAY. Gravel is fine to coarse angular to sub-rounded of sandstone, mudstone and coal. Greyish light brown SANDSTONE band from 1.9m to 2m.			
3.00-3.45 3.00-3.00	SPT N=16 B1		3,3/6,4,3,3		(1.78)				
3.50-3.68	SPT 25*/85 50/95		20,5/36,14		3.68	Complete at 3.68m			

Remarks

Remarks
No groundwater encountered during drilling.
SPT refused at 3.68m.
Breaking out from 0.00m to 0.20m.

Scale (approx)

1.25

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By

AT

Figure No.

LKC 16 1018.TP101

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

Tack Lea Works, Bury

Number
WS106**Excavation Method**

Drive-in Windowless Sampler

Dimensions**Ground Level (mOD)****Client**

Ainsworth Estates Ltd.

Job
Number
LKC 16 1018**Location****Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.40-0.60	ES1				(0.20)	MADE GROUND: Concrete.			
0.40-0.60	PID <0.1 ppm				0.20				
0.60-0.70	ES2				(0.20)	MADE GROUND: Grey sandy gravelly clay. Gravel is fine to coarse angular to rounded of concrete, brick fragments, sandstone and occasional ash/clinker.			
0.60-0.70	PID <0.1 ppm				0.40				
0.80-0.80	PID <0.1 ppm				(0.30)				
1.00-1.45	SPT N=1		1,1/0,0,0,1		0.70	MADE GROUND: Black slightly clayey sandy gravel. Gravel is fine to coarse angular to sub-rounded of ash/clinker with occasional brick fragments, concrete and coal. Hydrocarbon odour.			
					(1.20)	MADE GROUND: Soft brown mottled orange slightly sandy gravelly clay. Gravel is fine to coarse sub-angular to rounded of sandstone, coal and mudstone.			
1.80-1.90	B1				1.90				
1.90-1.90	ES3				(0.40)	MADE GROUND: Black sandy gravel. Gravel is fine to coarse angular to sub-rounded of ash/clinker, coal with occasional sandstone.			
1.90-1.90	PID <0.1 ppm		1,0/1,0,0,0		2.30				
2.00-2.45	SPT N=1				(0.70)	MADE GROUND: Grey slightly clayey gravelly fine to coarse sand. Gravel is fine to coarse angular to sub-rounded of coal, ash/clinker, sandstone and rare glass.			
2.50-2.50	ES4				3.00				
2.50-2.50	PID <0.1 ppm				(0.30)	MADE GROUND: Black sandy gravel. Gravel is fine to coarse angular to sub-rounded of ash/clinker, coal with occasional sandstone.			
3.00-3.45	SPT N=1		1,0/0,1,0,0		3.30				
					(0.70)	MADE GROUND: Grey slightly clayey gravelly fine to coarse sand. Gravel is fine to coarse angular to sub-rounded of coal, ash/clinker, brick fragments, sandstone and rare glass.			
4.00-4.45	SPT N=2		1,0/1,0,1,0		4.00				
					(0.80)	MADE GROUND: Black sandy gravel. Gravel is fine to coarse angular to sub-rounded of ash/clinker, coal with occasional sandstone.			
5.00-5.45	SPT N=6		1,2/1,2,2,1		4.80				
					(0.65)	Soft consistency low strength grey slightly sandy gravelly CLAY. Gravel is fine to coarse sub-angular to rounded of coal and sandstone.			
					5.45	Complete at 5.45m			

RemarksNo groundwater encountered during drilling.
Breaking out from 0.00m to 0.20m.**Scale**
(approx)

1:40

Logged
By

AT

Figure No.

LKC 16 1018.TP101

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

Tack Lea Works, Bury

**Trial Pit
Number****TP101****Excavation Method**

JCB 3CX

Dimensions

2.8m x 1.0m

Ground Level (mOD)**Client**

Ainsworth Estates Ltd.

**Job
Number**

LKC 16 1018

Location**Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20 0.20	ES1 PID <0.1ppm				(0.15) 0.15	MADE GROUND: Concrete.		
					(0.80)	MADE GROUND: Orange/reddish brown cobbley gravelly sand. Sand is medium to coarse. Gravel is fine to coarse, angular to sub-rounded of brick, paving, masonry, concrete, slate, metal, ash, clinker, wood and sandstone (boulders).		
1.00 1.00	ES2 PID <0.1ppm				0.95	Soft to firm consistency low to high strength brown mottled grey and orange gravelly CLAY with frequent sandstone boulders. Gravel is fine to medium, angular to rounded of coal, mudstone and sandstone		
2.00 2.00	SV 32.67kPa B1		20,50,28/Av. 32.67		(2.55)	Clay becoming firm from 2.0m bgl.		
3.00	SV 72kPa		76,78,62/Av. 72.00		3.50	Complete at 3.50m		

**Remarks**

No groundwater encountered.

Scale (approx)

1:25

Logged By

NS

Figure No.

LKC 16 1018.TP101

Excavation Method JCB 3CX	Dimensions 2.8m x 1.0m	Ground Level (mOD)	Client Ainsworth Estates Ltd.	Job Number LKC 16 1018
	Location	Dates 15-07-2016	Project Contractor D & I Drilling Ltd	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30 0.30	ES1 PID <0.1ppm				(0.20) 0.20	MADE GROUND: Concrete.		
					(2.40)	MADE GROUND: Dark brown gravelly sandy clay with frequent cobbles. Gravel is fine to coarse, sub-angular to sub-rounded, of brick, concrete, metal, masonry, tarmacadam, clinker and wood. Clay noted to have slight hydrocarbon odour and staining on the southern face between 0.3m and 0.6m bgl.		
1.50 1.50	ES2 PID <0.1ppm				2.60	Terminated at 2.60m		



Remarks

Trial pit terminated at 2.60m bgl due to unstable sides.
No groundwater encountered.

Scale (approx)	Logged By	Figure No.
1:25	NS	LKC 16 1018.TP102

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

Tack Lea Works, Bury

**Trial Pit
Number****TP103****Excavation Method**

Trial Pit

Dimensions

2.8m x 1.0m

Ground Level (mOD)**Client**

Ainsworth Estates Ltd.

**Job
Number**

LKC 16 1018

Location**Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50 0.50	ES1 PID <0.1ppm				(0.20) 0.20	MADE GROUND: Concrete.		
1.20 1.20	ES2 PID <0.1ppm				(2.40) 2.60	MADE GROUND: Greyish brown cobblely gravelly sand. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded of sandstone (boulders), concrete (boulders), and with metal. Sand becoming clayey from 1.0m bgl. Terminated at 2.60m		

**Remarks**No groundwater encountered.
Trial pit terminated at 2.60m bgl due to unstable sides.**Scale (approx)**

1:25

Logged By

NS

Figure No.

LKC 16 1018.TP103

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

Tack Lea Works, Bury

**Trial Pit
Number****TP104****Excavation Method**

Trial Pit

Dimensions

2.8m x 1.0m

Ground Level (mOD)**Client**

Ainsworth Estates Ltd.

**Job
Number**

LKC 16 1018

Location**Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	ES1				(0.20)	MADE GROUND: Concrete.		
0.20	PID <0.1ppm				0.20	MADE GROUND: Orangish yellow sandy gravel (sub-base). Sand is fine to medium. Gravel is fine to coarse, angular to sub-angular, of limestone.		
0.50	ES2				(0.20)	MADE GROUND: Dark brown black sandy gravel. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded of brick, ash, coal and clinker.		
0.50	PID <0.1ppm				0.40			
					(0.70)			
1.20	ES3				1.10	MADE GROUND: Brown/grey slightly sandy gravelly clay with occasional brick cobble. Sand is fine to medium. Gravel is fine to medium, angular to rounded, of mudstone, coal, sandstone and wood.		
1.20	PID <0.1ppm				(0.80)			
					1.90	MADE GROUND: Dark brown black sandy gravel. Sand is fine to coarse. Gravel is fine to coarse, angular to sub-rounded of brick, ash, coal and clinker.		
					(0.30)			
					2.20	MADE GROUND: Brown/grey slightly sandy gravelly clay with occasional brick cobble. Sand is fine to medium. Gravel is fine to medium, angular to rounded, of mudstone, concrete, masonry, coal, sandstone and wood.		
					(0.80)			
					3.00	Complete at 3.00m		

**Remarks**

No groundwater encountered.

Scale (approx)

1:25

Logged By

NS

Figure No.

LKC 16 1018.TP104

[illegible]

Remarks

Trial pit terminated at 3.0m bgl due to unstable sides.
No groundwater encountered.

Scale (approx)

1:25

Logged By

NS

Figure No.

LKC 16 1018.TP105

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

Tack Lea Works, Bury

**Trial Pit
Number****TP106****Excavation Method**

Trial Pit

Dimensions

2.8m x 1.0m

Ground Level (mOD)**Client**

Ainsworth Estates Ltd.

**Job
Number**

LKC 16 1018

Location**Dates**

15-07-2016

Project Contractor

D & I Drilling Ltd

Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30 0.30	ES1 PID <0.1ppm				(0.20) 0.20	MADE GROUND: Concrete.		
					(0.80)	MADE GROUND: Grey brown clayey sandy gravel. Sand is fine to medium. Gravel is fine to coarse, angular to sub-rounded, of brick, concrete, coal, mudstone, tarmacadam, ash, metal, wood and clinker with cobbles of brick, breezeblock and concrete.		
1.00 1.00	ES2 PID <0.1ppm				1.00	MADE GROUND: Grey brown clayey gravelly sand. Sand is fine to medium. Gravel is fine to coarse, angular to sub-rounded, of brick, concrete, coal, mudstone, tarmacadam, ash, metal, wood and clinker with cobbles of brick, breezeblock and concrete.		
					(1.80)			
					2.80	Terminated at 2.80m		

**Remarks**No groundwater encountered.
Trial pit terminated at 3.0m bgl due to unstable sides.**Scale (approx)**

1:25

Logged By

NS

Figure No.

LKC 16 1018.TP106

APPENDIX H

CERTIFICATE OF ANALYSIS - SOIL



Final Report

Report No.: 16-17147-1

Initial Date of Issue: 26-Jul-2016

Client LK Consult

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

Contact(s): Chris Hughes
Contaminated Land

Project LKC 16 1018 Tack Lea

Quotation No.:

Order No.: 732012

No. of Samples: 16

Turnaround (Wkdays): 5

Date Approved: 26-Jul-2016

Date Received: 19-Jul-2016

Date Instructed: 20-Jul-2016

Results Due: 26-Jul-2016

Approved By:



Details: Keith Jones, Technical Manager

Results - Soil

Project: LKC 16 1018 Tack Lea

Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325534	325535	325536	325538	325541	325544	325545	325547
	Client Sample ID.:				TP101	TP101	TP102	TP103	TP104	TP105	TP106	WS101
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.2	1	0.3	0.5	0.5	1	0.3	0.3
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	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	%	0.001	No Asbestos Detected		Amosite	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001			1.3					
Total Asbestos	N	2192	%	0.001			1.3					
Moisture	N	2030	%	0.020	13	15	11	14	19	22	13	5.1
Soil Colour	N	2040		N/A	Red	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones, Brick	Stones	Stones	Stones	Stones, Wood	Stones
Soil Texture	N	2040		N/A	Sand	Clay	Clay	Clay	Sand	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A			See Attached			See Attached		
pH	M	2010		N/A	10.1	7.8	8.1	9.9	8.7	8.5	8.7	11.6
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40			0.73			0.78		
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.15	0.051	0.063	0.22	0.066	0.088	0.053	0.19
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	42		10	26	22	120	12	9.6
Cadmium	M	2450	mg/kg	0.10	1.1		0.53	0.70	0.59	0.83	0.49	0.32
Chromium	M	2450	mg/kg	1.0	27		39	55	25	33	17	12
Copper	M	2450	mg/kg	0.50	180		42	64	97	170	26	10
Mercury	M	2450	mg/kg	0.10	0.17		0.15	0.28	0.15	0.31	0.24	< 0.10
Nickel	M	2450	mg/kg	0.50	33		32	31	44	80	22	9.6
Lead	M	2450	mg/kg	0.50	520		63	130	170	230	49	19
Selenium	M	2450	mg/kg	0.20	0.32		0.51	0.36	0.52	1.3	0.21	< 0.20
Vanadium	U	2450	mg/kg	5.0	52		22	30	48	140	23	12
Zinc	M	2450	mg/kg	0.50	150		150	150	99	170	60	38
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	2.8		2.9	6.6	21	17	3.5	0.79
Fuel Type	N	2670		N/A			Diesel			PAH		
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0			< 1.0			< 1.0		
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0			< 1.0			< 1.0		
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0			< 1.0			< 1.0		
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0			< 1.0			< 1.0		
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0			14			4.9		
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0			29			15		
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0			110			100		
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0			< 1.0			< 1.0		
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5.0			160			120		
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0			< 1.0			< 1.0		
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0			< 1.0			< 1.0		

