

DANTZIC STREET MANCHESTER

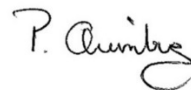
FINAL PHASE 2 GEO- ENVIRONMENTAL INVESTIGATION, RISK ASSESSMENT AND REMEDIATION STRATEGY

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1 Introduction

1.1 Background

LK Consult Ltd (LKC) has been commissioned by Leftfield Investments Holdings Ltd to carry out a Phase 2 Geo-Environmental Investigation, Risk Assessment and Remediation Strategy for land off Dantzic Street, Manchester. The investigation was undertaken in support of a planning application (114860/FO/2016) to develop the site for a mixed commercial / residential development.

The following work has previously been undertaken:

- » Ground Conditions Desk Study by Hydrock, report reference: R/151819/G001, dated December 2015.

This investigation has been undertaken to confirm the ground conditions below the site and to allow a contamination and geotechnical assessment to be undertaken.

The investigation will aim to confirm the risks of the potential pollutant linkages identified in the PRA and recommend further assessment / remediation, as required.

1.2 Site Details

A summary of the site details is presented in Table 1-1. Figures 1 and 2 indicate the site location and boundary. Figure 3 indicates the proposed development.

Site Location	North side of Dantzic Street, Manchester. Centred at approximate NGR 384630E 399431N.
Site Area	Approximately 0.77 hectares.
Current Land Uses	At the time of the site walkover it was noted the site is split into three sections; the eastern and south eastern part was owned by a waste management and skip hire company, the main part of the site was owned and used by a sign making company and the north west corner was being used for as a welfare compound for a nearby construction site.
Proposed Development	Residential and commercial development – erection of part 6, part 10, part 15 and part 24 storey building to comprise residential apartments with commercial floor space with associated car parking, public realm, hard and soft landscaping and other associated works.

Table 1-1. Summary of site details.

2 Previous Work

2.1 Summary of Existing Information

A PRA report (Ref: CL-602-CL1502-01, dated 20th August 2009) has previously been undertaken by LKC and is summarised in Section 2.2-2.6.

The conceptual model (Section 2.6) has been updated to be in line with LKC current risk assessment methodology.

2.2 Site History

A full site history is presented in the previous Hydrock desk study report which should be read in conjunction with this report.

Originally the site was occupied by residential properties but following this it has been subject to several phases of industrial development including a bolt works, rubber works, an asphalt works and more recently as a waste transfer station.

Potentially contaminative land use in the surrounding area includes a former gas works to the south, a dye/chemical works to the west and railway sidings to the south

2.3 Environmental Setting

The environmental setting is summarised in Table 2-1.

Categories			Details
Geology	Artificial		- Site is within an area of where artificial ground is indicated on mapping.
	Superficial		- Glacial Till.
	Bedrock		- Chester Pebble Beds Sandstone.
Hydro-geology	Aquifer	Superficial	- Unproductive.
	Designation	Bedrock	- Principal Aquifer.
	Source Protection Zone (SPZ)		- Site is not within an SPZ.
	Groundwater Abstractions		- None within 500m.
Hydrology	Nearest Surface Water		- River Irk, 40m northwest.
	Flooding		- The majority of the site is in Flood Zone 1. Flood Zone 2 on northern edge of site.
	Surface Water Abstractions		- None with 500m.
	Discharge Consent		- Five within 250m. Nearest is 68m northwest for discharge from storm sewer overflow into unrecorded watercourse.
Minerals / Mining	Coal Mining Development High Risk Area (DHRA)		- Not within DHRA.
	Surface Extractions		- No mineral extraction within 500m of the site.
Landfill sites	Known/Registered		- One within 250m. Queens Road Tip, 220m north, wastes accepted include inert, industrial, commercial, household, special, liquid sludge, waste inputs between December 1955 and December 1970.
	Potential		- Potentially infilled land include gasholders to the north of the site and an unspecified feature approximately 100m to the east.
Radon			- Probability of <1% of homes above Action Level. No further action required.

Table 2-1: Summary of the environmental setting.

2.4 Site Reconnaissance

A site walkover was undertaken as part of the Phase 1 desk study on Friday 4th December 2015. The key findings are summarised below:

- » The site was predominately covered by hardstanding of either concrete or tarmac.
- » The east and south eastern parts of the site were formerly occupied by a skip hire and waste handling company. A former above ground diesel tank was present in this area, but it had been removed prior to the walkover. No obvious visible fuel staining was noted in the area.
- » The main part of the site was occupied by a sign making company which was fully operational at the time of the walkover. The building and yard area were noted to be in good repair, with the yard area used for storage of materials and car parking.
- » Noted that chemicals and paints used in sign making were used within the building but that a majority of these were water based.
- » A small area in the north west corner of the site was being used as a site compound for an adjacent construction site.

2.5 Contamination Sources / Pathways and Receptors

Potential onsite contamination sources were identified as below:

- » Waste transfer station on site – may contain remnants of wastes including asbestos.
- » Former Asphalt Works in south of the site – PAHs and petroleum hydrocarbons.
- » Made ground onsite – metals, metalloids, asbestos, PAHs and petroleum hydrocarbons.
- » Ground gases from putrescible materials present in the made ground.

Potential offsite contamination sources were identified as below:

- » Waste transfer station approximately 24m to the north east.
- » Former gas works to the south and gasometers to the north.
- » Railway sidings immediately adjacent to the south.

Potential receptors are detailed in Table 2-2.

Receptors	
Human Health	- Future site users (including residents, visitors and site workers). - Offsite land users.
Controlled Waters	- Principal Aquifer. - River Irk, 40m northwest.
Buildings and structures.	
Potable water pipes.	
Flora within future soft landscaping.	

Table 2-2: Potential receptors

Potential pathways are detailed in Table 2-3.

Pathways		
Soil	Human Health ¹ (residential land use: apartments with shared landscaping)	- Ingestion of soil. - Ingestion of soil-derived indoor dust. - Dermal contact with soil. - Dermal contact with soil-derived indoor dust. - Inhalation of soil-derived outdoor dust. - Inhalation of soil-derived indoor dust. - Inhalation of vapours outside. - Inhalation of vapours inside.
		- Omitted as no private gardens: ingestion of contaminated vegetables and ingestion of soil attached to vegetables.
		- Windblown dust / fibres to adjacent receptors.
		- Direct contact with receptors (building foundations, services).
Water		- Root uptake.
		- Surface run-off over impermeable surface.
		- Infiltration into the ground, through potentially contaminated material (contamination possibly going into solution).
		- Site is predominantly hardstood; therefore, infiltration is likely to be limited.
Gas		- Migration through potentially permeable strata and preferential pathways.
		- Superficial (Till) likely to be low permeability.
		- Bedrock (sandstone) likely to be relatively permeable.
		- Migration into buildings (e.g. via services) and accumulation of gases in confined spaces (potentially causing explosion if methane is present).

Table 2-3: Potential pathways

2.6 LKC Preliminary Contamination Conceptual Model

The preliminary contamination conceptual model in the Hydrock report has been updated to be in line with LKC current risk assessment methodology (detailed below). The model is based on the contamination sources, pathways and receptors identified in the original report.

The preliminary contamination conceptual model using contaminant-pathway-receptor linkages based on guidance in CLR11² has been summarised in Table 2-4.

The aim of the conceptual model is to provide a preliminary assessment of the likelihood of a pollutant linkage for each potential combination of contaminant, pathway and receptor. A conceptual model can be used to make an informed decision on the contamination risks associated with the site and determine what site investigation work is required.

The preliminary contamination conceptual model has identified seven generic potential pollutant linkages. Each linkage is described along with an assessment of the risk based upon guidance on probabilities and consequences outlined in CIRIA C552³.

In order to assess the potential risk for each pollutant linkage, an assessment of the magnitude of the potential consequence (severity) of the risk occurring and the

¹ EA (2008). "Updated Technical Background to the CLEA Model." Science Report – SC050021/SR3.

² EA (2004). "Model Procedures for the Management of Land Contamination." R&D Publication CLR 11.

³ CIRIA (2001). "Contaminated land risk assessment: A guide to good practice". C552.

magnitude of the probability (likelihood) of the risk occurring has been considered and classified. This is based on the guidance provided in CIRIA C552 and further details including a risk matrix is provided in Appendix A.

Where LKC identified a low to very low risk, limited intrusive investigation work, a watching brief (during construction work) or no investigation work will be recommended. This will be dependent on the nature of the site and the proposed development.

Where the risk falls into the moderate/low risk, LKC will undertake an assessment to establish what category the pollutant linkage will fall into (i.e. moderate or low risk will be chosen).

Where LKC identifies a moderate or higher risk, intrusive work or precautionary remedial measures will be recommended.

The conceptual model is based on the future use of the site (post development), in line with proposed development scheme.

It should be noted that there may be risk from short term exposure from contaminated soil to site workers during development work. The Preliminary Contamination Conceptual Model deals with long term exposure to key receptors associated with the future use of the site. Acute risks can be easily mitigated by good environmental management of the site during site works. Standard health and safety precautions (as per HSE guidance⁴) should be adopted by all workers involved with site enabling and construction works. Therefore, this receptor is not considered in the contamination conceptual model.

2.7 Recommendations

Based upon the Preliminary Contamination Conceptual Model, a site investigation was recommended to assess the potential pollutant linkages further.

⁴ HSE (1991). "Protection of Workers and the General Public During Development of Contaminated Land" London HMSO.

Pollutant Linkage	Pathway	Receptor	Contaminant (source)	Probability	Consequence	Risk	Assessment and Recommendations
PL1	-Dermal contact. -Inhalation of soil, fibres and dust. -Ingestion of soils, dust, vegetables, soil attached to vegetables. -Windblown dust.	-Future site users. -Offsite receptors.	-ACM (former buildings, potentially in made ground).	Low Likelihood	Medium	Moderate / Low	-Potential for asbestos due to age of former buildings, date of demolition and likelihood of infilled basements due to former terraced housing. -Low probability as only small areas of soft landscaping proposed. -Recommendation: Intrusive investigation required.
			-Heavy metals -PAHs (made ground, infilled basements, onsite former industries).	Low Likelihood	Medium	Moderate / Low	-Potential for elevated metals and PAHs in made ground given history of site and surrounding area. -Low probability as only small areas of soft landscaping proposed. Moderate risk assumed for these localised areas. -Recommendation: Intrusive investigation required.
			-Hydrocarbons (fuels/oils from onsite car parking and fuel storage, onsite former asphalt works, offsite gas works).	Low Likelihood	Medium	Moderate / Low	-Low likelihood of hydrocarbons as although potential onsite sources identified, only small areas of soft landscaping proposed therefore chance of exposure is reduced. -Moderate risk assumed at this stage. -Recommendation: Intrusive investigation required.
PL2	-Inhalation of vapours. -Migration through permeable strata and preferential pathways.	-Future site users. -Offsite receptors.	-Volatile Contaminants such as hydrocarbons and solvents, (made ground, car parking onsite, onsite former asphalt works, offsite gasworks).	Likely	Medium	Moderate	-Likely probability given former industrial use of the site and potential volatile contamination sources identified onsite. -Recommendation: Intrusive investigation required. Volatile testing required if evidence of volatile contaminants identified in the ground.
PL3	-Inhalation of gas. -Migration through permeable strata and preferential pathways. -Explosion in confined spaces.	-Future site users. -Buildings. -Offsite land users.	-Methane, carbon dioxide. (potentially infilled features within 250m of the site, made ground onsite).	Low Likelihood	Severe	Moderate	-Low probability as only sources of hazardous gas identified to date are offsite infilled features. -Made ground may be a source of hazardous gas dependent on depth and composition. -Recommendation: Gas monitoring required if source of hazardous gas identified onsite.
PL4	-Surface Run-off. -Migration through permeable strata and preferential pathways -Perched waters migration.	-Groundwater (Principal Aquifer).	-Mobile contaminants such as metals, PAHs, hydrocarbons, volatile compounds (made ground, car parking onsite, onsite former asphalt works).	Likely	Medium	Moderate	-Likely probability given former industrial use of the site and potential volatile contamination sources identified onsite. -Moderate risk assumed given Principal Aquifer below the site. -Recommendation: Groundwater sampling required.
		-Surface water (River Irk).		Low Likelihood	Medium	Moderate / Low	-Low probability as although potential contamination sources identified and migration to River Irk is not anticipated. -Intervening land between the site and the river has formerly been occupied by gasometers which are likely to be a more significant contamination source. -Recommendation: Groundwater sampling required.

Table 2-4. Preliminary Contamination Conceptual Model.

Pollutant Linkage	Pathway	Receptor	Contaminant (source)	Probability	Consequence	Risk	Assessment and Recommendations
PL5	- Sulphate attack on concrete.	- Building structure.	- Sulphate (ash identified in made ground).	Likely	Mild	Moderate / Low	- Likely probability as ash likely to be present in made ground, which may be in contact with concrete used in future buildings. - Moderate risk assumed at this stage. - Recommendation: Intrusive investigation required.
PL6	- Ingestion of tainted water supply.	- Future site users. - Water pipes.	- Organic Contaminants such as hydrocarbons, solvents (made ground, car parking onsite, onsite former asphalt works).	Likely	Medium	Moderate	- Likely probability based on former site uses and potential contamination sources identified. - Risk is considered moderate at this stage due to unknown depth and composition of made ground. - Recommendation: Sampling required if made ground present at pipeline installation depths.
PL7	- Direct Contact (plant uptake).	- Flora.	- Phytotoxic Contaminants (made ground).	Low Likelihood	Minor	Very Low	- Low probability as contamination considered possible but only limited areas of soft landscaping proposed. - Recommendation: Investigation work as part of PL1.

Table 2-4 continued: Preliminary Contamination Conceptual Model.

3 Ground Investigation

3.1 Site Investigation Design and Methodology

In order to assess the ground conditions at the site and to investigate the potential pollutant linkages identified in the preliminary contamination conceptual model an intrusive investigation was undertaken.

The investigation was carried out on 18th November to 27th November 2019 and comprised the following:

- 5no. window sample boreholes drilled to 3.15-4.45 metres below ground level (mbgl) (ref. WS101 to WS105b).
- 3no. rotary boreholes drilled to 15-30mbgl (ref. RBH101 to RBH103).
- 5no. trial pits (using JCB) excavated to 1.3-2.2mbgl (ref. TP101 to TP105).

An archaeological excavation was being carried out in the south of the site at the time of the first phase of site investigation in November 2019. LKC were present during the excavation works and visually assessed the ground conditions in this area for evidence of contamination. Samples were also taken from a stockpile of made ground excavated as part of the archaeology works to assess the contaminative status of the made ground from this area.

Following the results of the groundwater testing, an additional phase of investigation was undertaken comprising 5no. window sample boreholes (WS201-205) in the area of RBH103 to assess the shallow soils in this area and confirm or otherwise the presence of chlorinated solvent contamination which may have migrated downwards to the underlying groundwater.

The window sample boreholes and trial pits were utilised to assess shallow ground conditions and potential below ground obstructions from previous development. The rotary boreholes were drilled to assess the depth to and composition of the underlying bedrock for piling design.

All site investigation locations are shown in Figure 4.

The locations were chosen to allow a good spread across the site as well as target areas of concern such as the area of the former asphalt works.

The number of site investigation points corresponds to approximately one location per 24m square centres. This is considered to be a conservative sampling density and is in line with BS10175⁵ for a 'main investigation'.

All profile logs are provided in Appendix B and are in line with BS14688-1⁶ and BS5930⁷.

3.2 Well Installations

All of the window sample and rotary boreholes were installed with monitoring wells for groundwater monitoring and sampling and gas monitoring. Monitoring wells were

⁵ British Standard (2017). "Investigation of Potentially Contaminated Sites – Code of Practice." BS10175:2017.

⁶ British Standards (2002) Geotechnical investigation and testing – Identification and Classification of Soil. Part 1: Identification and description. BS EN ISO 14688-1:2002.

⁷ British Standard (2015). "Code of Practice for Ground Investigations". BS5930:2015.

installed in accordance with BS10175 and CIRIA C665⁸ and, in the window sample boreholes, generally comprised approximately 1m plain pipe over a length of slotted pipe surrounded by pea gravel and sealed at the top with bentonite and concrete.

Monitoring installations in the deeper rotary boreholes were installed to target groundwater in the bedrock.

Well installation details are provided in profile logs in Appendix B.

3.3 Sampling Protocol

3.3.1 Soil Sampling (Contamination)

Standard sampling protocol and preservation of samples was undertaken as described in the EA guidance on site investigation⁹.

Soil was collected for onsite testing. A plastic zip bag was half filled with soil allowing a suitably sized headspace. The bag was sealed and stored for at least 20 minutes before being tested for total volatile organic compounds (TVOCs) using a PhoCheck Tiger photoionisation detector (PID). Results of the PID readings are presented on the profile logs (Appendix B). The on-site monitoring was carried out in line CIRIA C665¹⁰ to aid in screening samples for volatile analysis.

Soil samples of approximately 500g were recovered in amber jars, amber vials for volatile analysis and plastic tubs. All the samples were labelled and stored in cool boxes prior to being collected by courier at the end of the day for delivery to the Chemtest laboratory in Newmarket for chemical testing. If collection was not possible the same day then samples were stored in the sample storage fridge at the LK Group offices below 4°C. Samples were tracked using appropriate Chain of Custody forms provided by Chemtest.

Many of the contamination tests are UKAS or MCERTS accredited and further details are given in the Certificate of Analysis presented in Appendix C. Table 3-1 shows the soil testing undertaken.

⁸ CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665.

⁹ EA (2000). "Technical Aspects of Site Investigation. Volumes 1 & 2 Text Supplements Research and Development Technical Report." P5-065/Tr.

¹⁰ CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665.

Suites and Contaminants	No. Samples	Location & Depth	Justification
Metals / metalloids, pH, water soluble sulphate, speciated PAHs, SOM and asbestos screen.	7	TP102 0.9-1.1m TP103 0.3-0.9m TP104 0.0-1.0m TP105 0.1-1.0m WS102 0.0-0.5m WS103 0.0-0.5m WS105 0.3-0.6m	A basic suite with a broad selection of contaminants tested on samples across the site where no significant evidence of contamination was identified (with the exception of occasional ash and coal) and no TVOCs identified from the PID tests.
Metals / metalloids, pH, water soluble sulphate, cyanide suite, phenol, TPHCWG, BTEX, MTBE, speciated PAHs, SOM and asbestos screen.	6	TP101 0.5-1.5m WS101 0.8-1.2m WS104 1.2-1.5m WS105 1.0-1.2m SP1 SP2	Although no visual/olfactory evidence of contamination was identified (with the exception of some ash), due to location of former industrial land use, detailed suite including TPHCWG undertaken. Includes two samples taken from stockpile of excavated made ground from archaeological excavation in south of the site. Waste classification also requires detailed suite.
Metals / metalloids, pH, water soluble sulphate, cyanide suite, phenol, TPHCWG, BTEX, MTBE, speciated PAHs, VOCs, SVOCs, SOM and asbestos screen.	6	RBH103 14.5-15.0m WS201 0.7-1.0m WS202 2.5-2.8m WS203 1.4-1.9m WS204 0.3-0.4m WS205 2.0-2.7m	Potential solvent type odour detected in mudstone layer of rock core. Detailed suite including VOCs and SVOCs undertaken to assess if any contamination present. Detailed suite undertaken in WS201-WS205 due to visual and olfactory evidence of contamination in some locations. Purpose of additional window sample boreholes were to identify any chlorinated compounds (e.g TCE) which may have migrated to the underlying groundwater.
VOCs/SVOCs	1	WS201 2.0-2.7m	To understand the vertical extent of contamination identified in this location.

Table 3-1. Summary of soil sample testing undertaken.

Notes:

If asbestos present during screen identification and quantification will be undertaken.

Metal/metalloids=arsenic, cadmium, chromium, (total and hexavalent), copper, lead, mercury, nickel, selenium, vanadium, zinc and boron; TPHCWG=carbon banded and aromatic/aliphatic split petroleum hydrocarbons; PAH=polycyclic aromatic hydrocarbons, BTEX=benzene, toluene, ethylbenzene and xylenes; MTBE=Methyl tert-butyl ether, VOC=Volatile organic Compounds, SVOC= Semi Volatile Organic Compounds, SOM=Soil Organic Matter.

3.3.2 Water Sampling

To establish the condition of groundwater LKC undertook groundwater monitoring and sampling of the boreholes onsite. No groundwater was recorded in the window sample boreholes therefore only samples were taken from the deeper boreholes.

The groundwater samples were collected a minimum of 1 week after drilling had finished and following well development. Sample collection was undertaken using a low flow sampling pump using thin walled tubing to encourage laminar flow and minimise the potential loss of volatiles during sampling. The borehole was purged of all standing water and the sample collected from the recharged water. The sample was collected in glass and plastic bottles and a glass vial. A water meter was used to

test the pH, temperature and conductivity before sampling until equilibrium conditions were met, as per BS10175¹¹ guidelines.

All water samples were placed in glass bottles, plastic bottles and septum topped vials and stored in ice packed cool boxes. The samples were sent to Chemtest on the same day for analysis.

Sampling was carried out in accordance with BS5930¹² and BS5667-11¹³.

Table 3-2 shows the groundwater testing undertaken. Laboratory certificates are presented in Appendix E.

Suites and Contaminants	No. Samples	Location	Justification
Metals / metalloids, pH, sulphate, cyanide suite, TPHCWG, BTEX, MTBE, speciated PAHs, phenol, VOCs, SVOCs and hardness.	2	RBH101 RBH103	Detailed suite undertaken due to previous industrial site use and unidentified odour noted during rock core logging in RBH103.

Table 3-2. Summary of groundwater sampling tests undertaken.

Notes:

Metal/metalloids=arsenic, cadmium, chromium, (total and hexavalent), copper, lead, mercury, nickel, selenium, vanadium, zinc and boron; TPHCWG=carbon banded and aromatic/aliphatic split petroleum hydrocarbons; PAH=polycyclic aromatic hydrocarbons, BTEX=benzene, toluene, ethylbenzene and xylenes; MTBE=Methyl tert-butyl ether, VOC=Volatile organic Compounds, SVOC= Semi Volatile Organic Compounds.

3.4 Gas Monitoring

A moderate risk was identified in the preliminary contamination conceptual model for gas (pollutant linkage 3) and further action was only recommended if significant organic / putrescible material was identified on site. Based on the ground conditions encountered, LKC did not consider gas monitoring to be required. However, Manchester City Council requested gas monitoring to be undertaken.

LKC have undertaken six gas monitoring visits. Monitoring was undertaken using a Geotechnical Instruments GA5000 in accordance with the monitoring protocol outlined in CIRIA C665¹⁴ (flow rate measured first).

A gas risk assessment is presented in Section 6.3.

3.5 Geotechnical Testing

3.5.1 In-situ Onsite Geotechnical Testing

In-situ geotechnical tests were performed in the boreholes to further characterise the sub-soil conditions. The following tests were undertaken:

¹¹ British Standard (2017). "Investigation of Potentially Contaminated Sites – Code of Practice." BS10175:2017.

¹² British Standard (2015). "Code of Practice for Ground Investigations". BS5930:2015.

¹³ British Standard (2009). "Water Quality – Sampling. Part 11: Guidance on Sampling of Groundwaters". BS ISO 5667-11:2009.

¹⁴ CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665.

- Standard Penetration Tests (SPTs) were performed in the window sample boreholes at approximately 1m intervals, generally within the natural strata.
- Shear Vane tests (giving undrained shear strength) were performed in the window sample boreholes (to a maximum depth of 3mbgl) and trial pits at approximately 1m intervals, within the natural clay strata.

Shear vanes tests were not always possible due to the friable or sandy nature of some of the clay deposits.

The SPT and shear vane readings are provided within the profile logs (Appendix B).

3.5.2 Laboratory Geotechnical Testing

Soil samples taken during the investigation were collected in tubs and bulk bags and sent to Murray Rix Laboratories and Chemtest for geotechnical testing. In addition, selected rock core samples were also sent to Murray Rix for testing.

Many of the tests are UKAS accredited and further details are given in the laboratory report presented in Appendix D. Table 3-3 shows the geotechnical testing undertaken.

Suites and Contaminants	No. Samples	Location	Justification
pH and water-soluble sulphate	5	TP101 1.5-1.9m TP104 1.7-2.0m WS101 2.5-3.0m WS103 1.8-2.2m WS105 2.0-2.5m	Additional samples of natural ground taken across the site to assess the pH and sulphate for geotechnical purposes. pH and water-soluble sulphate are also included contamination suites on made ground.
Atterberg Limits (plasticity testing)	3	WS105 1.7-1.9m TP101 0.8-1.5m TP103 1.4-1.7m	A selection of clay samples across the site were tested for Atterberg Limits to assess their shrinkability potential associated with proposed trees.
Particle Size Distribution (PSD)	2	WS101 3.2-3.7m WS104 3.3-3.5m	PSD undertaken to confirm grading of granular material.
Unconfined Compression Test	3	RBH102 18.3-18.5m RBH102 29.8-30.0m RBH103 11.7-11.9m	To determine rock strength characteristics for pile design.
Point Load Tests	40	RBH101 – set of 10 tests between 10.5-12.75m. RBH102 – set of 10 tests between 7.0-8.5m. RBH102 – set of 10 tests between 26.0-28.0m. RBH103 – set of 10 tests between 7-9m.	To determine rock strength characteristics for pile design.
Single Stage Triaxial	3	RBH101 14.0-14.2m RBH102 10.2-10.4m RBH103 18.0-18.2m	Undertaken to confirm the strength of the clay strata identified within the mudstone bedrock strata.

Table 3-3. Summary of geotechnical testing undertaken.

4 Ground Conditions

4.1 Geology – Generalised Sequence

The ground conditions beneath the site generally comprised made ground underlain by natural silty or clayey sand. In the east of the site, a band of natural sandy clay was encountered between the made ground and underlying sand. Sandstone and mudstone bedrock was identified at depths between 2.7mbgl and 3.5mbgl in the three deeper boreholes. A summary section of the logs is provided in Plate 4-1, with additional comments below.

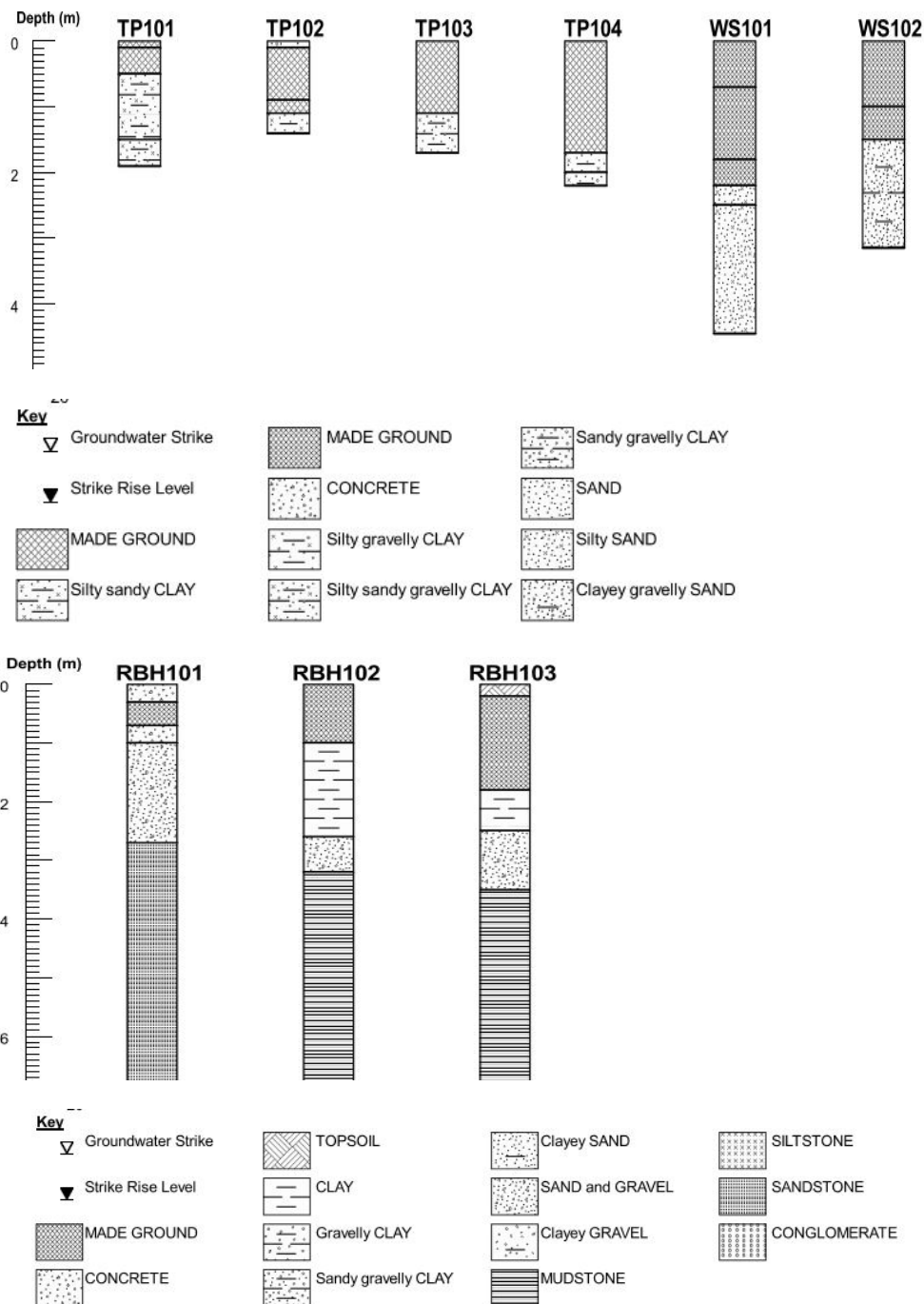


Plate 4-1: Summary of ground conditions.

Additional information on ground conditions:

- Made ground was recorded from depths of 0.5-2.5mbgl and generally consisted of gravelly sandy silt or sandy clayey gravel with various anthropogenic inclusions such as brick, concrete, pottery, wood, metal, bitumen, glass, ash and clinker.
- No significant organic or potentially putrescible material was identified in the made ground.
- A slight chemical type odour was noted in a band of soft clay within the mudstone bedrock at 14.8-15.0mbgl.
- Visual and/or olfactory evidence of contamination (moderate hydrocarbon odours) was identified in several additional boreholes (WS201, WS202 and WS205) advanced in the south west of the site.
- The archaeological excavations being undertaken in the south of the site during the investigation encountered significant below ground structures in that area including a former glass kiln.