Project: LKC 16 1018 Tack Lea

Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325534	325535	325536	325538	325541	325544	325545	325547
	Client Sample ID.:				TP101	TP101	TP102	TP103	TP104	TP105	TP106	WS101
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.2	1	0.3	0.5	0.5	1	0.3	0.3
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0			< 1.0			< 1.0		
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0			< 1.0			< 1.0		
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0			< 1.0			< 1.0		
Aromatic TPH >C16-C21	M	2680	mg/kg	1.0			< 1.0			61		
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0			110			450		
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0			< 1.0			< 1.0		
Total Aromatic Hydrocarbons	M	2680	mg/kg	5.0			110			510		
Total Petroleum Hydrocarbons	M	2680	mg/kg	10			270			630		
Naphthalene	M	2700	mg/kg	0.10	< 0.10		0.51	0.38	< 0.10	2.6	0.49	< 0.10
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10		< 0.10	0.10	< 0.10	0.49	0.36	< 0.10
Acenaphthene	M	2700	mg/kg	0.10	< 0.10		0.30	0.46	< 0.10	1.3	0.78	< 0.10
Fluorene	M	2700	mg/kg	0.10	< 0.10		0.19	0.22	< 0.10	1.5	0.53	< 0.10
Phenanthrene	M	2700	mg/kg	0.10	0.42		2.4	2.2	0.81	8.0	5.4	0.50
Anthracene	M	2700	mg/kg	0.10	0.14		1.0	0.60	0.13	2.7	1.8	0.24
Fluoranthene	M	2700	mg/kg	0.10	0.76		2.1	2.6	1.1	0.72	9.5	0.99
Pyrene	M	2700	mg/kg	0.10	0.83		2.0	2.7	1.1	0.39	10	1.1
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10		0.65	0.95	0.55	9.1	4.3	0.43
Chrysene	M	2700	mg/kg	0.10	< 0.10		0.55	1.0	0.46	11	4.8	0.61
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10		0.56	0.79	0.40	12	5.3	0.44
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10		< 0.10	0.12	< 0.10	5.3	2.0	0.11
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10		0.54	0.85	0.49	8.9	4.1	0.44
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10		0.29	0.50	0.22	6.0	2.4	0.22
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10		< 0.10	0.11	< 0.10	1.4	0.54	< 0.10
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10		0.42	0.54	0.27	5.7	2.7	0.25
Total Of 16 PAH's	M	2700	mg/kg	2.0	2.2		12	14	5.5	77	55	5.3
Dichlorodifluoromethane	U	2760	µg/kg	1.0								
Chloromethane	M	2760	µg/kg	1.0								
Vinyl Chloride	M	2760	µg/kg	1.0								
Bromomethane	M	2760	µg/kg	20								
Chloroethane	U	2760	µg/kg	2.0								
Trichlorofluoromethane	M	2760	µg/kg	1.0								
1,1-Dichloroethene	M	2760	µg/kg	1.0								
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0								
1,1-Dichloroethane	M	2760	µg/kg	1.0								
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0								
Bromochloromethane	U	2760	µg/kg	5.0								
Trichloromethane	M	2760	µg/kg	1.0								
1,1,1-Trichloroethane	M	2760	µg/kg	1.0								
Tetrachloromethane	M	2760	µg/kg	1.0								

Project: LKC 16 1018 Tack Lea

Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325534	325535	325536	325538	325541	325544	325545	325547
	Client Sample ID.:				TP101	TP101	TP102	TP103	TP104	TP105	TP106	WS101
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.2	1	0.3	0.5	0.5	1	0.3	0.3
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
1,1-Dichloropropene	U	2760	µg/kg	1.0								
Benzene	M	2760	µg/kg	1.0			< 1.0			< 1.0		
1,2-Dichloroethane	M	2760	µg/kg	2.0								
Trichloroethene	M	2760	µg/kg	1.0								
1,2-Dichloropropane	M	2760	µg/kg	1.0								
Dibromomethane	M	2760	µg/kg	1.0								
Bromodichloromethane	M	2760	µg/kg	5.0								
cis-1,3-Dichloropropene	N	2760	µg/kg	10								
Toluene	M	2760	µg/kg	1.0			< 1.0			< 1.0		
Trans-1,3-Dichloropropene	N	2760	µg/kg	10								
1,1,2-Trichloroethane	M	2760	µg/kg	10								
Tetrachloroethene	M	2760	µg/kg	1.0								
1,3-Dichloropropane	U	2760	µg/kg	2.0								
Dibromochloromethane	U	2760	µg/kg	10								
1,2-Dibromoethane	M	2760	µg/kg	5.0								
Chlorobenzene	M	2760	µg/kg	1.0								
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0								
Ethylbenzene	M	2760	µg/kg	1.0			< 1.0			< 1.0		
m & p-Xylene	M	2760	µg/kg	1.0			< 1.0			< 1.0		
o-Xylene	M	2760	µg/kg	1.0			< 1.0			< 1.0		
Styrene	M	2760	µg/kg	1.0								
Tribromomethane	U	2760	µg/kg	1.0								
Isopropylbenzene	M	2760	µg/kg	1.0								
Bromobenzene	M	2760	µg/kg	1.0								
1,2,3-Trichloropropane	N	2760	µg/kg	50								
N-Propylbenzene	U	2760	µg/kg	1.0								
2-Chlorotoluene	M	2760	µg/kg	1.0								
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0								
4-Chlorotoluene	U	2760	µg/kg	1.0								
Tert-Butylbenzene	U	2760	µg/kg	1.0								
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0								
Sec-Butylbenzene	U	2760	µg/kg	1.0								
1,3-Dichlorobenzene	M	2760	µg/kg	1.0								
4-Isopropyltoluene	U	2760	µg/kg	1.0								
1,4-Dichlorobenzene	M	2760	µg/kg	1.0								
N-Butylbenzene	U	2760	µg/kg	1.0								
1,2-Dichlorobenzene	M	2760	µg/kg	1.0								
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50								
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0								

Project: LKC 16 1018 Tack Lea

Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325534	325535	325536	325538	325541	325544	325545	325547
	Client Sample ID.:				TP101	TP101	TP102	TP103	TP104	TP105	TP106	WS101
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.2	1	0.3	0.5	0.5	1	0.3	0.3
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
Hexachlorobutadiene	U	2760	µg/kg	1.0								
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0								
Carbon Disulphide	N	2760	µg/kg	50								
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0			< 1.0			< 1.0		
N-Nitrosodimethylamine	N	2790	mg/kg	0.50								
Phenol	N	2790	mg/kg	0.50								
2-Chlorophenol	N	2790	mg/kg	0.50								
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.50								
1,3-Dichlorobenzene	N	2790	mg/kg	0.50								
1,4-Dichlorobenzene	N	2790	mg/kg	0.50								
1,2-Dichlorobenzene	N	2790	mg/kg	0.50								
2-Methylphenol	N	2790	mg/kg	0.50								
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.50								
Hexachloroethane	N	2790	mg/kg	0.50								
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.50								
4-Methylphenol	N	2790	mg/kg	0.50								
Nitrobenzene	N	2790	mg/kg	0.50								
Isophorone	N	2790	mg/kg	0.50								
2-Nitrophenol	N	2790	mg/kg	0.50								
2,4-Dimethylphenol	N	2790	mg/kg	0.50								
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.50								
2,4-Dichlorophenol	N	2790	mg/kg	0.50								
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.50								
Naphthalene	N	2790	mg/kg	0.50								
4-Chloroaniline	N	2790	mg/kg	0.50								
Hexachlorobutadiene	N	2790	mg/kg	0.50								
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.50								
2-Methylnaphthalene	N	2790	mg/kg	0.50								
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50								
2,4,6-Trichlorophenol	N	2790	mg/kg	0.50								
2,4,5-Trichlorophenol	N	2790	mg/kg	0.50								
2-Chloronaphthalene	N	2790	mg/kg	0.50								
2-Nitroaniline	N	2790	mg/kg	0.50								
Acenaphthylene	N	2790	mg/kg	0.50								
Dimethylphthalate	N	2790	mg/kg	0.50								
2,6-Dinitrotoluene	N	2790	mg/kg	0.50								
Acenaphthene	N	2790	mg/kg	0.50								
Dibenzofuran	N	2790	mg/kg	0.50								
4-Chlorophenylphenylether	N	2790	mg/kg	0.50								

Results - Soil

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Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325534	325535	325536	325538	325541	325544	325545	325547
	Client Sample ID.:				TP101	TP101	TP102	TP103	TP104	TP105	TP106	WS101
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.2	1	0.3	0.5	0.5	1	0.3	0.3
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
2,4-Dinitrotoluene	N	2790	mg/kg	0.50								
Fluorene	N	2790	mg/kg	0.50								
Diethyl Phthalate	N	2790	mg/kg	0.50								
4-Nitroaniline	N	2790	mg/kg	0.50								
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50								
Azobenzene	N	2790	mg/kg	0.50								
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.50								
Hexachlorobenzene	N	2790	mg/kg	0.50								
Pentachlorophenol	N	2790	mg/kg	0.50								
Phenanthrene	N	2790	mg/kg	0.50								
Anthracene	N	2790	mg/kg	0.50								
Carbazole	N	2790	mg/kg	0.50								
Di-N-Butyl Phthalate	N	2790	mg/kg	0.50								
Fluoranthene	N	2790	mg/kg	0.50								
Pyrene	N	2790	mg/kg	0.50								
Butylbenzyl Phthalate	N	2790	mg/kg	0.50								
Benzo[a]anthracene	N	2790	mg/kg	0.50								
Chrysene	N	2790	mg/kg	0.50								
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50								
Di-N-Octyl Phthalate	N	2790	mg/kg	0.50								
Benzo[b]fluoranthene	N	2790	mg/kg	0.50								
Benzo[k]fluoranthene	N	2790	mg/kg	0.50								
Benzo[a]pyrene	N	2790	mg/kg	0.50								
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.50								
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.50								
Benzo[g,h,i]perylene	N	2790	mg/kg	0.50								
PCB 28	M	2810	mg/kg	0.010								
PCB 52	M	2815	mg/kg	0.010								
PCB 101	M	2815	mg/kg	0.010								
PCB 118	M	2815	mg/kg	0.010								
PCB 153	M	2815	mg/kg	0.010								
PCB 138	M	2815	mg/kg	0.010								
PCB 180	M	2810	mg/kg	0.010								
Total PCBs (7 Congeners)	N	2815	mg/kg	0.10								
Total Phenols	M	2920	mg/kg	0.30			< 0.30			< 0.30		

Results - Soil

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Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325550	325552	325554	325555	325556	325559	325562	325564
	Client Sample ID.:				WS102	WS102	WS103	WS103	WS104	WS105	WS106	WS106
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.5	1	2.8	3.8	0.4	0.5	0.4	1.9
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	U	2192	%	0.001								
Total Asbestos	N	2192	%	0.001								
Moisture	N	2030	%	0.020	19	9.9	16	21	15	20	18	16
Soil Colour	N	2040		N/A	Brown	Brow	Brown	Brown	Brown	Black	Brown	Brown
Other Material	N	2040		N/A	Stones, Brick	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Clay	Clay	Clay	Sand	Clay	Clay	Clay
Chromatogram (TPH)	N			N/A			See Attached				See Attached	
pH	M	2010		N/A	8.5	8.1	8.5			7.9	8.7	
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40		< 0.40	1.8				0.70	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.18	0.024	0.062			0.29	0.18	
Cyanide (Free)	M	2300	mg/kg	0.50		< 0.50	< 0.50				< 0.50	
Cyanide (Total)	M	2300	mg/kg	0.50		< 0.50	< 0.50				< 0.50	
Arsenic	M	2450	mg/kg	1.0	11	6.4	27			24	16	
Cadmium	M	2450	mg/kg	0.10	1.7	0.36	0.87			0.70	0.40	
Chromium	M	2450	mg/kg	1.0	25	23	20			42	22	
Copper	M	2450	mg/kg	0.50	62	27	39			96	39	
Mercury	M	2450	mg/kg	0.10	0.13	< 0.10	0.11			0.51	0.12	
Nickel	M	2450	mg/kg	0.50	29	37	35			39	26	
Lead	M	2450	mg/kg	0.50	51	23	49			170	110	
Selenium	M	2450	mg/kg	0.20	0.32	0.40	0.77			1.3	0.50	
Vanadium	U	2450	mg/kg	5.0	26	21	31			48	30	
Zinc	M	2450	mg/kg	0.50	270	71	110			120	91	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50			< 0.50	< 0.50	
Organic Matter	M	2625	%	0.40	6.6	2.6	19	6.2	1.6	21	3.1	3.1
Fuel Type	N	2670		N/A		N/A	PAH	N/A	PAH		PAH	PAH
Aliphatic TPH >C5-C6	N	2680	mg/kg	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
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	3.8
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	83	< 1.0	< 1.0		< 1.0	89
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Total Aliphatic Hydrocarbons	M	2680	mg/kg	5.0		< 5.0	83	< 5.0	< 5.0		< 5.0	93
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0

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Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325550	325552	325554	325555	325556	325559	325562	325564
	Client Sample ID.:				WS102	WS102	WS103	WS103	WS104	WS105	WS106	WS106
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.5	1	2.8	3.8	0.4	0.5	0.4	1.9
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0		< 1.0	2.2	< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0		< 1.0	23	< 1.0	< 1.0		< 1.0	< 1.0
Aromatic TPH >C16-C21	M	2680	mg/kg	1.0		< 1.0	100	< 1.0	2.3		1.8	16
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0		< 1.0	260	< 1.0	< 1.0		3.8	63
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Total Aromatic Hydrocarbons	M	2680	mg/kg	5.0		< 5.0	380	< 5.0	< 5.0		5.6	79
Total Petroleum Hydrocarbons	M	2680	mg/kg	10		< 10	470	< 10	< 10		< 10	170
Naphthalene	M	2700	mg/kg	0.10	< 0.10		280			1.8	0.50	
Acenaphthylene	M	2700	mg/kg	0.10	< 0.10		22			0.32	0.37	
Acenaphthene	M	2700	mg/kg	0.10	< 0.10		300			1.2	0.50	
Fluorene	M	2700	mg/kg	0.10	< 0.10		270			0.74	0.42	
Phenanthrene	M	2700	mg/kg	0.10	< 0.10		1500			6.8	1.7	
Anthracene	M	2700	mg/kg	0.10	< 0.10		270			2.8	0.51	
Fluoranthene	M	2700	mg/kg	0.10	< 0.10		1200			10	3.8	
Pyrene	M	2700	mg/kg	0.10	< 0.10		1100			8.8	3.9	
Benzo[a]anthracene	M	2700	mg/kg	0.10	< 0.10		520			5.0	2.1	
Chrysene	M	2700	mg/kg	0.10	< 0.10		570			4.9	2.5	
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	< 0.10		450			4.1	2.4	
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	< 0.10		190			2.5	1.2	
Benzo[a]pyrene	M	2700	mg/kg	0.10	< 0.10		370			0.56	1.6	
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	< 0.10		200			2.8	< 0.10	
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	< 0.10		58			0.58	0.28	
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	< 0.10		180			4.6	1.7	
Total Of 16 PAH's	M	2700	mg/kg	2.0	< 2.0		7500			58	24	
Dichlorodifluoromethane	U	2760	µg/kg	1.0		< 1.0						
Chloromethane	M	2760	µg/kg	1.0		< 1.0						
Vinyl Chloride	M	2760	µg/kg	1.0		< 1.0						
Bromomethane	M	2760	µg/kg	20		< 20						
Chloroethane	U	2760	µg/kg	2.0		< 2.0						
Trichlorofluoromethane	M	2760	µg/kg	1.0		< 1.0						
1,1-Dichloroethene	M	2760	µg/kg	1.0		< 1.0						
Trans 1,2-Dichloroethene	M	2760	µg/kg	1.0		< 1.0						
1,1-Dichloroethane	M	2760	µg/kg	1.0		< 1.0						
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0		< 1.0						
Bromochloromethane	U	2760	µg/kg	5.0		< 5.0						
Trichloromethane	M	2760	µg/kg	1.0		< 1.0						
1,1,1-Trichloroethane	M	2760	µg/kg	1.0		< 1.0						
Tetrachloromethane	M	2760	µg/kg	1.0		< 1.0						

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Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325550	325552	325554	325555	325556	325559	325562	325564
	Client Sample ID.:				WS102	WS102	WS103	WS103	WS104	WS105	WS106	WS106
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.5	1	2.8	3.8	0.4	0.5	0.4	1.9
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD								
1,1-Dichloropropene	U	2760	µg/kg	1.0		< 1.0						
Benzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0		< 2.0						
Trichloroethene	M	2760	µg/kg	1.0		< 1.0						
1,2-Dichloropropane	M	2760	µg/kg	1.0		< 1.0						
Dibromomethane	M	2760	µg/kg	1.0		< 1.0						
Bromodichloromethane	M	2760	µg/kg	5.0		< 5.0						
cis-1,3-Dichloropropene	N	2760	µg/kg	10		< 10						
Toluene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	2760	µg/kg	10		< 10						
1,1,2-Trichloroethane	M	2760	µg/kg	10		< 10						
Tetrachloroethene	M	2760	µg/kg	1.0		< 1.0						
1,3-Dichloropropane	U	2760	µg/kg	2.0		< 2.0						
Dibromochloromethane	U	2760	µg/kg	10		< 10						
1,2-Dibromoethane	M	2760	µg/kg	5.0		< 5.0						
Chlorobenzene	M	2760	µg/kg	1.0		< 1.0						
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0		< 2.0						
Ethylbenzene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	1.2		< 1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
Styrene	M	2760	µg/kg	1.0		< 1.0						
Tribromomethane	U	2760	µg/kg	1.0		< 1.0						
Isopropylbenzene	M	2760	µg/kg	1.0		< 1.0						
Bromobenzene	M	2760	µg/kg	1.0		< 1.0						
1,2,3-Trichloropropane	N	2760	µg/kg	50		< 50						
N-Propylbenzene	U	2760	µg/kg	1.0		< 1.0						
2-Chlorotoluene	M	2760	µg/kg	1.0		< 1.0						
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0						
4-Chlorotoluene	U	2760	µg/kg	1.0		< 1.0						
Tert-Butylbenzene	U	2760	µg/kg	1.0		< 1.0						
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0		< 1.0						
Sec-Butylbenzene	U	2760	µg/kg	1.0		< 1.0						
1,3-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0						
4-Isopropyltoluene	U	2760	µg/kg	1.0		< 1.0						
1,4-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0						
N-Butylbenzene	U	2760	µg/kg	1.0		< 1.0						
1,2-Dichlorobenzene	M	2760	µg/kg	1.0		< 1.0						
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50		< 50						
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0		< 1.0						

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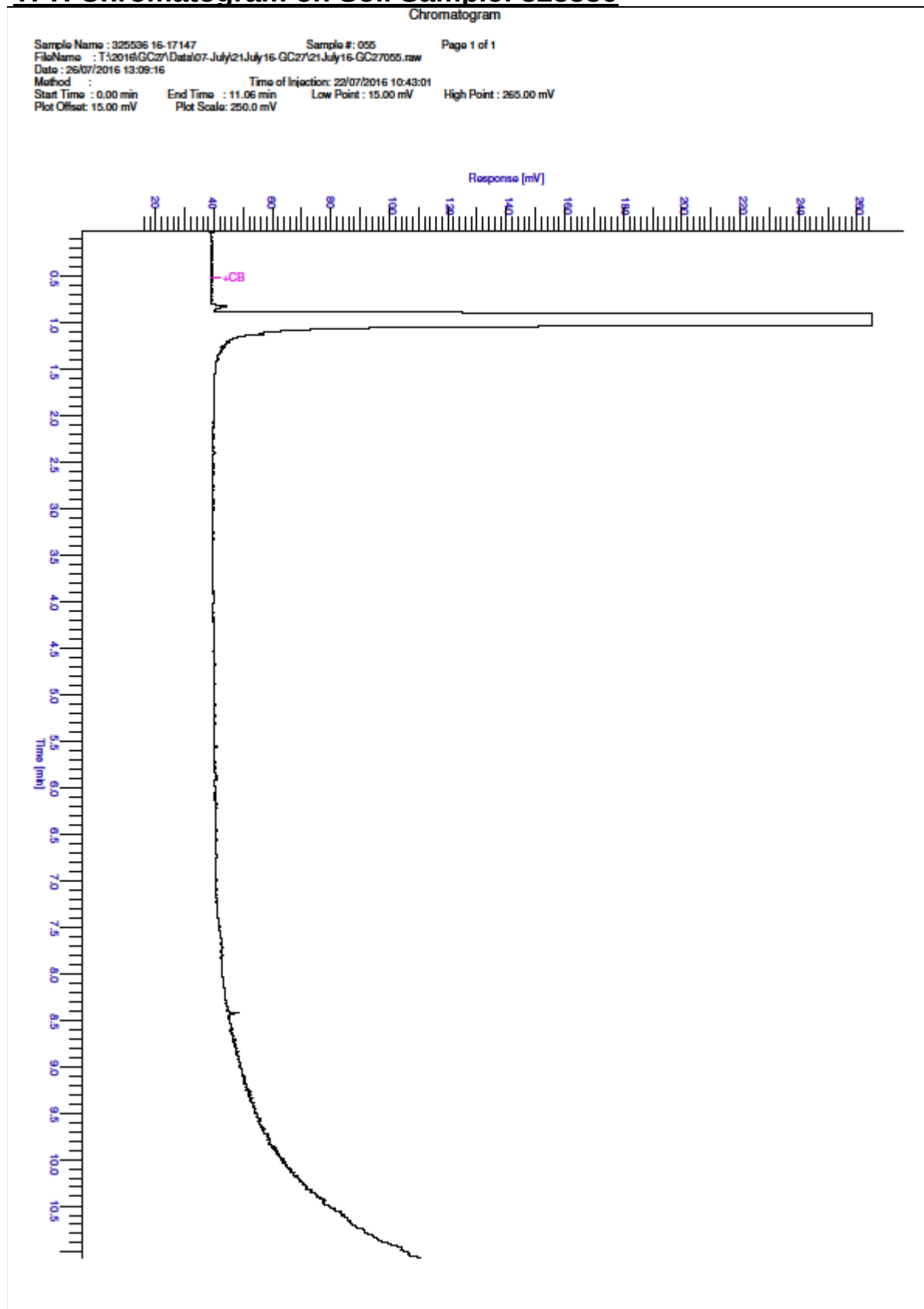
Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325550	325552	325554	325555	325556	325559	325562	325564
	Client Sample ID.:				WS102	WS102	WS103	WS103	WS104	WS105	WS106	WS106
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.5	1	2.8	3.8	0.4	0.5	0.4	1.9
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD								
Hexachlorobutadiene	U	2760	µg/kg	1.0		< 1.0						
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0		< 2.0						
Carbon Disulphide	N	2760	µg/kg	50		< 50						
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0		< 1.0	< 1.0	< 1.0	< 1.0		< 1.0	< 1.0
N-Nitrosodimethylamine	N	2790	mg/kg	0.50		< 0.50						
Phenol	N	2790	mg/kg	0.50		< 0.50						
2-Chlorophenol	N	2790	mg/kg	0.50		< 0.50						
Bis-(2-Chloroethyl)Ether	N	2790	mg/kg	0.50		< 0.50						
1,3-Dichlorobenzene	N	2790	mg/kg	0.50		< 0.50						
1,4-Dichlorobenzene	N	2790	mg/kg	0.50		< 0.50						
1,2-Dichlorobenzene	N	2790	mg/kg	0.50		< 0.50						
2-Methylphenol	N	2790	mg/kg	0.50		< 0.50						
Bis(2-Chloroisopropyl)Ether	N	2790	mg/kg	0.50		< 0.50						
Hexachloroethane	N	2790	mg/kg	0.50		< 0.50						
N-Nitrosodi-n-propylamine	N	2790	mg/kg	0.50		< 0.50						
4-Methylphenol	N	2790	mg/kg	0.50		< 0.50						
Nitrobenzene	N	2790	mg/kg	0.50		< 0.50						
Isophorone	N	2790	mg/kg	0.50		< 0.50						
2-Nitrophenol	N	2790	mg/kg	0.50		< 0.50						
2,4-Dimethylphenol	N	2790	mg/kg	0.50		< 0.50						
Bis(2-Chloroethoxy)Methane	N	2790	mg/kg	0.50		< 0.50						
2,4-Dichlorophenol	N	2790	mg/kg	0.50		< 0.50						
1,2,4-Trichlorobenzene	N	2790	mg/kg	0.50		< 0.50						
Naphthalene	N	2790	mg/kg	0.50		< 0.50						
4-Chloroaniline	N	2790	mg/kg	0.50		< 0.50						
Hexachlorobutadiene	N	2790	mg/kg	0.50		< 0.50						
4-Chloro-3-Methylphenol	N	2790	mg/kg	0.50		< 0.50						
2-Methylnaphthalene	N	2790	mg/kg	0.50		< 0.50						
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50		< 0.50						
2,4,6-Trichlorophenol	N	2790	mg/kg	0.50		< 0.50						
2,4,5-Trichlorophenol	N	2790	mg/kg	0.50		< 0.50						
2-Chloronaphthalene	N	2790	mg/kg	0.50		< 0.50						
2-Nitroaniline	N	2790	mg/kg	0.50		< 0.50						
Acenaphthylene	N	2790	mg/kg	0.50		< 0.50						
Dimethylphthalate	N	2790	mg/kg	0.50		< 0.50						
2,6-Dinitrotoluene	N	2790	mg/kg	0.50		< 0.50						
Acenaphthene	N	2790	mg/kg	0.50		< 0.50						
Dibenzofuran	N	2790	mg/kg	0.50		< 0.50						
4-Chlorophenylphenylether	N	2790	mg/kg	0.50		< 0.50						