4.2 Groundwater

4.2.1 Groundwater Levels

Groundwater strikes were recorded during the investigation in trial pits and boreholes. In addition, groundwater monitoring within the borehole wells has been undertaken on six occasions. An oil-water interface probe (approximately 1cm detection limit) was used to detect the presence of free phase hydrocarbons within each borehole. Results are summarised in Table 4-1.

BH/TP	Water Strike Depths (mbgl)	Well Response Zone (mbgl)	No. of Monitoring Visits	Monitoring Depths (mbgl)			Sample Taken?	Evidence of Contam?
				Min	Max	Base		
WS101	Dry	1.0-4.0 (MG/S)	6	Dry	Dry	3.9	N	N
WS102	Dry	1.0-2.8 (MG/S)	6	Dry	Dry	2.8	N	N
WS103	Dry	1.0-3.0 (MG/C)	6	Dry	Dry	2.9	N	N
WS104	Dry	1.0-3.0(MG/C)	6	Dry	Dry	3.0	N	N
WS105B	Dry	1.0-3.0 (MG/S)	6	Dry	Dry	2.9	N	N
WS201	Dry	1.0-3.0 (C/S)	1	Dry	Dry	2.9	N	Y ²
WS202	Dry	1.0-3.0 (C)	1	Dry	Dry	2.9	N	Y ²
WS203	Dry	Not installed.					N	N
WS204	Dry	Not installed.					N	N
WS205	Dry	0.7-2.7 (C)	1	Dry	Dry	2.7	N	Y ²
RBH101	NR	5.0-15 (SS/MS)	6	4.32	4.54	14.75	Y (G)	N
RBH102	NR	Not installed.					N	N
RBH103	NR	5.0-20 (SS/MS)	5	6.3	6.6	19.48	Y (G)	Y ¹
TP101	Dry	Not installed.					N	N
TP102	Dry	Not installed.					N	N
TP103	Dry	Not installed.					N	N
TP104	Dry	Not installed.					N	N
TP105	Dry	Not installed.					N	N

Table 4-1: Summary of water strike depths within boreholes and trial pits.

Response Zones:

MG=Made Ground; SS = Sandstone; MS = Mudstone; S=Sand; C=Clay.

Notes:

G=Groundwater Sample

¹ Slight chemical odour noted in rock core sample at 14.8-15mbgl.

² Moderate hydrocarbon odour during drilling.

NR: Water strikes not recorded in rotary cored boreholes due to drilling method.

4.3 In-Situ Geotechnical Testing

4.3.1 Standard Penetration Tests

In-situ standard penetration tests (SPTs) were undertaken, predominantly in the natural ground. The results are summarised in Table 4-2 and provided within the profile logs in Appendix B.

Approximate Depth (mbgl)	SPT 'N' Values				
	WS101	WS102	WS103	WS104	WS105
1-2	8 (MG)	11 (MG/S)	16 (MG)	13 (MG)	7 (C)
2-3	12 (MG)	50 (S/S)	14 (C)	22 (MG)	-
3-4	14 (S)	-	50 (S/S)	50 (S/S)	50 (S)
4-5	50 (S/S)	-	-	-	-
GW Level	Dry	Dry	Dry	Dry	Dry

Table 4-2: Summary of SPT (N) values.

Notes:

S/S = Sandstone; S=Sand; C=Clay.

Groundwater level based on strikes during investigation and monitoring data.

4.3.2 Shear Vanes

Hand shear vane readings, recording undrained shear strength (USS), were taken within the clay strata. The results are summarised in Table 4-3 and provided within the profile logs in Appendix B.

Approximate Depth (mbgl)	Average Undrained Shear Strength (kN/m ²)					
	WS102	WS103	WS105	TP101	TP102	TP104
0-1	-	46.5	-	-	-	-
1-2	61.25	-	92.5, 61.5	52.7, 53.3	48.7	28.7
2-3	-	-	-	-	-	54.7
3-4	-	-	-	-	-	-
GW Level	Dry	Dry	Dry	Dry	Dry	Dry

Table 4-3: Summary of average hand shear vane readings.

Notes:

Groundwater level based on strikes during investigation and monitoring data.

4.4 Geotechnical Laboratory Testing

4.4.1 Single Stage Triaxial Test

Single stage triaxial testing has been undertaken on three samples of the mudstone bedrock. The results are presented in Appendix D and summarised in Table 4-4.

Location	Depth (mbgl)	Material Description	Undrained Shear strength (kPa)
RBH101	14.0-14.2	Reddish brown rock core.	119
RBH102	10.2-10.4	Reddish brown rock core.	127
RBH103	18.0-18.2	Reddish brown rock core.	111

Table 4-4: Summary of single stage triaxial results.

4.4.2 Particle Size Distribution

Particle size distribution (PSDs) tests were carried out on granular strata to confirm the material type. Full results are presented in Appendix D and summarised below in Table 4-5.

Location	Depth (mbgl)	Material	Percent passing through sieve		
			63mm	2mm	0.063mm
WS101	3.2-3.7	Reddish brown silty SAND with rare gravel.	100	100	12
WS104	3.3-3.5	Reddish brown silty SAND with rare gravel.	100	99	13

Table 4-5: Summary of particle size distribution results.

Notes:

% passing: 63mm = cobble / gravel boundary; 2mm = gravel / sand boundary; 0.063mm = sand / silt boundary

4.4.3 Atterberg Limits

Representative samples of natural clay were subjected to Atterberg Limits (plasticity) and Moisture Content testing. Results are presented in Appendix D and summarised in Table 4-6. Table 4-6 also includes the modified plasticity index as detailed in Chapter 4.2-D5 of the NHBC standards (modified plasticity index = plasticity index x % less than 425µm sieve / 100%).

Location	Depth (mbgl)	Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Class	Passing 425 micron (%)	Modified Plasticity Index (%)
WS105	1.7-1.9	21	40	16	24	CL	86	20.6
TP101	0.8-1.5	24	38	15	23	CL	90	20.7
TP103	1.4-1.7	33	42	16	26	CL	95	24.7

Table 4-6: Summary of plasticity index testing.

The modified plasticity index is between 20% and 25%. This characterises the clay as having a medium volume change potential.

4.4.1 Compressive Strength Testing

Uniaxial Compressive Strength (UCS) tests have been undertaken on three samples of the competent sandstone strata. In addition, a total of forty point load tests were undertaken on rock core samples recovered. The results are presented in Appendix D and summarised in Tables 4-7 and 4-8.

Location	Depth (mbgl)	UCS (MPa)	Rock Strength Classification
RBH102	29.8-30.0	4.9	Very Weak
RBH103	18.3-18.5	28.7	Weak

Table 4-7: Summary of UCS results.

Location	Depth (mbgl)	Is (MPa) range	Is ₍₅₀₎ (MPa) range	Mean Is ₍₅₀₎ MPa
RBH101	10.5-12.75	0.03-0.10	0.04-0.12	0.065
RBH102	7.0-8.5	0.00-0.01	0.00-0.02	0.012
	26.0-28.0	0.07-0.54	0.09-0.69	0.313
RBH103	7.0-9.0	0.00-0.03	0.00-0.04	0.012

Table 4-8: Summary of Point Load Test results.

4.4.2 Sulphate and pH

Water soluble sulphate and pH tests were carried out on soil samples. Full results are presented in Appendix C and summarised in Table 4-9.

Strata	pH	Sulphate (g/l)
Made Ground	6.6-11.8	<0.01-0.59
Natural	7.8-8.5	0.01-0.4

Table 4-9: Summary of pH and sulphate results.

5 Geotechnical Assessment

Final foundation design will need to be confirmed once loadings of proposed buildings are known and details of ground works (i.e. potential cut and fill exercises) are known.

A preliminary geotechnical assessment is presented in Table 5-1.

Proposed Development	- Residential and commercial development – erection of part 6, part 10, part 15 and part 24 storey building to comprise residential apartments with commercial floor space with associated car parking, public realm, hard and soft landscaping and other associated works.
General Ground conditions	- Maximum investigation depth 30mbgl. - Made Ground to 0.5-2.5mbgl. SPT N=8-16 at 1mbgl in made ground. - Gravelly clayey SAND in the west of the site to maximum depth of 3.5mbgl. SPTs N=14-50 at 3mbgl. - Localised clay (WS103 at 1.6-3.25mbgl) SPT N=14. - Sandstone or mudstone bedrock encountered at 2.7-3.5mbgl. - No groundwater encountered in shallow boreholes or recorded in deeper boreholes due to drilling technique. - Subsequent monitoring identified groundwater at between 4.54 and 6.6mbgl.
Anticipated Foundation Type	- Shallow spread footings e.g strip and trench fill are not recommended. Piled foundations are likely to be the most feasible option. - As the proposed development is a mixture of high and medium rise structures with elevated car parking in a 'combined' space, settlement between differently loaded structures is a key risk to be mitigated. - To mitigate the risk of differential settlement, all columns will need to be founded on piles socketed into the competent Chester Pebble Beds bedrock, the top of which is approximately 5m below existing ground level. - Preliminary estimates suggest the rock sockets of heavily loaded piles may require at least 6m of socket length and at least 3m socket length for lesser loaded columns. Therefore, pile length would be in the region of 8-12m. - Large column loads on some columns will be directly adjacent to much less loaded columns and angular rotation between the columns must be kept to at least 1 in 500 or better over the lifetime of the building. - It is recommended to consult with a competent and qualified piling contractor at the earliest juncture. - A piling mat will be required, and the ground will require the clearing of potential obstructions by grubbing out of relic foundations and other buried structures. - Soft spots, such as the soft clay encountered in TP104, will require excavation and replacement with appropriate compacted granular material prior to laying the piling mat. - If required, the piling mat could comprise of an aggregate that could be incorporated into the permanent works to negate the requirement to export the piling mat material after installation of the piles.
Ground Bearing Floor Slabs	- Ground bearing floor slabs are acceptable founded on cleared and prepared ground with soft spots removed.
Adjacent Structures	- Railway arches/underbridges are immediately adjacent to the site to the south. - Piles should not be located too close to these structures so as not to superimpose new loads into the zone of influence of existing bridge and arch supports, or existing retaining walls and embankments.

Concrete Requirements	- Based on BRE Digest 2005 ¹⁵ – DS-1 AC-1 across the majority of the site. DS-2 AC-2 may be required in the vicinity of TP103.
Services	- Services – consideration to the presence of services running through the site. Services may need to re-routed.
Plasticity	- Given that the likely foundation design will be piles, the shrinkability of clay is unlikely to be a constraint. However, based on testing undertaken the superficial clay encountered on site was recorded as having a medium volume change potential.
Road / Pavement Design	- A preliminary design CBR for roads and ground level is 3%.

Table 5-1: Geotechnical Assessment.

¹⁵ BRE (2005). "Concrete in Aggressive Ground." Special Digest 1.

6 Generic Risk Assessment

6.1 Introduction

Current good practice requires that the findings from a site investigation should be evaluated on a site-specific basis, using a risk-based approach. Risk assessment involves identification and evaluation of the hazards presented by the concentrations of contaminants measured followed by an evaluation of the risks which are associated with these hazards (CLR11¹⁶). Information gathered from the risk assessment has been collated in the revised contamination conceptual model in Section 6.6.

6.2 Soil Risk Assessment

6.2.1 Methodology

With regards to the soil risk assessment LKC will use the following hierarchy:

- Category 4 Screening Levels (C4SLs).
- LQM Suitable 4 Use Levels (S4ULs).
- ATRISK Soil Screening Values (SSVs) and CL:AIRE Generic Assessment Criteria (GACs).

C4SLs were published in 2013^{17,18}. The recent change to the contaminated land guidance has changed the evaluation of risk from 'minimal' (referred to as Health Criteria values (HCVs))¹⁹ used to generate Soil Guideline Values (SGVs) to 'low' (referred to as Lowest Level of Toxicological Concern (LLTCs)). The policy companion document and supporting letter by Defra, dated 3rd September 2014, states that C4SLs '*could be used under the planning regime, as well as within Part 2A*'. Based on these comments LKC considers the justifications and assumptions used to generate 'low' risk are suitable for the planning regime.

Where no C4SLs have been generated LKC will use the LQM S4ULs²⁰. Similar assumptions and land uses to C4SLs have been used. However, toxicological information has been based on 'minimal risk' as per previous guidelines and assumptions^{21,22,23,24}.

If contaminants are not present as C4SLs and S4ULs then LKC will use ATRISK SSVs or CL:AIRE GACs²⁵. These follow the 'minimal' risk principle and more stringent exposure parameters and will be conservative.

LKC consider the main risk drivers for PAHs are benzo(a)pyrene (B(a)P) and naphthalene. This is due to B(a)P possibly being a carcinogen and most toxic of the

¹⁶ EA (2004). "Model Procedures for the Management of Land Contamination." R&D Publication CLR 11.

¹⁷ Defra (2014). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Policy Companion Document."

¹⁸ CL:AIRE (2013). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Final project Report."

¹⁹ EA (2008). "Human Health Toxicological Assessment of Contaminants in Soils." Science Report – SC050021/SR2.

²⁰ LQM (2014). "The LQM/CIEH S4ULs for Human Health Risk Assessment."

²¹ EA (2008). "Updated Technical Background to the CLEA Model." Science Report – SC050021/SR3.

²² EA (2008). "Human Health Toxicological Assessment of Contaminants in Soils." Science Report – SC050021/SR2.

²³ EA (2008). "A Review of Body Weight and Height Data used within the Contaminated Land Exposure Assessment Model (CLEA)." Project SC050021/Technical Review 1.

²⁴ EA (2009). "Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values." Science report SC050021/SR7.

²⁵ CL:AIRE (2009). "The Soil Generic Assessment Criteria for Human Health Risk Assessment."

PAHs^{26,27} and naphthalene the most volatile and soluble²⁸. The new C4SLs indicate B(a)P as a surrogate marker for carcinogenic PAHs, if it falls within appropriate limits, since the risk from other non-carcinogenic PAHs are considered negligible²⁹. For B(a)P to be used as a surrogate marker it should follow the profile described by the HPA (2008)³⁰ and CL:AIRE (2013). Naphthalene will be treated separately using the LQM S4ULs.

The proposed development is for residential apartments with limited shared soft landscaping, therefore the assessment criteria for residential without plant uptake has been used.

All criteria have been generated using the CLEA V1.06 model³¹ based either on 1%, 2.5% and 6% Soil Organic matter (SOM). Results will be compared to the nearest appropriate SOM.

A summary of the generic assessment criteria is provided in Appendix G.

B(a)P as Surrogate Marker

Based on the above assumption for PAHs, LKC undertook an assessment of the data for the site with regards to using B(a)P as a surrogate marker for carcinogenic PAHs as per HPA and CL:AIRE guidelines. The primary toxicological study related to Culp *et al.*³², which was based on coal tar mixtures (>80,000mg/kg of total PAHs) fed in food to mice over a two-year carcinogenicity study.

Graph 6-1 summarises the study site data with respect to how the ratios of carcinogenic PAHs relate to B(a)P, within the confidence limits provided in the HPA document.

²⁶ EA (2002). "Contaminants in Soils: Collation of Toxicological Data and Intake Values for Humans. Benzo[a]pyrene." R&D Publication TOX2.

²⁷ USEPA (1984). "Health Effects Assessment of Polycyclic Aromatic Hydrocarbons (PAHs). EPA 540/1-86-013."

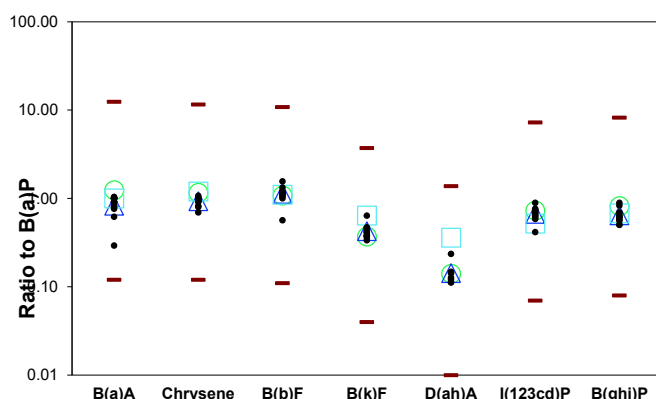
²⁸ EA (2003). "Review of the Fate and Transport of Selected Contaminants in the Soil Environment." Draft technical report P5- 079/TR1.

²⁹ CL:AIRE (2013). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Final project Report."

³⁰ HPA (2010). "HPA Contaminated Land Information Sheet: Risk Assessment Approaches for Polycyclic Aromatic Hydrocarbons (PAHs)." Version 3.

³¹ EA (2008). "CLEA Software (Version 1.05) Handbook." Science Report – SC050021/SR4.

³² Culp, S; Gaylor, D; Sheldon, W; Goldstein, L and Beland, F (1998). "A Comparison of Tumours Induced by Coal Tar and Benzo-a-pyrene in a 2-Year Bioassay." Carcinogenesis. **Vol 19**, no. 1, pp. 117-124.



Graph 6-1: The ratio of PAH to B(a)P in soil for all available data at the site based on 12 samples (where values were >LOD to allow the calculation of a ratio).

Notes:

B(a)P = Benzo(a)pyrene; D(ah)A = Dibenzo(ah)anthracene; B(a)A = Benzo(a)anthracene; B(b)F = Benzo(b)fluoranthene;

B(k)F = benzo(k)fluoranthene; I(123cd)P = Indeno(123cd)pyrene; B(ghi)P = Benzo(ghi)perylene

● = Ratio to B(a)P for all data ○ = Mean ratio to B(a)P for Culp data ▲ = Mean ratio to B(a)P from all data at the site

□ = Mean ratio to B(a)P for UK data presented by HPA ■ = Upper and Lower limits (order of magnitude from Culp data)

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

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

Other Contaminants with no C4SLs, LQM S4ULs, ATRISK SSVs or CL:AIRE GACs

Where generic assessment criteria have not been derived (mainly due to insufficient toxicological data), the results were compared against contaminants of assumed likely similar toxicity (with some conservatism) as shown below:

- 2-methylnaphthalene: compared to commercial criteria S4UL for naphthalene (1,100mg/kg 6% SOM). LKC considers this appropriate given that the guidance provided on the ATSDR website³³ indicates that the oral toxicity of 2-methylnaphthalene is within an order of magnitude to that of naphthalene, although it was unknown what an appropriate inhalation reference dose is.
- Dibenzofuran: compared to commercial C4SL for benzo(a)pyrene (77mg/kg 6% SOM). This contaminant is a bi-product of organic combustion but can be naturally occurring. The Material Safety Sheets indicates this compound is not volatile and considering there is no toxicological information available³⁴, LKC compared the analytical results to one of the most toxic PAH as a precaution.
- 2-methylphenol, 4-methylphenol and 2,4-Dichlorophenol: results were combined with phenol concentrations and compared to the phenol S4UL as a conservative screening value. This is considered appropriate due to similar toxicity to phenol, with the primary risk from direct contact. These contaminants are a primary constituent of creosols³⁵.

³³ ATSDR (2005). Public Health for naphthalene, 1-methynaphthalene and 2-methynaphthalene.

³⁴ IRIS Database (USEPA). <http://www.epa.gov/iris/subst/0429.htm>. Last updated 20th December 2010.

³⁵ ATSDR (2008). "Toxicological profiles for Cresols." <http://www.atsdr.cdc.gov/toxprofiles/tp34.pdf>.

6.2.2 Soil Results Comparison against Assessment Criteria

All analysis sheets are presented in Appendix C. Elevated and pertinent results are presented in Table 6-1.

Contaminant	Units	No. of samples	Elevated Results	Sample Location	Criteria (1%/2.5%/6%)	Source of Criteria
Metals						
Lead	mg/kg	18	500	WS104 (1.2-1.5m)	310	C4SL
			390	SP1		
			810	SP2		
PAHs						
Benzo(a)pyrene	mg/kg	18	10	WS102 0.0-0.5m	5.3	C4SL
			170	WS103 0.0-0.5m		
			25	WS105 0.3-0.6m		
			9.9	TP103 0.3-0.9m		
			24	TP105 0.1-1.0		
			5.5	SP1		
Naphthalene	mg/kg	18	2,200	WS205 2.0-2.7m	2.3/5.6/13	S4UL
TPH						
Aliphatic C12-C16	mg/kg	11	16,000	WS205 2.0-2.7m	1,100/2,400/4,300	S4UL
Aromatic C8-10	mg/kg	11	87	WS205 2.0-2.7m	47/110/270	S4UL
Aromatic C10-12	mg/kg	11	770	WS205 2.0-2.7m	250/590/1,200	S4UL
VOCs/SVOCs						
Benzene	mg/kg	11	3.5	WS205 2.0-2.7m	3.3	C4SL
Trichloroethene	mg/kg	7	5.4	WS201 0.7-1.0m	0.017/0.036/0.08	S4UL
			0.072	WS201 2.0-2.7m		
			0.058	WS202 2.5-2.8m		
			0.062	WS204 0.3-0.4m		
GENERAL						
pH	pH	18	Range 7.8 to 11.2			
SOM	%	13	Range 0.95 to 18			
Asbestos	N/A	18	Detected (see Table 6-2)			

Table 6-1: Summary of elevated and pertinent analytical results.

Notes:

Only results that exceeded assessment criteria have been shown and results from **all depths** are noted. Results have been compared to the nearest appropriate SOM.

Asbestos was identified, as detailed in Table 6-2.

Sample Location	ID	Type	Total Asbestos (%)
TP105 (0.1-1.0m)	Chrysotile	Fibres/Clumps	0.002
SP1	Chrysotile	Free fibres	<0.001

Table 6-2: Details of asbestos identified.

6.2.3 Hazard Quotient

To examine the potential additivity of toxicological effects between the petroleum hydrocarbon fractions, a Hazard Index (HI) as described by the Environment Agency³⁶ technical report was calculated for the samples. This should be undertaken when there are no elevated petroleum hydrocarbons, when compared to assessment criteria of individual fractions. A HI was calculated for WS101 0.8-1.2m and WS104 1.2-1.5m (See Appendix H) and are summarised in Table 6-3. A HI was not calculated for the remaining samples as no or minimal petroleum hydrocarbons fractions were present.

³⁶ EA (2005). "The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils." Science report P5-080/TR3.

HI results are presented in Table 6-3.

Sample Location	Hazard Index	Further consideration required?
WS101 (0.8-1.2m)	0.67	N
WS104 (1.2-1.5m)	0.81	N

Table 6-3: Hazard Indices.

Notes

Bold where HI is >1

6.2.4 Direct Contact Risk – Pollutant Linkage 1

Elevated PAHs and metals (lead) have been identified on site, given the number and location of elevated samples, the contamination is considered to be site wide.

The source of the contamination is expected to the ash, clinker and coal noted in the made ground.

At the concentrations identified, the contaminants are considered to pose a potential risk to future site users (residents) in soft landscaped areas, where made ground may be exposed / in contact with vegetables. The principal pathways are the ingestion pathways (soil, dust and vegetables) and dermal contact.

The probability of PAH and metal contamination affecting site users is likely. With a medium consequence, the risk is considered to be moderate and remediation is recommended.

Asbestos (chrysotile) was also identified in TP105 (0.1-1.0m) and the sample from SP1 representing made ground in the south east of the site. The asbestos was identified as free fibres or fibres/clumps. The source of the asbestos is likely to be from previously demolished buildings on the site.

Given that only two samples out of eighteen tested positive for asbestos, it is anticipated that the asbestos in made ground is relatively limited / localised. However, it cannot be ruled out for made ground across the rest of the site.

Asbestos may affect site users in soft landscaping of the proposed development site, via the inhalation of fibres. The probability is considered to be likely. With a medium consequence the risk is assumed to be high and remediation is recommended.

Additional consideration should also be given to the risk to workers and offsite receptors during groundworks and construction. This is discussed further in Section 7.3.

6.2.5 Risk from Inhalation of Vapours – Pollutant Linkage 2

Elevated concentrations of volatile contaminants including naphthalene, benzene and trichloroethene (TCE) have been identified in made ground and superficial deposits below the existing building in the south west of the site. The source of this contamination is likely to be from surface spillages in previous industries in this part of the site such as the bolt works and foundry.

PID readings from the locations in the south west of the site (WS201-205 and RBH103) also confirm the presence of volatile contamination with results between 4.3ppm and 207ppm during subsequent monitoring of wells installed.

Evidence of volatile contamination was not encountered in any other exploratory location on site including within the archaeological excavation to the east of the existing building.

LKC consider the probability of volatile contaminants affecting site users in the south west of the site as likely. The consequence is expected to be medium, giving a moderate risk and remediation is required in this area with respect to pollutant linkage 2.

6.3 Gas Risk Assessment

Six gas monitoring visits have been undertaken on the study site. Gas monitoring results are presented in Appendix F. Following guidance set out in CIRIA C665³⁷ and BS8485³⁸ peak methane and carbon dioxide concentrations have been used in the gas risk assessment. In addition, and as per guidance, flow rates were measured first.

All gas concentrations, flow, pressure and groundwater levels are shown on Table 6-4.

Boreholes	Visit	CH ₄ (%v/v)	CO ₂ (%v/v)	O ₂ (%v/v)	H ₂ S (ppm)	CO (ppm)	Flow (l/h)	Groundwater (mbgl)	Pressure (mb)
RBH101	1	0.1	0.4	18.8	<1	1	<0.1	4.54	1011 (r)
	2	0.1	0.9	7.9	<1	4	-0.1	4.40	1004 (f)
	3	<0.1	1.5	16.8	<1	2	<0.1	4.44	1004 (f)
	4	0.1	1.4	17.2	<1	1	-0.1	4.34	1000 (r)
	5	<0.1	1.3	18.8	<1	1	<0.1	4.5	995 (s)
	6	<0.1	1.7	16.4	<1	1	<0.1	4.32	997 (r)
RBH103	1	<0.1	0.1	21.3	<1	<1	-0.1	6.6	1011 (r)
	2	Unable to monitor – building inaccessible.							
	3	<0.1	5.7	14.4	<1	<1	3.4	6.49	1004 (f)
	4	0.1	5.3	14.7	<1	<1	-1.4	6.30	1000 (r)
	5	Unable to monitor – building inaccessible.							
	6	<0.1	0.5	21.1	<1	<1	<0.1	6.3	996 (r)
WS101	1	<0.1	0.2	7.9	<1	<1	0.1	Dry	1011 (r)
	2	0.1	0.1	19.3	<1	<1	<0.1	Dry	1004 (f)
	3	<0.1	0.1	4.7	<1	<1	<0.1	Dry	1004 (f)
	4	0.1	1.4	5.7	<1	<1	<0.1	Dry	1000 (r)
	5	<0.1	1.2	7.2	<1	<1	<0.1	Dry	994 (s)
	6	<0.1	0.1	10.1	<1	<1	<0.1	Dry	996 (r)
WS102	1	<0.1	1.2	18.9	<1	<1	0.3	Dry	1012 (r)
	2	Unable to monitor – borehole inaccessible.							
	3	<0.1	2	15.9	<1	<1	<0.1	Dry	1004 (f)
	4	0.1	1.4	17.6	<1	<1	<0.1	Dry	1000 (r)
	5	<0.1	2.1	17.7	<1	<1	<0.1	Dry	994 (s)
	6	<0.1	2	17.4	<1	<1	<0.1	Dry	997 (r)
WS103	1	<0.1	4.2	13.2	<1	<1	<0.1	Dry	1012 (r)
	2	Unable to monitor – borehole inaccessible.							
	3	<0.1	7	5.5	<1	<1	0.1	Dry	1004 (f)

³⁷ CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665.

³⁸ BSI (2015). "Code of Practice for the Characterisation and Remediation from Ground Gas in Affected Developments." BS8485:2015.

	4	0.1	6.9	0.4	<1	<1	<0.1	Dry	1000 (r)
	5	<0.1	6.9	0.5	<1	<1	0.1	Dry	994 (s)
	6	<0.1	6.8	2	<1	<1	<0.1	Dry	997 (r)
WS104	1	<0.1	6.5	4.6	<1	<1	<0.1	Dry	1012 (r)
	2	0.1	3.8	13.5	<1	<1	<0.1	Dry	1004 (f)
	3	<0.1	4.6	13.3	<1	4	-0.1	Dry	1004 (f)
	4	0.1	3.6	14.9	<1	<1	<0.1	Dry	1000 (r)
	5	<0.1	3.2	18.4	<1	<1	<0.1	Dry	994 (s)
	6	<0.1	2.4	16.5	<1	<1	<0.1	Dry	997 (r)
WS105	1	Unable to monitor – building inaccessible.							
	2	0.1	2.0	14.0	<1	<1	<0.1	Dry	1004 (f)
	3	<0.1	5.6	14.7	<1	<1	<0.1	Dry	1004 (f)
	4	0.1	3.0	16.9	<1	<1	<0.1	Dry	1000 (r)
	5	<0.1	2.9	18.2	<1	<1	<0.1	Dry	994 (s)
	6	<0.1	3.1	18	<1	<1	<0.1	Dry	997 (r)

Table 6-4: Summary of gas monitoring.

Notes:

If concentrations / flow is zero, then equipment detection limits are assumed.

Table shows peak concentrations of CH₄, CO₂, O₂, H₂S and CO.

Bold where CO₂ exceeds 5%v/v and CH₄ exceeds 1%v/v.

Atmospheric pressure (over past 24hrs): r=rising, f=falling, s=steady

Gas Screening Value

In accordance with CIRIA C665³⁹, a Gas Screening Value (GSV) may be calculated. Assuming worst-case scenario maximum gas concentrations and flow for each borehole have been used to calculate the GSV. The GSV can be used to determine the characteristic situation (CS).

Table 6-5 shows the maximum GSV for each borehole and the appropriate characteristic situation (based on GSV only). An overall site assessment has also been included (worst case values across the site).

Boreholes	Max GSV (l/hr)	CS / TL
RBH101	0.0017	CS1
RBH103	0.194	CS2
WS101	0.0014	CS1
WS102	0.0063	CS1
WS103	0.0070	CS1
WS104	0.0065	CS1
WS105	0.0056	CS1
All boreholes	0.238	CS2

Table 6-5: Summary of worst-case Gas Screening Values (GSV).

Notes:

CS – Characteristic Situation; TL= Traffic Light.

In addition, in accordance with CIRIA C665, if carbon dioxide and methane are recorded above 5%v/v and 1%v/v respectively, you should consider upgrading the characteristic situation from CS1 to CS2.

Carbon dioxide was recorded marginally above 5% in several wells on a number of occasions, but this was not associated with any elevated flow rates. The levels are only marginally elevated, and the concentrations recorded are relatively consistent. LKC consider it unlikely that concentrations significantly higher than those recorded

³⁹ CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665.

will be found on site if further gas monitoring was undertaken. Taking this into account and the very low flow rates recorded, LKC consider that CS1 would be appropriate for the site.