Results - Soil

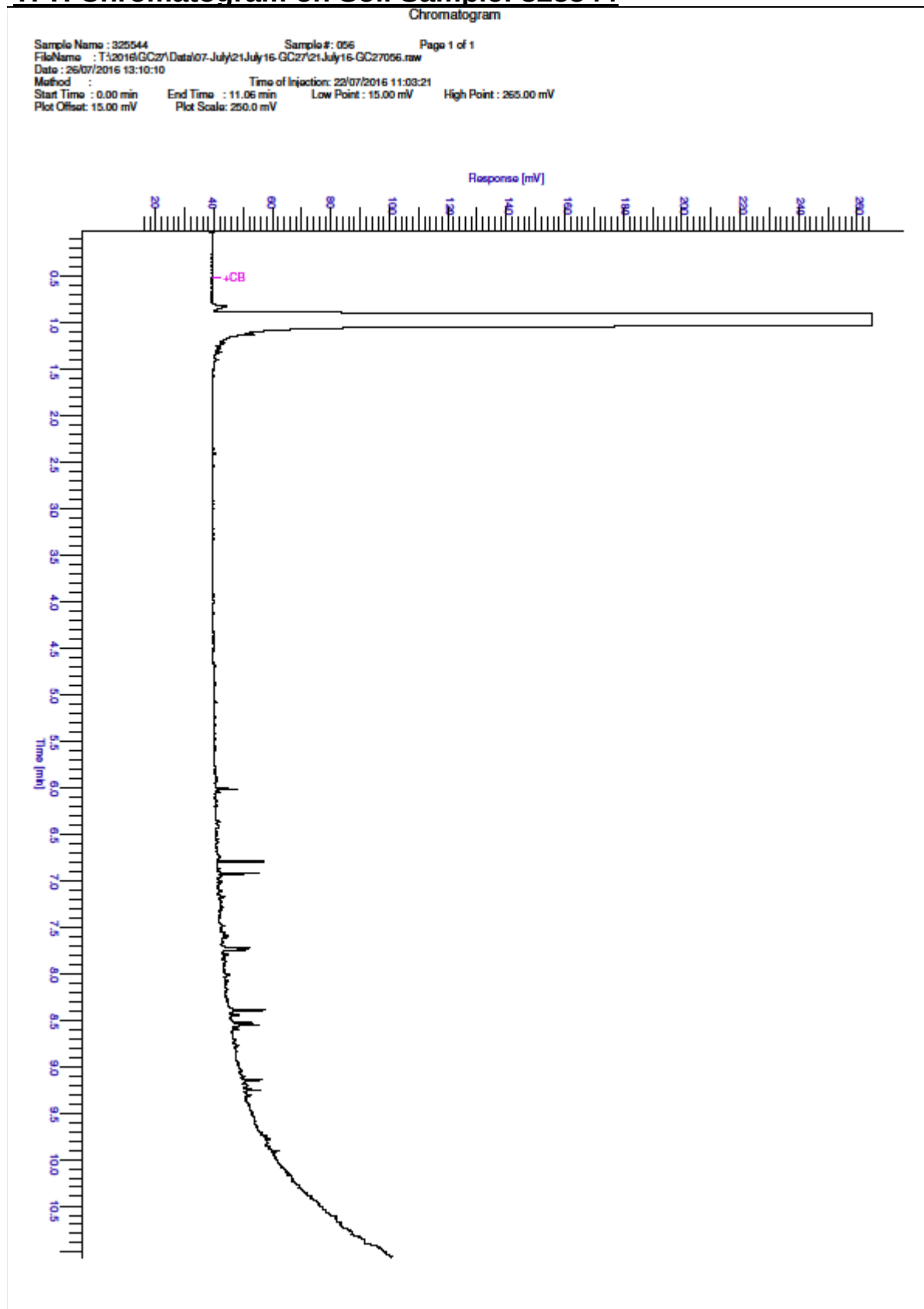
Project: LKC 16 1018 Tack Lea

Client: LK Consult	Chemtest Job No.:				16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147	16-17147
Quotation No.:	Chemtest Sample ID.:				325550	325552	325554	325555	325556	325559	325562	325564
	Client Sample ID.:				WS102	WS102	WS103	WS103	WS104	WS105	WS106	WS106
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.5	1	2.8	3.8	0.4	0.5	0.4	1.9
	Date Sampled:				15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016	15-Jul-2016
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD								
2,4-Dinitrotoluene	N	2790	mg/kg	0.50		< 0.50						
Fluorene	N	2790	mg/kg	0.50		< 0.50						
Diethyl Phthalate	N	2790	mg/kg	0.50		< 0.50						
4-Nitroaniline	N	2790	mg/kg	0.50		< 0.50						
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50		< 0.50						
Azobenzene	N	2790	mg/kg	0.50		< 0.50						
4-Bromophenylphenyl Ether	N	2790	mg/kg	0.50		< 0.50						
Hexachlorobenzene	N	2790	mg/kg	0.50		< 0.50						
Pentachlorophenol	N	2790	mg/kg	0.50		< 0.50						
Phenanthrene	N	2790	mg/kg	0.50		< 0.50						
Anthracene	N	2790	mg/kg	0.50		< 0.50						
Carbazole	N	2790	mg/kg	0.50		< 0.50						
Di-N-Butyl Phthalate	N	2790	mg/kg	0.50		< 0.50						
Fluoranthene	N	2790	mg/kg	0.50		< 0.50						
Pyrene	N	2790	mg/kg	0.50		< 0.50						
Butylbenzyl Phthalate	N	2790	mg/kg	0.50		< 0.50						
Benzo[a]anthracene	N	2790	mg/kg	0.50		< 0.50						
Chrysene	N	2790	mg/kg	0.50		< 0.50						
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50		< 0.50						
Di-N-Octyl Phthalate	N	2790	mg/kg	0.50		< 0.50						
Benzo[b]fluoranthene	N	2790	mg/kg	0.50		< 0.50						
Benzo[k]fluoranthene	N	2790	mg/kg	0.50		< 0.50						
Benzo[a]pyrene	N	2790	mg/kg	0.50		< 0.50						
Indeno(1,2,3-c,d)Pyrene	N	2790	mg/kg	0.50		< 0.50						
Dibenz(a,h)Anthracene	N	2790	mg/kg	0.50		< 0.50						
Benzo[g,h,i]perylene	N	2790	mg/kg	0.50		< 0.50						
PCB 28	M	2810	mg/kg	0.010							< 0.010	
PCB 52	M	2815	mg/kg	0.010							< 0.010	
PCB 101	M	2815	mg/kg	0.010							< 0.010	
PCB 118	M	2815	mg/kg	0.010							< 0.010	
PCB 153	M	2815	mg/kg	0.010							< 0.010	
PCB 138	M	2815	mg/kg	0.010							< 0.010	
PCB 180	M	2810	mg/kg	0.010							< 0.010	
Total PCBs (7 Congeners)	N	2815	mg/kg	0.10							< 0.10	
Total Phenols	M	2920	mg/kg	0.30		< 0.30	< 0.30				< 0.30	

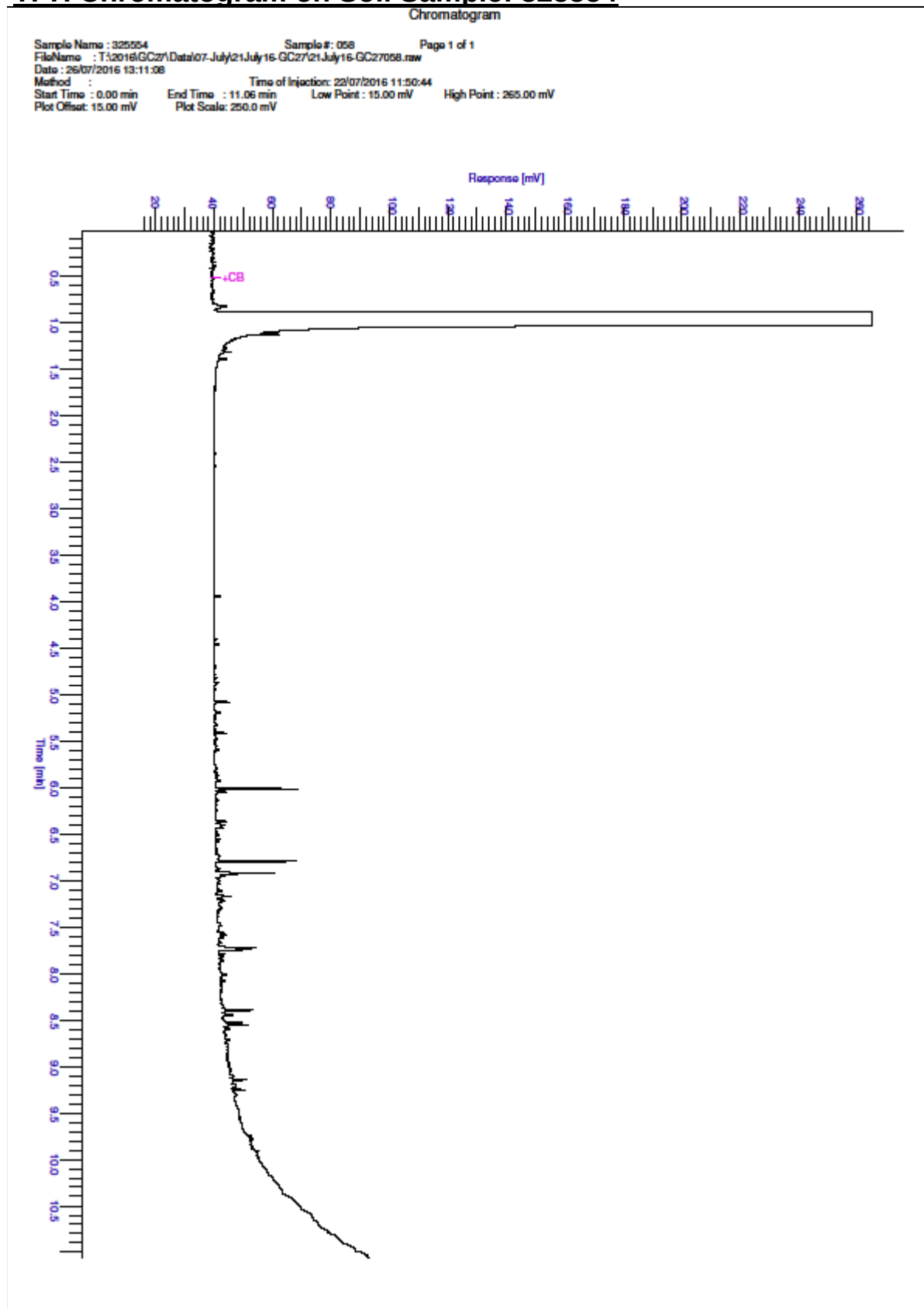
TPH Chromatogram on Soil Sample: 325536



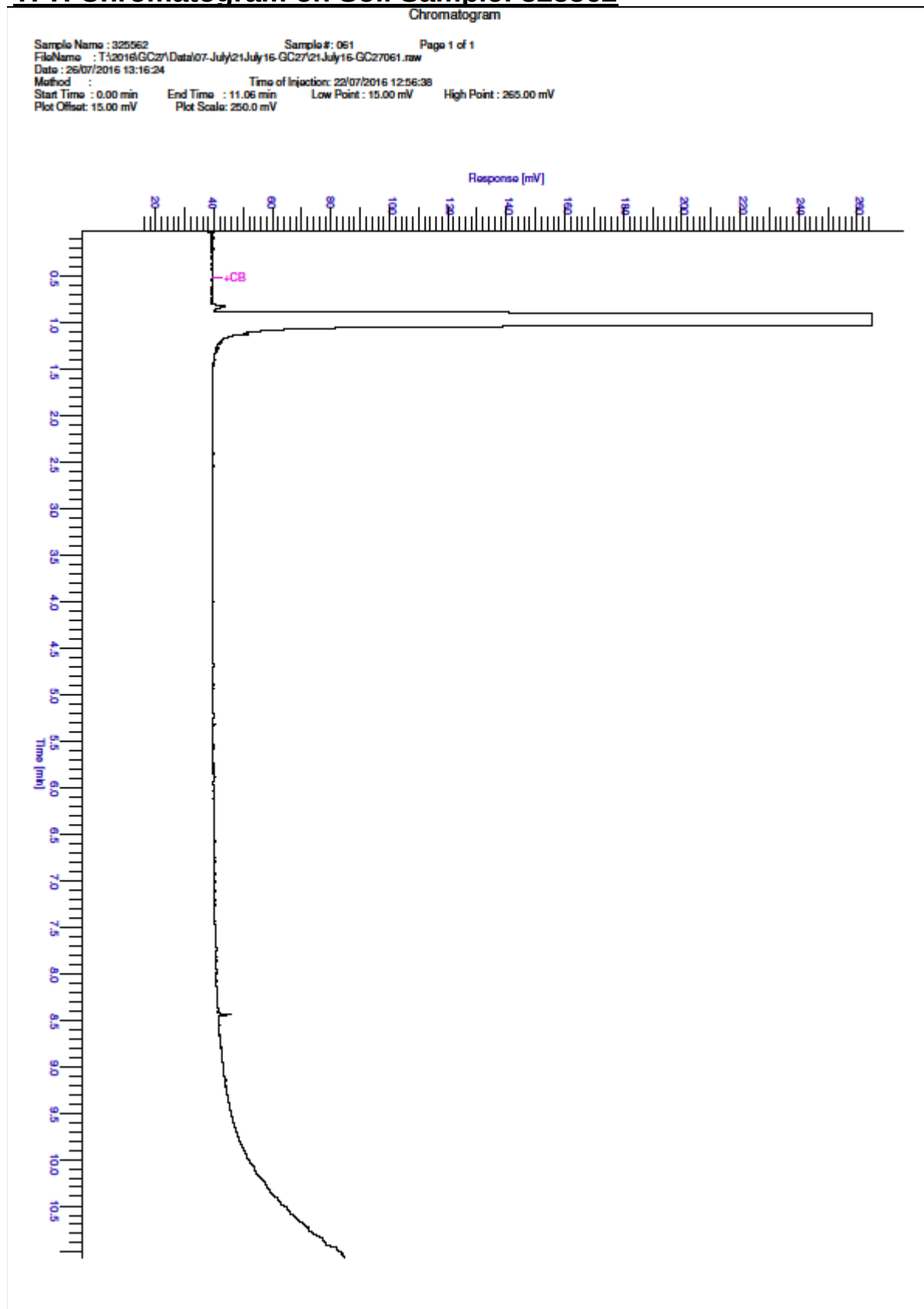
TPH Chromatogram on Soil Sample: 325544



TPH Chromatogram on Soil Sample: 325554



TPH Chromatogram on Soil Sample: 325562



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"

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 our Coventry 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

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.co.uk

APPENDIX I

CERTIFICATE OF ANALYSIS – GEOTECHNICAL



TEST REPORT

Client LK Consult Ltd

Address Unit 29 Eton Business
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract Tack Lea

Job Number MRN 2347/246
Date of Issue 02 August 2016
Page 1 of 6

Approved Signatories

S J Hutchings, A W Hutchings, A Richardson

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3

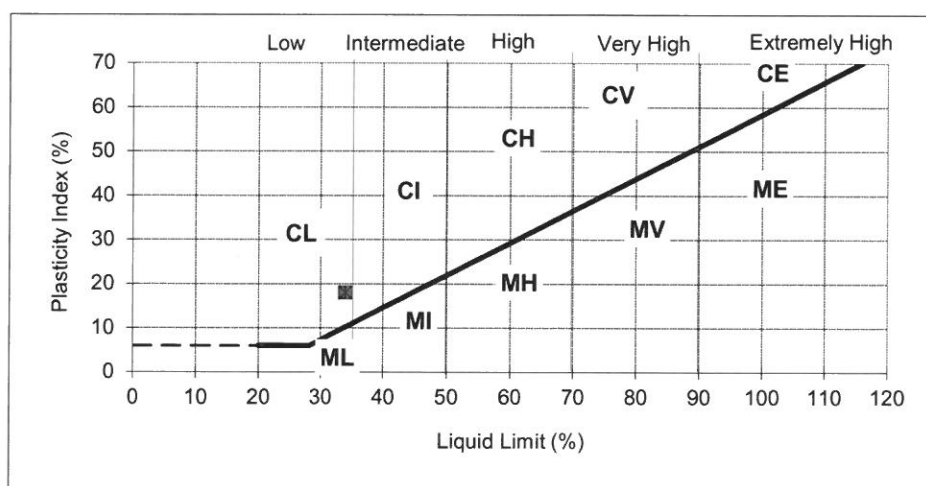
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	Tack Lea
JOB NUMBER	MRN 2347/246

SAMPLE LABEL	TP101 2m	DATE SAMPLED	20-Jul-16
SAMPLE No.	67261	DATE RECEIVED	26-Jul-16
DATE TESTED	28-Jul-16	SAMPLED BY	Client

MATERIAL	Firm brown/orange/grey mottled sandy silty Clay with some gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
19	34	16	18	56



REMARKS

Sample tested in natural condition

SIGNED

NAME

A. Richardson
(Laboratory Manager)

DATE

02-Aug-16

Page 2 of 6

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

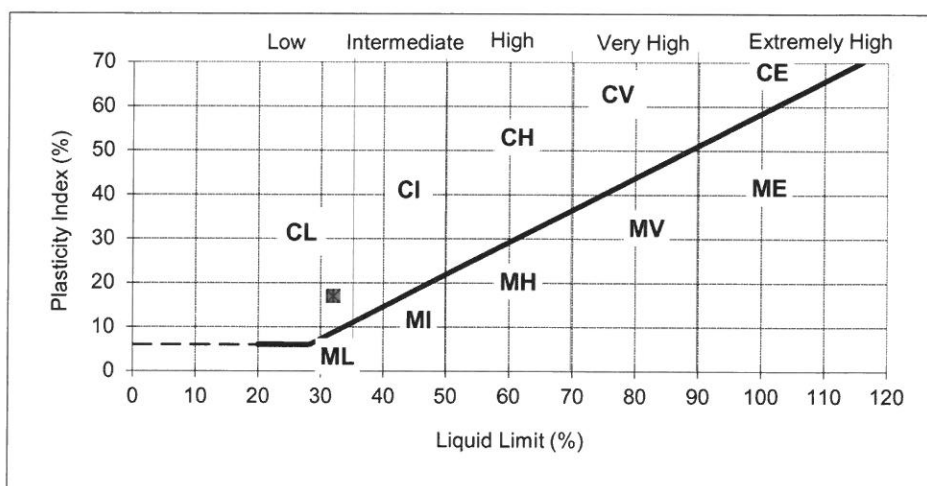
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	Tack Lea
JOB NUMBER	MRN 2347/246

SAMPLE LABEL	WS103 4.5m	DATE SAMPLED	20-Jul-16
SAMPLE No.	67262	DATE RECEIVED	26-Jul-16
DATE TESTED	28-Jul-16	SAMPLED BY	Client

MATERIAL	Firm brown/orange/grey mottled sandy silty Clay with much gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18	32	15	17	37



REMARKS

Sample tested after wet sieving

SIGNED

NAME

Page 3 of 6

A. Richardson
(Laboratory Manager)

DATE

02-Aug-16

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

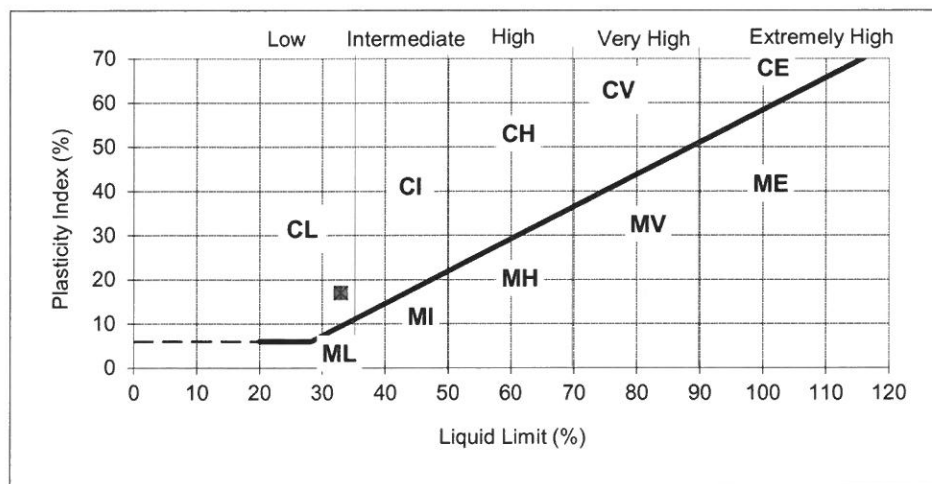
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	Tack Lea
JOB NUMBER	MRN 2347/246

SAMPLE LABEL	WS104 3.0m	DATE SAMPLED	20-Jul-16
SAMPLE No.	67263	DATE RECEIVED	26-Jul-16
DATE TESTED	28-Jul-16	SAMPLED BY	Client

MATERIAL	Firm orange/grey mottled sandy silty Clay with trace gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18	33	16	17	78



REMARKS

Sample tested in natural condition

SIGNED

NAME A. Richardson DATE
Page 4 of 6 (Laboratory Manager)

02-Aug-16

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
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TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

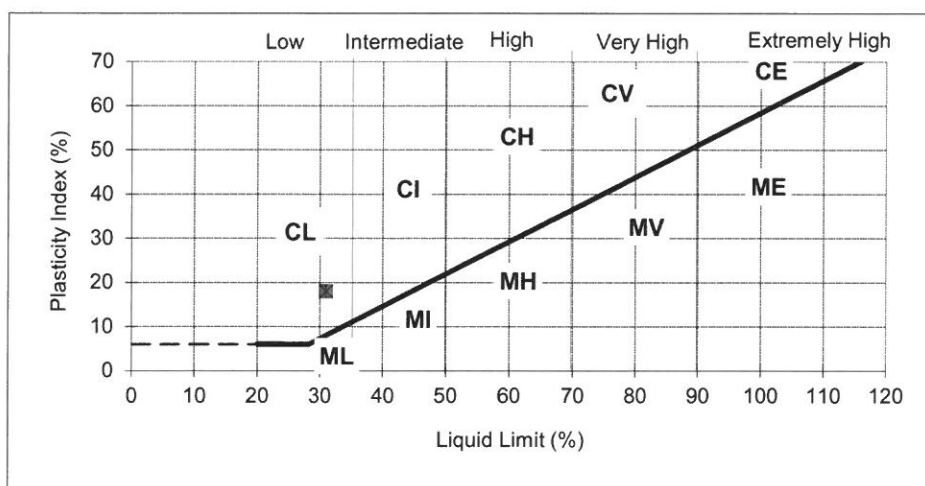
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	Tack Lea
JOB NUMBER	MRN 2347/246

SAMPLE LABEL	WS105 3.0m	DATE SAMPLED	20-Jul-16
SAMPLE No.	67264	DATE RECEIVED	26-Jul-16
DATE TESTED	28-Jul-16	SAMPLED BY	Client

MATERIAL	Stiff brown sandy silty Clay with trace gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
16	31	13	18	83



REMARKS

Sample tested in natural condition

SIGNED

NAME

A. Richardson
(Laboratory Manager)

DATE

02-Aug-16

Page 5 of 6

MURRAY RIX

33C Vauxhall Ind. Estate, Greg Street
Reddish, Stockport SK5 7BR
TEL 0161 475 0870 FAX 0161 475 0871



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

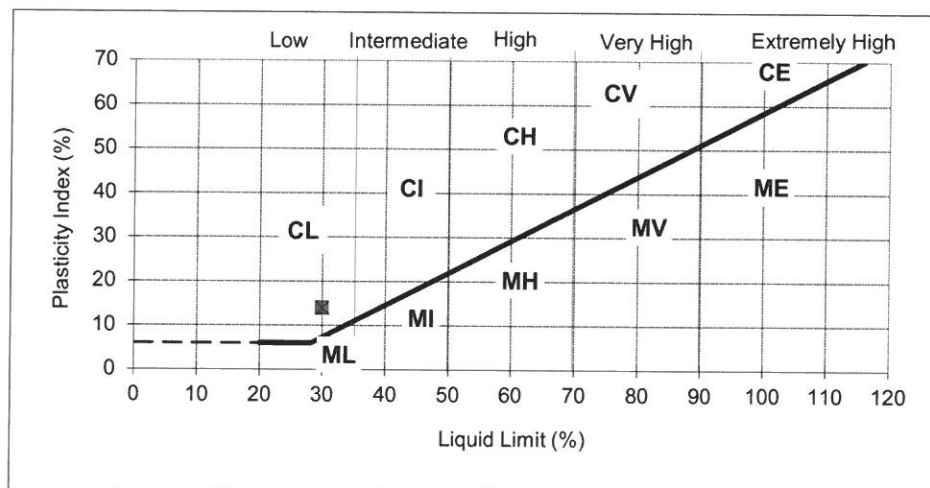
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	Tack Lea
JOB NUMBER	MRN 2347/246

SAMPLE LABEL	WS106 1.8m	DATE SAMPLED	20-Jul-16
SAMPLE No.	67265	DATE RECEIVED	26-Jul-16
DATE TESTED	28-Jul-16	SAMPLED BY	Client

MATERIAL	Soft brown/orange mottled sandy silty Clay with trace gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
24	30	16	14	77



REMARKS

Sample tested in natural condition

SIGNED

NAME

A. Richardson
(Laboratory Manager)

DATE

02-Aug-16

Page 6 of 6

APPENDIX J

CERTIFICATE OF ANALYSIS – WATER



2183

Final Report

Report No.: 16-18716-1

Initial Date of Issue: 15-Aug-2016

Client LK Consult

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

Contact(s): Chris Hughes

Project LKC 16 1018 Tack Lea, Bury

Quotation No.: **Date Received:** 05-Aug-2016

Order No.: 732049 **Date Instructed:** 05-Aug-2016

No. of Samples: 4

Turnaround (Wkdays): 5 **Results Due:** 11-Aug-2016

Date Approved: 15-Aug-2016

Approved By:



Details: Keith Jones, Technical Manager

Results - Water

Client: LK Consult	Chemtest Job No.:				16-18716	16-18716	16-18716	16-18716
Quotation No.:	Chemtest Sample ID.:				333605	333606	333607	333608
	Client Sample ID.:				WS101	WS102	WS103	WS105
	Sample Type:				WATER	WATER	WATER	WATER
	Date Sampled:				04-Aug-2016	04-Aug-2016	04-Aug-2016	04-Aug-2016
Determinand	Accred.	SOP	Units	LOD				
pH	U	1010		N/A	7.6	7.5	7.2	8.1
Sulphate	U	1220	mg/l	1.0	430	140	24	160
Cyanide (Total)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050
Hardness	U	1415	mg/l	15	550	1400	330	230
Arsenic (Dissolved)	U	1450	µg/l	1.0	< 1.0	4.2	1.4	< 1.0
Boron (Dissolved)	U	1450	µg/l	20	370	590	58	450
Cadmium (Dissolved)	U	1450	µg/l	0.080	0.084	0.22	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	< 1.0	18
Copper (Dissolved)	U	1450	µg/l	1.0	2.4	26	2.1	6.9
Mercury (Dissolved)	U	1450	µg/l	0.50	< 0.50	1.1	< 0.50	< 0.50
Nickel (Dissolved)	U	1450	µg/l	1.0	5.1	7.8	2.9	1.3
Lead (Dissolved)	U	1450	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Selenium (Dissolved)	U	1450	µg/l	1.0	< 1.0	5.2	< 1.0	< 1.0
Vanadium (Dissolved)	U	1450	µg/l	1.0	< 1.0	3.1	< 1.0	< 1.0
Zinc (Dissolved)	U	1450	µg/l	1.0	12	9.6	18	3.6
Chromium (Hexavalent)	U	1490	µg/l	20	< 20	< 20	< 20	< 20
Total Organic Carbon	U	1610	mg/l	2.0	21	240	44	22
Fuel Type	N	1670		N/A	N/A	Lube	Lube	N/A
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	5.7	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	5.2	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	29	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	1100	1000	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	1100	1000	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10	53	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	63	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	55	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	430	9.1	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	42	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	740	430	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	1400	440	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10	2500	1400	< 10
Naphthalene	N	1700	µg/l	0.010				< 0.010
Acenaphthylene	N	1700	µg/l	0.010				< 0.010
Acenaphthene	N	1700	µg/l	0.010				< 0.010

Results - Water

Client: LK Consult	Chemtest Job No.:				16-18716	16-18716	16-18716	16-18716
Quotation No.:	Chemtest Sample ID.:				333605	333606	333607	333608
	Client Sample ID.:				WS101	WS102	WS103	WS105
	Sample Type:				WATER	WATER	WATER	WATER
	Date Sampled:				04-Aug-2016	04-Aug-2016	04-Aug-2016	04-Aug-2016
Determinand	Accred.	SOP	Units	LOD				
Fluorene	N	1700	µg/l	0.010				< 0.010
Phenanthrene	N	1700	µg/l	0.010				< 0.010
Anthracene	N	1700	µg/l	0.010				< 0.010
Fluoranthene	N	1700	µg/l	0.010				< 0.010
Pyrene	N	1700	µg/l	0.010				< 0.010
Benzo[a]anthracene	N	1700	µg/l	0.010				< 0.010
Chrysene	N	1700	µg/l	0.010				< 0.010
Benzo[b]fluoranthene	N	1700	µg/l	0.010				< 0.010
Benzo[k]fluoranthene	N	1700	µg/l	0.010				< 0.010
Benzo[a]pyrene	N	1700	µg/l	0.010				< 0.010
Indeno(1,2,3-c,d)Pyrene	N	1700	µg/l	0.010				< 0.010
Dibenz(a,h)Anthracene	N	1700	µg/l	0.010				< 0.010
Benzo[g,h,i]perylene	N	1700	µg/l	0.010				< 0.010
Total Of 16 PAH's	N	1700	µg/l	0.20				< 0.20
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Chloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Vinyl Chloride	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Bromomethane	U	1760	µg/l	5.0	< 5.0	< 5.0	< 5.0	
Chloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Bromochloromethane	U	1760	µg/l	5.0	< 5.0	< 5.0	< 5.0	
Trichloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Benzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	
Trichloroethene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Dibromomethane	U	1760	µg/l	10	< 10	< 10	< 10	
Bromodichloromethane	U	1760	µg/l	5.0	< 5.0	< 5.0	< 5.0	
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10	< 10	
Toluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10	< 10	
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10	< 10	< 10	
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	

Results - Water

Client: LK Consult	Chemtest Job No.:				16-18716	16-18716	16-18716	16-18716
Quotation No.:	Chemtest Sample ID.:				333605	333606	333607	333608
	Client Sample ID.:				WS101	WS102	WS103	WS105
	Sample Type:				WATER	WATER	WATER	WATER
	Date Sampled:				04-Aug-2016	04-Aug-2016	04-Aug-2016	04-Aug-2016
Determinand	Accred.	SOP	Units	LOD				
Dibromochloromethane	U	1760	µg/l	10	< 10	< 10	< 10	
1,2-Dibromoethane	U	1760	µg/l	5.0	< 5.0	< 5.0	< 5.0	
Chlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Tribromomethane	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Bromobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50	< 50	< 50	
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50	< 50	< 50	
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	
Carbon Disulphide	N	1760	µg/l	2.0	< 2.0	< 2.0	< 2.0	
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Phenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2-Chlorophenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
1,3-Dichlorobenzene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
1,4-Dichlorobenzene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
1,2-Dichlorobenzene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Hexachloroethane	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	