The gas concentrations and flow rates recorded are considered typical of a site with a depth of made ground of less than 5m and with no significant organic material within the made ground.

Although the northern corner of the site is within a 250m buffer zone around a historic landfill, it is considered unlikely that gas migration from this source would be sufficient to pose a risk to the proposed development site at Dantzic Street. This is especially true given the mapped Till between the site and former landfill which is likely to be relatively impermeable and also as the River Irk which is between the site and the landfill.

Other potentially infilled features in proximity to the site, such as the gasholders to the north, are not considered to be of sufficient size to generate gas concentrations and flow rates that would pose a significant risk to the proposed development. In addition, these features were potentially infilled by 1970s and gas generation potential would have declined since the initial infilling.

The proposed development has a ground floor level which comprises predominately of a car park below the residential areas of the new building. To meet the required standards of ventilation the car park will need to be adequately designed to ensure the build-up of exhaust fumes does not occur. This will also represent a level of gas protection to the building as it will also ensure the dilution of any potential ground gas that may enter the building from below.

Based on the above, LKC consider the probability of carbon dioxide or methane gas affecting site users and buildings as unlikely. Assuming a severe consequence, there is a moderate / low risk. Given the generally low gas concentrations and flow recorded from gas monitoring undertaken, a low risk is considered most appropriate and no remediation is required.

6.4 Controlled Water Assessment

LKC considers the underlying Principal Aquifer as the primary receptor although the site is not within a Source Protection Zone and no groundwater abstractions have been identified within 500m.

Groundwater samples were collected from two deeper boreholes, RBH101 and RBH103, to assess the condition of the groundwater within the sandstone bedrock. No sample could be collected from RBH102 as this location was not accessible due to parked cars.

No water samples were collected from the shallow window sample boreholes as the monitoring wells were dry.

LKC have compared results above Limits of Detection (LOD). Where relevant the review of priority substances takes precedence considering threshold values for groundwater cannot be used '*as part of site-specific investigations*'. The hierarchy is as follows:

- River Basin District Standards⁴⁰ and updated Water Framework Directive⁴¹ for Annual Average / Maximum Allowable Concentration Environmental Quality Standards (AA-MAC-EQS) for priority substances (surface water risk).
- 2016 private water supply standards (UKDWS potable)⁴².
- 2001 Environment Agency Values for Environmental Quality Standards (EQS) and UK Drinking Water Standard (UKDWS)⁴³.
- Resource Protection Values (RPVs)⁴⁴.
- Minimal Reporting Values (MRVs).

Elevated contaminants above limits of detection are presented in Table 6-6 below and all analysis sheets are presented in Appendix B.

Contaminant	Units	No. of samples	Elevated Result	Location	GAC	Source of Criteria
VOCs / SVOCs						
Vinyl chloride	µg/l	2	33	RBH101	0.5	UKDWS
Trichloroethene	µg/l	2	460	RBH103	10	UKDWS
General						
pH	pH	2	Range 7.8-8.1			
Hardness	mg/l CaCO ₃	2	600-1,100			

Table 6-6: Summary of elevated groundwater results.

Notes:

² = Based on hardness

EQS (2001) and AA / MAC-EQS (2015) = surface water criteria.

UKDWS (2001, 2016) and WHO (2017) = Groundwater criteria (potable supply).

Results above LODs presented.

An elevated concentration of TCE was recorded in the deeper groundwater within the bedrock in the south west of the site (RBH103), adjacent to the southern boundary and elevated vinyl chloride was recorded in deeper groundwater in the north west corner of the site (RBH101).

From available groundwater elevation data, the predominant flow in the groundwater is in a north west direction towards the River Irk. The deeper groundwater testing results also seem to support this as a higher concentration of TCE was recorded in RBH103 (upgradient) and a significantly lower TCE concentration was recorded in RBH101 (downgradient) along with known daughter products from TCE degradation such as vinyl chloride and 1,2-dichloroethene.

Shallow contamination including TCE was identified in the made ground and superficial deposits in the south west of the site in proximity to RBH103. In addition, a thin band of mudstone with a chemical odour was identified in RBH103 at 14.8-15mbgl. However, no evidence of significant vertical migration of contamination was identified from the rock core taken from RBH103. No odours or elevated PID readings were recorded in the bedrock core from 3.5mbgl to 14.8mbgl.

Based on the concentrations and distribution of the shallow TCE contamination in the made ground and superficial deposits in the south west of the site along with the rock

⁴⁰ Defra (2010). "The River Basin Districts Typology, Standards and Groundwater Threshold Values". Water Framework Directive (England and Wales) Directions 2010.

⁴¹ Defra (2015). "Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015".

⁴² Statutory Instruments (2016). "The Private Water Supplies Regulation 2016." No. 614

⁴³ EA (2002). "Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part IIA of the Environment Protection Act 1990."

⁴⁴ SEPA (2010). "Assigning Groundwater Assessment Criteria for Pollutant Inputs." WAT-PS-10-01.

core assessment in RBH103, it is considered unlikely that the source of the deeper groundwater impact is from this source. No shallow groundwater in contact with the most impacted strata in the south west of the site was recorded on any of the monitoring visits. Significant infiltration of water, which would promote vertical migration of contamination, is also not expected in this area as this part of the site has been covered by a building and hardstanding for a significant number of years.

Given the location of RBH103, the borehole with the highest TCE concentration, on the southern boundary of the site and the depth of the impact which appears to be around 14-15mbgl it is very likely that the source of the deeper bedrock groundwater contamination is from an offsite source to the south of the site. The extensive industrial history of the site and surrounding area mean that the wider groundwater quality is likely to be low.

Remediation of the shallow contamination in the south west of the site will be required to mitigate the human health risk and this will also significantly reduce the risk of any future release of contaminants to groundwater during or following construction of the proposed development. This remediation will need to be undertaken prior to any piling operations on the site to prevent the mobilisation of the shallow contamination.

Piling may provide a preferential pathway for contaminants to the Principal Aquifer. Once the method of piling has been determined, good practice for the drilling of piles on contaminated sites should be adhered to, such as guidance provided by the Environment Agency⁴⁵.

LKC considers the probability of contaminants on site affecting the Principal Aquifer as low as there is no evidence of significant downward migration of contamination where identified onsite. The deeper groundwater impact is considered to be due to lower quality wider groundwater in the bedrock from the extensive industry in the area. Given the medium consequence, a moderate/low risk is anticipated from the site.

6.5 Additional Risk Assessments

6.5.1 Concrete (Pollutant Linkage 5)

The concentrations of soluble sulphate in the soil when contrasted to BRE Digest 2005⁴⁶ categorise the concrete requirement as DS-1 AC-1 across the majority of the site. One location, TP103, recorded elevated sulphate in made ground and is classified as DS-2 AC-2.

Based on the above, the probability of sulphate concentrations affecting buildings is a low likelihood. Given the consequence is considered to be mild, the risk (pollutant linkage 5) is anticipated to be low and sulphate resistant concrete is only likely to be required in localised areas. This should be confirmed with the structural engineer.

6.5.2 Potable Water Supply (Pollutant Linkage 6)

Soil results were compared to United Utilities (UU) guidelines for the selection of potable water pipes in land potentially affected by contamination⁴⁷. Only contaminants of concern, based on the preliminary conceptual model and ground conditions encountered, were analysed. The following contaminants were not considered to be

⁴⁵Environment Agency (2001) Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention.

⁴⁶BRE (2005). "Concrete in Aggressive Ground." Special Digest 1.

⁴⁷UU(2011). "United Utilities Water Supplementary Guidance for the Selection of Water Pipes in Land Potentially Affected by Contamination."

a risk and no evidence of these were identified during the intrusive investigation, therefore not included in the analysis suites: chlorinated compounds, cresols, ethers, nitrobenzene, ketones, aldehydes and amines.

The following elevated contaminants were identified:

- » Elevated petroleum hydrocarbons in the north and south west of the site.
- » Elevated naphthalene in made ground across the site.
- » Elevated chlorinated solvents in the south west of the site.

It is likely that barrier pipe will be required across the site subject to the depth and location of the water pipes and in consultation with UU.

Once details of the pipeline location and depths are known a UU Risk Assessment should be undertaken.

At this stage, the probability of organic contaminants affecting potable water pipes is likely. Given the consequence is considered to be medium, a moderate risk (pollutant linkage 6) is anticipated and remediation (i.e. barrier pipe) is likely to be required (subject to further risk assessment).

6.5.3 *Phytotoxicity (Pollutant Linkage 7)*

Soil results were compared to phytotoxic guideline values as outlined in BS3882⁴⁸.

Elevated zinc (maximum concentration 500mg/kg) and copper (maximum concentration 400mg/kg) were identified. The probability of phytotoxic contaminants affecting vegetation is considered to be likely. With a minor consequence, the risk (pollutant linkage 7) is anticipated to be low. Although the risk is low, some remediation is recommended. The remediation associated with PL1 (cover system) will be more than sufficient for PL7.

6.6 **Revised Contamination Conceptual Model**

The preliminary contamination conceptual model (Table 2-4) has been revised following the risk assessments undertaken in Sections 6.1-6.5. The revised contamination conceptual model follows the same methodology and guidance used in the preliminary contamination conceptual model. The risk matrix is provided in Appendix A.

The revised contamination conceptual model is presented in Table 6-7.

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

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

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

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

⁴⁸ BS (2015). "Specifications for Topsoil and Requirements for Use." BS3882:2015.

Further details of the remedial proposals and a remedial option appraisal are given in Section 9.

Pollutant Linkage	Pathway	Receptor	Contaminant (source)	Probability	Consequence	Risk	Assessment and Recommendations
PL1	- Dermal contact. - Inhalation of soil, fibres and dust. - Ingestion of soils, dust, vegetables, soil attached to vegetables. - Windblown dust.	- Future site users. - Offsite receptors.	- ACM (made ground).	Likely	Medium	Moderate (localised)	- Likely probability of asbestos affecting site users in proposed soft landscaped areas. - Recommendation: Remediation required likely to comprise a clean capping layer with break layer in soft landscaping.
			- Heavy metals - PAHs (made ground).	Likely	Medium	Moderate (localised)	- Elevated PAHs and metals identified in made ground on site. - Likely probability of these contaminants affecting site users in proposed soft landscaping. - Only small areas of soft landscaping proposed. Moderate risk assumed for these localised areas. - Recommendation: Remediation required likely to comprise a clean capping layer with break layer in soft landscaping.
			- Hydrocarbons (made ground)	Likely	Medium	Moderate (localised)	- Likely probability as elevated TPH fractions identified in the south west of the site. - Only small areas of soft landscaping proposed. Moderate risk assumed for these localised areas. - Recommendation: Remediation required likely to comprise a clean capping layer with break layer in soft landscaping. Excavation and disposal or treatment of the impacted shallow soils in the south west of the site also required for volatile risk.
PL2	- Inhalation of vapours. - Migration through permeable strata and preferential pathways.	- Future site users. - Offsite receptors.	- Volatile Contaminants such as hydrocarbons and solvents.	Likely	Medium	Moderate	- Likely probability in the south west of the site as elevated concentrations of light end TPH fractions, naphthalene, benzene and TCE identified in made ground and superficial deposits. - Recommendation: Remediation required. Excavation and treatment or disposal of impacted shallow soils required.
PL3	- Inhalation of gas. - Migration through permeable strata and preferential pathways. - Explosion in confined spaces.	- Future site users. - Buildings. - Offsite land users.	- Methane, carbon dioxide. (potentially infilled features within 250m of the site, made ground onsite).	Unlikely	Severe	Moderate / Low	- Unlikely probability as no evidence of made ground generating high concentrations of gas or flow rates. - Building design will mitigate the accumulation of any ground gas within the building. - Recommendation: No gas protection measures required.
PL4	- Surface Run-off. - Migration through permeable strata and preferential pathways - Perched waters migration.	- Groundwater (Principal Aquifer).	- Mobile contaminants such as metals, PAHs, hydrocarbons, volatile compounds (made ground, car parking onsite, onsite former asphalt works).	Low Likelihood	Medium	Moderate / Low	- Low probability as although shallow contamination identified in the south west of the site, there is no evidence of significant downward migration to the underlying aquifer. - Low risk assumed as deeper groundwater impact identified is considered likely to be due to wider groundwater quality rather than an onsite source. - Recommendation: No specific groundwater remediation required.
		- Surface water (River Irk).		Unlikely	Medium	Low	- Unlikely probability as significant potential mobile contamination only identified in the south west of the site and no evidence for lateral migration towards the river. - Recommendation: No specific groundwater remediation required.

Table 6-7: Revised Contamination Conceptual Model.

Pollutant Linkage	Pathway	Receptor	Contaminant (source)	Probability	Consequence	Risk	Assessment and Recommendations
PL5	- Sulphate attack on concrete.	- Building structure.	- Sulphate (ash identified in made ground).	Likely	Mild	Moderate / Low	- Likely probability in localised area as elevated sulphate identified which may be in contact with concrete used in future buildings. - Moderate risk assumed for the area where elevated sulphate identified. - Recommendation: Concrete classification of DS-1 AC-1 for majority of site. DS-2 AC-2 for the area around TP103.
PL6	- Ingestion of tainted water supply.	- Future site users. - Water pipes.	- Organic Contaminants such as hydrocarbons, solvents (made ground)	Likely	Medium	Moderate	- Likely probability as elevated organic contaminants identified compared to UKWIR criteria. - Recommendation: Barrier pipe likely to be required dependent on findings of UU Risk Assessment.
PL7	- Direct Contact (plant uptake).	- Flora.	- Phytotoxic Contaminants (made ground).	Likely	Minor	Low	- Likely probability as elevated copper and zinc identified. - Recommendation: Remediation for PL1 will be adequate to mitigate the risk to flora.

Table 6-7 continued: Revised Contamination Conceptual Model.

7 Waste Disposal Assessment

The soil contamination results as presented in Appendix C have been used to help determine the waste classification of material for off-site disposal.

As an initial screen the soil results were inputted into Hazwaste Online™. This is a web-based facility that allows an assessment waste as either hazardous or non-hazardous waste based on relevant guidance and legislation^{49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67}.

Hazwaste Online™. has been designed to cover, amongst other waste types, the European Waste List of Waste (LoW) code number 17 "Construction and Demolition Waste (Including Excavated Soil from Contaminated Sites)".

Where less than limits of detection (LOD) were recorded, the value of the LOD was inputted.

Where applicable, worst case metal species based on hazard statements/ molecular weight, site history, ground conditions and likely species present in soils were used (e.g. metal oxides relating to an ash based source).

The output sheet is presented in Appendix I and the locations where soil which would be classified as hazardous waste are summarised in Table 7-1.

Sampling Location	Hazardous Waste Y/N	LoW Code	Hazard (Risk Phrase)	Contaminants
WS101	Y	17 05 03	HP7 (carcinogenic), HP11 (mutagenic)	TPH (C6-C40)
WS104	Y	17 05 03	HP7 (carcinogenic), HP11 (mutagenic)	TPH (C6-C40)
WS105	Y	17 05 03	HP8 (Corrosive)	pH
WS205	Y	17 05 03	HP3(i) Flammable HP7 (carcinogenic), HP11 (mutagenic), HP14 (ecotoxic)	TPH (C6-C40)

Table 7-1: Summary of Hazwaste Online™ findings.

⁴⁹ EA (2018). "Guidance on the Classification and Assessment of Waste (1st Edition v1.1)". Technical Guidance WM3.

⁵⁰ CLP Regulation - Regulation 1272/2008/EC of 16 December 2008.

⁵¹ 1st ATP - Regulation 790/2009/EC of 10 August 2009

⁵² 3rd ATP - Regulation 618/2012/EU of 10 July 2012

⁵³ 4th ATP - Regulation 487/2013/EU of 8 May 2013

⁵⁴ Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

⁵⁵ 5th ATP - Regulation 944/2013/EU of 2 October 2013

⁵⁶ 6th ATP - Regulation 605/2014/EU of 5 June 2014

⁵⁷ WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

⁵⁸ Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014

⁵⁹ 7th ATP - Regulation 2015/1221/EU of 24 July 2015

⁶⁰ 8th ATP - Regulation (EU) 2016/918 of 19 May 2016

⁶¹ 9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

⁶² 10th ATP - Regulation (EU) 2017/776 of 4 May 2017

⁶³ HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

⁶⁴ 13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

⁶⁵ POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004

⁶⁶ 1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010

⁶⁷ 2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Based on individual locations, hazardous waste has been identified. The soil from the areas around these locations should be classified as HAZARDOUS WASTE and LoW code “17-05-03 - soil and stones containing hazardous substances”. Further testing is recommended during the groundworks phase including WAC testing.

8 Conclusions

8.1 Geotechnical

Shallow spread footings e.g strip and trench fill are not recommended. Piled foundations are likely to be the most feasible option.

As the proposed development is a mixture of high and medium rise structures with elevated car parking in a 'combined' space, settlement between differently loaded structures is a key risk to be mitigated.

To mitigate the risk of differential settlement, all columns will need to be founded on piles socketed into the competent Chester Pebble Beds bedrock, the top of which is approximately 5m below existing ground level.

It is recommended to consult with a competent and qualified piling contractor at the earliest juncture.

A piling mat will be required, and the ground will require the clearing of potential obstructions by grubbing out of relic foundations and other buried structures.

Ground bearing floor slabs are acceptable founded on cleared and prepared ground with soft spots removed.

Railway arches/underbridges are immediately adjacent to the site to the south. Piles should not be located too close to these structures so as not to superimpose new loads into the zone of influence of existing bridge and arch supports, or existing retaining walls and embankments.

Sulphate resistant concrete is recommended (DS-2 AC-1) in localised areas. A majority of the site will not require sulphate resistant concrete (classification of DS-1 AC-1).

A design CBR value of 3% should be used for footpaths and roads.

Further advice on foundation design should be sought from a structural engineer.

8.2 Contamination Assessment

A revised contamination conceptual model has been produced by LKC which is summarised in Table 8-1 below (more detailed model provided in Section 6).

Pollutant Linkage		Risk	Recommendations
1	Contaminants posing a risk to future site users via dermal contact, ingestion and inhalation (of soil, dust, fibres and vegetables).	Moderate (localised) (ACM, metals, hydrocarbons, PAHs)	Clean cover and break layer in soft landscaped areas.
2	Volatile contaminants posing a risk to future site users via the inhalation of vapours.	Low	No remediation required.
3	Gas posing a risk to buildings and future site users via the migration of gas into building causing explosion and asphyxiation.	Moderate/Low	No remediation required.
4	Mobile contamination posing a risk to controlled waters via the migration through permeable strata.	Moderate/Low	No specific groundwater remediation required.
5	Sulphate posing a risk to building via direct contact (sulphate attack).	Moderate/Low	Sulphate resistant concrete required (DS-2 AC-2) in area around TP103.
6	Organic contaminants posing a risk to water pipes.	Moderate	Consultation with UU and completion of potable waters risk assessment once the depth and route of new pipes are known.
7	Phytotoxic metals posing a risk to flora via root uptake.	Low	Clean cover and break layer in soft landscaped areas.

Table 8-1: Summary Risk Table.

Remedial recommendations are presented in Section 9.

9 Recommendations and Remedial Strategy

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

9.1 Remediation and Validation Recommendations

Table 9-1 details the further works and remedial recommendations / requirements.

PL	Remediation Requirements	Validation Requirements
ALL	<u>Earthworks Inspections / Unexpected Contamination</u> The relevant contractors should be briefed that during development works at the site should any unusual ground conditions and / or visual or olfactory evidence of contamination (including asbestos containing material) be encountered at the site, LKC and the Local Authority should be informed, and further assessment of the material may be required.	Log of work undertaken including photographs. Details of any sampling undertaken and validation of any potential additional remedial work.
2	<u>Volatile Contamination Hotspot Removal (south west of site below the existing building)</u> Following demolition of the existing building, impacted soils (based on visual / olfactory evidence and the use of a PID (screening value of 20ppm)) should be excavated. Impacted soils should be placed on an impermeable surface following excavation to prevent cross contamination of existing ground. Given the volatile nature of the contamination and as the site is relatively large, treatment of the impacted material on site is likely to be the most cost effective and sustainable remediation option. Treatment options for this contamination include bioremediation or vacuum extraction of volatile contaminants coupled with regular turning of the stockpile of excavated soils. Treatment of impacted soils onsite will require a relevant permit from the Environment Agency. The other option is for disposal of the material offsite and further testing of the excavated soils should be undertaken to confirm suitable waste facility. However, as, at least, some of this material will be classified as hazardous waste, depending on the final quantity to be disposed of, this may be an expensive option. The excavation work should be done under the supervision and instruction of an environmental consultant and validation of the base and sides of	Details of contaminated soil excavation work and validation undertaken including photographs. Confirmatory samples of the remaining in-situ soils. Consignment notes confirming the removal of impacted soil, if disposal is the preferred option. If soils are to be treated on site, then validation of the treated materials before re-placement on site will be required. Assessment criteria for residential without plant uptake to be used as validation criteria.

	the excavation will be required to confirm that all impacted material has been removed. If all impacted ground cannot be removed and contamination remains on the ground, further remediation may need to be considered.	
1 and 7	<u>Environmental Cover System</u> As made ground is relatively deep, it is unlikely to be viable to remove the contaminated soils. Therefore, an environmental cover system is recommended. The environmental cover system should be as follows: Shared Landscaping: 450mm thick environmental cover system comprising: 100mm physical break layer (MOT type 1 material, 20-30mm, minimal fines) and at least 350mm comprising clean inert fill and sufficient topsoil for a growing medium. The subsoil layer can be replaced by additional topsoil. A diagram of a typical environmental cover system is shown in Appendix J.	Measuring depth of environmental cover system using a staff and providing photographic evidence. Photographic evidence of the granular physical break or geotextile layer will also be collected. Chemical validation of imported soils: See Table 9-2.
5	<u>Sulphate Resistant Concrete</u> Sulphate Resistant Concrete in line with DS-2 AC-2 recommended in the area around TP103.	N/A
6	<u>Potable Water Pipes</u> It is recommended that a United Utilities Risk Assessment is undertaken once the location and depth of potable water pipes are known. It is likely that barrier pipe will be required.	Delivery Notes of Pipe Material. Photographs of the Installed Pipe.
<u>Grubbing Out of In-Ground Structures</u> It is recommended that in-ground structures are grubbed out as part of the groundworks. In-ground structures should be expected in most areas of the site.		
<u>Re-use of site won material</u> To ensure material is compliant with appropriate waste regulations, any site won material re-used onsite should be in recourse to appropriate exemptions. A U1 and T5 exemption should be registered. This will allow the following to be used onsite or brought in for use onsite (refer to guidance for types of waste that can be used ⁶⁸): 5,000 tonnes (c. 2,500m³) <u>treatment</u> of crushed concrete / stone. 1,000 tonnes (c. 500³) <u>use of</u> non-hazardous soil 5,000 tonnes (c. 2,500m³) <u>use of</u> clays, sand, gravel, brick, concrete, stone etc. 50,000 tonnes (c. 25,000m³) <u>use of</u> bituminous material to be used in roadways. A Materials Management Plan (MMP) with recourse to the CL:AIRE Code of Practice may be required if volumes exceed exemption limits. This must be registered before material movement starts onsite. If an MMP is required, this needs to be registered by a Qualified Person (QP) and there must be 'certainty of use' for any material re-used onsite or exported to site to ensure there is no 'sham recovery'. For all the above material will need to be tested at the rate and analytical suites presented in Table 9-2.		

⁶⁸ <https://www.gov.uk/guidance/waste-exemptions-using-waste>

Asbestos Management Plan

Due to the presence of asbestos containing material, it is recommended that additional precautions are taken during site clearance, earthworks and construction in the area of concern. The presence of asbestos in the made ground at the site presents a potential risk of generation of airborne fibres if this material is disturbed, such as for excavations to construct new foundations.

This risk can be managed by careful procedures and site monitoring to reduce the risk of airborne fibres, and it is recommended that an appropriate 'Asbestos Management Strategy' is developed and adopted for all intrusive ground works which disturb the made ground in the area of concern. This should be carried out in line with CIRIA C733⁶⁹.

This may include asbestos awareness training for all site staff, provision of suitable personal and respiratory protective equipment and air monitoring.

With regards to cement bound asbestos, this can be handpicked, doubled bagged and disposed of appropriately to a licenced landfill. Guidance on removing asbestos cement is described in HSE (2012)⁷⁰.

If ACM is identified in soil arisings then soil should be placed directly into covered skips and disposed of at a suitable licenced landfill, after further testing to quantify the extent of asbestos contamination of the soils. It should be considered that blue asbestos is notifiable and must be removed by a licenced contractor.

Health and Safety Considerations

In working with, removing or treating any contaminating material it is important that any potential risks associated with the actual site works are mitigated by good environmental management of the site during the remedial phases. Standard health and safety precautions (as per HSE guidance⁷¹) should be adopted by all workers involved with site enabling and construction works.

Piling in Contaminated Land

It is understood that the building will be piled into the bedrock. This may provide a preferential pathway for contaminants to the Secondary B Aquifer. Once the method of piling has been determined, good practice for the drilling of piles on contaminated sites should be adhered to, such as guidance provided by the Environment Agency⁷².

Asbestos Survey

A Pre-Demolition and Major Refurbishment Asbestos Survey should be undertaken, and any ACMs removed and properly disposed of, prior to the demolition of the existing buildings, by a suitably qualified professional.

Table 9-1: Further work, remediation and validation requirements

Notes: See Table 6-6 for pollutant linkage (PL) details.

9.2 Validation of Subsoil / Topsoil

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

A summary of the required imported material sampling requirements is presented in Table 9-2. Ideally, the material should be sampled at source to prevent double handling if soil fails, with confirmatory sampling undertaken on importation to site. However, where this is not possible then material imported should be segregated based on source and soil type. Validation samples should be taken prior to placement to ensure suitability for use.

⁶⁹ CIRIA (2014). "Asbestos in Soil and Made Ground: A Guide to Understanding and Managing Risks". C733.

⁷⁰ HSE (2012). "Removing Asbestos Cement (AC) Debris." A11 Asbestos Essential – Non-licenced Tasks.

⁷¹ HSE (1991). "Protection of Workers and the General Public During Development of Contaminated Land" London HMSO.

⁷² Environment Agency (2001) Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention.

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

Table 9-2: Sampling requirements for imported soils.

Notes:

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

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

*Minimum sampling rate of 3 samples per source.

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

In addition, it should be ensured that the matrix of the topsoil is suitable as a growing medium and no undesirable material is present (in line with BS3882⁷³). LKC advise this information is provided by the supplier before material is imported onto site.

Imported material to be used in soft landscaping will be compared against residential without plant uptake criteria (as used in the contamination risk assessment (Section 6-1)). Appropriate remedial target criteria are presented in Appendix G.

9.3 Site Completion Report

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

- » Details of the demolition of the existing buildings within a Pre-Demolition and Major Refurbishment Asbestos Survey.
- » Validation of excavation and removal or treatment of impacted soils in south west of site.
- » Validation of environmental cover system in soft landscaped areas.
- » Verification testing of all imported soil for soft landscaping areas.
- » Information on the installation of protective pipes and / or sterile trenches.
- » Details of any unexpected contamination identified onsite, suitably risk assessed and / or validated.
- » Provision of waste transfer documents for surplus soils removed from site.

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

⁷³ BS (2015). "Specifications for Topsoil and Requirements for use." BS3882:2015.