Results - Water

Client: LK Consult	Chemtest Job No.:				16-18716	16-18716	16-18716	16-18716
Quotation No.:	Chemtest Sample ID.:				333605	333606	333607	333608
	Client Sample ID.:				WS101	WS102	WS103	WS105
	Sample Type:				WATER	WATER	WATER	WATER
	Date Sampled:				04-Aug-2016	04-Aug-2016	04-Aug-2016	04-Aug-2016
Determinand	Accred.	SOP	Units	LOD				
4-Methylphenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Nitrobenzene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Isophorone	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2-Nitrophenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2,4-Dimethylphenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2,4-Dichlorophenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
1,2,4-Trichlorobenzene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Naphthalene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
4-Chloroaniline	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Hexachlorobutadiene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
4-Chloro-3-Methylphenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2-Methylnaphthalene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Hexachlorocyclopentadiene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2,4,6-Trichlorophenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2,4,5-Trichlorophenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2-Chloronaphthalene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2-Nitroaniline	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Acenaphthylene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Dimethylphthalate	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2,6-Dinitrotoluene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Acenaphthene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Dibenzofuran	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
4-Chlorophenylphenylether	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2,4-Dinitrotoluene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Fluorene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Diethyl Phthalate	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
4-Nitroaniline	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Azobenzene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
4-Bromophenylphenyl Ether	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Hexachlorobenzene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Pentachlorophenol	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Phenanthrene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Anthracene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Carbazole	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Di-N-Butyl Phthalate	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Fluoranthene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Pyrene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Butylbenzyl Phthalate	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Benzo[a]anthracene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	

Results - Water

Client: LK Consult	Chemtest Job No.:				16-18716	16-18716	16-18716	16-18716
Quotation No.:	Chemtest Sample ID.:				333605	333606	333607	333608
	Client Sample ID.:				WS101	WS102	WS103	WS105
	Sample Type:				WATER	WATER	WATER	WATER
	Date Sampled:				04-Aug-2016	04-Aug-2016	04-Aug-2016	04-Aug-2016
Determinand	Accred.	SOP	Units	LOD				
Chrysene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Di-N-Octyl Phthalate	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Benzo[b]fluoranthene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Benzo[k]fluoranthene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Benzo[a]pyrene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Dibenz(a,h)Anthracene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Benzo[g,h,i]perylene	N	1790	µg/l	0.050	< 0.050	< 0.050	< 0.050	
Total Phenols	U	1920	mg/l	0.030	< 0.030	0.36	< 0.030	< 0.030

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"

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 our Coventry 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

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.co.uk

APPENDIX K

GAS MONITORING RESULTS



1. Equipment is serviced and checked as recommended by the manufacturer. Refer to calibration records and service certificates.
2. CH4 is explosive between the range of 5 - 15% v/v. 100% lower explosive limit is equal to 5% v/v CH4.
3. Flow readings are based on a 1 minute average value where flow is detected (equipment range of +/- 12 ltr/hr)
4. After CIRIA C665, GSV = gas concentration (%) x flow rate. Peak CH4 and Steady CO2 values used.
5. Monitoring is carried out in line with procedures set by LKC Ltd with reference to CIRIA C665. Refer to procedural documents



1. Equipment is serviced and checked as recommended by the manufacturer. Refer to calibration records, and service certificates.
2. CH4 is explosive between the range of 5 - 15% v/v. 100% lower explosive limit is equal to 5% v/v CH4.
3. Flow readings are based on a 1 minute average value where flow is detected (equipment range of +/- 12 ltr/hr)
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5. Monitoring is carried out in line with procedures set by LKC Ltd with reference to CIRIA C665. Refer to procedural documents



LK CONSULT LTD

GAS MONITORING RECORD

SITE	Tack Lea, Bury
REF	LKC 16 1018
DATE	30-Aug-2016
STAFF	AT
VISIT	4 of 6

EQUIPMENT ^{*1}		
Instrument / Model Type	Serial Number	Comments
Geotechnical Instruments GA5000	G502417	Serviced, calibrated & gas checked.
Geotech dipmeter	79864	Operating Normally

ATMOSPHERIC / GROUND CONDITIONS	
Atmospheric Pressure Trend on Site	Rising
Atmospheric Pressure (Prev 24hrs)	Rising
Weather Conditions	Overcast, warm, no wind
Ground Conditions	Dry

Borehole ID	Date/Time	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Peak CH4 (% v/v)	% of Lower Explosive Limit ^{*2}	CO Pod (ppm)	H2S Pod (ppm)	Balance (%)	Barometric Pressure (mb)	Relative Pressure (mb)	Internal Flow ^{*3} (ltr/hr)	Standing Water Level (mbgl)	Installation Base Dip (mbgl)	Notes
WS101	30/08/2016 11:17	0.0	6.3	9.9	0.0	0.0	4.0	1.0	83.8	1006	0.0	-0.1	2.20	3.02	
WS102	30/08/2016 11:02	1.5	2.1	17.9	1.5	0.0	6.0	1.0	78.5	1006	0.0	0.0	0.58	1.94	Flow steady after 4 m 33 s. Water in tube.
WS103	30/08/2016 11:29	0.0	1.5	18.6	0.0	0.0	9.0	1.0	79.9	1007	0.0	0.0	4.29	4.92	
WS104	30/08/2016 11:43	0.0	2.2	17.1	0.0	0.0	5.0	1.0	80.7	1008	0.0	-0.1	2.94	3.02	
WS105	30/08/2016 11:56	0.0	0.1	20.4	0.0	0.0	4.0	1.0	79.5	1008	0.0	0.0	1.69	3.48	
WS106	30/08/2016 12:13	0.0	0.1	20.5	0.0	0.0	2.0	1.0	79.4	1009	0.0	-0.1		4.37	
CPBH	-	-	-	-	-	-	-	-	-	-	-	-	9.84	10.08	CPBH from previous SI. Dipped, no gas.

ABBREVIATIONS			
^{*1}	Refer to Note 1	ppm	Parts per million
ND	Not detected	mb	Millibars
NR	Not recorded	ltr/hr	Litres per hour
UR	Unable to record	mbgl	Metres below ground level
OS	Off recordable scale	LEL	Lower explosive limit in air
N/A	Not applicable	OEL	Occupational exposure limit
% v/v	Percentage volume by total volume		

- NOTES**
1. Equipment is serviced and checked as recommended by the manufacturer. Refer to calibration records. and service certificates.
 2. CH4 is explosive between the range of 5 - 15% v/v. 100% lower explosive limit is equal to 5% v/v CH4.
 3. Flow readings are based on a 1 minute average value where flow is detected (equipment range of +/- 12 ltr/hr)
 4. After CIRIA C665. GSV = gas concentration (%) x flow rate. Peak CH4 and Steady CO2 values used.
 5. Monitoring is carried out in line with procedures set by LKC Ltd with reference to CIRIA C665. Refer to procedural documents



LK CONSULT LTD

GAS MONITORING RECORD

SITE	Tack Lea, Bury
REF	LKC 16 1018
DATE	13-Sep-2016
STAFF	AT
VISIT	5 of 6

EQUIPMENT ^{*1}		
Instrument / Model Type	Serial Number	Comments
Geotechnical Instruments GA5000	G502417	Serviced, calibrated & gas checked.
Geotech dipmeter	79864	Operating Normally

ATMOSPHERIC / GROUND CONDITIONS	
Atmospheric Pressure Trend on Site	Rising
Atmospheric Pressure (Prev 24hrs)	Steady
Weather Conditions	Sunny, warm, no wind
Ground Conditions	Dry

Borehole ID	Date/Time	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Peak CH4 (% v/v)	% of Lower Explosive Limit ^{*2}	CO Pod (ppm)	H2S Pod (ppm)	Balance (%)	Barometric Pressure (mb)	Internal Flow ^{*3} (ltr/hr)	Standing Water Level (mbgl)	Installation Base Dip (mbgl)	Notes
WS101	13/09/2016 10:37	0.0	6.5	9.0	0.0	0.0	5.0	1.0	84.5	994	0.0	2.20	3.02	
WS102	13/09/2016 10:27	0.2	1.6	18.4	0.2	4.0	7.0	1.0	79.8	993	0.0	0.51	1.93	
WS103	13/09/2016 10:47	0.0	1.7	17.7	0.0	0.0	6.0	1.0	80.6	995	0.0	4.30	4.93	
WS104	13/09/2016 10:55	0.0	1.8	16.6	0.0	0.0	6.0	1.0	81.6	996	-0.1	2.93	3.02	
WS105	13/09/2016 11:04	0.0	0.1	19.6	0.0	0.0	5.0	1.0	80.3	996	0.1	1.69	3.48	
WS106	13/09/2016 11:13	0.0	0.0	19.7	0.0	0.0	1.0	1.0	80.3	996	0.0	DRY	4.38	Borehole dry.

ABBREVIATIONS			
^{*1}	Refer to Note 1	ppm	Parts per million
ND	Not detected	mb	Millibars
NR	Not recorded	ltr/hr	Litres per hour
UR	Unable to record	mbgl	Metres below ground level
OS	Off recordable scale	LEL	Lower explosive limit in air
N/A	Not applicable	OEL	Occupational exposure limit
% v/v	Percentage volume by total volume		

NOTES	
1.	Equipment is serviced and checked as recommended by the manufacturer. Refer to calibration records and service certificates.
2.	CH4 is explosive between the range of 5 - 15% v/v. 100% lower explosive limit is equal to 5% v/v CH4.
3.	Flow readings are based on a 1 minute average value where flow is detected (equipment range of +/- 12 ltr/hr)
4.	After CIRIA C665. GSV = gas concentration (%) x flow rate. Peak CH4 and Steady CO2 values used.
5.	Monitoring is carried out in line with procedures set by LKC Ltd with reference to CIRIA C665. Refer to procedural documents



LK CONSULT LTD

GAS MONITORING RECORD

SITE	Tack Lea, Bury
REF	LKC 16 1018
DATE	30-Sep-2016
STAFF	AT
VISIT	6 of 6

EQUIPMENT ^{*1}		
Instrument / Model Type	Serial Number	Comments
Geotechnical Instruments GA5000	G502417	Serviced, calibrated & gas checked.
Geotech dipmeter	79864	Operating Normally

ATMOSPHERIC / GROUND CONDITIONS	
Atmospheric Pressure Trend on Site	Steady
Atmospheric Pressure (Prev 24hrs)	Rising
Weather Conditions	Sunny, cool, no wind
Ground Conditions	Dry

Borehole ID	Date/Time	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Peak CH4 (% v/v)	% of Lower Explosive Limit ^{*2}	CO Pod (ppm)	H2S Pod (ppm)	Balance (%)	Barometric Pressure (mb)	Internal Flow ^{*3} (ltr/hr)	Standing Water Level (mbgl)	Installation Base Dip (mbgl)	Notes
WS01	30/09/2016 10:19	0.0	6.6	8.5	0.0	0.0	3.0	1.0	84.9	989	0.0	2.14	3.03	
WS02	30/09/2016 10:07	0.0	2.0	18.9	0.0	0.0	2.0	1.0	79.1	988	0.0	0.51	1.94	Steady flow after 2m 45s. Water in tube after 95s.
WS03	30/09/2016 10:29	0.0	2.0	17.9	0.0	0.0	2.0	1.0	80.1	990	0.0	4.29	4.93	
WS04	30/09/2016 10:37	0.0	8.2	9.7	0.0	0.0	4.0	1.0	82.1	991	0.0	2.92	3.02	
WS05	30/09/2016 10:46	0.0	0.2	20.1	0.0	0.0	4.0	1.0	79.7	991	0.0	1.69	3.48	
WS06	30/09/2016 10:56	0.0	3.4	15.6	0.0	0.0	0.0	1.0	81.0	992	-0.1	DRY	4.38	Borehole dry.

ABBREVIATIONS	
^{*1}	Refer to Note 1
ND	Not detected
NR	Not recorded
UR	Unable to record
OS	Off recordable scale
N/A	Not applicable
% v/v	Percentage volume by total volume
ppm	Parts per million
mb	Millibars
ltr/hr	Litres per hour
mbgl	Metres below ground level
LEL	Lower explosive limit in air
OEL	Occupational exposure limit

NOTES	
1.	Equipment is serviced and checked as recommended by the manufacturer. Refer to calibration records and service certificates.
2.	CH4 is explosive between the range of 5 - 15% v/v. 100% lower explosive limit is equal to 5% v/v CH4.
3.	Flow readings are based on a 1 minute average value where flow is detected (equipment range of +/- 12 ltr/hr)
4.	After CIRIA C665. GSV = gas concentration (%) x flow rate. Peak CH4 and Steady CO2 values used.
5.	Monitoring is carried out in line with procedures set by LKC Ltd with reference to CIRIA C665. Refer to procedural documents

APPENDIX L

GENERIC ASSESSMENT CRITERIA VALUES

Summary of Category 4 Screening Levels: 2015

Substance	Residential (with home- grown produce)	Residential (without home- grown produce)	Allotments	Commercial	Public Open Space 1	Public Open Space 2
Arsenic	37 mg/kg	40 mg/kg	49 mg/kg	640 mg/kg	79 mg/kg	170 mg/kg
Benzene	0.87 mg/kg	3.3 mg/kg	0.18 mg/kg	98 mg/kg	140 mg/kg	230 mg/kg
Benzo(a)pyrene	5.0 mg/kg	5.3 mg/kg	5.7 mg/kg	77 mg/kg	10 mg/kg	21 mg/kg
Cadmium	22 mg/kg	150 mg/kg	3.9 mg/kg	410 mg/kg	220 mg/kg	880 mg/kg
Chromium VI	21 mg/kg	21 mg/kg	170 mg/kg	49 mg/kg	21 mg/kg	250 mg/kg
Lead	200 mg/kg	310 mg/kg	80 mg/kg	2300 mg/kg	630 mg/kg	1300 mg/kg

Summary Table for the Generic Assessment Criteria for Human Health Risk Assessment Land Quality Management (LQM) S4ULs.

All GAC are based on sandy loam soils with a pH 7.