Figures

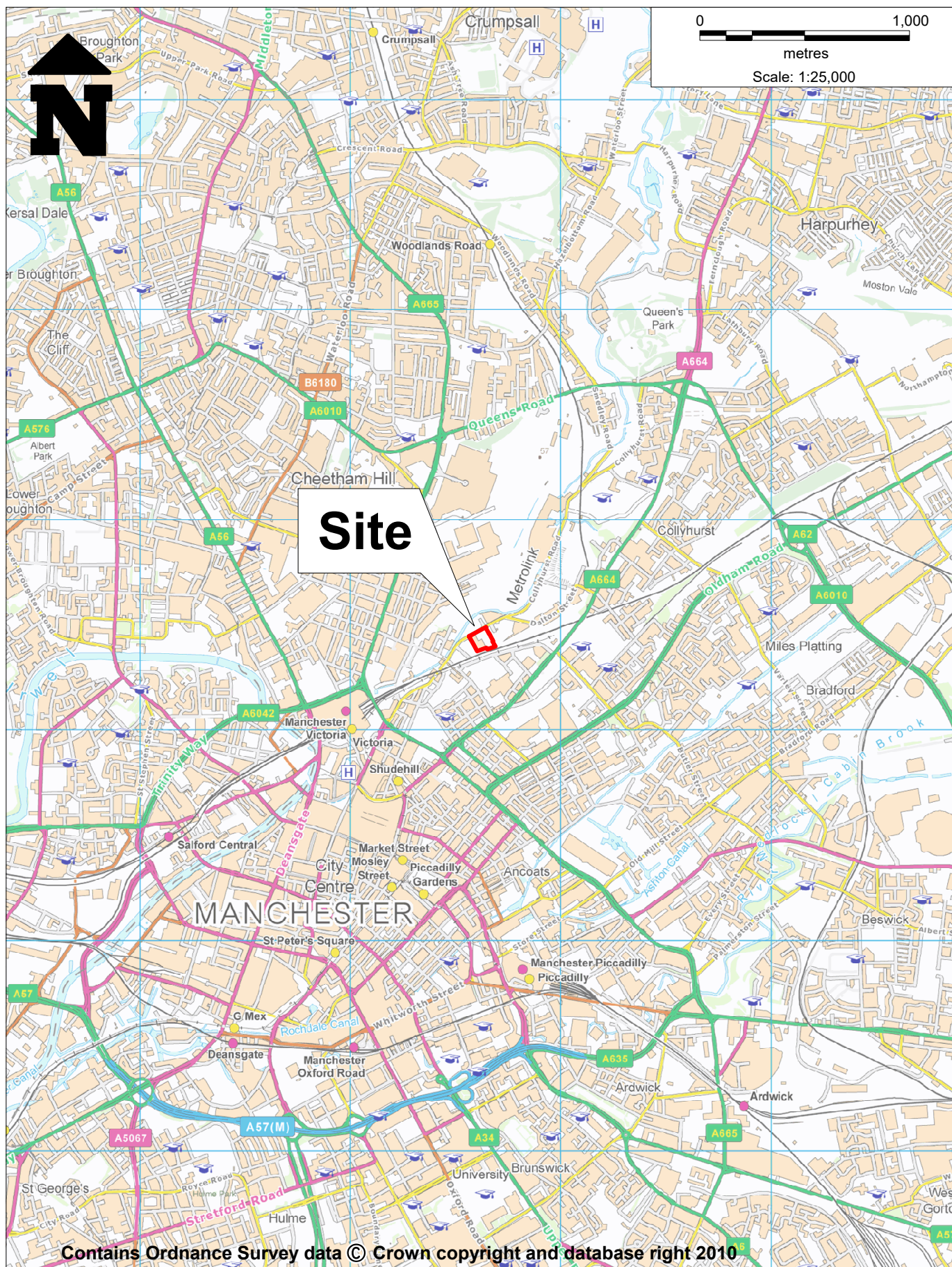
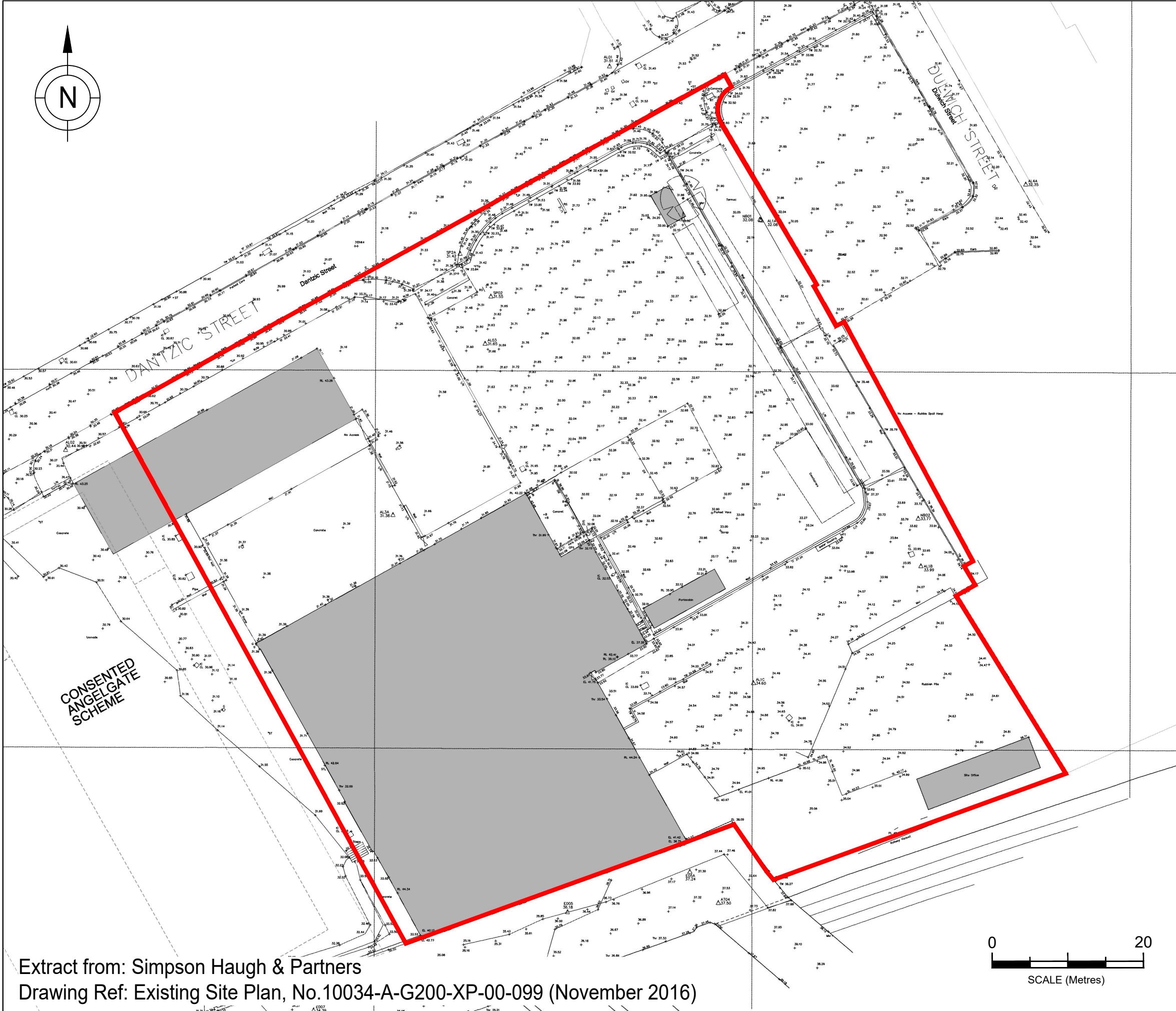


Figure 1: Site Location Plan, Dantzic Street, Manchester

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



KEY

 Site Boundary

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



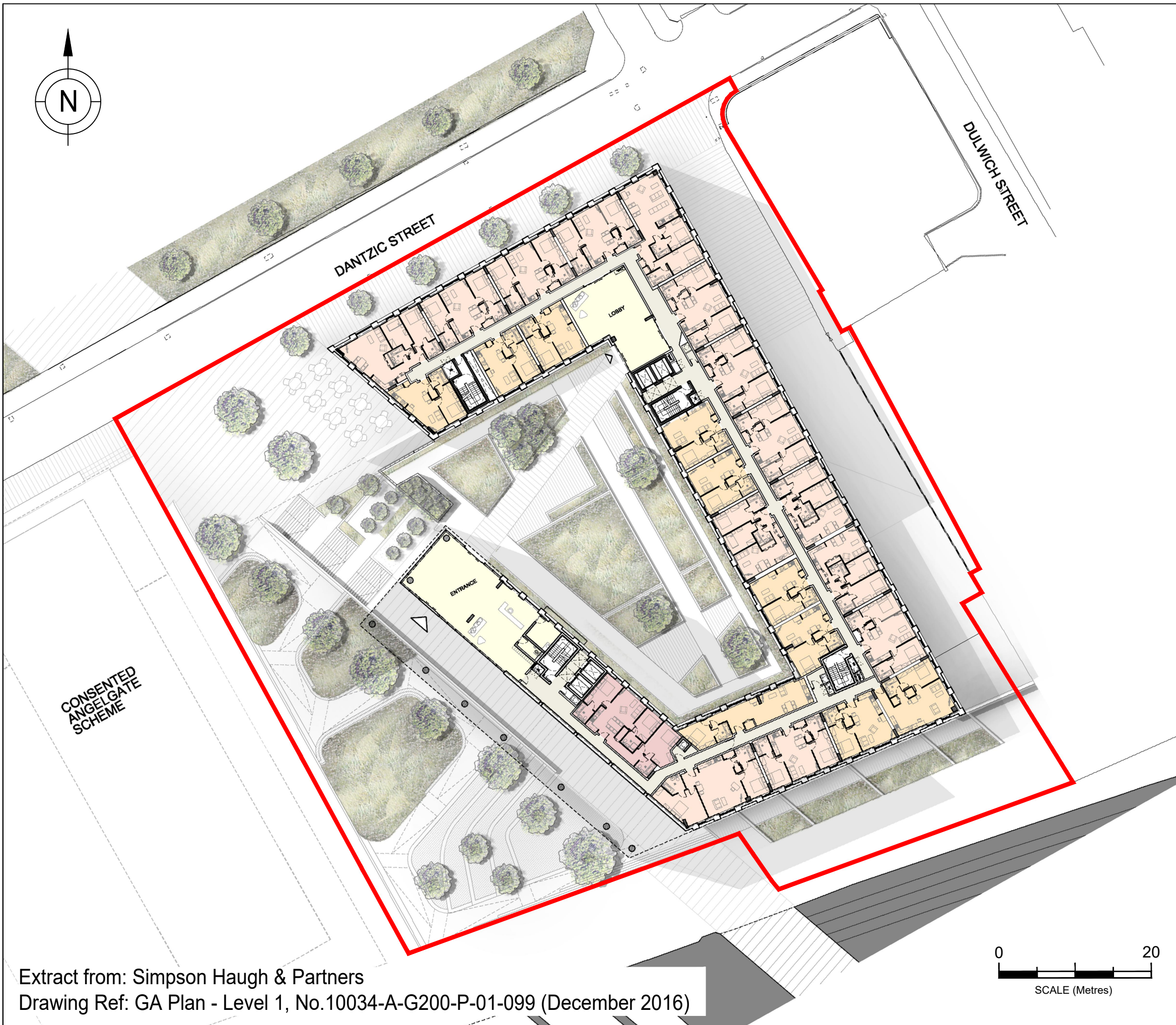
Client:
Leftfield Investments Holdings Ltd

Site:
Dantzig Street, Manchester

Title:
Site Boundary Plan

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
LKC 20 1060	1:500 @ A3	2	
Drawn By:	Checked By:	Drawn:	
AC	CH	Dec 2019	

Extract from: Simpson Haugh & Partners
Drawing Ref: Existing Site Plan, No.10034-A-G200-XP-00-099 (November 2016)



KEY

 Site Boundary

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



Client:
Leftfield Investments Holdings Ltd

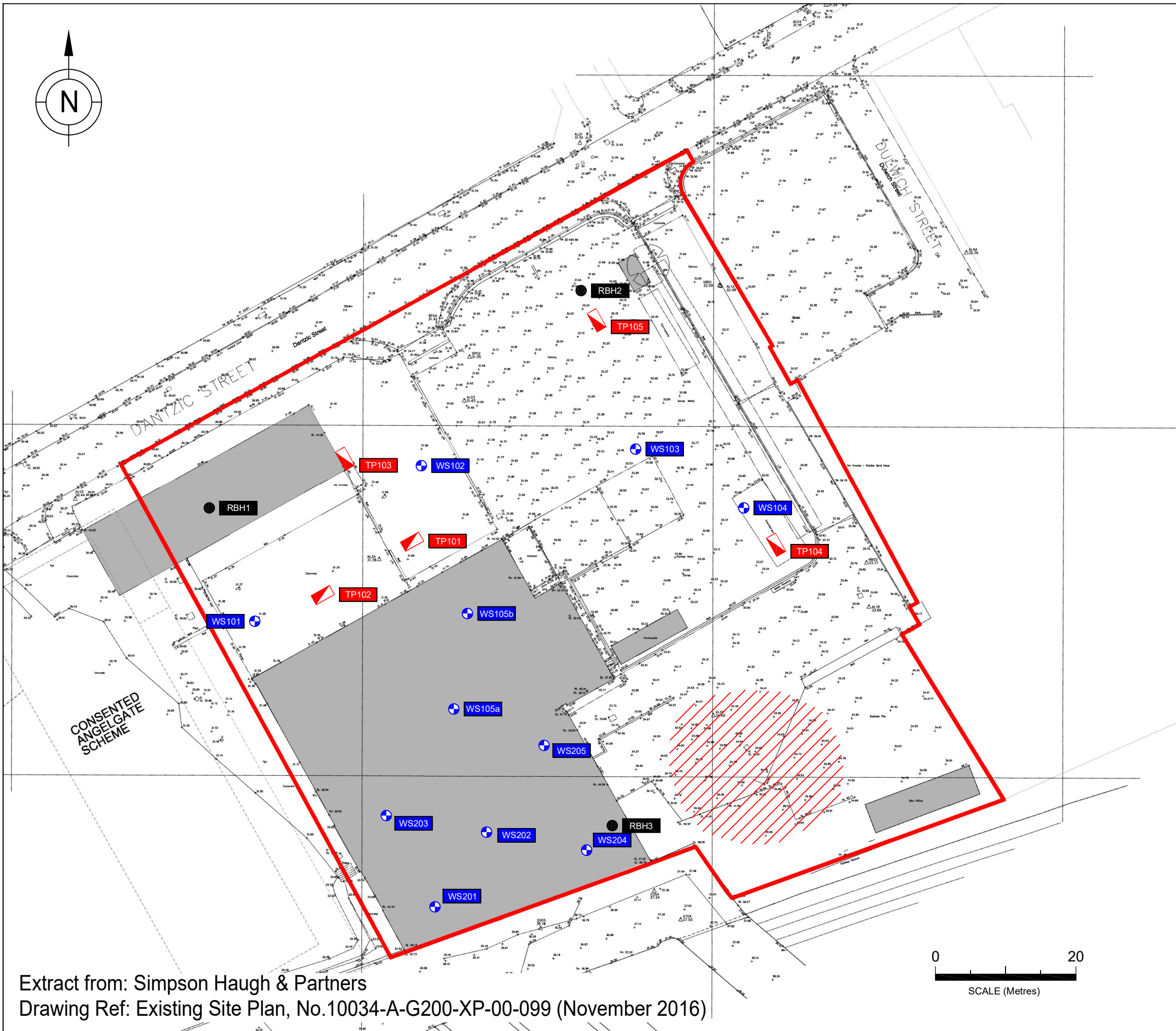
Site:
Dantzic Street, Manchester

Title:
Proposed Development Plan
(First Floor Plan)

Job No.:	Scale (See Scale Bar):	Figure:	Revision:
LKC 20 1060	1:500 @ A3	3	
Drawn By:	Checked By:	Drawn:	
AC	CH	Dec 2019	

Extract from: Simpson Haugh & Partners
Drawing Ref: GA Plan - Level 1, No.10034-A-G200-P-01-099 (December 2016)

0 20
SCALE (Metres)



Site Boundary

Window Sample Borehole (WS)

Trial Pit (TP)

Rotary Borehole (RBH)

Area of Archaeological Dig

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

LK

CONSULT LIMITED

Client:

Leftfield Investments Holdings Ltd

Site:

Dantzig Street, Manchester

Title:

Sampling Location Plan

Job No.:

LKC 20 1060

Scale (See Scale Bar):

1:500 @ A3

Figure:

4

Revision:

Drawn By:

AC

Checked By:

CH

Drawn:

Feb 2020

Extract from: Simpson Haugh & Partners

Drawing Ref: Existing Site Plan, No.10034-A-G200-XP-00-099 (November 2016)

Appendix A

Risk Matrix

Risk Evaluation

The method for risk evaluation is a qualitative method of interpreting the output from the risk estimation stage of the assessment, based on CIRIA 552⁷⁴. It involves the classification of the:

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

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

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

Table B. Classification of Probability.

⁷⁴ CIRIA C552 (2001) Contaminated Land Risk Assessment - A Guide to Good Practice.

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

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

Table C. Comparison of Consequence against Probability

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

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

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

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

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

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

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

Appendix B

Profile Logs

Window Sample Logs
Trial Pit Logs
Rotary Borehole Logs

Excavation Method

Concrete corer to 0.20mbgl.
Drive-in Windowless Sampler
to 3.00mbgl.
SPT driven to 3.4mbgl.

Dimensions

150mm to 1.00m

Ground Level (mOD)

40.00

Client

Jirehouse Fiduciares Nevis Limited

Job
Number
LKC 20 1060

Location (Handheld GPS)

384609 E 399381 N

Dates

20/02/2020

Engineer
Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.40-0.70	B1 PID= 4.4PPM			39.80 39.70 39.60	(0.20) (0.20) (0.30)	MADE GROUND: Concrete.			
0.70-1.00 0.70-1.00	B2 PID= 21.6PPM D2			39.30	(0.30) 0.70	MADE GROUND: Grey sandy GRAVEL. Sand is fine to medium. Gravel is fine to medium, subangular comprising limestone.			
1.00-1.50 1.00-1.50	B3 PID= 1.8PPM D3					MADE GROUND: Light reddish sandy GRAVEL comprising sandstone. Sand is fine to medium. Gravel is coarse, subangular.			
2.00-2.70 2.00-2.70	B4 PID= 4.5PPM D4				(2.00)	MADE GROUND: Black SAND and GRAVEL comprising ash and clinker. Sand is fine to coarse. Gravel is fine to medium, subangular.			
						Stiff to firm consistency brown with grey mottling slightly gravelly CLAY with pockets of coal. Gravel is fine to medium, subangular comprising mudstone.			
				37.30	2.70	Red SAND.			
				36.60	(0.70) 3.40	Terminated at 3.40m			

Remarks

Moderate hydrocarbon odour at 2.0mbgl to 3.0mbgl.
Refusal on sandstone at 3.4mbgl.

Scale
(approx)

1:40

Logged
By

RW

Figure No.

LKC 20 1060.WS201

Excavation Method

Drive-in Windowless Sampler
to 3.0mbgl.
SPT driven to 3.395mbgl.

Dimensions

150mm to 2.00m

Ground Level (mOD)

40.00

Client

Jirehouse Fiduciaries Nevis Limited

Job
Number

LKC 20 1060

Location (Handheld GPS)

384619 E 399392 N

Dates

20/02/2020

Engineer
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	B1 PID= 1.1PPM D1			39.80	(0.20)	MADE GROUND: Grey GRAVEL. Gravel is fine to coarse, subangular comprising concrete.			
0.20-0.40				39.60	(0.20) 0.40	MADE GROUND: Black SAND and GRAVEL with occasional brick and ash. Gravel is fine to coarse, subangular to subrounded comprising brick and ash.			
1.00-2.00	B2 PID= 6.0PPM				(2.10)	Firm to stiff brown with grey mottling slightly gravelly CLAY. Gravel is fine to medium, subangular comprising mudstone.			
2.00-2.50	B3 PID= 7.9PPM D3								
2.50-2.80	B4 PID= 1.8PPM D4			37.50	2.50	Firm to stiff brown with yellow and grey mottling sandy gravelly CLAY. Sand is fine to medium. Gravel is fine to medium, subangular comprising sandstone and mudstone.			
2.80-3.00	B5 PID= 1.1PPM			37.20	2.80				
3.00-3.40	SPT 50/245		8,10/11,15,16,8	37.00	3.00	Red slightly gravelly SAND. Sand is fine to coarse. Gravel is fine, subrounded comprising sandstone.			
						Terminated at 3.40m			

Remarks

Moderate hydrocarbon odour from 2.0mbgl to 2.80mbgl.
Refusal on sandstone at 3.395mbgl.

Scale
(approx)

1:40

Logged
By

RW

Figure No.

LKC 20 1060.WS202

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

Dantzic Street, Manchester

Number
WS203**Excavation Method**Concrete corer to 0.20mbgl.
Drive-in Windowless Sampler
to 1.90mbgl.
CPT driven to 2.115mbgl.**Dimensions**

150mm to 1.00m

Ground Level (mOD)

40.00

Client

Jirehouse Fiduciaries Nevis Limited

Job
Number
LKC 20 1060**Location (Handheld GPS)**

384604 E 399391 N

Dates

20/02/2020

Engineer**Sheet**
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20-0.80	B1 PID= 2.0PPM			39.80	(0.20) 0.20	MADE GROUND: Concrete.		
0.80-1.20 0.80-1.20	B2 PID= 0.4PPM D2			39.20	(0.60) 0.80	MADE GROUND: Light reddish brown sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse, subangular comprising sandstone. Ash and clinker layer at 0.30mbgl.		
1.40-1.90 1.40-1.90	B3 1.4PPM D3			38.80 38.60	(0.40) 1.20 (0.20) 1.40	MADE GROUND: Black sandy gravelly silty CLAY with occasional glass, ash and clinker. Sand is fine to medium. Gravel is fine to coarse, subrounded to angular comprising glass, ash and clinker.		
1.90-2.12	SPT 50/10		25/50	38.10	(0.50) 1.90	MADE GROUND: Brick.		
						MADE GROUND: Reworked stiff consistency brown with grey mottling sandy gravelly CLAY with rare brick. Sand is fine to coarse. Gravel is fine to medium, subangular comprising mudstone.		
						Terminated at 2.12m		

Remarks

Refusal on possible concrete.

Scale
(approx)

1:40

Logged
By

RW

Figure No.

LKC 20 1060.WS203

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

Dantzic Street, Manchester

Number
WS204**Excavation Method**Concrete corer to 0.3mbgl.
Drive-in windowless Sampler
to 3.3mbgl.**Dimensions**

150mm to 2.00m

Ground Level (mOD)

40.00

Client

Jirehouse Fiduciaries Nevis Limited

Job
Number
LKC 20 1060**Location (Handheld GPS)**

384632 E 399391 N

Dates

20/02/2020

Engineer**Sheet**
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-0.30	B1 PID= 0.6PPM					MADE GROUND: Concrete.		
0.30-0.40	B2 PID= 1.4PPM			39.70	(0.30)	Firm to stiff brown with grey mottling CLAY.		
0.30-0.40	D2				0.30			
					(1.40)			
				38.30	1.70	Brown clayey GRAVEL. Gravel is fine to coarse, subrounded to subangular comprising sandstone and mudstone.		
					(1.20)			
				37.10	2.90	Red SAND. Sand is fine to coarse.		
					(0.40)			
				36.70	3.30	Terminated at 3.30m		

Remarks

Refusal at 3.30mbgl on sandstone.

Scale
(approx)

1:40

Logged
By

RW

Figure No.

LKC 20 1060.WS204

Excavation Method

Concrete corer to 0.22mbgl.
Drive-in Windowless Sampler
to 2.70mbgl.

Dimensions

150mm to 2.00m

Ground Level (mOD)

40.00

Client

Jirehouse Fiduciaries Nevis Limited

Job
Number

LKC 20 1060

Location (Handheld GPS)

384627 E 399404 N

Dates

20/02/2020

Engineer
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	B1 PID= 0.4PPM D1			39.78	(0.22) 0.22	MADE GROUND: Concrete.			
				39.50	(0.28) 0.50	MADE GROUND: Black SAND and GRAVEL comprising of ash and brick. Sand is fine to coarse. Gravel is fine to coarse, subangular.			
1.00-1.30 1.00-1.30	B2 PID= 1.1PPM D2				(2.10)	Firm to stiff brown with grey mottling slightly gravelly CLAY. Gravel is fine to medium, subangular comprising mudstone.			
						Black stain at 1.30mbgl.			
2.00-2.70 2.00-2.70	B3 PID= 96.0PPM D3			37.40 37.30	(2.60) (2.70)	Grey clayey GRAVEL. Gravel fine to medium, subangular comprising sandstone.			
						Terminated at 2.70m			

Remarks

Moderate hydrocarbon odour at 1.3mbgl becoming stronger at 2.0mbgl to end of borehole.
Refusal on possible sandstone at 2.7mbgl.

Scale
(approx)

1:40

Logged
By

RW

Figure No.

LKC 20 1060.WS205

Excavation Method

Drive-in Windowless Sampler
to 4.45mbgl.

Dimensions
Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

Job
Number
LKC 20 1060

Location (Handheld GPS)

384582 E 399424 N

Dates

18/11/2019

Engineer
Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.50	D1				(0.70)	MADE GROUND: Brown gravelly sandy slightly clayey SILT with occasional brick fragments, whole bricks, glass, ash, clinker and plastic. Sand is medium to coarse. Gravel is medium to coarse subangular to subrounded of mixed lithologies.			
0.80-1.20	D2			32.30	0.70	MADE GROUND: Reddy orange slightly gravelly slightly clayey SAND with occasional pockets of light brown medium grained sand. Sand is fine to medium. Gravel is fine to medium subangular to subrounded.			
1.20-1.65	SPT N=8		1,2/1,3,2,2		(1.10)				
1.20-1.60	B3								
1.80-2.20	D4			31.20	1.80	MADE GROUND: Light grey gravelly clayey SAND with rare glass and plastic. Sand is medium. Gravel is fine to medium subangular to subrounded of mixed lithologies.			
2.00-2.45	SPT N=12		3,3/3,3,3,3	30.80	2.20				
				30.50	(0.30)	Light brown slightly silty SAND. Sand is medium.			
2.50-3.00	B5				2.50	Reddy orange silty SAND. Sand is medium.			
2.50-3.00	D6								
3.00-3.45	SPT N=14		2,2/3,3,4,4		(1.95)				
4.00-4.45	SPT N=50		10,10/12,13,12,13	28.55	4.45	Terminated at 4.45m			

Remarks

Borehole was dry and stable.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>
Location accurate to 5m.
Refusal at 4.45mbgl on probable bedrock.

Scale
(approx)

1:50

Logged
By

MA

Figure No.

LKC 20 1060.WS101

Excavation Method

Drive-in Windowless Sampler
to 2.80mbgl.

Dimensions
Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

**Job
Number**
LKC 20 1060

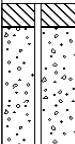
Location (Handheld GPS)

384600 E 399444 N

Dates

18/11/2019

Engineer
Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.50	D1					MADE GROUND: Dark brown gravelly sandy slightly clayey SILT with occasional brick fragments, whole bricks, glass, ash, clinker and plastic. Sand is medium to coarse. Gravel is medium to coarse sub angular to subrounded of mixed lithologies. At 0.30mbgl large glass slabs encountered.			
1.00-1.20	D2		73.5, 73.5, 49, 49/Av.	32.00	1.00	MADE GROUND: Firm to stiff consistency light grey slightly gravelly CLAY with rare ash and clinker and brick fragments. Gravel is fine subangular to angular of mixed lithologies.			
1.10	PP 61.25kPa		61.25		(0.50)				
1.20-1.65	SPT N=11		2, 1/2, 2, 4, 3	31.50	1.50	Light brown gravelly clayey SAND (possibly reworked). Sand is coarse. Gravel is fine to medium subangular to subrounded of quartz and other mixed lithologies.			
1.50-2.00	D3								
2.00-2.45	SPT N=36		3, 4/9, 13, 7, 7		(1.65)				
2.50-2.70	B4								
2.70-3.15	SPT N=50		11, 10/12, 12, 14, 12	29.85	3.15	Terminated at 3.15m			

Remarks

Borehole was dry and stable.
Elevation estimated from <https://www.freemaptools.com/elevation-finder.htm>
Location accurate to 5m.
Refusal at 3.15mbgl on probable bedrock.

**Scale
(approx)**

1:50

**Logged
By**

MA

Figure No.

Ikc 20 1060.WS102

Excavation Method

Drive-in Windowless Sampler
to 3.25mbgl.

Dimensions
Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

**Job
Number**
LKC 20 1060

Location (Handheld GPS)

384655 E 399439 N

Dates

18/11/2019

Engineer
Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
0.00-0.50	D1					MADE GROUND: Blackish brown gravelly silty SAND with occasional brick, glass, plastic, timber, concrete, ash and clinker. Sand is medium. Gravel is medium to coarse subangular to subrounded of mixed lithologies.			
0.80	PP 46.5kPa		49, 49, 49, 39/Av. 46.50		(1.00)	At 0.70 to 0.80mbgl band of grey sandy gravel.			
1.00-1.20	D2			32.00	1.00	At 0.80 to 0.90mbgl band of soft grey sandy gravelly clay.			
1.20-1.65	SPT N=16		4,5/3,4,5,4		(0.60)	MADE GROUND: Blackish brown gravelly slightly sandy SILT with frequent ash and clinker, occasional glass and rare brick fragments. Sand is medium. Gravel is medium to coarse subangular to subrounded of mixed lithologies.			
1.70-2.50	B4			31.40	1.60	Soft light brown slightly gravelly slightly silty CLAY. Gravel is fine subangular to subrounded of mixed lithologies.			
1.80-2.20	D3		3,5/3,3,4,4		(1.65)				
2.00-2.45	SPT N=14								
2.80-3.25	SPT N=50		7,8/11,13,14,12						
				29.75	3.25	Terminated at 3.25m			

Remarks

Borehole was stable and dry.
Elevation estimated from <https://www.freemaptools.com/elevation-finder.htm>
Location accurate to 5m.
Refusal at 3.25mbgl on probable bedrock.

Scale (approx)

1:50

Logged By

MA

Figure No.

lkc 20 1060.WS103

Excavation Method

Drive-in Wondowless sampler to 3.95mbgl.

Dimensions
Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

Job Number
LKC 20 1060

Location (Handheld GPS)

384635 E 399448 N

Dates

18/11/2019

Engineer
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	D1			32.80	(0.20) 0.20	MADE GROUND: Tarmacadam			
1.20-3.95	SPT N=13		3,5/4,3,3,3	31.80	1.20	MADE GROUND: Blackish brown gravelly silty SAND with occasional brick, glass, plastic, timber, concrete, ash and clinker. Sand is medium. Gravel is medium to coarse subangular to subrounded of mixed lithologies. At 0.90mbgl layer of bricks around 100mm thick. At 1.00mbgl becomes darker brown in colour.			
1.20-1.50	D2				(1.30)	MADE GROUND: Dark brown slightly gravelly clayey SILT with occasional brick fragments and wiring. Gravel is medium to coarse subangular to angular of mixed lithologies.			
2.00-2.45	SPT N=22		3,4/4,5,6,7	30.50	2.50	Firm to stiff consistency light brown mottled orange slightly gravelly silty CLAY. Gravel is fine subangular to angular of mudstone and other mixed lithologies. At 3.00mbgl becomes lighter in colour, sandy and gravelly.			
2.50-3.00	D3			29.70	(0.80)	Reddy orange SAND. Sand is medium.			
3.30-3.50	B4		5,6/9,13,13,15	29.50	3.30 (0.20) 3.50	Terminated at 3.95m			
3.30-3.50	D5								
3.50-3.95	SPT N=50								

Remarks

Borehole was stable and dry.
Elevation estimated from <https://www.freemaptools.com/elevation-finder.htm>
Location accurate to 5m.
Refusal at 3.95mbgl on probable bedrock.

Scale (approx)

1:50

Logged By

MA

Figure No.

Ikc 20 1060.WS104

Excavation Method

Drive-in Windowless Sampler
to 0.60mbgl.

Dimensions
Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

Job
Number
LKC 20 1060

Location (Handheld GPS)

384620 E 399415 N

Dates

18/11/2019

Engineer
Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30-0.60	D1			32.76 32.40	(0.24) 0.24 (0.36) 0.60	MADE GROUND: Concrete. MADE GROUND: Light brown gravelly SAND with frequent whole brick and brick fragments, and rare ash and clinker and glass. Sand is medium. Gravel is medium to coarse subangular to angular of mixed lithologies. Complete at 0.60m	 	

Remarks

Borehole was stable and dry.
Elevation estimated from <https://www.freemaptools.com/elevation-finder.htm>
Location accurate to 5m.
Refusal at 0.60mbgl due to possible flooring structure, relocated to WS105b.

Scale
(approx)

1:50

Logged
By

MA

Figure No.

lkc 20 1060.WS105A

Excavation Method

Drive-in Windowless Sampler
to 3.45mbgl.

Dimensions
Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

Job
Number
LKC 20 1060

Location (Handheld GPS)

384620 E 399422 N

Dates

18/11/2019

Engineer
Sheet
1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
1.00-1.20	D1				(0.30)	MADE GROUND: Concrete.			
1.10	PP 92kPa			32.70	0.30				
1.20-1.65	SPT N=7				(0.80)	MADE GROUND: Light brown gravelly SAND with frequent whole brick and brick fragments, and rare ash, clinker and glass. Sand is medium. Gravel is medium to coarse subangular to angular of mixed lithologies.			
1.30	PP 61.5kPa		74, 98, 98, 98/Av. 92.00 2,2/1,2,2,2	31.90	1.10	At 0.80mbgl thin layer of predominantly ash and clinker.			
1.70-1.90	B3		74, 49, 49, 74/Av. 61.50	31.30	1.70	Stiff consistency light brown slightly gravelly slightly sandy CLAY. Sand is medium. Gravel is fine subangular of mixed lithologies.			
					(0.60)	At 1.30mbgl becomes sandy.			
					(0.80)	Light brown gravelly clayey SAND. Sand is medium. Gravel is fine to coarse subangular to subrounded of mixed lithologies.			
3.00-3.45	SPT N=50		6,9/11,12,14,13	30.50	2.50	Reddish orange slightly silty SAND. Sand is medium.			
					(0.95)				
				29.55	3.45	Complete at 3.45m			

Remarks

Borehole was stable and dry.
Elevation estimated from <https://www.freemaptools.com/elevation-finder.htm>
Location accurate to 5m.
Refusal at 3.45mbgl on probable bedrock.

Scale
(approx)

1:50

Logged
By

MA

Figure No.

lkc 20 1060.WS105B

Excavation Method

Machine excavated trial pit to 1.90mbgl.

Dimensions

0.5x2.0x1.9m

Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Location (Handheld GPS)

384579 E 399431 N

Dates

27/11/2019

Engineer
Sheet

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-0.50	D1 PID=0.0ppm			32.90	0.10 (0.40)	MADE GROUND: Grey sandy GRAVEL. Sand is fine to coarse. Gravel is fine to medium and subangular comprising limestone (MOT layer).		
0.50-1.50	DB2 PID=0.0ppm			32.50	0.50 (1.00)	MADE GROUND: Dark brown sandy clayey GRAVEL with occasional brick (whole and fragments). Sand is fine to medium. Gravel is fine to medium and angular to subangular comprising sandstone, mudstone and limestone.		
1.00	SV 52.67kPa		48kPa, 52 kPa, 58kPa/Av. 52.67			Firm consistency medium strength light yellowish brown mottled slightly sandy silty CLAY. Sand is fine to medium.		
1.50-1.90	DB3 PID=0.0ppm			31.50	1.50 (0.40)	Firm consistency medium strength orangish brown slightly gravelly sandy silty CLAY with occasional sand lenses. Sand is fine to medium. Gravel is fine to coarse and angular to subrounded comprising sandstone and mudstone.		
1.70	SV 53.33kPa		46kPa, 54kPa, 60kPa/Av. 53.33	31.10	1.90	Complete at 1.90m		

Plan

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Remarks

Trial pit dry and stable.
Location accurate to 3.0-5.0m.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>

Scale (approx)

1:40

Logged By

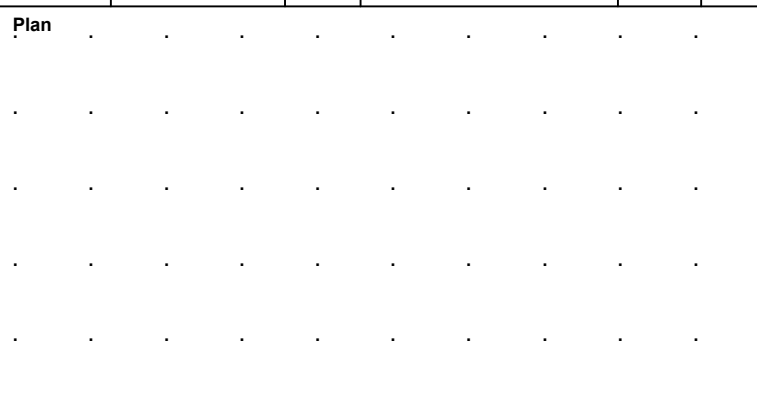
HM

Figure No.

lkc 20 1060.TP101

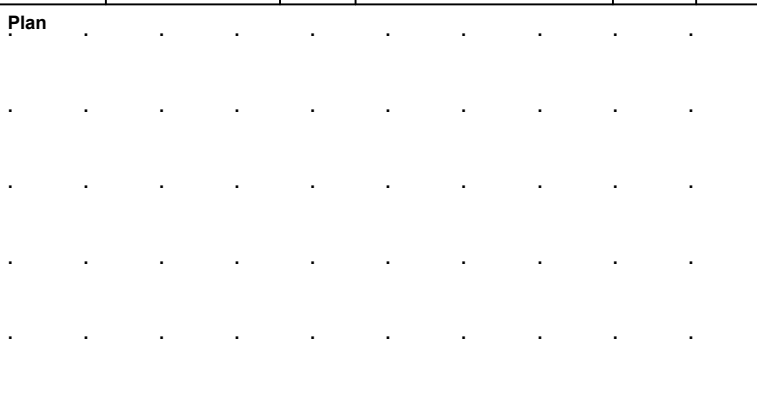
Excavation Method Machine excavated trial pit to 1.40mbgl.	Dimensions 0.5x2.0x1.4m	Ground Level (mOD) 33.00	Client Leftfield Investments Holdings Ltd	Job Number LKC 20 1060
	Location (Handheld GPS) 384608 E 399442 N	Dates 27/11/2019	Engineer	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-0.90	D1 PID=0.0ppm			32.90	0.10	MADE GROUND: Tarmacadam.		
					(0.80)	MADE GROUND: Grey becoming dark grey sandy clayey GRAVEL with rare brick fragments and tarmacadam fragments. Sand is fine to medium. Gravel is fine to coarse and subangular comprising limestone.		
0.90-1.10	D2 PID=0.0ppm			32.10	0.90	MADE GROUND: Dark brown slightly clayey sandy GRAVEL with frequent ash, clinker, occasional brick fragments, rare glass and pottery fragments. Sand is fine to medium. Gravel is subangular to angular comprising sandstone and mudstone.		
1.10-1.40	DB3 PID=0.0ppm		48kPa, 48kPa, 50kPa/Av.	31.90	1.10			
1.20	SV 48.67kPa		48.67	31.60	1.40	Firm consistency medium strength orangish brown mottled sandy silty CLAY. Sand is fine to medium. Sand content decreases with depth. Old metal pipe at 1.10mbgl.		
						Complete at 1.40m		

Plan 	Remarks Trail pit dry and stable. Location accurate to 3.0-5.0m. Elevation estimated using https://www.freemaptools.com/elevation-finder.htm		
	Scale (approx) 1:40	Logged By HM	Figure No. Ikc 20 1060.TP102

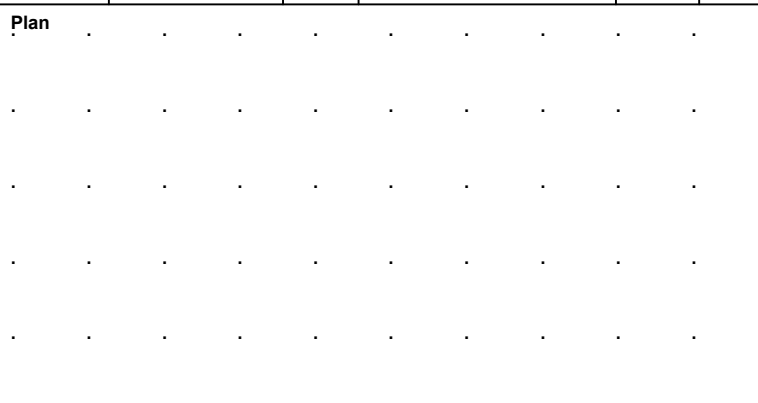
Excavation Method Machine excavated trial pit to 1.70mbgl.	Dimensions 0.5x2.0x1.7m	Ground Level (mOD) 33.00	Client Leftfield Investments Holdings Ltd	Job Number LKC 20 1060
	Location (Handheld GPS)	Dates 27/11/2019	Engineer	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.30-0.90	D1 PID=0.0ppm				(1.10)	MADE GROUND: Dark brown sandy clayey GRAVEL with occasional ash, brick (whole and fragments) clinker, rare concrete fragments, pottery fragments and metal fragments. Sand is fine to medium. Gravel is fine to coarse subangular to angular comprising sandstone and mudstone.		
0.90-1.10	D2 PID=0.0ppm			31.90	1.10	Layer of predominantly ash and clinker at 0.90-.1.10mbgl.		
1.10-1.30	D3 PID=0.0ppm				(0.60)	Soft to firm consistency medium strength light greyish brown mottled slightly gravelly sandy silty CLAY with rare coal fragments and rounded sandstone cobbles. Sand is fine to medium. Gravel is fine to coarse and angular to rounded comprising sandstone, mudstone and quartz. Sand content decreases with depth.		
1.40-1.70	B4		48kPa, 50kPa, 46kPa/Av.					
1.50	SV 48kPa		48.00	31.30	1.70	Complete at 1.70m		

Plan 	Remarks Trial pit dry and stable. Location accurate to 3.0-5.0m. Elevation estimated using https://www.freemaptools.com/elevation-finder.htm		
	Scale (approx) 1:40	Logged By HM	Figure No. Ikc 20 1060.TP102

Excavation Method Machine excavated trial pit to 2.20mbgl.	Dimensions 0.5x2.0x2.2m	Ground Level (mOD) 34.00	Client Leftfield Investments Holdings Ltd	Job Number LKC 20 1060
	Location (Handheld GPS) 384650 E 399425 N	Dates 27/11/2019	Engineer	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.00-1.00	D1 PID=0.0ppm				(1.70)	MADE GROUND: Dark brown gravelly silty SAND with occasional brick (whole and fragments), ash, pottery fragments, rare glass, bitumen and tree roots. Sand is fine to medium. Gravel is fine to coarse and subangular to subrounded comprising sandstone and mudstone. Tree roots at 0.30mbgl.		
1.70-2.00	DB2 PID=0.0ppm		28kPa, 28kPa, 30kPa/Av. 28.67	32.30	1.70 (0.30)	Soft consistency low strength brownish grey sandy silty CLAY with slight natural organic odour. Sand is fine to medium.		
2.00-2.20	B3		58kPa, 52kPa, 54kPa/Av. 54.67	32.00	2.00 (0.20)	Firm consistency medium strength greyish brown slightly gravelly sandy silty CLAY with rare coal fragments. Sand is fine to medium. Gravel is fine to coarse and angular to subrounded comprising sandstone, mudstone and quartz.		
2.00	SV 54.67kPa			31.80	2.20	Complete at 2.20m		

Plan 	Remarks Trial pit dry and stable. Location accurate to 3.0-5.0m. Elevation estimated using https://www.freemaptools.com/elevation-finder.htm		
	Scale (approx) 1:40	Logged By HM	Figure No. Ikc 20 1060.TP104

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

Dantzic Street, Manchester

**Trial Pit
Number****TP105****Excavation Method**Machine excavated trial pit to
1.30mbgl.**Dimensions**

0.5x2.0x1.3m

Ground Level (mOD)

33.00

Client

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Location (Handheld GPS)**Dates**

27/11/2019

Engineer**Sheet**

1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-1.00	D1 PID=0.0ppm			32.90	0.10	MADE GROUND: Grey fine to coarse subangular GRAVEL comprising limestone and sandstone.		
					(1.20)	MADE GROUND: Dark brown gravelly clayey SAND with frequent ash, occasional clinker, brick (whole and fragments), rare sandstone setts and concrete. Sand is fine to medium. Gravel is fine coarse and angular to subrounded comprising sandstone, mudstone and quartz. Trail pit collapse from 0.80mbgl due to influx of water from nearby rotary drilling.		
				31.70	1.30	Complete at 1.30m		

Plan

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RemarksTrail pit collapse from 0.80mbgl due to influx of water from nearby rotary drilling.
Location accurate to 3.0-5.0m.
Elevation estimated using <https://www.freemaptools.com/elevation-finder.htm>**Scale (approx)**

1:40

Logged By

HM

Figure No.

lkc 20 1060.TP105

Machine : Comacchio 205

Flush : Mist

Core Dia : 92.5 mm

Method : Rotary Cored

Casing Diameter

120mm cased to 7.00m

Ground Level (mOD)
Location (Handheld GPS)

Dates

25/10/2019

Client

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Sheet

1/2

Depth (m)	TCR	SCR	RQD	I _f	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
7.00							(0.30)	CONCRETE:			
							0.30	MADE GROUND:			
							(0.40)				
							0.70	CONCRETE:			
							(0.30)				
							1.00	SAND and GRAVEL.			
							(1.70)				
							2.70	Red brown SANDSTONE.			
							(4.30)				
							7.00				
10.00	88	83	10	Av:60 Min:NI Max:170			7.09	Stiff consistency red sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse, subangular of limestone.			
								Weak strength thinly laminated fine to coarse red SANDSTONE. Bedding horizontal. Fractures bedding parallel closely spaced planar smooth open clean, possibly drilling induced. Fractures 50-70degrees widely spaced planar smooth open with black iron staining.			

Remarks
**Scale
(approx)**

1:50

**Logged
By**

PW

Figure No.

LKC 20 1060.RBH101

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

Dantzic Street, Manchester

**Borehole
Number****RBH101****Machine** : Comacchio 205**Flush** : Mist**Core Dia** : 92.5 mm**Method** : Rotary Cored**Casing Diameter**

120mm cased to 7.00m

Ground Level (mOD)**Client**

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Location (Handheld GPS)**Dates**

25/10/2019

Engineer**Sheet**

2/2

Depth (m)	TCR	SCR	RQD	I _f	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
13.00	87	77	30	Av:90 Min:NI Max:180			(6.85)	Increasingly weak fine grained and muddy with depth from 10.00mbgl onwards.			
	100	100	90	Av:120 Min:40 Max:950			13.94 (1.06)	Extremely weak thinly laminated shaley red MUDSTONE with rare grey patches. Bedding 8degrees. Completely weathered. Fractures all annealed.			
15.00							15.00	Terminated at 15.00m			

Remarks**Scale
(approx)**

1:50

**Logged
By**

PW

Figure No.

LKC 20 1060.RBH101

Machine : Comacchio 205

Flush : Mist

Core Dia : 92.5 mm

Method :
Casing Diameter

120mm cased to 10.00m

Ground Level (mOD)
Location (Handheld GPS)

Dates

26/11/2019-
27/11/2019

Client

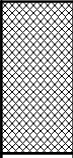
Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Sheet

1/4

Depth (m)	TCR	SCR	RQD	I _f	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
7.00							(1.00)	MADE GROUND:		
							1.00	Light brown CLAY.		
							(1.60)			
							2.60	SAND and GRAVEL.		
							(0.60)			
							3.20	SANDSTONE and MUDSTONE.		
							(3.80)			
							7.00	Weak strength thinly laminated brown muddy fine to coarse SANDSTONE. Bedding horizontal. Fractures bedding parallel closely spaced planar rough open clean.		
							7.74	Weak strength thinly laminated red very muddy fine to medium SANDSTONE. Fractures bedding parallel closely spaced planar rough open clean.		
							(0.32)			
							8.06	Extremely to very weak strength thinly laminated red shaley MUDSTONE. Bedding 8degrees. Completely weathered in places. Fractures bedding parallel widely spaced stepped rough open clean, occasional grey discolouration along fractures. Fractures 60degrees widely spaced stepped rough open clean, potentially drilling induced.		
10.00										

Remarks
**Scale
(approx)**

1:50

**Logged
By**

PW

Figure No.

LKC 20 1060.RBH102

Machine : Comacchio 205

Flush : Mist

Core Dia : 92.5 mm

Method :
Casing Diameter

120mm cased to 10.00m

Ground Level (mOD)
Location (Handheld GPS)
Dates

26/11/2019-
27/11/2019

Client

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Engineer
Sheet

2/4

Depth (m)	TCR	SCR	RQD	I _f	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
13.00	100	100	94	Av:190 Min:40 Max:330			(4.85)			
							12.91	Weak thinly laminated grey fine sandy SILTSTONE.	*****	
							13.00 (0.19) 13.19	Red clayey GRAVEL. Gravel is fine to coarse, angular of mudstone.	*****	
							(0.81)	Very weak to weak strength thinly laminated red with occasional grey bands shaley MUDSTONE. Bedding 10degrees. Fractures bedding parallel widely spaced planar smooth open clean.	*****	
16.00	100	94	86	Av:260 Min:NI Max:300			14.00 (0.29) 14.30 14.32 (0.53)	Weak strength thinly laminated grey SILTSTONE.	*****	
							14.85	Very weak to weak strength thinly laminated red with occasional grey bands shaley MUDSTONE.	*****	
							14.93	Weak strength thinly laminated grey SILTSTONE.	*****	
							15.01	Very weak to weak strength thinly laminated red with occasional grey bands shaley MUDSTONE.	*****	
19.00	98	89	85	Av:140 Min:NI Max:340			(0.99)	Weak strength thinly laminated grey SILTSTONE.	*****	
							16.00 (0.29) 16.29 16.36 16.45	Soft consistency red gravelly CLAY. Gravel is fine to coarse, angular of mudstone.	*****	
							(1.33)	Very weak thinly laminated red MUDSTONE. Bedding 10degrees. Fractures 30degrees planar rough open clean, possibly drilling induced.	*****	
							17.78 17.90 17.94	Weak strength thinly laminated grey SILTSTONE.	*****	
19.00							(2.76)	Weak strength thinly laminated grey SILTSTONE with medium to coarse gravel sized clasts of red mudstone.	*****	
								Medium strong thickly laminated to thinly bedded fine SANDSTONE. Bedding 12degrees. Fractures bedding parallel medium spaced planar smooth open clean.	*****	

Remarks
**Scale
(approx)**

1:50

**Logged
By**

PW

Figure No.

LKC 20 1060.RBH102

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

Dantzic Street, Manchester

Borehole Number**RBH102****Machine :** Comacchio 205**Flush :** Mist**Core Dia :** 92.5 mm**Method :****Casing Diameter**

120mm cased to 10.00m

Ground Level (mOD)**Client**

Leftfield Investments Holdings Ltd

Job Number

LKC 20 1060

Location (Handheld GPS)**Dates**26/11/2019-
27/11/2019**Engineer****Sheet**

3/4

Depth (m)	TCR	SCR	RQD	I _f	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
22.00	100	95	74	Av:230 Min:NI Max:250			20.70	Fracture at 70degrees undulating smooth clean open from 20.40 to 20.90mbgl.		
							(0.40)	Very weak to weak strength thinly laminated red MUDSTONE. Bedding 10degrees. Fractures bedding parallel closely spaced planar rough open clean, possibly drilling induced.		
							21.10	Weak strength thinly laminated grey SILTSTONE.		
							21.13			
							(0.32)			
							21.45	Very weak to weak strength thinly laminated red MUDSTONE.		
							21.48	Weak strength thinly laminated grey SILTSTONE.		
							21.55	Very weak to weak strength thinly laminated red MUDSTONE.		
							21.58	Weak strength thinly laminated grey SILTSTONE.		
							(2.22)	Extremely weak to very weak strength thinly laminated red MUDSTONE. Bedding 10degrees. Fractures bedding parallel very closely spaced planar rough open clean.		
25.00	92	63	39	Av:NI Min:NI Max:240			23.80	Weak strength thinly laminated grey SILTSTONE.		
							(0.43)			
							24.23	Extremely weak to very weak strength thinly laminated red MUDSTONE.		
							(0.45)			
							24.68	Weak strength thinly laminated red SILTSTONE. Bedding 12degrees. Fractures bedding parallel closely spaced planar smooth open clean.		
							(0.32)			
							25.00	Weak strength thinly laminated red silty MUDSTONE with occasional mica. Fractures bedding parallel closely spaced planar and undulating smooth open clean.		
							(0.67)			
							25.67	Extremely weak to very weak strength thinly laminated red MUDSTONE.		
							(0.51)			
28.00	93	84	32	Av:80 Min:NI Max:200			26.18	Weak strength thinly laminated red SILTSTONE. Fractures horizontal medium spaced planar smooth open clean, possibly drilling induced.		
							(1.98)			
								Fracture at 70degrees undulating smooth clean open from 27.20 to 27.80mbgl.		
							28.16	Extremely weak to very weak strength thinly laminated red MUDSTONE.		
							28.22	Weak strength thinly laminated red SILTSTONE.		
							(1.08)			
							29.30	Extremely weak to very weak strength thinly laminated red MUDSTONE.		
							29.39	Weak strength thinly laminated red SILTSTONE.		
30.00	96	92	58	Av:120 Min:NI Max:180			(0.39)			
							29.78	Extremely weak to very weak strength thinly laminated red		

Remarks**Scale (approx)**

1:50

Logged By

PW

Figure No.

LKC 20 1060.RBH102



LK CONSULT LTD

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

Site

Dantzic Street, Manchester

**Borehole
Number**

RBH102

Machine : Comacchio 205

Flush : Mist

Core Dia : 92.5 mm

Method :

Casing Diameter

120mm cased to 10.00m

Ground Level (mOD)

Client

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Location (Handheld GPS)

Dates

26/11/2019-
27/11/2019

Engineer

Sheet

4/4

Depth (m)	TCR	SCR	RQD	I _f	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							29.90 30.00	MUDSTONE. Weak strength thinly laminated red SILTSTONE. Terminated at 30.00m		

Remarks	Scale (approx)	Logged By
	1:50	PW
	Figure No. LKC 20 1060.RBH102	

Machine : Comacchio 205

Flush : Mist

Core Dia : 92.5 mm

Method :
Casing Diameter

120mm cased to 10.00m

Ground Level (mOD)
Location (Handheld GPS)

Dates

28/11/2019-
29/11/2019

Client

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Engineer
Sheet

1/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
7.00							(0.20) 0.20	CONCRETE:			
							(1.60)	MADE GROUND:			
							1.80	Light brown CLAY.			
							(0.70) 2.50	SAND and GRAVEL.			
9.00	53	50	23	Av:70 Min:NI Max:230			(1.00) 3.50	Red brown SANDSTONE and MUDSTONE.			
							(3.50)				
							7.00	Medium strength thinly bedded red muddy SANDSTONE. Bedding 10degrees. Fractures bedding parallel closely spaced planar smooth open clean. Thin (1mm) band of iron present at 7.50mbgl. Thin (1mm) band of iron present at 7.55mbgl.			
							(2.00) 9.00	Weak strength thinly bedded red muddy SANDSTONE with occasional thin siltstone laminations. Bedding 10degrees. Fractures bedding parallel closely spaced planar smooth open clean.			

Remarks
**Scale
(approx)**

1:50

**Logged
By**

PW

Figure No.

LKC 20 1060.RBH103

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

Dantzic Street, Manchester

**Borehole
Number****RBH103****Machine :** Comacchio 205**Flush :** Mist**Core Dia :** 92.5 mm**Method :****Casing Diameter**

120mm cased to 10.00m

Ground Level (mOD)**Client**

Leftfield Investments Holdings Ltd

**Job
Number**

LKC 20 1060

Location (Handheld GPS)**Dates**28/11/2019-
29/11/2019**Engineer****Sheet**

3/3

Depth (m)	TCR	SCR	RQD	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
							20.00	red MUDSTONE. Fractures bedding parallel widely spaced planar and stepped closed. Fractures viable but sealed due to compaction of the clay. Terminated at 20.00m			

Remarks**Scale
(approx)**

1:50

**Logged
By**

PW

Figure No.

LKC 20 1060.RBH103

Appendix C

Certificates of Analysis – Soil



Final Report

Report No.: 20-05856-1
Initial Date of Issue: 03-Mar-2020
Client LK Consult
Client Address: Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Manchester
Lancashire
M26 2ZS
Contact(s): Chris Hughes
Contaminated Land
Project LKC 20 1060 Dantzic Street,
Manchester

Quotation No.:		Date Received:	24-Feb-2020
Order No.:	737619	Date Instructed:	25-Feb-2020
No. of Samples:	6		
Turnaround (Wkdays):	5	Results Due:	02-Mar-2020
Date Approved:	03-Mar-2020		

Approved By:

Details: Darrell Hall, Director

Results - Soil

Client: LK Consult	Chemtest Job No.:				20-05856	20-05856	20-05856	20-05856	20-05856	20-05856
Quotation No.:	Chemtest Sample ID.:				974935	974937	974940	974942	974944	974947
	Client Sample ID.:				WS201 D2	WS201 D4	WS202 D4	WS203 D3	WS204 D2	WS205 D3
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.70	2.00	2.50	1.40	0.30	2.00
	Bottom Depth (m):				1.00	2.70	2.80	1.90	0.40	2.70
	Date Sampled:				20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020
	Asbestos Lab:				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
ACM Detection Stage	U	2192		N/A	-		-	-	-	-
Moisture	N	2030	%	0.020	20	14	9.9	17	16	15
Soil Colour	N	2040		N/A	Brown,	Brown,	Brown,	Brown,	Brown,	Brown,
Other Material	N	2040		N/A	Stones,	Stones,	Stones,	Stones,	Stones,	Stones,
Soil Texture	N	2040		N/A	Clay,	Clay,	Clay,	Clay,	Clay,	Clay,
pH	M	2010		4.0	7.4		7.7	8.5	7.8	7.8
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	1.1		< 0.40	0.81	0.48	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.12		0.012	0.13	0.050	< 0.010
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	15		5.4	21	8.6	7.6
Cadmium	M	2450	mg/kg	0.10	0.29		< 0.10	0.78	0.15	0.14
Chromium	M	2450	mg/kg	1.0	13		14	30	23	22
Copper	U	2450	mg/kg	0.50	32		12	67	18	14
Mercury	M	2450	mg/kg	0.10	0.16		< 0.10	0.35	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	20		16	29	27	26
Lead	M	2450	mg/kg	0.50	41		11	280	21	14
Selenium	M	2450	mg/kg	0.20	0.51		0.32	0.45	0.42	0.35
Vanadium	U	2450	mg/kg	5.0	19		12	26	21	21
Zinc	U	2450	mg/kg	0.50	47		27	150	58	51
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50		< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	6.7		0.55	11	1.2	1.5
Fuel Type	N	2670		N/A	N/A		N/A	N/A	N/A	Creosote
Aliphatic TPH >C5-C6	N	2680	mg/kg	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
Aliphatic TPH >C8-C10	M	2680	mg/kg	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	38
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	16000
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	200
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	260
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0		< 5.0	< 5.0	< 5.0	16000
Aromatic TPH >C5-C7	N	2680	mg/kg	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	39
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	87

Results - Soil

Client: LK Consult	Chemtest Job No.:					20-05856	20-05856	20-05856	20-05856	20-05856	20-05856
Quotation No.:	Chemtest Sample ID.:					974935	974937	974940	974942	974944	974947
	Client Sample ID.:					WS201 D2	WS201 D4	WS202 D4	WS203 D3	WS204 D2	WS205 D3
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.70	2.00	2.50	1.40	0.30	2.00
	Bottom Depth (m):					1.00	2.70	2.80	1.90	0.40	2.70
	Date Sampled:					20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020
	Asbestos Lab:					COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD							
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0	770
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0	900
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0	520
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0	29
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	N	2680	mg/kg	5.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	2300
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10		< 10	< 10	< 10	< 10	19000
Dichlorodifluoromethane	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloromethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	M	2760	µg/kg	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Chloroethane	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichlorofluoromethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	M	2760	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	M	2760	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromochloromethane	U	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Trichloromethane	M	2760	µg/kg	1.0	34	10	< 1.0	< 1.0	1.3	< 1.0	< 1.0
1,1,1-Trichloroethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	M	2760	µg/kg	1.0	11	43	2.6	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	M	2760	µg/kg	1.0	1.6	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.5
1,2-Dichloroethane	M	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Trichloroethene	N	2760	µg/kg	1.0	5400	72	58	29	62	< 1.0	< 1.0
1,2-Dichloropropane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	M	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Toluene	M	2760	µg/kg	1.0	16	2.5	1.2	< 1.0	1.2	< 1.0	22
Trans-1,3-Dichloropropene	N	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,1,2-Trichloroethane	M	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Tetrachloroethene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Dibromochloromethane	U	2760	µg/kg	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
1,2-Dibromoethane	M	2760	µg/kg	5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Results - Soil

Client: LK Consult	Chemtest Job No.:					20-05856	20-05856	20-05856	20-05856	20-05856	20-05856
Quotation No.:	Chemtest Sample ID.:					974935	974937	974940	974942	974944	974947
	Client Sample ID.:					WS201 D2	WS201 D4	WS202 D4	WS203 D3	WS204 D2	WS205 D3
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.70	2.00	2.50	1.40	0.30	2.00
	Bottom Depth (m):					1.00	2.70	2.80	1.90	0.40	2.70
	Date Sampled:					20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020
	Asbestos Lab:					COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD							
Ethylbenzene	M	2760	µg/kg	1.0	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	66
m & p-Xylene	M	2760	µg/kg	1.0	3.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	110
o-Xylene	M	2760	µg/kg	1.0	1.5	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	80
Styrene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	13
Bromobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
N-Propylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	70
4-Chlorotoluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tert-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	240
Sec-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Butylbenzene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
1,2,4-Trichlorobenzene	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Carbon Disulphide	N	2760	µg/kg	50	< 50		< 50	< 50	< 50	< 50	< 50
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
N-Nitrosodimethylamine	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	50
2-Chlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	24
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachloroethane	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	30

Results - Soil

Client: LK Consult	Chemtest Job No.:					20-05856	20-05856	20-05856	20-05856	20-05856	20-05856
Quotation No.:	Chemtest Sample ID.:					974935	974937	974940	974942	974944	974947
	Client Sample ID.:					WS201 D2	WS201 D4	WS202 D4	WS203 D3	WS204 D2	WS205 D3
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.70	2.00	2.50	1.40	0.30	2.00
	Bottom Depth (m):					1.00	2.70	2.80	1.90	0.40	2.70
	Date Sampled:					20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020
	Asbestos Lab:					COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD							
Nitrobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Isophorone	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Naphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2200
4-Chloroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	510
4-Nitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthylene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	13
Dimethylphthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Acenaphthene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	130
3-Nitroaniline	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dibenzofuran	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	220
4-Chlorophenylphenylether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Fluorene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	130
Diethyl Phthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Azobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexachlorobenzene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Phenanthrene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	460
Anthracene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	82
Carbazole	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	43
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Results - Soil

Client: LK Consult	Chemtest Job No.:					20-05856	20-05856	20-05856	20-05856	20-05856	20-05856
Quotation No.:	Chemtest Sample ID.:					974935	974937	974940	974942	974944	974947
	Client Sample ID.:					WS201 D2	WS201 D4	WS202 D4	WS203 D3	WS204 D2	WS205 D3
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):					0.70	2.00	2.50	1.40	0.30	2.00
	Bottom Depth (m):					1.00	2.70	2.80	1.90	0.40	2.70
	Date Sampled:					20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020	20-Feb-2020
	Asbestos Lab:					COVENTRY		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD							
Fluoranthene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	91
Pyrene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	64
Butylbenzyl Phthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	11
Chrysene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	15
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.4
Benzo[k]fluoranthene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.9
Benzo[a]pyrene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.5
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.6
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	15
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.9
Total Phenols	M	2920	mg/kg	0.30	< 0.30		< 0.30	< 0.30	< 0.30	< 0.30	60