All GAC are based on sandy loam soils with a pH 7.			LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
Contaminant		SOM	Res +	Res -	Allot.	Comm.	POS _{resi}	POS _{park}
Metals	Inorganic Arsenic	6%	37	40	43	640	79	170
	Beryllium	6%	1.7	1.7	35	12	2.2	63
	Boron	6%	290	11,000	45	240,000	21,000	46,000
	Cadmium	6%	11	85	1.9	190	120	532
	Chromium (III)	6%	910	910	18,000	8,600	1,500	33,000
	Chromium (VI)	6%	6.0	6.0	1.8	33	7.7	220
	Copper	6%	2,400	7,100	520	68,000	12,000	44,000
	Elemental Mercury	6%	1.2	1.2	21	58 (25.8) ^{vap}	16	30 (25.8) ^{vap}
	Inorganic Mercury	6%	40	56	19	1,100	120	240
	Methylmercury	6%	11	15	6.0	320	40	68
	Nickel	6%	180	180	230	980	230	3,400
	Selenium	6%	250	430	88	12,000	1,100	1,800
	Vanadium	6%	410	1,200	91	9,000	2,000	5,000
Zinc	6%	3,700	40,000	620	730,000	81,000	170,000	
BTEX Compounds	Benzene	1%	0.087	0.38	0.017	27	72	90
		2.5%	0.17	0.70	0.034	47	72	100
		6%	0.37	1.4	0.075	90	73	110
	Toluene	1%	130	880 (869) ^{vap}	22	56,000 (869) ^{vap}	56,000	87,000 (869) ^{vap}
		2.5%	290	1,900	51	110,000 (1,920) ^{vap}	56,000	95,000 (1,920) ^{vap}
		6%	660	3,900	120	180,000 (4,360) ^{vap}	56,000	100,000 (4,360) ^{vap}
	Ethylbenzene	1%	47	83	16	5,700 (518) ^{vap}	24,000	17,000 (518) ^{vap}
		2.5%	110	190	39	13,000 (1,220) ^{vap}	24,000	22,000 (1,220) ^{vap}
		6%	260	440	91	27,000 (2,840) ^{vap}	25,000	27,000 (2,840) ^{vap}
	o-xylene	1%	60	88	28	6,600 (478) ^{sol}	41,000	17,000 (478) ^{sol}
		2.5%	140	210	67	15,000 (1,120) ^{sol}	42,000	24,000 (1,120) ^{sol}
		6%	330	480	160	33,000 (2,620) ^{sol}	43,000	33,000 (2,620) ^{sol}
	m-xylene	1%	59	82	31	6,200 (625) ^{vap}	41,000	17,000 (625) ^{vap}
		2.5%	140	190	74	14,000 (1,470) ^{vap}	42,000	24,000 (1,470) ^{vap}
		6%	320	450	170	31,000 (3,460) ^{vap}	43,000	32,000 (3,460) ^{vap}
	p-xylene	1%	56	79	29	5,900 (576) ^{sol}	41,000	17,000 (576) ^{sol}
		2.5%	130	180	69	14,000 (1,350) ^{sol}	42,000	23,000 (1,350) ^{sol}
		6%	310	430	160	30,000 (3,170) ^{sol}	43,000	31,000 (3,170) ^{sol}

NOTES

^{sol/vap} = solubility / vapour limit (potentially use if free product identified, although highly conservative).

f = oral, dermal and inhalation exposures compared to oral HCV.

All GAC are based on sandy loam soils with a pH 7.

All GAC are based on sandy loam soils with a pH 7.			LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
Contaminant		SOM	Res +	Res -	Allot.	Comm.	POS _{resi}	POS _{park}
Polycyclic Aromatic Hydrocarbons (PAHs)	Acenaphthene	1%	210	3,000 (57.1) ^{sol}	34	84,000 (57.0) ^{sol}	15,000	29,000
		2.5%	510	4,700 (141) ^{sol}	85	97,000 (141) ^{sol}	15,000	30,000
		6%	1,100	6,000 (336) ^{sol}	200	100,000	15,000	30,000
	Acenaphthylene	1%	170	2,900 (86.1) ^{sol}	28	83,000 (86.1) ^{sol}	15,000	29,000
		2.5%	420	4,600 (212) ^{sol}	69	97,000 (212) ^{sol}	15,000	30,000
		6%	920	6,000 (506) ^{sol}	160	100,000	15,000	30,000
	Anthracene	1%	2,400	31,000 (1.17) ^{vap}	380	520,000	74,000	150,000
		2.5%	5,400	35,000	950	540,000	74,000	150,000
		6%	11,000	37,000	2,200	540,000	74,000	150,000
	Benz(a)anthracene	1%	7.2	11	2.9	170	29	49
		2.5%	11	14	6.5	170	29	56
		6%	13	15	13	180	29	62
	Benzo(a)pyrene (only)	1%	2.2	3.2	0.97	35	5.7	11
		2.5%	2.7	3.2	2.0	35	5.7	12
		6%	3.0	3.2	3.5	36	5.7	13
	Benzo(b)fluoranthene	1%	2.6	3.9	0.99	44	7.1	13
		2.5%	3.3	4.0	2.1	44	7.2	15
		6%	3.7	4.0	3.9	45	7.2	16
	Benzo(ghi)perylene	1%	320	360	290	3,900	640	1,400
		2.5%	340	360	470	4,000	640	1,500
		6%	350	360	640	4,000	640	1,600
	Benzo(k)fluoranthene	1%	77	110	37	1,200	190	370
		2.5%	93	110	75	1,200	190	410
		6%	100	110	130	1,200	190	440
	Chrysene	1%	15	30	4.1	350	57	93
		2.5%	22	31	9.4	350	57	110
		6%	27	32	19	350	57	120
	Dibenzo(ah)anthracene	1%	0.24	0.31	0.14	3.5	0.57	1.1
		2.5%	0.28	0.32	0.27	3.6	0.58	1.3
		6%	0.3	0.32	0.43	3.6	0.58	1.4
	Fluoranthene	1%	280	1,500	52	23,000	3,100	6,300
		2.5%	560	1,600	130	23,000	3,100	6,300
		6%	890	1,600	290	23,000	3,100	6,400
	Fluorene	1%	170	2,800 (36.0) ^{sol}	27	63,000 (30.9) ^{sol}	9,900	20,000
		2.5%	400	3,800 (76.5) ^{sol}	67	68,000	9,900	20,000
		6%	860	4,500 (183) ^{sol}	160	71,000	9,900	20,000
	Indeno(123-cd)pyrene	1%	27	45	9.5	500	82	150
		2.5%	36	46	21	510	82	170
		6%	41	46	39	510	82	180
	Naphthalene	1%	2.3 ^f	2.3 ^f	4.1 ^f	190 ^f (76.4) ^{sol}	4,900 ^f	1,200 ^f (76.4) ^{sol}
		2.5%	5.6 ^f	5.6 ^f	10 ^f	460 ^f (183) ^{sol}	4,900 ^f	1,900 ^f (183) ^{sol}
		6%	13 ^f	13 ^f	24 ^f	1,100 ^f (432) ^{sol}	4,900 ^f	3,000
	Phenanthrene	1%	95	1,300 (36.0) ^{sol}	15	22,000	3,100	6,200
		2.5%	220	1,500	38	22,000	3,100	6,200
		6%	440	1,500	90	22,000	3,100	6,300
	Pyrene	1%	620	3,700	110	54,000	7,400	15,000
		2.5%	1,200	3,800	270	54,000	7,400	15,000
		6%	2,000	3,800	620	54,000	7,400	15,000
Coal Tar (B(a)P as surrogate marker)	1%	0.79	1.2	0.32	15	2.2	4.4	
	2.5%	0.98	1.2	0.67	15	2.2	4.7	
	6%	1.1	1.2	1.2	15	2.2	4.8	

NOTES

^{sol} / ^{vap} = solubility / vapour limit (potentially use if free product identified, although highly conservative).

^f = naphthalene is based on comparison of inhalation exposure with TDI_{Inhal} for localised effect.

All GAC are based on sandy loam soils with a pH 7.

LQM Generic Assessment Criteria (mg/kg) Dry weight soil

Contaminant	SOM	Res +	Res -	Allot.	Comm.	POS _{resi}	POS _{park}
Aliphatic							
EC 5-6	1%	42	42	730	3,200 (304) ^{sol}	570,000(304) ^{sol}	95,000 (304) ^{sol}
EC>6-8	1%	100	100	2,300	7,800 (144) ^{sol}	600,000	150,000 (144) ^{sol}
EC>8-10	1%	27	27	320	2,000 (78) ^{sol}	13,000	14,000 (78) ^{vap}
EC>10-12	1%	130 (48) ^{vap}	130 (48) ^{vap}	2,200	9,700 (48) ^{sol}	13,000	21,000 (48) ^{vap}
EC>12-16	1%	1,100 (24) ^{sol}	1,100 (24) ^{sol}	11,000	59,000 (24) ^{sol}	13,000	25,000 (24) ^{sol}
EC>16-35	1%	65,000 (8.48) ^{f, sol}	65,000 (8.48) ^{f, sol}	260,000 ^f	160,000 ^f	250,000 ^f	450,000 ^f
EC>35-44	1%	65,000 (8.48) ^{f, sol}	65,000 (8.48) ^{f, sol}	260,000 ^f	160,000 ^f	250,000 ^f	450,000 ^f
Aliphatic							
EC 5-6	2.5%	78	78	1,700	5,900 (558) ^{sol}	590,000	130,000 (558) ^{sol}
EC>6-8	2.5%	230	230	5,600	17,000 (322) ^{sol}	610,000	220,000 (322) ^{sol}
EC>8-10	2.5%	65	65	770	4,800 (190) ^{vap}	13,000	18,000 (190) ^{vap}
EC>10-12	2.5%	330 (118) ^{vap}	330 (118) ^{vap}	4,400	23,000 (118) ^{vap}	13,000	23,000 (118) ^{vap}
EC>12-16	2.5%	2,400 (59) ^{sol}	2,400 (59) ^{sol}	13,000	82,000 (59) ^{sol}	13,000	25,000 (59) ^{sol}
EC>16-35	2.5%	92,000 (21) ^{f, sol}	92,000 (21) ^{f, sol}	270,000 ^f	1,700,000 ^f	250,000 ^f	480,000 ^f
EC>35-44	2.5%	92,000 (21) ^{f, sol}	92,000 (21) ^{f, sol}	270,000 ^f	1,700,000 ^f	250,000 ^f	480,000 ^f
Aliphatic							
EC 5-6	6%	160	160	3,900	12,000 (1,150) ^{sol}	600,000	180,000 (1,150) ^{sol}
EC>6-8	6%	530	530	13,000	40,000 (736) ^{sol}	620,000	320,000 (736) ^{sol}
EC>8-10	6%	150	150	1,700	11,000 (451) ^{vap}	13,000	21,000 (451) ^{vap}
EC>10-12	6%	760 (283) ^{vap}	760 (283) ^{vap}	7,300	47,000 (283) ^{vap}	13,000	24,000 (283) ^{vap}
EC>12-16	6%	4,300 (142) ^{sol}	4,400 (142) ^{sol}	13,000	90,000 (142) ^{sol}	13,000	26,000 (142) ^{sol}
EC>16-35	6%	110,000 ^f	110,000 ^f	270,000 ^f	1,800,000 ^f	250,000 ^f	490,000 ^f
EC>35-44	6%	110,000 ^f	110,000 ^f	270,000 ^f	1,800,000 ^f	250,000 ^f	490,000 ^f
Aromatic							
EC5-7(benzene as non-threshold)	1%	70	370	13	26,000 (1,220) ^{sol}	56,000	76,000 (1,220) ^{sol}
EC>7-8(toluene)	1%	130	860	22	56,000 (869) ^{vap}	56,000	87,000 (869) ^{vap}
EC>8-10	1%	34	47	8.6	3,500 (613) ^{vap}	5,000	7,200 (613) ^{vap}
EC>10-12	1%	74	250	13	16,000 (364) ^{sol}	5,000	9,200 (364) ^{sol}
EC>12-16	1%	140	1,800	23	36,000 (169) ^{sol}	5,100	10,000
EC>16-21	1%	260 ^f	1,900 ^f	46 ^f	28,000 ^f	3,800 ^f	7,600 ^f
EC>21-35	1%	1,100 ^f	1,900 ^f	370 ^f	28,000 ^f	3,800 ^f	7,800 ^f
EC>35-44	1%	1,100 ^f	1,900 ^f	370 ^f	28,000 ^f	3,800 ^f	7,800 ^f
Aromatic							
EC5-7(benzene as non-threshold)	2.5%	140	690	27	46,000 (2,260) ^{sol}	56,000	84,000 (2,260) ^{sol}
EC>7-8(toluene)	2.5%	290	1,800	51	110,000 (1,920) ^{sol}	56,000	95,000 (1,920) ^{sol}
EC>8-10	2.5%	83	110	21	8,100 (1,500) ^{vap}	5,000	8,500 (1,500) ^{vap}
EC>10-12	2.5%	180	590	31	28,000 (899) ^{sol}	5,000	9,700 (899) ^{sol}
EC>12-16	2.5%	330	2,300 (419) ^{sol}	57	37,000	5,100	10,000
EC>16-21	2.5%	540 ^f	1,900 ^f	110 ^f	28,000 ^f	3,800 ^f	7,700 ^f
EC>21-35	2.5%	1,500 ^f	1,900 ^f	820 ^f	28,000 ^f	3,800 ^f	7,800 ^f
EC>35-44	2.5%	1,500 ^f	1,900 ^f	820 ^f	28,000 ^f	3,800 ^f	7,800 ^f
Aromatic							
EC5-7(benzene as non-threshold)	6%	300	1,400	57	86,000 (4,710) ^{sol}	56,000	92,000 (4,710) ^{sol}
EC>7-8(toluene)	6%	660	3,900	120	180,000 (4,360) ^{vap}	56,000	100,000 (4,360) ^{vap}
EC>8-10	6%	190	270	51	17,000 (3,580) ^{vap}	5,000	9,300 (3,580) ^{vap}
EC>10-12	6%	380	1,200	4	34,000 (2,150) ^{sol}	5,000	10,000
EC>12-16	6%	660	2,500	130	38,000	5,100	10,000
EC>16-21	6%	930 ^f	1,900 ^f	260 ^f	28,000 ^f	3,800 ^f	7,800 ^f
EC>21-35	6%	1,700 ^f	1,900 ^f	1,600 ^f	28,000 ^f	3,800 ^f	7,900 ^f
EC>35-44	6%	1,700 ^f	1,900 ^f	1,600 ^f	28,000 ^f	3,800 ^f	7,900 ^f
Aliphatic	1%	1,600 ^f	1,900 ^f	1,200 ^f	28,000 ^f	3,800 ^f	7,800 ^f
+Aromatic	2.5%	1,800 ^f	1,900 ^f	2,100 ^f	28,000 ^f	3,800 ^f	7,800 ^f
>EC44	6%	1,900 ^f	1,900 ^f	3,000 ^f	28,000 ^f	3,800 ^f	7,900 ^f

NOTES

^{sol}/^{vap} = solubility / vapour limit (potentially use if free product identified, although highly conservative).