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

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

customerservices@chemtest.com



Final Report

Report No.: 19-39229-1

Initial Date of Issue: 04-Dec-2019

Client LK Consult

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

Contact(s): Chris Hughes
Contaminated Land

Project LKC 20 1060 Dantzic Street

Quotation No.: **Date Received:** 21-Nov-2019

Order No.: 737410 **Date Instructed:** 22-Nov-2019

No. of Samples: 9

Turnaround (Wkdays): 5 **Results Due:** 28-Nov-2019

Date Approved: 04-Dec-2019

Approved By:

Details: Glynn Harvey, Laboratory Manager

Results - Soil

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:				19-39229	19-39229	19-39229	19-39229	19-39229	19-39229	19-39229	19-39229
Quotation No.:	Chemtest Sample ID.:				930454	930456	930457	930460	930462	930464	930466	930467
	Client Sample ID.:				WS101	WS101	WS102	WS103	WS103	WS104	WS105	WS105
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.80	2.50	0.00	0.00	1.80	1.20	0.30	1.00
	Bottom Depth (m):				1.20	3.00	0.50	0.50	2.20	1.50	0.60	1.20
	Date Sampled (\$):				18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019
	Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
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
ACM Detection Stage	U	2192		N/A	-		-	-		-	-	-
Moisture	N	2030	%	0.020	12	9.9	6.4	8.2	19	14	4.3	18
Soil Colour	N	2040		N/A	Red	Red	Black	Black	Brown	Black	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones,	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand,	Sand	Clay	Sand,	Sand	Clay
Chromatogram (TPH)	N			N/A	See Attached					See Attached		See Attached
pH	M	2010		N/A	9.1	8.5	9.6	9.1	8.0	8.4	11.8	8.0
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.96					1.4		0.88
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.32	< 0.010	0.13	0.10	0.021	0.012	0.36	0.20
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50					< 0.50		< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50					0.60		0.50
Arsenic	M	2450	mg/kg	1.0	9.1		14	18		29	12	9.9
Cadmium	M	2450	mg/kg	0.10	0.25		1.1	0.83		0.33	1.3	< 0.10
Chromium	M	2450	mg/kg	1.0	19		26	39		25	24	27
Copper	M	2450	mg/kg	0.50	20		51	59		100	36	12
Mercury	M	2450	mg/kg	0.10	0.20		0.20	0.17		0.50	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	14		29	48		34	22	24
Lead	M	2450	mg/kg	0.50	100		140	130		530	150	25
Selenium	M	2450	mg/kg	0.20	< 0.20		< 0.20	0.43		0.43	< 0.20	0.44
Vanadium	U	2450	mg/kg	5.0	25		35	70		35	26	34
Zinc	M	2450	mg/kg	0.50	160		230	150		320	300	76
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	0.95		10	12		10	4.3	1.2
Fuel Type	N	2670		N/A	PAH/H. Oil					PAH/H. Oil		N/A
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0					21		< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	8.0					44		< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0					43		< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	140					220		< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	150					330		< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0

Results - Soil

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:				19-39229	19-39229	19-39229	19-39229	19-39229	19-39229	19-39229	19-39229
Quotation No.:	Chemtest Sample ID.:				930454	930456	930457	930460	930462	930464	930466	930467
	Client Sample ID.:				WS101	WS101	WS102	WS103	WS103	WS104	WS105	WS105
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.80	2.50	0.00	0.00	1.80	1.20	0.30	1.00
	Bottom Depth (m):				1.20	3.00	0.50	0.50	2.20	1.50	0.60	1.20
	Date Sampled (\$):				18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019	18-Nov-2019
	Asbestos Lab:				DURHAM		DURHAM	DURHAM		DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD								
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0					< 1.0		< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	1.6					26		< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	44					92		< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	990					1300		< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	14					12		< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	1000					1400		< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	1200					1800		< 10
Benzene	M	2760	µg/kg	1.0	< 1.0					1.6		< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0					2.3		< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0					< 1.0		< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0					< 1.0		< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0					< 1.0		< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0					< 1.0		< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10		0.56	2.9		3.4	5.6	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10		0.14	3.3		0.25	0.57	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10		2.8	14		0.40	9.4	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10		2.1	12		1.1	7.4	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.64		19	92		6.4	57	0.63
Anthracene	M	2800	mg/kg	0.10	0.14		5.0	39		0.95	16	0.21
Fluoranthene	M	2800	mg/kg	0.10	0.87		25	260		8.3	73	1.5
Pyrene	M	2800	mg/kg	0.10	0.83		21	220		7.7	57	1.3
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.37		10	130		3.1	26	0.69
Chrysene	M	2800	mg/kg	0.10	0.37		9.9	140		3.1	25	0.59
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.56		12	190		4.5	29	0.48
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.23		4.3	70		1.6	11	0.32
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.36		10	170		3.4	25	0.85
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.32		6.6	130		2.3	15	0.62
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10		1.2	19		0.43	2.8	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.32		6.2	86		2.1	14	0.59
Total Of 16 PAH's	N	2800	mg/kg	2.0	5.0		140	1600		49	370	7.9
Total Phenols	M	2920	mg/kg	0.30	< 0.30					< 0.30		< 0.30

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:				19-39229
Quotation No.:	Chemtest Sample ID.:				930468
	Client Sample ID.:				WS105
	Sample Type:				SOIL
	Top Depth (m):				2.00
	Bottom Depth (m):				2.50
	Date Sampled (\$):				18-Nov-2019
	Asbestos Lab:				
Determinand	Accred.	SOP	Units	LOD	
ACM Type	U	2192		N/A	
Asbestos Identification	U	2192	%	0.001	
ACM Detection Stage	U	2192		N/A	
Moisture	N	2030	%	0.020	8.6
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones,
Soil Texture	N	2040		N/A	Sand,
Chromatogram (TPH)	N			N/A	
pH	M	2010		N/A	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.40
Cyanide (Free)	M	2300	mg/kg	0.50	
Cyanide (Total)	M	2300	mg/kg	0.50	
Arsenic	M	2450	mg/kg	1.0	
Cadmium	M	2450	mg/kg	0.10	
Chromium	M	2450	mg/kg	1.0	
Copper	M	2450	mg/kg	0.50	
Mercury	M	2450	mg/kg	0.10	
Nickel	M	2450	mg/kg	0.50	
Lead	M	2450	mg/kg	0.50	
Selenium	M	2450	mg/kg	0.20	
Vanadium	U	2450	mg/kg	5.0	
Zinc	M	2450	mg/kg	0.50	
Chromium (Hexavalent)	N	2490	mg/kg	0.50	
Organic Matter	M	2625	%	0.40	
Fuel Type	N	2670		N/A	
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	

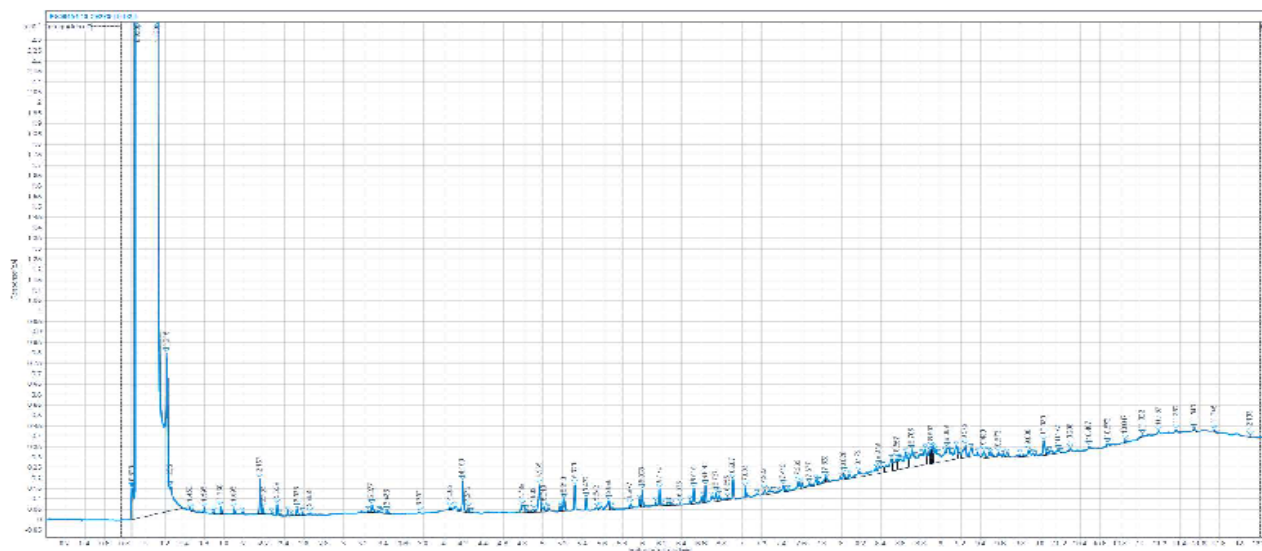
Results - Soil

Project: LKC 20 1060 Dantzic Street

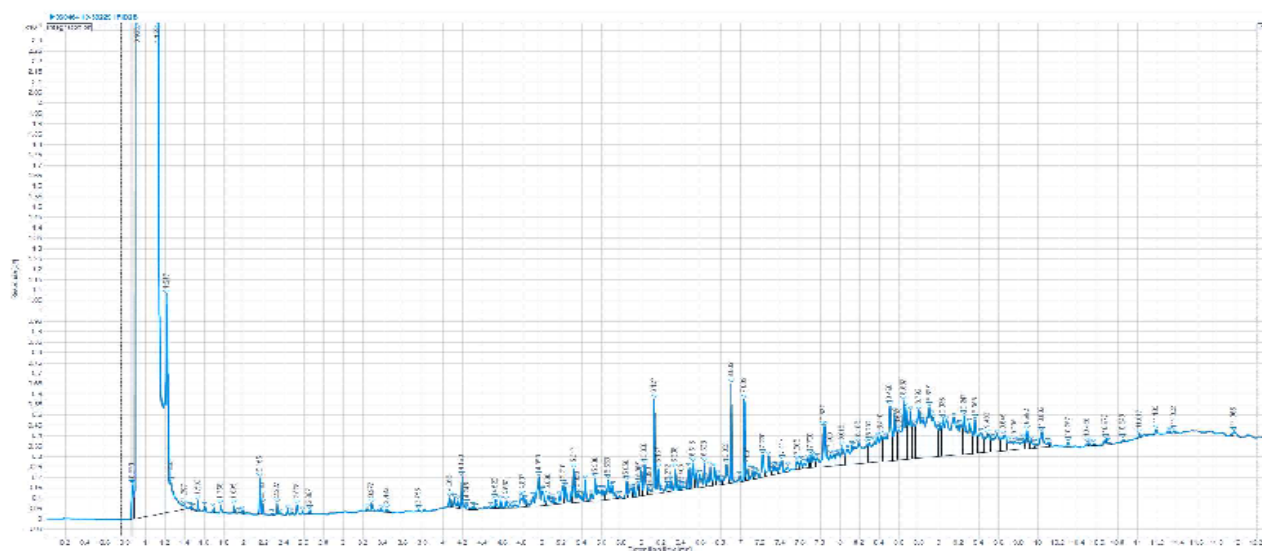
Client: LK Consult	Chemtest Job No.:				19-39229
Quotation No.:	Chemtest Sample ID.:				930468
	Client Sample ID.:				WS105
	Sample Type:				SOIL
	Top Depth (m):				2.00
	Bottom Depth (m):				2.50
	Date Sampled (\$):				18-Nov-2019
	Asbestos Lab:				
Determinand	Accred.	SOP	Units	LOD	
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	
Benzene	M	2760	µg/kg	1.0	
Toluene	M	2760	µg/kg	1.0	
Ethylbenzene	M	2760	µg/kg	1.0	
m & p-Xylene	M	2760	µg/kg	1.0	
o-Xylene	M	2760	µg/kg	1.0	
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	
Naphthalene	M	2800	mg/kg	0.10	
Acenaphthylene	N	2800	mg/kg	0.10	
Acenaphthene	M	2800	mg/kg	0.10	
Fluorene	M	2800	mg/kg	0.10	
Phenanthrene	M	2800	mg/kg	0.10	
Anthracene	M	2800	mg/kg	0.10	
Fluoranthene	M	2800	mg/kg	0.10	
Pyrene	M	2800	mg/kg	0.10	
Benzo[a]anthracene	M	2800	mg/kg	0.10	
Chrysene	M	2800	mg/kg	0.10	
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	
Benzo[a]pyrene	M	2800	mg/kg	0.10	
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	
Total Of 16 PAH's	N	2800	mg/kg	2.0	
Total Phenols	M	2920	mg/kg	0.30	

Results - Soil

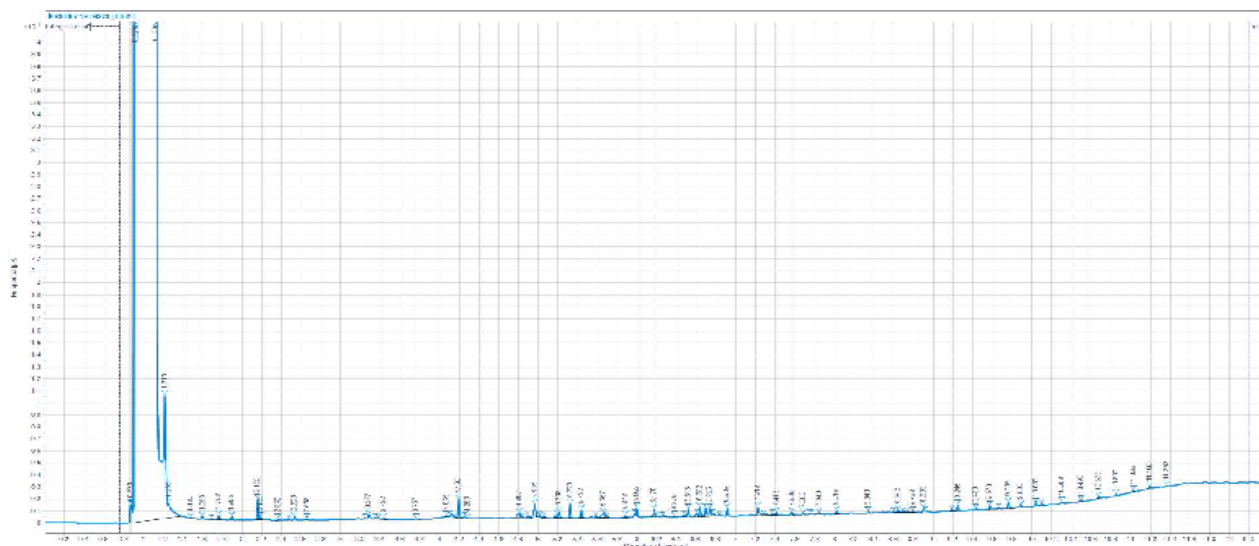
TPH Chromatogram on Soil Sample: 930454



TPH Chromatogram on Soil Sample: 930464



TPH Chromatogram on Soil Sample: 930467



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

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"
- \$ This information has been supplied by the client and can affect the integrity of test data.

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



2183



Final Report

Report No.: 19-40027-1

Initial Date of Issue: 17-Dec-2019

Client LK Consult

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

Contact(s): Chris Hughes
Contaminated Land

Project LKC 20 1060 Dantzic Street

Quotation No.: **Date Received:** 28-Nov-2019

Order No.: 737410 **Date Instructed:** 03-Dec-2019

No. of Samples: 9

Turnaround (Wkdays): 5 **Results Due:** 09-Dec-2019

Date Approved: 17-Dec-2019

Approved By:

Details: Ken Scally, Technical Director

Results - Soil

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:				19-40027	19-40027	19-40027	19-40027	19-40027	19-40027	19-40027	19-40027
Quotation No.:	Chemtest Sample ID.:				934774	934777	934778	934779	934782	934783	934784	934785
	Client Sample ID.:				TP101	TP102	TP102	TP103	TP104	TP104	TP105	SP1
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m) (\$):				0.50	0.90	1.00	0.30	0.00	1.70	0.10	
	Bottom Depth (m) (\$):				1.50	1.10	1.40	0.90	1.00	2.00	1.00	
	Date Sampled (\$):				27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019
	Asbestos Lab:				COVENTRY	COVENTRY		COVENTRY	COVENTRY		COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A	-	-		-	-		Fibres/Clumps	Free Fibres
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected		No Asbestos Detected	No Asbestos Detected		Chrysotile	Chrysotile
ACM Detection Stage	U	2192		N/A	-	-		-	-		Stereo Microscopy	Stereo Microscopy
Asbestos by Gravimetry	U	2192	%	0.001							0.002	<0.001
Total Asbestos	N	2192	%	0.001							0.002	<0.001
Moisture	N	2030	%	0.020	11	3.2	8.2	6.6	9.0	13	9.2	11
Soil Colour	N	2040		N/A	Brown	Black	Brown	Black	Brown	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Sand	Clay	Sand	Clay	Sand	Sand	Sand
Chromatogram (TPH)	N			N/A	See Attached							See Attached
pH	M	2010		4.0	6.6	8.3	8.1	11.2	9.2	7.8	8.9	8.4
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40							0.61
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.071	0.019	< 0.010	0.59	0.074	0.020	< 0.010	0.20
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50							< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	0.70							< 0.50
Arsenic	M	2450	mg/kg	1.0	5.7	4.3		15	20		26	25
Cadmium	M	2450	mg/kg	0.10	0.10	0.31		0.42	0.47		0.77	0.70
Chromium	M	2450	mg/kg	1.0	20	5.4		18	56		160	17
Copper	M	2450	mg/kg	0.50	9.1	4.5		29	110		250	91
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10		0.27	0.42		0.27	0.37
Nickel	M	2450	mg/kg	0.50	16	7.6		20	32		70	26
Lead	M	2450	mg/kg	0.50	15	6.4		85	130		210	390
Selenium	M	2450	mg/kg	0.20	0.30	< 0.20		< 0.20	0.86		< 0.20	0.36
Vanadium	U	2450	mg/kg	5.0	26	31		29	30		30	26
Zinc	M	2450	mg/kg	0.50	46	20		97	230		220	190
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50		< 0.50	< 0.50		< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	1.1	11		4.4	9.1		4.7	15
Fuel Type	N	2670		N/A	N/A							W. Diesel
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							5.6
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0							37
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0							13
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0							130
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0							84
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0							< 1.0

Results - Soil

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:					19-40027	19-40027	19-40027	19-40027	19-40027	19-40027	19-40027
Quotation No.:	Chemtest Sample ID.:					934774	934777	934778	934779	934782	934783	934785
	Client Sample ID.:					TP101	TP102	TP102	TP103	TP104	TP104	SP1
	Sample Type:					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m) (\$):					0.50	0.90	1.00	0.30	0.00	1.70	0.10
	Bottom Depth (m) (\$):					1.50	1.10	1.40	0.90	1.00	2.00	1.00
	Date Sampled (\$):					27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019	27-Nov-2019
	Asbestos Lab:					COVENTRY	COVENTRY		COVENTRY	COVENTRY		COVENTRY
Determinand	Accred.	SOP	Units	LOD								
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0							270
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
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							3.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0							34
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0							56
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0							160
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0							< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0							250
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10							520
Benzene	M	2760	µg/kg	1.0	< 1.0							< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0							< 1.0
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
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0							< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10	< 0.10		0.48	< 0.10		4.2	0.72
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10	< 0.10		0.12	< 0.10		1.5	0.28
Acenaphthene	M	2800	mg/kg	0.10	< 0.10	< 0.10		3.0	< 0.10		8.0	1.0
Fluorene	M	2800	mg/kg	0.10	< 0.10	< 0.10		2.1	< 0.10		7.8	1.7
Phenanthrene	M	2800	mg/kg	0.10	< 0.10	0.22		19	0.62		52	4.0
Anthracene	M	2800	mg/kg	0.10	< 0.10	< 0.10		4.8	0.13		13	0.91
Fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.44		23	1.1		52	7.2
Pyrene	M	2800	mg/kg	0.10	< 0.10	0.67		20	1.1		48	8.4
Benzo[a]anthracene	M	2800	mg/kg	0.10	< 0.10	0.41		9.0	0.52		22	3.4
Chrysene	M	2800	mg/kg	0.10	< 0.10	1.5		9.8	0.62		23	4.4
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10	1.4		11	0.77		25	6.0
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10	0.47		4.6	0.25		9.9	2.1
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10	1.4		9.9	0.66		24	5.5
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10	0.58		6.2	0.46		14	3.5
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10	0.33		1.4	< 0.10		3.5	0.81
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10	0.83		5.7	0.45		12	3.5
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0	8.3		130	6.7		320	53
Total Phenols	M	2920	mg/kg	0.30	< 0.30							< 0.30

Project: LKC 20 1060 Dantzic Street

Results - Soil

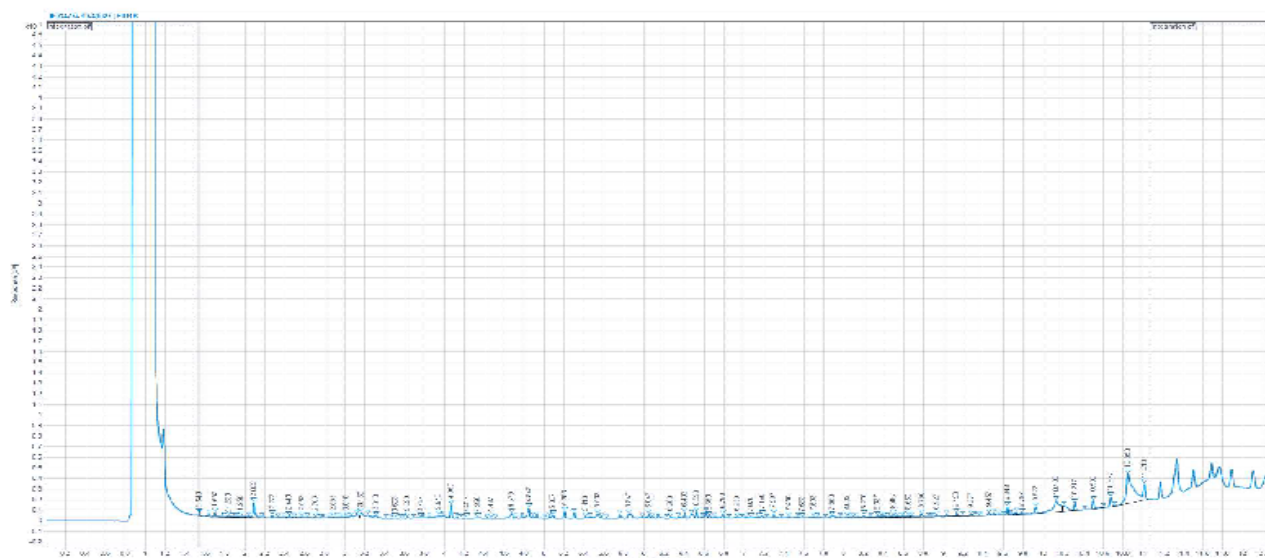
Client: LK Consult	Chemtest Job No.:				19-40027
Quotation No.:	Chemtest Sample ID.:				934786
	Client Sample ID.:				SP2
	Sample Type:				SOIL
	Top Depth (m) (\$):				
	Bottom Depth (m) (\$):				
	Date Sampled (\$):				27-Nov-2019
	Asbestos Lab:				COVENTRY
Determinand	Accred.	SOP	Units	LOD	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-
Asbestos by Gravimetry	U	2192	%	0.001	
Total Asbestos	N	2192	%	0.001	
Moisture	N	2030	%	0.020	15
Soil Colour	N	2040		N/A	Black
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
Chromatogram (TPH)	N			N/A	See Attached
pH	M	2010		4.0	8.1
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	1.7
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.18
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	40
Cadmium	M	2450	mg/kg	0.10	< 0.10
Chromium	M	2450	mg/kg	1.0	18
Copper	M	2450	mg/kg	0.50	400
Mercury	M	2450	mg/kg	0.10	0.79
Nickel	M	2450	mg/kg	0.50	45
Lead	M	2450	mg/kg	0.50	810
Selenium	M	2450	mg/kg	0.20	0.73
Vanadium	U	2450	mg/kg	5.0	39
Zinc	M	2450	mg/kg	0.50	500
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	18
Fuel Type	N	2670		N/A	W. Diesel
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0

Project: LKC 20 1060 Dantzic Street

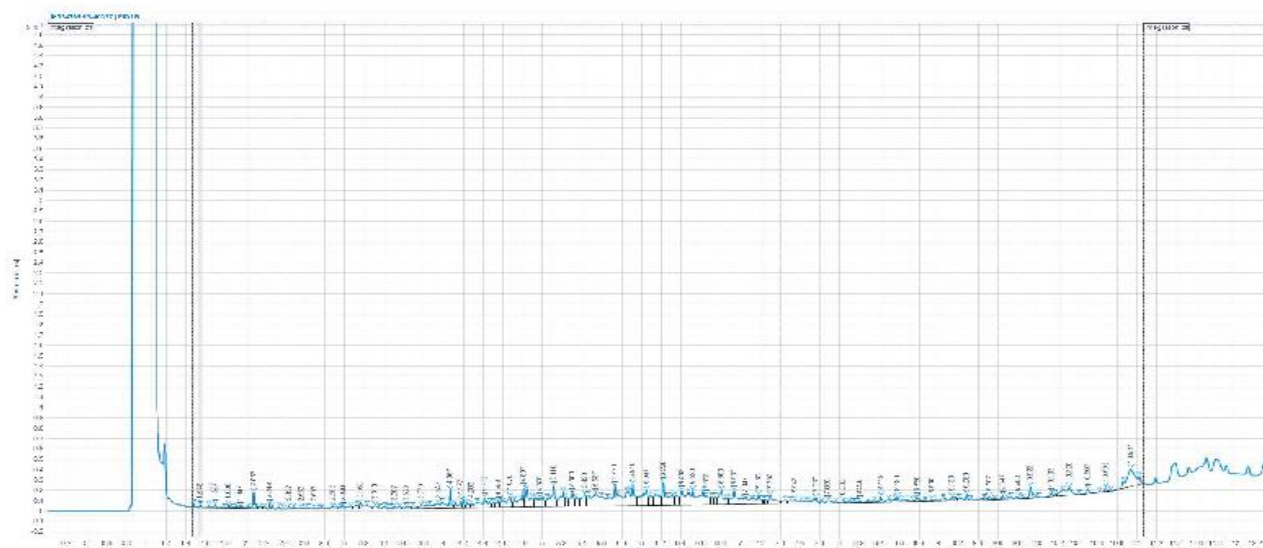
Results - Soil

Client: LK Consult	Chemtest Job No.:		19-40027		
Quotation No.:	Chemtest Sample ID.:		934786		
	Client Sample ID.:		SP2		
	Sample Type:		SOIL		
	Top Depth (m) (\$):				
	Bottom Depth (m) (\$):				
	Date Sampled (\$):		27-Nov-2019		
	Asbestos Lab:		COVENTRY		
Determinand	Accred.	SOP	Units	LOD	
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	600
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	11
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	610
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	610
Benzene	M	2760	µg/kg	1.0	< 1.0
Toluene	M	2760	µg/kg	1.0	< 1.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	< 1.0
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.90
Anthracene	M	2800	mg/kg	0.10	0.35
Fluoranthene	M	2800	mg/kg	0.10	1.9
Pyrene	M	2800	mg/kg	0.10	1.6
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.68
Chrysene	M	2800	mg/kg	0.10	0.77
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	0.98
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	0.30
Benzo[a]pyrene	M	2800	mg/kg	0.10	0.83
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	0.62
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	0.69
Total Of 16 PAH's	N	2800	mg/kg	2.0	9.6
Total Phenols	M	2920	mg/kg	0.30	< 0.30

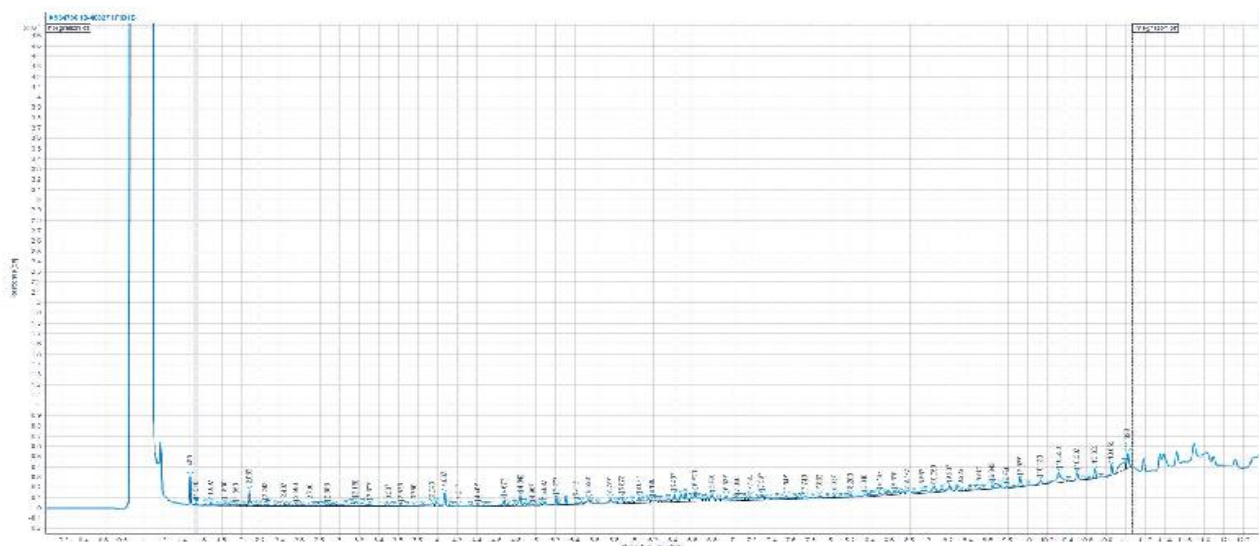
TPH Chromatogram on Soil Sample: 934774



TPH Chromatogram on Soil Sample: 934785



TPH Chromatogram on Soil Sample: 934786



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

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"
- \$ This information has been supplied by the client and can affect the integrity of test data.

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com



Final Report

Report No.: 19-40693-1

Initial Date of Issue: 16-Dec-2019

Client LK Consult

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

Contact(s): Chris Hughes
Contaminated Land

Project LKC 20 1060 Dantzic Street

Quotation No.: **Date Received:** 04-Dec-2019

Order No.: 737410 **Date Instructed:** 05-Dec-2019

No. of Samples: 1

Turnaround (Wkdays): 5 **Results Due:** 11-Dec-2019

Date Approved: 16-Dec-2019

Approved By:

Details: Glynn Harvey, Laboratory Manager

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:				19-40693
Quotation No.:	Chemtest Sample ID.:				937762
	Client Sample ID.:				RBH103
	Sample Type:				SOIL
	Top Depth (m) (\$):				14.50
	Bottom Depth (m) (\$):				15.00
	Date Sampled (\$):				03-Dec-2019
	Asbestos Lab:				LIVERPOOL
Determinand	Accred.	SOP	Units	LOD	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-
Moisture	N	2030	%	0.020	14
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Clay
pH	M	2010		4.0	9.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010
Cyanide (Free)	M	2300	mg/kg	0.50	< 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50
Arsenic	M	2450	mg/kg	1.0	46
Cadmium	M	2450	mg/kg	0.10	0.35
Chromium	M	2450	mg/kg	1.0	38
Copper	M	2450	mg/kg	0.50	7.5
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	130
Lead	M	2450	mg/kg	0.50	13
Selenium	M	2450	mg/kg	0.20	< 0.20
Vanadium	U	2450	mg/kg	5.0	26
Zinc	M	2450	mg/kg	0.50	70
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Organic Matter	M	2625	%	0.40	< 0.40
Fuel Type	N	2670		N/A	N/A
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0

Results - Soil

Project: LKC 20 1060 Dantzic Street

Results - Soil

Client: LK Consult	Chemtest Job No.:				19-40693
Quotation No.:	Chemtest Sample ID.:				937762
	Client Sample ID.:				RBH103
	Sample Type:				SOIL
	Top Depth (m) (\$):				14.50
	Bottom Depth (m) (\$):				15.00
	Date Sampled (\$):				03-Dec-2019
	Asbestos Lab:				LIVERPOOL
Determinand	Accred.	SOP	Units	LOD	
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10
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	mg/kg	1.0	< 1.0
Trans 1,2-Dichloroethene	M	2760	mg/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
1,1-Dichloropropene	U	2760	µg/kg	1.0	< 1.0
Benzene	M	2760	µg/kg	1.0	< 1.0
1,2-Dichloroethane	M	2760	µg/kg	2.0	< 2.0
Trichloroethene	N	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
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

Project: LKC 20 1060 Dantzic Street

Results - Soil

Client: LK Consult	Chemtest Job No.:				19-40693
Quotation No.:	Chemtest Sample ID.:				937762
	Client Sample ID.:				RBH103
	Sample Type:				SOIL
	Top Depth (m) (\$):				14.50
	Bottom Depth (m) (\$):				15.00
	Date Sampled (\$):				03-Dec-2019
	Asbestos Lab:				LIVERPOOL
Determinand	Accred.	SOP	Units	LOD	
1,1,1,2-Tetrachloroethane	M	2760	µg/kg	2.0	< 2.0
Ethylbenzene	M	2760	µg/kg	1.0	< 1.0
m & p-Xylene	M	2760	µg/kg	1.0	< 1.0
o-Xylene	M	2760	µg/kg	1.0	< 1.0
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
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
N-Nitrosodimethylamine	M	2790	mg/kg	0.50	< 0.50
Phenol	M	2790	mg/kg	0.50	< 0.50
2-Chlorophenol	M	2790	mg/kg	0.50	< 0.50
Bis-(2-Chloroethyl)Ether	M	2790	mg/kg	0.50	< 0.50
1,3-Dichlorobenzene	M	2790	mg/kg	0.50	< 0.50
1,4-Dichlorobenzene	N	2790	mg/kg	0.50	< 0.50
1,2-Dichlorobenzene	M	2790	mg/kg	0.50	< 0.50
2-Methylphenol	M	2790	mg/kg	0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	M	2790	mg/kg	0.50	< 0.50
Hexachloroethane	N	2790	mg/kg	0.50	< 0.50
N-Nitrosodi-n-propylamine	M	2790	mg/kg	0.50	< 0.50

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:				19-40693
Quotation No.:	Chemtest Sample ID.:				937762
	Client Sample ID.:				RBH103
	Sample Type:				SOIL
	Top Depth (m) (\$):				14.50
	Bottom Depth (m) (\$):				15.00
	Date Sampled (\$):				03-Dec-2019
	Asbestos Lab:				LIVERPOOL
Determinand	Accred.	SOP	Units	LOD	
4-Methylphenol	M	2790	mg/kg	0.50	< 0.50
Nitrobenzene	M	2790	mg/kg	0.50	< 0.50
Isophorone	M	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	M	2790	mg/kg	0.50	< 0.50
2,4-Dichlorophenol	M	2790	mg/kg	0.50	< 0.50
1,2,4-Trichlorobenzene	M	2790	mg/kg	0.50	< 0.50
Naphthalene	M	2790	mg/kg	0.50	< 0.50
4-Chloroaniline	N	2790	mg/kg	0.50	< 0.50
Hexachlorobutadiene	M	2790	mg/kg	0.50	< 0.50
4-Chloro-3-Methylphenol	M	2790	mg/kg	0.50	< 0.50
2-Methylnaphthalene	M	2790	mg/kg	0.50	< 0.50
4-Nitrophenol	N	2790	mg/kg	0.50	< 0.50
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50	< 0.50
2,4,6-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50
2,4,5-Trichlorophenol	M	2790	mg/kg	0.50	< 0.50
2-Chloronaphthalene	M	2790	mg/kg	0.50	< 0.50
2-Nitroaniline	M	2790	mg/kg	0.50	< 0.50
Acenaphthylene	M	2790	mg/kg	0.50	< 0.50
Dimethylphthalate	M	2790	mg/kg	0.50	< 0.50
2,6-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50
Acenaphthene	M	2790	mg/kg	0.50	< 0.50
3-Nitroaniline	N	2790	mg/kg	0.50	< 0.50
Dibenzofuran	M	2790	mg/kg	0.50	< 0.50
4-Chlorophenylphenylether	M	2790	mg/kg	0.50	< 0.50
2,4-Dinitrotoluene	M	2790	mg/kg	0.50	< 0.50
Fluorene	M	2790	mg/kg	0.50	< 0.50
Diethyl Phthalate	M	2790	mg/kg	0.50	< 0.50
4-Nitroaniline	M	2790	mg/kg	0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50	< 0.50
Azobenzene	M	2790	mg/kg	0.50	< 0.50
4-Bromophenylphenyl Ether	M	2790	mg/kg	0.50	< 0.50
Hexachlorobenzene	M	2790	mg/kg	0.50	< 0.50
Pentachlorophenol	N	2790	mg/kg	0.50	< 0.50
Phenanthrene	M	2790	mg/kg	0.50	< 0.50
Anthracene	M	2790	mg/kg	0.50	< 0.50
Carbazole	M	2790	mg/kg	0.50	< 0.50

Results - Soil

Project: LKC 20 1060 Dantzic Street

Client: LK Consult	Chemtest Job No.:		19-40693		
Quotation No.:	Chemtest Sample ID.:		937762		
	Client Sample ID.:		RBH103		
	Sample Type:		SOIL		
	Top Depth (m) (\$):		14.50		
	Bottom Depth (m) (\$):		15.00		
	Date Sampled (\$):		03-Dec-2019		
	Asbestos Lab:		LIVERPOOL		
Determinand	Accred.	SOP	Units	LOD	
Di-N-Butyl Phthalate	M	2790	mg/kg	0.50	< 0.50
Fluoranthene	M	2790	mg/kg	0.50	< 0.50
Pyrene	M	2790	mg/kg	0.50	< 0.50
Butylbenzyl Phthalate	M	2790	mg/kg	0.50	< 0.50
Benzo[a]anthracene	M	2790	mg/kg	0.50	< 0.50
Chrysene	M	2790	mg/kg	0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50	< 0.50
Di-N-Octyl Phthalate	M	2790	mg/kg	0.50	< 0.50
Benzo[b]fluoranthene	M	2790	mg/kg	0.50	< 0.50
Benzo[k]fluoranthene	M	2790	mg/kg	0.50	< 0.50
Benzo[a]pyrene	M	2790	mg/kg	0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	M	2790	mg/kg	0.50	< 0.50
Dibenz(a,h)Anthracene	M	2790	mg/kg	0.50	< 0.50
Benzo[g,h,i]perylene	M	2790	mg/kg	0.50	< 0.50
Total Phenols	M	2920	mg/kg	0.30	1.0

Results - Soil

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2670	Total Petroleum Hydrocarbons (TPH) in Soils by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO*TPH C8–C40	Dichloromethane extraction / GC-FID
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"
- \$ This information has been supplied by the client and can affect the integrity of test data.

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Appendix D

Certificates of Analysis - Geotechnical



TEST REPORT

Client LK Consult Ltd

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

Contract LKC 20 1060 -
Dantzic Street, Manchester

Job Number MRN 3524/171
Date of Issue 17 December 2019
Page 1 of 6

Approved Signatories

S J Hutchings, O P Davies

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.



Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
Email: enquiries@murrayrix.com Website: www.murrayrix.com

Also at: London: 020 8523 1999

Murray Rix is the trading name of Murray Rix (Northern) Limited. Registered in England 2878361

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

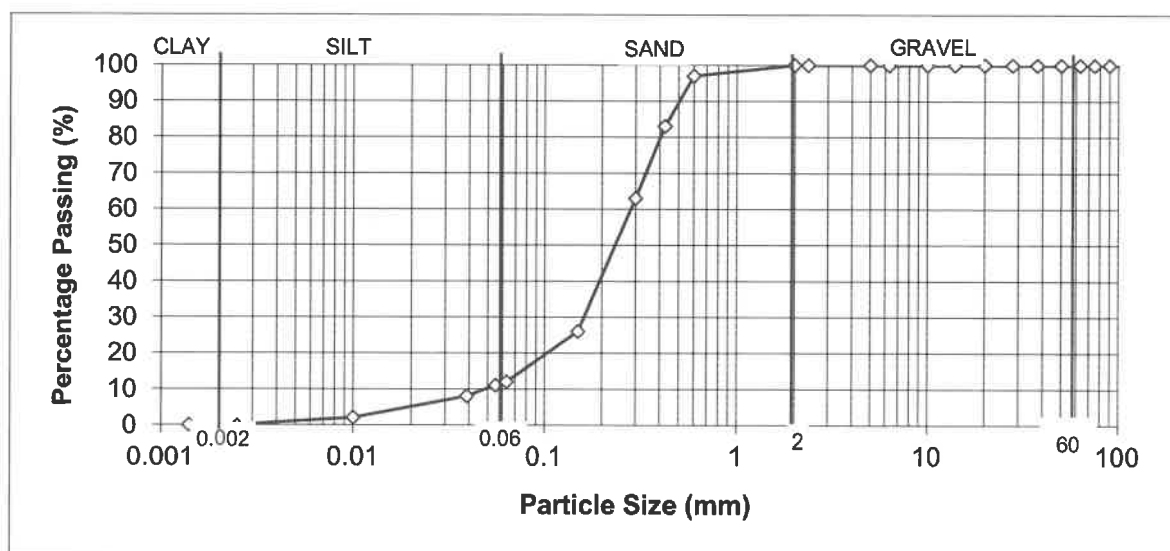
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/171

SAMPLE LABEL	WS101 3.2-3.7	DATE SAMPLED	Not advised
LAB SAMPLE No	87324	DATE RECEIVED	09-Dec-19
DATE TESTED	09-Dec-19	SAMPLED BY	Client

MATERIAL	Reddish brown silty SAND with rare gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	100	
90	100		2	100	
75	100		0.6	97	
63	100		0.425	83	
50	100		0.3	63	
37.5	100		0.15	26	
28	100		0.063	12	
20	100		0.055	11	
14	100		0.039	8	
10	100		0.01	2	
6.3	100		0.0025	0	
5	100		0.0014	0	



REMARKS

As received moisture content = 13%

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

17-Dec-19

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

PARTICLE SIZE DISTRIBUTION

BS 1377: PART 2: Clause 9.5: 1990

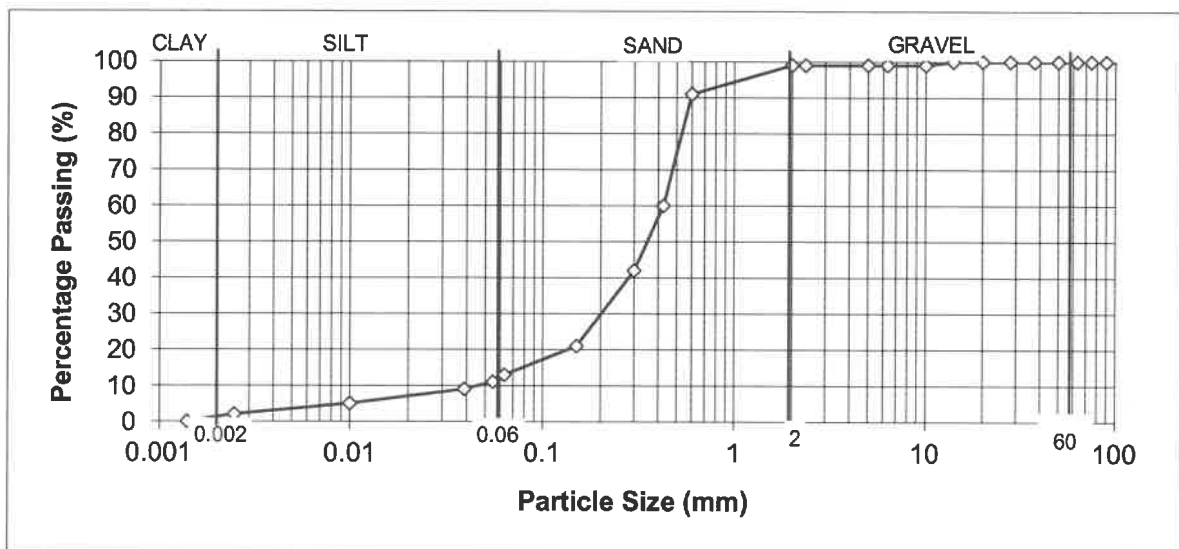
Determination of Moisture Content in accordance with BS 1377: PART 2: Clause 3: 1990 (Oven Dry)

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/171

SAMPLE LABEL	WS104 3.30-3.50	DATE SAMPLED	Not advised
LAB SAMPLE No	87325	DATE RECEIVED	09-Dec-19
DATE TESTED	09-Dec-19	SAMPLED BY	Client

MATERIAL	Reddish brown silty SAND with rare gravel
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		2.36	99	
90	100		2	99	
75	100		0.6	91	
63	100		0.425	60	
50	100		0.3	42	
37.5	100		0.15	21	
28	100		0.063	13	
20	100		0.055	11	
14	100		0.039	9	
10	99		0.01	5	
6.3	99		0.0025	2	
5	99		0.0014	0	



REMARKS

As received moisture content = 8.1%

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

17-Dec-19

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

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

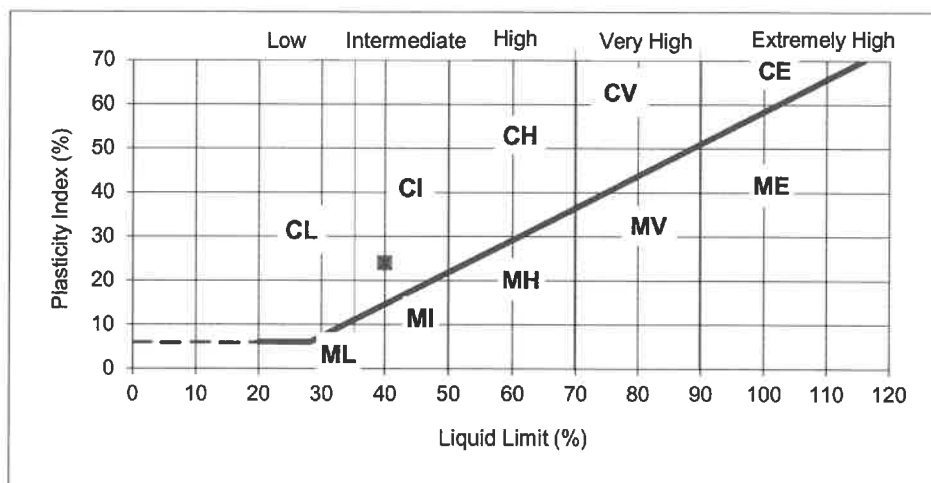
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/171

SAMPLE LABEL	WS105 1.70-1.90	DATE SAMPLED	Not advised
SAMPLE No.	87326	DATE RECEIVED	09-Dec-19
DATE TESTED	01-Oct-21	SAMPLED BY	Client

MATERIAL	Stiff brown silty sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
21	40	16	24	86



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 4 of 6

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Dec-19

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

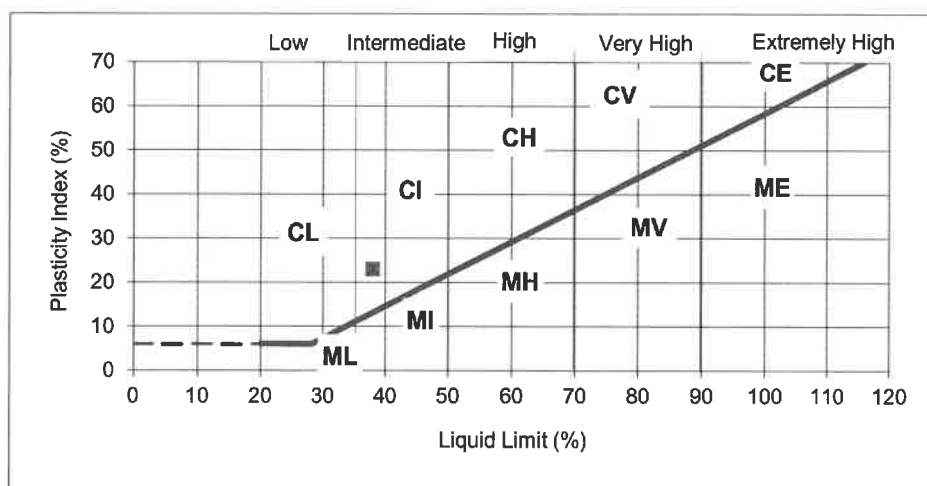
BS 1377: PART 2: 1990 Clause 4.4 ONE POINT METHOD & Clause 5.3
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/171

SAMPLE LABEL	TP101 0.8-1.5m	DATE SAMPLED	Not advised
SAMPLE No.	87327	DATE RECEIVED	09-Dec-19
DATE TESTED	01-Oct-21	SAMPLED BY	Client

MATERIAL	Firm to stiff brown silty sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
24	38	15	23	90



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 5 of 6

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Dec-19

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID AND PLASTIC LIMIT

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

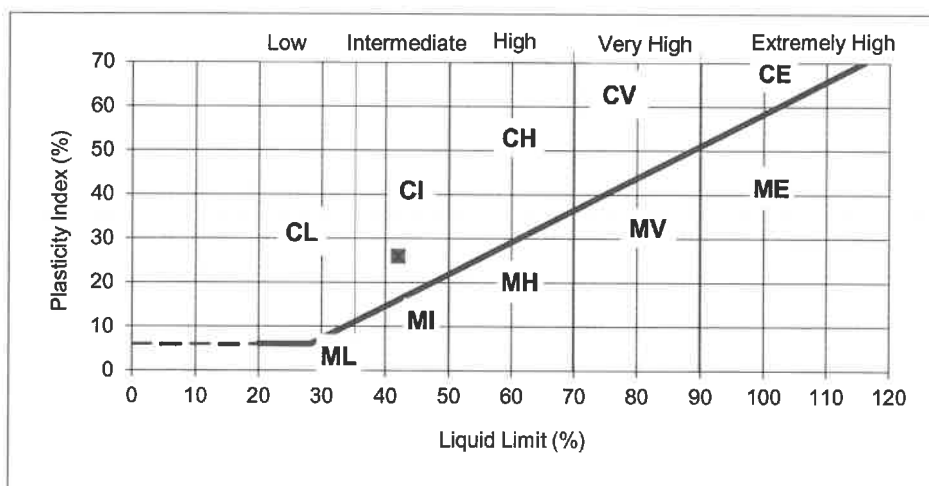
MOISTURE CONTENT METHOD BS 1377: PART 2: 1990 Clause 3.2

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/171

SAMPLE LABEL	TP103 1.4-1.7m	DATE SAMPLED	Not advised
SAMPLE No.	87328	DATE RECEIVED	09-Dec-19
DATE TESTED	01-Oct-21	SAMPLED BY	Client

MATERIAL	Soft to firm brown silty sandy CLAY with rare gravel
ADVISED SOURCE	Site Investigation Sample

Moisture Content (Natural) (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
33	42	16	26	95



REMARKS

Sample tested in natural condition

SIGNED

NAME
Page 6 of 6

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Dec-19



TEST REPORT

Client LK Consult Ltd
Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKC 20 1060 -
Dantzic Street, Manchester

Job Number MRN 3524/170
Date of Issue 17 December 2019
Page 1 of 11

Approved Signatories

S J Hutchings, O P Davies

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

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/170

SAMPLE LABEL	BH101 (10.50-12.75m)	DATE SAMPLED	Not advised
LAB SAMPLE No	87352	DATE RECEIVED	09-Dec-19
DATE TESTED	10-Dec-19	SAMPLED BY	Client

MATERIAL	Rock Core
ADVISED SOURCE	Site Investigation Sample

Sample Number	Test Type	D (mm)	*W (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
10.50-10.58	D	85		0.4	7225.00	85.00	0.06	1.27	0.07
10.60-10.75	D	85		0.2	7225.00	85.00	0.03	1.27	0.04
12.00-12.20	D	85		0.3	7225.00	85.00	0.04	1.27	0.05
12.20-12.35	D	85		0.7	7225.00	85.00	0.10	1.27	0.12
12.40-12.50	D	85		0.5	7225.00	85.00	0.07	1.27	0.09
12.55-12.70	D	85		0.5	7225.00	85.00	0.07	1.27	0.09
12.75-12.85	D	85		0.3	7225.00	85.00	0.04	1.27	0.05
12.90-13.00	D	85		0.3	7225.00	85.00	0.04	1.27	0.05
12.35-12.45	D	85		0.2	7225.00	85.00	0.03	1.27	0.04
12.65-12.75	D	85		0.3	7225.00	85.00	0.04	1.27	0.05
11					0.00	0.00	0.00	0.00	0.00
12					0.00	0.00	0.00	0.00	0.00
13					0.00	0.00	0.00	0.00	0.00
14					0.00	0.00	0.00	0.00	0.00
15					0.00	0.00	0.00	0.00	0.00
16					0.00	0.00	0.00	0.00	0.00
17					0.00	0.00	0.00	0.00	0.00
18					0.00	0.00	0.00	0.00	0.00
19					0.00	0.00	0.00	0.00	0.00
20					0.00	0.00	0.00	0.00	0.00

*W Entry required if test type is not Diametrical

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Dec-19

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION BS 1377: PART 7: 1990:CLAUSE 8 SINGLE STAGE

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 – Dantzic Street, Manchester
JOB NUMBER	MRN 3524/170

SAMPLE LABEL	BH101 (14.00-14.20)	DATE SAMPLED	Not advised
LAB SAMPLE No	87353	DATE RECEIVED	09 December 2019
DATE TESTED	10 December 2019	SAMPLED BY	Client

MATERIAL	Reddish brown ROCK CORE
ADVISED SOURCE	Site Investigation sample

SPECIMEN LENGTH	170	mm
SPECIMEN DIAMETER	85	mm
MOISTURE CONTENT OF SAMPLE	13	%
BULK DENSITY	2.45	Mg/m ³
DRY DENSITY	2.16	Mg/m ³
DEPTH OF TOP OF SPECIMEN	14.00	m
RATE OF STRAIN	2	%/min
RUBBER MEMBRANE THICKNESS	0.6	mm

SPECIMEN AT FAILURE



Measured Cell Pressure (kPa)	Strain at Failure (%)	Membrane Correction (kPa)	Corrected Max Deviator Stress (kPa)	Shear Stress Cu (kPa)
280	16	2.0	238.3	119

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 December 2019

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/170

SAMPLE LABEL	BH102 (7.00-8.50m)	DATE SAMPLED	Not advised
LAB SAMPLE No	87354	DATE RECEIVED	09-Dec-19
DATE TESTED	10-Dec-19	SAMPLED BY	Client

MATERIAL	Rock Core
ADVISED SOURCE	Site Investigation Sample

Sample Number	Test Type	D (mm)	*W (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
7.05-7.15	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
7.20-7.30	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
7.30-7.40	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
7.45-7.55	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
7.55-7.70	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
7.80-7.90	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
7.95-8.05	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
8.10-8.20	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
8.20-8.30	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
8.30-8.40	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
11					0.00	0.00	0.00	0.00	0.00
12					0.00	0.00	0.00	0.00	0.00
13					0.00	0.00	0.00	0.00	0.00
14					0.00	0.00	0.00	0.00	0.00
15					0.00	0.00	0.00	0.00	0.00
16					0.00	0.00	0.00	0.00	0.00
17					0.00	0.00	0.00	0.00	0.00
18					0.00	0.00	0.00	0.00	0.00
19					0.00	0.00	0.00	0.00	0.00
20					0.00	0.00	0.00	0.00	0.00

*W Entry required if test type is not Diametrical

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Dec-19

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION BS 1377: PART 7: 1990:CLAUSE 8 SINGLE STAGE

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 – Dantzic Street, Manchester
JOB NUMBER	MRN 3524/170

SAMPLE LABEL	BH102 (10.20-10.40m)	DATE SAMPLED	Not advised
LAB SAMPLE No	87355	DATE RECEIVED	09 December 2019
DATE TESTED	10 December 2019	SAMPLED BY	Client

MATERIAL	Reddish brown ROCK CORE
ADVISED SOURCE	Site Investigation sample

SPECIMEN LENGTH	170	mm
SPECIMEN DIAMETER	85	mm
MOISTURE CONTENT OF SAMPLE	13	%
BULK DENSITY	2.52	Mg/m ³
DRY DENSITY	2.23	Mg/m ³
DEPTH OF TOP OF SPECIMEN	10.20	m
RATE OF STRAIN	2	%/min
RUBBER MEMBRANE THICKNESS	0.6	mm

SPECIMEN AT FAILURE



Measured Cell Pressure (kPa)	Strain at Failure (%)	Membrane Correction (kPa)	Corrected Max Deviator Stress (kPa)	Shear Stress Cu (kPa)
210	18	2.0	254.1	127

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 December 2019

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

ASTM D7012 – 14 Method C

Client LK Consult Ltd
Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Site LKC 20 1060 – Dantzic Street, Manchester

Job No. MRN 3524/170

Laboratory Sample Number 87356

Site Reference Number BH102 (18.30-18.50m) Box 4

Date of Receipt 09 December 2019

Date of Test 10 December 2019

Dimensions

Tested by	MW	Diameter	85 mm
Length after preparation	170 mm	Length/diameter ratio	2.00

Method of End Preparation Saw/Grinding

Time in Water prior to test 0 hours

Material	Rock Core	Site Mark	BH102 (18.00-19.00m) Box 4
Sample Location	Not advised	Tested By	MW

Date of Drilling Not Advised

Drilled by Others

Description of core after test	Split vertically from top to bottom, with no visible end effects
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Compressive Strength

Load at Failure	kN	163.1	Measured Compressive Strength	N/mm ²	28.7
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Compressive Strength 28.7 MPa

Comments/Deviations from standard method/Abnormalities noted during visual inspection.
range

Name O.P. Davies BA (Hons) Signature
(Laboratory Manager)



Date 17 December 2019

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/170

SAMPLE LABEL	BH102 (26.00-28.00)	DATE SAMPLED	Not advised
LAB SAMPLE No	87357	DATE RECEIVED	09-Dec-19
DATE TESTED	10-Dec-19	SAMPLED BY	Client

MATERIAL	Rock Core
ADVISED SOURCE	Site Investigation Sample

Sample Number	Test Type	D (mm)	*W (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
26.10-26.20	D	85		1.5	7225.00	85.00	0.21	1.27	0.26
26.40-26.50	D	85		1.1	7225.00	85.00	0.15	1.27	0.19
26.50-26.60	D	85		1.9	7225.00	85.00	0.26	1.27	0.33
26.70-26.80	D	85		3.9	7225.00	85.00	0.54	1.27	0.69
26.80-26.90	D	85		3.1	7225.00	85.00	0.43	1.27	0.54
26.90-27.00	D	85		1.9	7225.00	85.00	0.26	1.27	0.33
27.00-27.10	D	85		2.1	7225.00	85.00	0.29	1.27	0.37
27.20-27.30	D	85		0.5	7225.00	85.00	0.07	1.27	0.09
27.30-27.40	D	85		1.1	7225.00	85.00	0.15	1.27	0.19
27.75-27.85	D	85		0.8	7225.00	85.00	0.11	1.27	0.14
11					0.00	0.00	0.00	0.00	0.00
12					0.00	0.00	0.00	0.00	0.00
13					0.00	0.00	0.00	0.00	0.00
14					0.00	0.00	0.00	0.00	0.00
15					0.00	0.00	0.00	0.00	0.00
16					0.00	0.00	0.00	0.00	0.00
17					0.00	0.00	0.00	0.00	0.00
18					0.00	0.00	0.00	0.00	0.00
19					0.00	0.00	0.00	0.00	0.00
20					0.00	0.00	0.00	0.00	0.00

*W Entry required if test type is not Diametrical

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Dec-19

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE
SPECIMENS
ASTM D7012 – 14 Method C

Client LK Consult Ltd
Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Site LKC 20 1060 – Dantzic Street, Manchester

Job No. MRN 3524/170

Laboratory Sample Number 87358

Site Reference Number BH102 (29.80-30.00m) Box 8

Date of Receipt 09 December 2019

Date of Test 10 December 2019

Dimensions

Tested by	MW	Diameter	85 mm
Length after preparation	170 mm	Length/diameter ratio	2.00

Method of End Preparation Saw/Grinding

Time in Water prior to test 0 hours

Material	Rock Core	Site Mark	BH102 (28.00-30.00m) Box 8
Sample Location	Not advised	Tested By	MW

Date of Drilling Not Advised

Drilled by Others

Description of core after test	Split vertically from top to bottom, with no visible end effects
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Compressive Strength

Load at Failure	kN	27.9	Measured Compressive Strength	N/mm ²	4.9
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Compressive Strength 4.9 MPa

Comments/Deviations from standard method/Abnormalities noted during visual inspection.
range

Name O.P. Davies BA (Hons) **Signature**
(Laboratory Manager)



Date 17 December 2019

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

DETERMINATION OF POINT LOAD STRENGTH INDEX OF ROCK
METHOD IN ACCORDANCE WITH ASTM STANDARD D 5731

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 - Dantzic Street, Manchester
JOB NUMBER	MRN 3524/170