^f = oral, dermal and inhalation exposures compared to oral HCV.

All GAC are based on sandy loam soils with a pH 7.

		LQM Generic Assessment Criteria (mg/kg) Dry weight soil						
Contaminant		SOM	Res +	Res -	Allot.	Comm.	POS _{resi}	POS _{park}
Chloalkanes and Alkenes & Explosives	1,2 Dichloroethane (DCA)	1%	7.1E-03	9.2E-03	4.6E-03	0.67	29	21
		2.5%	1.1E-02	1.3E-02	8.3E-03	0.97	29	24
		6%	1.9E-02	2.3E-02	1.6E-02	1.7	29	28
	1,1,1 Trichloroethane (TCA)	1%	8.8	9.0	48	660	140,000	57,000 (1,425) ^{vap}
		2.5%	18	18	110	1,300	140,000	76,000 (2,915) ^{vap}
		6%	39	40	240	3,000	140,000	100,000 (6,392) ^{vap}
	1,1,2,2-Tetrachloroethanes (PCA)	1%	1.6	3.9	0.41	270	1,400	1,800
		2.5%	3.4	8.0	0.89	550	1,400	2,100
		6%	7.5	17	2.0	1,100	1,400	2,300
	1,1,1,2-Tetrachloroethanes (PCA)	1%	1.2	1.5	0.79	110	1,400	1,500
		2.5%	2.8	3.5	1.9	250	1,400	1,800
		6%	6.4	8.2	4.4	560	1,400	2,100
	Tetrachloroethene (PCE)	1%	0.18	0.18	0.65	19	1,400	810 (424) ^{sol}
		2.5%	0.39	0.40	1.5	42	1,400	1,100 (951) ^{sol}
		6%	0.90	0.92	3.6	95	1,400	1,500
	Tetrachloromethane (carbon tetrachloride)	1%	2.6E-02	2.6E-02	0.45	2.9	890	190
		2.5%	5.6E-02	5.6E-02	1.0	6.3	920	270
		6%	0.13	0.13	2.4	14	950	400
	Trichloroethene (TCE)	1%	1.6E-02	1.7E-02	4.1E-02	1.2	120	70
		2.5%	3.4E-02	3.6E-02	9.1E-02	2.6	120	91
		6%	7.5E-02	8.0E-02	0.21	5.7	120	120
	Trichloromethane (chloroform)	1%	0.91	1.2	0.42	99	2,500	2,600
		2.5%	1.7	2.1	0.83	170	2,500	2,800
		6%	3.4	4.2	1.7	350	2,500	3,100
	Chloroethene (vinyl chloride)	1%	6.4E-04	7.7E-04	5.5E-04	5.9E-02	3.5	4.8
		2.5%	8.7E-04	1.0E-03	1.0E-03	7.7E-02	3.5	5.0
		6%	1.4E-03	1.5E-03	1.8E-03	0.12	3.5	5.4
	2,4,6-Trinitrotoluene (TNT)	1%	1.6	65	0.24	1,000	130	260
		2.5%	3.7	66	0.58	1,000	130	270
		6%	8.1	66	1.4	1,000	130	270
	RDX	1%	120	13,000	17	210,000	26,000	49,000 (18.7) ^{sol}
		2.5%	250	13,000	38	210,000	26,000	51,000
		6%	540	13,000	85	210,000	27,000	53,000
	HMX	1%	5.7	6,700	0.86	110,000	13,000	23,000 (0.35) ^{vap}
		2.5%	13	6,700	1.9	110,000	13,000	23,000 (0.39) ^{vap}
		6%	26	6,700	3.9	110,000	13,000	24,000 (0.48) ^{vap}
Pesticides	Aldrin	1%	5.7	7.3	3.2	170	18	30
		2.5%	6.6	7.4	6.1	170	18	31
		6%	7.1	7.5	9.8	170	18	31
	Dieldrin	1%	0.97	7.0	0.17	170	18	30
		2.5%	2.0	7.3	0.41	170	18	30
		6%	3.5	7.4	0.96	170	18	31
	Atrazine	1%	3.3	610	0.5	9,300	1,200	2,300
		2.5%	7.8	620	1.2	9,400	1,200	2,400
		6%	17.4	620	2.7	9,400	1,200	2,400
	Dichlorvos	1%	3.2E-02	6.4	4.9E-03	140	16	26
		2.5%	6.6E-02	6.5	1.0E-02	140	16	26
		6%	0.14	6.6	2.2E-02	140	16	27
	Endosulfans (2 isomers)	1%	7.4	160 (3.0E-03) ^{vap}	1.2	5,600 (3.0E-03) ^{vap}	1,200	2,300
		2.5%	18	280 (7.0E-03) ^{vap}	2.9	7,400 (7.0E-03) ^{vap}	1,200	2,400
		6%	41	410 (1.6E-02) ^{vap}	6.8	8,400 (1.6E-02) ^{vap}	1,200	2,500
	Hexachlorocyclohexane (3 isomers), inc Lindane	1%	8.5E-02	3.7	1.3E-02	65	8.1	15
		2.5%	0.2	3.8	3.2E-02	65	8.1	15
		6%	0.46	3.8	7.7E-02	65	8.1	16

NOTES

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All GAC are based on
sandy loam soils with a pH
7.

All GAC are based on sandy loam soils with a pH 7.			LQM Generic Assessment Criteria (mg/kg) Dry weight soil					
Contaminant		SOM	Res +	Res -	Allot.	Comm.	POS _{resi}	POS _{park}
Chlorobenzenes	Chlorobenzene	1%	0.46	0.46	5.9	56	11,000	1,300 (675) ^{sol}
		2.5%	1.0	1.0	14	130	13,000	2,000 (1,520) ^{sol}
		6%	2.4	2.4	32	290	14,000	2,900
	Dichlorobenzenes (3 isomers)	1%	23	24	94	2,000 (571) ^{sol}	90,000	24,000 (571) ^{sol}
		2.5%	55	57	230	4,800 (1,370) ^{sol}	95,000	36,000 (1,370) ^{sol}
		6%	130	130	540	11,000 (3,240) ^{sol}	98,000	51,000 (3,270) ^{sol}
	Trichlorobenzenes (3 isomers)	1%	2.6	2.6	55	220	15,000	1,700 (318) ^{vap}
		2.5%	6.4	6.4	140	530	17,000	2,600 (786) ^{vap}
		6%	15	15	320	1,300	19,000	4,000 (1,880) ^{vap}
	Tetrachlorobenzenes (3 isomers)	1%	0.66	0.75	0.38	49 (39.4) ^{vap}	78	110 (39) ^{vap}
		2.5%	1.6	1.9	0.90	120 (98.1) ^{vap}	79	120
		6%	3.7	4.3	2.2	240 (235) ^{vap}	79	130
	Pentachlorobenzene	1%	5.8	19	1.2	640 (43.0) ^{sol}	100	190
		2.5%	12	30	3.1	770 (107) ^{sol}	100	190
		6%	22	38	7.0	830	100	190
	Hexachlorobenzene	1%	1.8 (0.20) ^{vap}	4.1 (0.20) ^{vap}	0.47	110 (0.20) ^{vap}	16	30
		2.5%	3.3 (0.50) ^{vap}	5.7 (0.50) ^{vap}	1.1	120	16	30
		6%	4.9	6.7 (1.2) ^{vap}	2.5	120	16	30
Chlorophenol	Chlorophenols (4 congeners)	1%	0.87 ^g	94	0.13 ^g	3,500	620	1,100
		2.5%	2.0	150	0.30	4,000	620	1,100
		6%	4.5	210	0.70	4,300	620	1,100
	Pentachlorophenol	1%	0.22	27 (16.4) ^{vap}	3.0E-02	400	60	110
		2.5%	0.52	29	8.0E-02	400	60	120
		6%	1.2	31	0.19	400	60	120
Others	Carbon Disulphide	1%	0.14	0.14	4.8	11	11,000	1,300
		2.5%	0.29	0.29	10	22	11,000	1,900
		6%	0.62	0.62	23	47	11,000	2,700
	Hexachlorobutadiene	1%	0.29	0.32	0.25	31	25	48
		2.5%	0.7	0.78	0.61	66	25	50
		6%	1.6	1.8	1.4	120	25	51
	Phenol	1%	280	750	66	760 ^{dir} (31,000)	760 ^{dir} (11,000)	760 ^{dir} (8,600)
		2.5%	550	1,300	140	1,500 ^{dir} (35,000)	1,500 ^{dir} (11,000)	1,500 ^{dir} (9,700)
		6%	1,100	2,300	280	3,200 ^{dir} (37,000)	3,200 ^{dir} (11,000)	3,200 ^{dir} (11,000)

NOTES

^{sol / vap} = solubility / vapour limit (potentially use if free product identified, although highly conservative).

^{dir} = S4uls based on threshold protective of direct skin contact with phenol (brackets long term exposure for illustration purposes).

^g = derived based on 2,3,4,6-tetrachlorophenol.

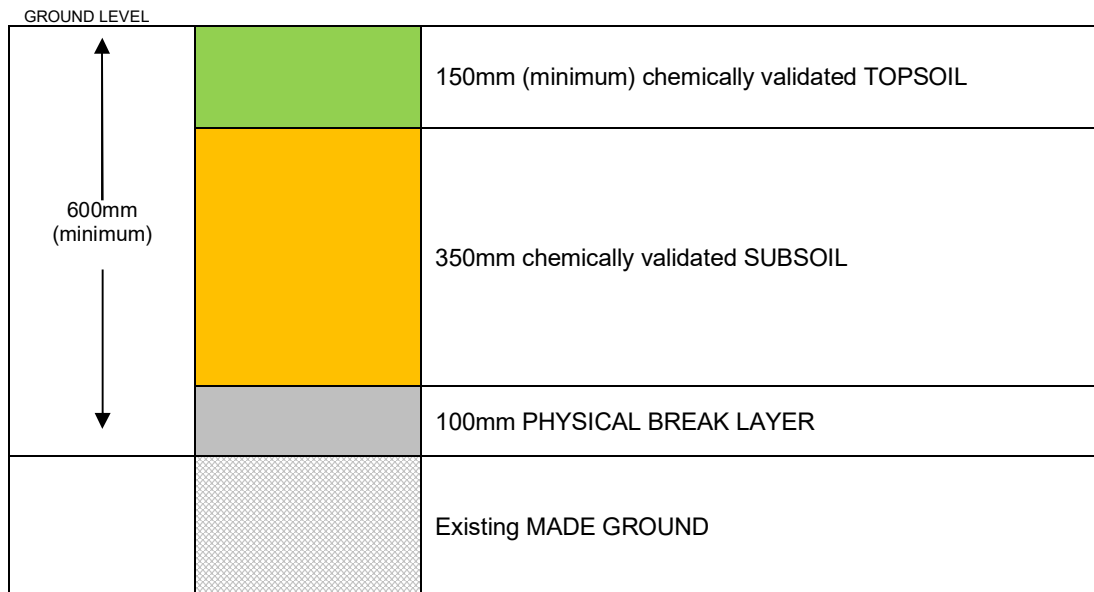
APPENDIX M

ENVIRONMENTAL COVER SYSTEM CONSTRUCTION

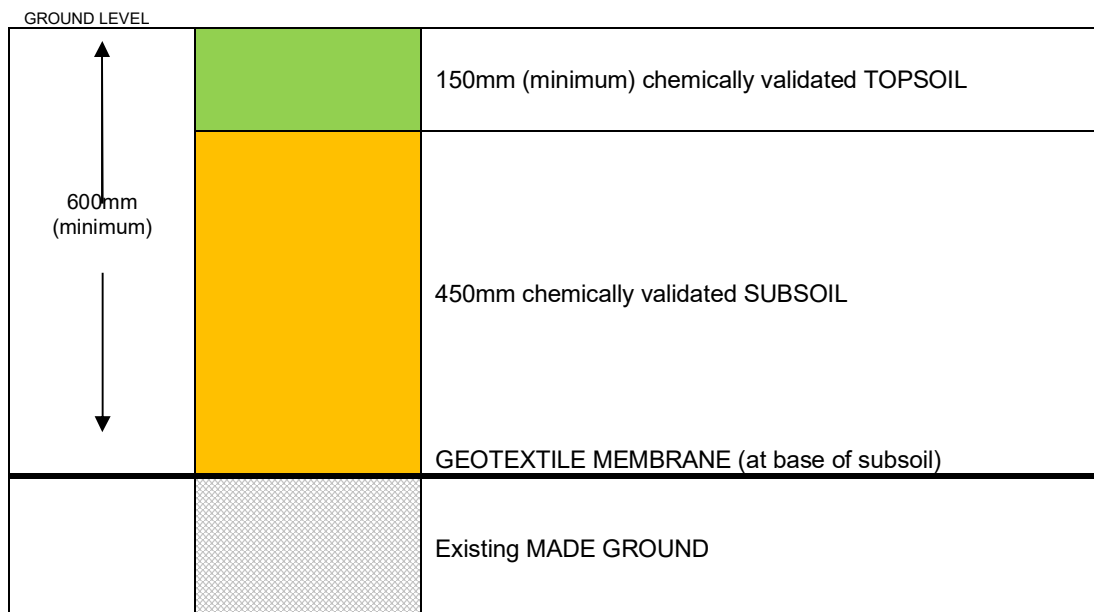
Private Gardens
Shared Landscaping

PRIVATE GARDENS

Either (physical break layer)

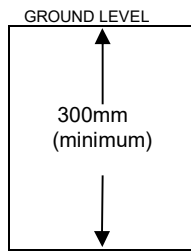


Or (geotextile membrane)

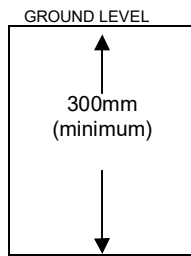


SHARED LANDSCAPING

Either (physical break layer)

GROUND LEVEL  300mm (minimum)		200mm (minimum) chemically validated TOPSOIL
		100mm PHYSICAL BREAK LAYER
		Existing MADE GROUND

Or (geotextile membrane)

GROUND LEVEL  300mm (minimum)		150mm (minimum) chemically validated TOPSOIL
		150mm chemically validated SUBSOIL
		GEOTEXTILE MEMBRANE (at base of subsoil)
		Existing MADE GROUND

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