SAMPLE LABEL	BH103 (7.00-9.00)	DATE SAMPLED	Not advised
LAB SAMPLE No	87359	DATE RECEIVED	09-Dec-19
DATE TESTED	10-Dec-19	SAMPLED BY	Client

MATERIAL	Rock Core
ADVISED SOURCE	Site Investigation Sample

Sample Number	Test Type	D (mm)	*W (mm)	Load (P) (kN)	D_e^2 (mm ²)	D_e (mm)	I_s (MPa)	F	$I_{s(50)}$ (MPa)
7.10-7.20	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
7.25-7.35	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
7.35-7.45	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
7.60-7.70	D	85		0.2	7225.00	85.00	0.03	1.27	0.04
7.90-8.00	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
8.00-8.10	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
8.10-8.20	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
8.20-8.30	D	85		0.1	7225.00	85.00	0.01	1.27	0.02
8.50-8.60	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
8.65-8.75	D	85		0.0	7225.00	85.00	0.00	1.27	0.00
11					0.00	0.00	0.00	0.00	0.00
12					0.00	0.00	0.00	0.00	0.00
13					0.00	0.00	0.00	0.00	0.00
14					0.00	0.00	0.00	0.00	0.00
15					0.00	0.00	0.00	0.00	0.00
16					0.00	0.00	0.00	0.00	0.00
17					0.00	0.00	0.00	0.00	0.00
18					0.00	0.00	0.00	0.00	0.00
19					0.00	0.00	0.00	0.00	0.00
20					0.00	0.00	0.00	0.00	0.00

*W Entry required if test type is not Diametrical

REMARKS

SIGNED



NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17-Dec-19

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE
DETERMINATION OF THE COMPRESSIVE STRENGTH OF INTACT ROCK CORE
SPECIMENS
ASTM D7012 – 14 Method C

Client LK Consult Ltd
Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Site LKC 20 1060 – Dantzic Street, Manchester

Job No. MRN 3524/170

Laboratory Sample Number 87360

Site Reference Number BH103 (11.70-11.90m) Box 8

Date of Receipt 09 December 2019

Date of Test 10 December 2019

Dimensions

Tested by	MW	Diameter	85 mm
Length after preparation	170 mm	Length/diameter ratio	2.00

Method of End Preparation Saw/Grinding

Time in Water prior to test 0 hours

Material	Rock Core	Site Mark	BH103 (9.00-12.00m) Box 1
Sample Location	Not advised	Tested By	MW

Date of Drilling Not Advised

Drilled by Others

Description of core after test	Split vertically from top to bottom, with no visible end effects
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Compressive Strength

Load at Failure	kN	12.1	Measured Compressive Strength	N/mm ²	2.1
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Compressive Strength 2.1 MPa

Comments/Deviations from standard method/Abnormalities noted during visual inspection.
range

Name O.P. Davies BA (Hons) **Signature** 
(Laboratory Manager)

Date 17 December 2019

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870

TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION BS 1377: PART 7: 1990:CLAUSE 8 SINGLE STAGE

CLIENT	LK Consult Ltd
SITE	LKC 20 1060 – Dantzic Street, Manchester
JOB NUMBER	MRN 3524/170

SAMPLE LABEL	BH103 (18.00-18.20)	DATE SAMPLED	Not advised
LAB SAMPLE No	87361	DATE RECEIVED	09 December 2019
DATE TESTED	10 December 2019	SAMPLED BY	Client

MATERIAL	Reddish brown ROCK CORE
ADVISED SOURCE	Site Investigation sample

SPECIMEN LENGTH	170	mm
SPECIMEN DIAMETER	85	mm
MOISTURE CONTENT OF SAMPLE	11	%
BULK DENSITY	2.45	Mg/m ³
DRY DENSITY	2.21	Mg/m ³
DEPTH OF TOP OF SPECIMEN	18.00	m
RATE OF STRAIN	2	%/min
RUBBER MEMBRANE THICKNESS	0.6	mm

SPECIMEN AT FAILURE



Measured Cell Pressure (kPa)	Strain at Failure (%)	Membrane Correction (kPa)	Corrected Max Deviator Stress (kPa)	Shear Stress Cu (kPa)
370	16	2.0	222.4	111

REMARKS

SIGNED

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

DATE 17 December 2019

Appendix E

Certificates of Analysis - Groundwater



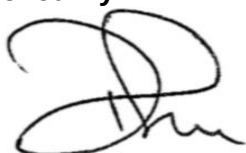
2183

Final Report

Report No.: 20-03244-1
Initial Date of Issue: 11-Feb-2020
Client LK Consult
Client Address: Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Manchester
Lancashire
M26 2ZS
Contact(s): Chris Hughes
Contaminated Land
Project LKC 20 1060 Dantzic Street,
Manchester

Quotation No.:		Date Received:	31-Jan-2020
Order No.:	737564	Date Instructed:	04-Feb-2020
No. of Samples:	2		
Turnaround (Wkdays):	5	Results Due:	10-Feb-2020
Date Approved:	11-Feb-2020		

Approved By:



Details: Darrell Hall, Director

Client: LK Consult	Chemtest Job No.:				20-03244	20-03244
Quotation No.:	Chemtest Sample ID.:				962790	962791
	Client Sample ID.:				RBH1	RBH3
	Sample Type:				WATER	WATER
	Date Sampled:				29-Jan-2020	29-Jan-2020
Determinand	Accred.	SOP	Units	LOD		
pH	U	1010		N/A	7.8	8.1
Sulphate	U	1220	mg/l	1.0	180	89
Cyanide (Total)	U	1300	mg/l	0.050	0.050	< 0.050
Cyanide (Free)	U	1300	mg/l	0.050	< 0.050	< 0.050
Calcium	U	1415	mg/l	5.0	340	200
Total Hardness as CaCO3	U	1270	mg/l	15	1100	600
Arsenic (Dissolved)	U	1450	µg/l	1.0	9.4	1.7
Boron (Dissolved)	U	1450	µg/l	20	130	200
Cadmium (Dissolved)	U	1450	µg/l	0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	µg/l	1.0	3.5	6.9
Copper (Dissolved)	U	1450	µg/l	1.0	2.2	6.0
Nickel (Dissolved)	U	1450	µg/l	1.0	2.2	2.2
Lead (Dissolved)	U	1450	µg/l	1.0	1.0	< 1.0
Selenium (Dissolved)	U	1450	µg/l	1.0	8.2	4.2
Vanadium (Dissolved)	U	1450	µg/l	1.0	< 1.0	1.1
Zinc (Dissolved)	U	1450	µg/l	1.0	42	15
Mercury Low Level	U	1460	µg/l	0.010	< 0.010	< 0.010
Chromium (Hexavalent)	U	1490	µg/l	20	< 20	< 20
Dissolved Organic Carbon	U	1610	mg/l	2.0	12	11
Fuel Type	N	1670		N/A	N/A	N/A
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	< 0.10	< 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	< 0.10	< 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	< 10	< 10
Dichlorodifluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Chloromethane	U	1760	µg/l	1.0	< 1.0	< 1.0

Client: LK Consult	Chemtest Job No.:				20-03244	20-03244
Quotation No.:	Chemtest Sample ID.:				962790	962791
	Client Sample ID.:				RBH1	RBH3
	Sample Type:				WATER	WATER
	Date Sampled:				29-Jan-2020	29-Jan-2020
Determinand	Accred.	SOP	Units	LOD		
Vinyl Chloride	N	1760	µg/l	1.0	33	< 1.0
Bromomethane	U	1760	µg/l	5.0	< 5.0	< 5.0
Chloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichlorofluoromethane	U	1760	µg/l	1.0	< 1.0	< 1.0
1,1-Dichloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
Trans 1,2-Dichloroethene	U	1760	µg/l	1.0	330	< 1.0
1,1-Dichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
cis 1,2-Dichloroethene	U	1760	µg/l	1.0	62	6.6
Bromochloromethane	U	1760	µg/l	5.0	< 5.0	< 5.0
Trichloromethane	U	1760	µg/l	1.0	< 1.0	51
1,1,1-Trichloroethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Tetrachloromethane	U	1760	µg/l	1.0	< 1.0	77
1,1-Dichloropropene	U	1760	µg/l	1.0	< 1.0	< 1.0
Benzene	U	1760	µg/l	1.0	< 1.0	1.1
1,2-Dichloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Trichloroethene	N	1760	µg/l	1.0	2.8	460
1,2-Dichloropropane	U	1760	µg/l	1.0	< 1.0	< 1.0
Dibromomethane	U	1760	µg/l	10	< 10	< 10
Bromodichloromethane	U	1760	µg/l	5.0	< 5.0	< 5.0
cis-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10
Toluene	U	1760	µg/l	1.0	< 1.0	3.8
Trans-1,3-Dichloropropene	N	1760	µg/l	10	< 10	< 10
1,1,2-Trichloroethane	U	1760	µg/l	10	< 10	< 10
Tetrachloroethene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3-Dichloropropane	U	1760	µg/l	2.0	< 2.0	< 2.0
Dibromochloromethane	U	1760	µg/l	10	< 10	< 10
1,2-Dibromoethane	U	1760	µg/l	5.0	< 5.0	< 5.0
Chlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	U	1760	µg/l	2.0	< 2.0	< 2.0
Ethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
m & p-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0
o-Xylene	U	1760	µg/l	1.0	< 1.0	< 1.0
Styrene	U	1760	µg/l	1.0	< 1.0	< 1.0
Tribromomethane	U	1760	µg/l	1.0	< 1.0	< 1.0
Isopropylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Bromobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,3-Trichloropropane	N	1760	µg/l	50	< 50	< 50
N-Propylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
2-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
4-Chlorotoluene	U	1760	µg/l	1.0	< 1.0	< 1.0

Client: LK Consult	Chemtest Job No.:				20-03244	20-03244
Quotation No.:	Chemtest Sample ID.:				962790	962791
	Client Sample ID.:				RBH1	RBH3
	Sample Type:				WATER	WATER
	Date Sampled:				29-Jan-2020	29-Jan-2020
Determinand	Accred.	SOP	Units	LOD		
Tert-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Sec-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	N	1760	µg/l	1.0	< 1.0	< 1.0
4-Isopropyltoluene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
N-Butylbenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2-Dibromo-3-Chloropropane	U	1760	µg/l	50	< 50	< 50
1,2,4-Trichlorobenzene	U	1760	µg/l	1.0	< 1.0	< 1.0
Hexachlorobutadiene	U	1760	µg/l	1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	U	1760	µg/l	2.0	< 2.0	< 2.0
Carbon Disulphide	N	1760	µg/l	2.0	< 2.0	< 2.0
Methyl Tert-Butyl Ether	N	1760	µg/l	1.0	< 1.0	< 1.0
N-Nitrosodimethylamine	N	1790	µg/l	0.50	< 0.50	< 0.50
Phenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Chlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis-(2-Chloroethyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
1,3-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
1,2-Dichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methylphenol (o-Cresol)	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Chloroisopropyl)Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachloroethane	N	1790	µg/l	0.50	< 0.50	< 0.50
N-Nitrosodi-n-propylamine	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Nitrobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Isophorone	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dimethylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
1,2,4-Trichlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Naphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorobutadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chloro-3-Methylphenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methylnaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorocyclopentadiene	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,6-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4,5-Trichlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50

Client: LK Consult	Chemtest Job No.:				20-03244	20-03244
Quotation No.:	Chemtest Sample ID.:				962790	962791
	Client Sample ID.:				RBH1	RBH3
	Sample Type:				WATER	WATER
	Date Sampled:				29-Jan-2020	29-Jan-2020
Determinand	Accred.	SOP	Units	LOD		
2-Chloronaphthalene	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthylene	N	1790	µg/l	0.50	< 0.50	< 0.50
Dimethylphthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
2,6-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Acenaphthene	N	1790	µg/l	0.50	< 0.50	< 0.50
3-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenzofuran	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Chlorophenylphenylether	N	1790	µg/l	0.50	< 0.50	< 0.50
2,4-Dinitrotoluene	N	1790	µg/l	0.50	< 0.50	< 0.50
Fluorene	N	1790	µg/l	0.50	< 0.50	< 0.50
Diethyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitroaniline	N	1790	µg/l	0.50	< 0.50	< 0.50
2-Methyl-4,6-Dinitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Azobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Bromophenylphenyl Ether	N	1790	µg/l	0.50	< 0.50	< 0.50
Hexachlorobenzene	N	1790	µg/l	0.50	< 0.50	< 0.50
Pentachlorophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Phenanthrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Carbazole	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Butyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Butylbenzyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Chrysene	N	1790	µg/l	0.50	< 0.50	< 0.50
Bis(2-Ethylhexyl)Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Di-N-Octyl Phthalate	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[a]pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Indeno(1,2,3-c,d)Pyrene	N	1790	µg/l	0.50	< 0.50	< 0.50
Dibenz(a,h)Anthracene	N	1790	µg/l	0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	N	1790	µg/l	0.50	< 0.50	< 0.50
4-Nitrophenol	N	1790	µg/l	0.50	< 0.50	< 0.50
Naphthalene	N	1800	µg/l	0.010	< 0.010	< 0.010
Acenaphthylene	N	1800	µg/l	0.010	< 0.010	< 0.010
Acenaphthene	N	1800	µg/l	0.010	< 0.010	< 0.010
Fluorene	N	1800	µg/l	0.010	< 0.010	< 0.010
Phenanthrene	N	1800	µg/l	0.010	< 0.010	< 0.010

Client: LK Consult	Chemtest Job No.:				20-03244	20-03244
Quotation No.:	Chemtest Sample ID.:				962790	962791
	Client Sample ID.:				RBH1	RBH3
	Sample Type:				WATER	WATER
	Date Sampled:				29-Jan-2020	29-Jan-2020
Determinand	Accred.	SOP	Units	LOD		
Anthracene	N	1800	µg/l	0.010	< 0.010	< 0.010
Fluoranthene	N	1800	µg/l	0.010	< 0.010	< 0.010
Pyrene	N	1800	µg/l	0.010	< 0.010	< 0.010
Benzo[a]anthracene	N	1800	µg/l	0.010	< 0.010	< 0.010
Chrysene	N	1800	µg/l	0.010	< 0.010	< 0.010
Benzo[b]fluoranthene	N	1800	µg/l	0.010	< 0.010	< 0.010
Benzo[k]fluoranthene	N	1800	µg/l	0.010	< 0.010	< 0.010
Benzo[a]pyrene	N	1800	µg/l	0.010	< 0.010	< 0.010
Indeno(1,2,3-c,d)Pyrene	N	1800	µg/l	0.010	< 0.010	< 0.010
Dibenz(a,h)Anthracene	N	1800	µg/l	0.010	< 0.010	< 0.010
Benzo[g,h,i]perylene	N	1800	µg/l	0.010	< 0.010	< 0.010
Total Of 16 PAH's	N	1800	µg/l	0.10	< 0.10	< 0.10
Total Phenols	U	1920	mg/l	0.030	< 0.030	< 0.030

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l ⁻¹ CaCO ₃ equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1415	Cations in Waters by ICP-MS	Sodium; Potassium; Calcium; Magnesium	Direct determination by inductively coupled plasma - mass spectrometry (ICP-MS).
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1670	Total Petroleum Hydrocarbons (TPH) in Waters by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO	Pentane extraction / GC FID detection
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35–C44 Aromatics: >C5–C7, >C7–C8, >C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35–C44	Pentane extraction / GCxGC FID detection
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1790	Semi-Volatile Organic Compounds (SVOCs) in Waters by GC-MS	Semi-volatile organic compounds	Solvent extraction / GCMS detection
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

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

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

Charges may apply to extended sample storage

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

customerservices@chemtest.com

Appendix F

Gas Monitoring Results

Site	Dantzig Street, Manchester
Job Number	LKC 20 1060
Date	05/12/2019
Engineer	BR
Visit	1 of 1

Equipment ¹		
Instrument	Serial Number	Comments
Gas Analyser GA5000	G502417	Serviced, calibrated, gas checked.
Geotech Diometer	122-008632-1	Operating normally.

Atmospheric / Ground Conditions	
Atmospheric pressure trend onsite	Rising
Atmospheric pressure (prev 24hrs)	Falling then rising
Weather Conditions	Cloudy, cool, light breeze
Ground Conditions	Wet / hardsood

[illegible]

ABBREVIATIONS	
ND	Not detected
NR	Not recorded
UR	Unable to record
OS	Off recordable scale
N/A	Not applicable
ppm	Parts per million
mb	Millibars
l/hr	Litres per hour
mbgl	Metres below ground level
LEL	Lower explosive limit in air

NOTES
All monitoring is carried out in line with LK Consult Ltd procedures, with reference to CIRIA C665.
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).



EQUIPMENT* ¹		
Instrument / Model Type	Serial Number	Comments
Geotechnical Instruments GA2000+	GA10350	Serviced, calibrated & gas checked.
50m Dipmetre	Type 010	Operating Normally

ATMOSPHERIC / GROUND CONDITIONS	
Atmospheric Pressure Trend on Site	Steady
Atmospheric Pressure (Prev 24hrs)	Falling
Weather Conditions	Cold, clear sky, still.
Ground Conditions	Damp, frozen.

ABBREVIATIONS

*1	Refer to Note 1
ND	Not detected
NR	Not recorded
UR	Unable to record
OS	Off recordable scale
N/A	Not applicable

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



LK CONSULT LTD

GAS MONITORING RECORD

SITE	Danztic Street, Manchester
REF	LKC 20 1060
DATE	13-Jan-2020
STAFF	NJ
VISIT	3 of 6

EQUIPMENT*1		
Instrument / Model Type	Serial Number	Comments
Geotechnical Instruments GA2000+	GA10350	Serviced, calibrated & gas checked.
Geotech Dipmeter	122-006309-1	Operating Normally

ATMOSPHERIC / GROUND CONDITIONS	
Atmospheric Pressure Trend on Site	Falling
Atmospheric Pressure (Prev 24hrs)	Rising then falling
Weather Conditions	Cold, cloudy, slightly windy
Ground Conditions	Dry

Borehole ID	Date/Time	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Peak CH4 (% v/v)	Peak CO2 (% 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
RBH1	13/01/2020 08:27	0	1.4	16.8	0	1.5	0	(2) 1	0	81.8	1004	0	0	4.44	14.53	
RBH3	13/01/2020 09:39	0	5.6	14.4	0	5.7	0	0	0	80	1001	0.81	(+3.5) +3.4	6.49	19.23	
WS101	13/01/2020 08:37	0	0.1	4.7	0	0.1	0	0	0	95.2	1004	0.55	0	Dry	4.93	
WS102	13/01/2020 08:17	0	2	15.9	0	1.9	0	0	0	82.1	1004	-0.3	0	Dry	2.55	
WS103	13/01/2020 08:09	0	7	5.5	0	7	0	0	0	87.5	1004	-0.09	(+0.1) 0	Dry	2.94	
WS104	13/01/2020 07:53	0	4.6	13.3	0	4.6	0	(4) 0	0	82.1	1004	0.32	(-0.1) 0	Dry	2.74	
WS105b	13/01/2020 09:05	0	5.6	14.7	0	5.6	0	0	0	79.7	1002	0.82	0	Dry	2.71	

ABBREVIATIONS

*1 Refer to Note 1
ND Not detected
NR Not recorded
UR Unable to record
OS Off recordable scale
N/A Not applicable

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

- Equipment is serviced and checked as recommended by the manufacturer. Refer to calibration records and service certificates.
- CH4 is explosive between the range of 5 - 15% v/v. 100% lower explosive limit is equal to 5% v/v CH4.
- Flow readings are based on a 1 minute average value where flow is detected (equipment range of +/- 12 ltr/hr)
- After CIRIA C665. GSV = gas concentration (%) x flow rate. Peak CH4 and Steady CO2 values used.
- 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	Dantzic Stret, Manchester
REF	LKC 20 1060
DATE	29.01.2020
STAFF	NJ
VISIT	4 of 6

EQUIPMENT* ¹		
Instrument / Model Type	Serial Number	Comments
Geotechnical Instruments GA2000+	GA10350	Serviced, calibrated & gas checked.
Solinst Mini Interface Meter	122-006309-1	Operating Normally

ATMOSPHERIC / GROUND CONDITIONS	
Atmospheric Pressure Trend on Site	Rising
Atmospheric Pressure (Prev 24hrs)	Rising
Weather Conditions	Dry, cloudy, slightly windy
Ground Conditions	Wet

Borehole ID	Date/Time	CH4 (% v/v)	CO2 (% v/v)	O2 (% v/v)	Peak CH4 (% v/v)	Peak CO2 (% 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
RBH1	29/01/2020 08:50	0.1	1.4	17.2	0.1	1.4	2.0	1.0	0.0	81.3	1000	0.1	-0.1	14.34	14.34	
RBH3	29/01/2020 11:57	0.1	5.3	14.7	0.1	5.3	2.0	0.0	0.0	79.9	1002	-0.1	-1.4	6.30	19.21	
WS101	29/01/2020 09:01	0.1	1.4	5.7	0.1	1.4	2.0	0.0	0.0	92.8	1000	0.0	0.0	Dry	4.93	
WS102	29/01/2020 08:35	0.1	1.4	17.6	0.1	1.4	2.0	0.0	0.0	80.9	1000	0.1	0.0	Dry	2.54	
WS103	29/01/2020 08:22	0.1	6.9	0.4	0.1	6.9	2.0	0.0	0.0	92.6	1000	0.1	0.0	Dry	2.95	
WS104	29/01/2020 08:14	0.1	3.6	14.9	0.1	3.5	2.0	0.0	0.0	81.4	1000	0.1	0.0	Dry	2.74	
WS105b	29/01/2020 09:10	0.1	3.0	16.9	0.1	3.0	2.0	0.0	0.0	80.0	1000	0.1	0.0	Dry	3.76	

ABBREVIATIONS

* ¹	Refer to Note 1
ND	Not detected
NR	Not recorded
UR	Unable to record
OS	Off recordable scale
N/A	Not applicable

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

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

GAS MONITORING RECORD

Site	LKC 20 1060
Job Number	Dantzie Street, Manchester
Date	11.02.2020
Engineer	NJ
Visit	5 of 6

Equipment ¹		
Instrument	Serial Number	Comments
Gas Analyser GA5000	G502417	Serviced, calibrated, gas checked.
Geotech Diometer	122-008632-1	Operating normally.

Atmospheric / Ground Conditions	
Atmospheric pressure trend onsite	Steady
Atmospheric pressure (prev 24hrs)	Rising
Weather Conditions	Hail and rain, cloudy, windy
Ground Conditions	Wet

[illegible]

ABBREVIATIONS	
ND	Not detected
NR	Not recorded
UR	Unable to record
OS	Off recordable scale
N/A	Not applicable
ppm	Parts per million
mb	Millibars
l/hr	Litres per hour
mbgl	Metres below ground level
LEL	Lower explosive limit in air

NOTES
All monitoring is carried out in line with LK Consult Ltd procedures, with reference to CIRIA C665.
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).

Site	Dantzic Street
Job Number	LKC 20 1060
Date	43887
Engineer	RW
Visit	6 of 6

Equipment ¹		
Instrument	Serial Number	Comments
Gas Analyser GA5000	G502417	Serviced, calibrated, gas checked.
Geotech Dipmeter	81070	Operating normally.

Atmospheric / Ground Conditions	
Atmospheric pressure trend onsite	Rising
Atmospheric pressure (prev 24hrs)	Variable
Weather Conditions	Breezy, cloudy, cold
Ground Conditions	Damp/Wet

[illegible]

ABBREVIATIONS	
ND	Not detected
NR	Not recorded
UR	Unable to record
OS	Off recordable scale
N/A	Not applicable
ppm	Parts per million
mb	Millibars
l/hr	Litres per hour
mbgl	Metres below ground level
LEL	Lower explosive limit in air

NOTES	
All monitoring is carried out in line with LK Consult Ltd procedures, with reference to CIRIA C665.	
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).	

Appendix G

Generic Assessment Criteria Values

Category 4 Screening Levels (C4SL)

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	168 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 mg/kg	5.3 mg/kg	5.7 mg/kg	76 mg/kg	10 mg/kg	21 mg/kg
Cadmium	26 mg/kg	149 mg/kg	4.9 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	23 mg/kg	250 mg/kg
Lead	200 mg/kg	310 mg/kg	80 mg/kg	2330 mg/kg	630 mg/kg	1300 mg/kg

Category 4 Screening Levels (C4SL)

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	168 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 mg/kg	5.3 mg/kg	5.7 mg/kg	76 mg/kg	10 mg/kg	21 mg/kg
Cadmium	26 mg/kg	149 mg/kg	4.9 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	23 mg/kg	250 mg/kg
Lead	200 mg/kg	310 mg/kg	80 mg/kg	2330 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.

		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

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

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.

Table 4.2a: EIC/AGS/CL:AIRE GAC for organics with 1% SOM

Contaminant	GAC for 1% SOM (mg.kg ⁻¹)				Soil Saturation Concentration (mg.kg ⁻¹)
	Residential with consumption of homegrown produce	Residential without consumption of homegrown produce	Allotments	Commercial	
1,1,2 Trichloroethane	0.6	0.88	0.28	94	4030
1,1-Dichloroethane	2.4	2.5	9.2	280	1830
1,1-Dichloroethene	0.23	0.23	2.8	26	2230
1,2,4-Trimethylbenzene	0.35	0.41	0.38	42	557
1,2-Dichloropropane	0.024	0.024	0.62	3.3	1190
2,4-Dimethylphenol	19	210	3.1	16000	1380
2,4-Dinitrotoluene	1.5	170	0.22	3700	141
2,6-Dinitrotoluene	0.78	78	0.12	1900	287
2-Chloronaphthalene	3.7	3.8	40	390	114
Biphenyl	66	220	14	18000	34.4
Bis (2-ethylhexyl) phthalate	280	2700	47	85000	8.68
Bromobenzene	0.87	0.91	3.2	97	853
Bromodichloromethane	0.016	0.019	0.016	2.1	1790
Bromoform	2.8	5.2	0.95	760	2690
Butyl benzyl phthalate	1400	42000	220	940000	26.3
Chloroethane	8.3	8.4	110	960	2610
Chloromethane	0.0083	0.0085	0.066	1.0	1910
<i>Cis</i> 1,2 Dichloroethene	0.11	0.12	0.26	14	3940
Dichloromethane	0.58	2.1	0.10	270	7270
Diethyl Phthalate	120	1800	19	150000	13.7
Di- <i>n</i> -butyl phthalate	13	450	2.0	15000	4.65
Di- <i>n</i> -octyl phthalate	2300	3400	940	89000	32.6
Hexachloroethane	0.20	0.22	0.27	22	8.17
Isopropylbenzene	11	12	32	1400	390
Methyl <i>tert</i> -butyl ether	49	73	23	7900	20400
Propylbenzene	34	40	34	4100	402
Styrene	8.1	35	1.6	3300	626
Total Cresols (2-, 3- and 4-methylphenol)	80	3700	12	160000	15000
<i>Trans</i> 1,2 Dichloroethene	0.19	0.19	0.93	22	3420
Tributyl tin oxide	0.25	1.4	0.042	130	41.3

Notes

It is strongly recommended that the accompanying EIC/AGS/CL:AIRE GAC report is read and understood if using these GAC

GAC in highlighted boxes exceed soil saturation concentration. Soil concentrations above soil saturation may indicate that NAPL is present. Risks from NAPL may need to be considered separately.

Table 4.3a: EIC/AGS/CL:AIRE GAC for organics with 2.5% SOM

Contaminant	GAC for 2.5% SOM (mg.kg ⁻¹)				Soil Saturation Concentration (mg.kg ⁻¹)
	Residential with consumption of homegrown produce	Residential without consumption of homegrown produce	Allotments	Commercial	
1,1,2 Trichloroethane	1.2	1.8	0.61	190	8210
1,1-Dichloroethane	3.9	4.1	17	450	2960
1,1-Dichloroethene	0.40	0.41	5.6	46	3940
1,2,4-Trimethylbenzene	0.85	0.99	0.93	99	1360
1,2-Dichloropropane	0.042	0.042	1.2	5.9	2110
2,4-Dimethylphenol	43	410	7.2	24000	3140
2,4-Dinitrotoluene	3.2	170	0.49	3700	299
2,6-Dinitrotoluene	1.7	84	0.27	1900	622
2-Chloronaphthalene	9.2	9.3	98	960	280
Biphenyl	160	500	35	33000	84.3
Bis (2-ethylhexyl) phthalate	610	2800	120	86000	21.6
Bromobenzene	2.0	2.1	7.6	220	1970
Bromodichloromethane	0.030	0.034	0.032	3.7	3220
Bromoform	5.9	11	2.1	1500	5480
Butyl benzyl phthalate	3300	44000	550	940000	64.7
Chloroethane	11	11	200	1300	3540
Chloromethane	0.0098	0.0099	0.13	1.2	2240
<i>Cis</i> 1,2 Dichloroethene	0.19	0.20	0.50	24	6610
Dichloromethane	0.98	2.8	0.19	360	9680
Diethyl Phthalate	260	3500	41	220000	29.1
Di- <i>n</i> -butyl phthalate	31	450	5.0	15000	11.4
Di- <i>n</i> -octyl phthalate	2800	3400	2100	89000	81.5
Hexachloroethane	0.48	0.54	0.67	53	20.1
Isopropylbenzene	27	28	79	3300	950
Methyl <i>tert</i> -butyl ether	84	120	44	13000	33100
Propylbenzene	82	97	83	9700	981
Styrene	19	78	3.7	6500	1440
Total Cresols (2-, 3- and 4-methylphenol)	180	5400	27	180000	32500
<i>Trans</i> 1,2 Dichloroethene	0.34	0.35	1.9	40	6170
Tributyl tin oxide	0.59	3.1	0.10	180	101

Notes

It is strongly recommended that the accompanying EIC/AGS/CL:AIRE GAC report is read and understood if using these GAC.

GAC in highlighted boxes exceed soil saturation concentration. Soil concentrations above soil saturation may indicate that NAPL is present. Risks from NAPL may need to be considered separately.

Table 4.4a: EIC/AGS/CL:AIRE GAC for organics with 6% SOM

Contaminant	GAC for 6% SOM (mg.kg ⁻¹)				Soil Saturation Concentration (mg.kg ⁻¹)
	Residential with consumption of homegrown produce	Residential without consumption of homegrown produce	Allotments	Commercial	
1,1,2 Trichloroethane	2.7	3.9	1.4	400	18000
1,1-Dichloroethane	7.4	7.7	35	850	5600
1,1-Dichloroethene	0.82	0.82	12	92	7940
1,2,4-Trimethylbenzene	2.0	2.3	2.2	220	3250
1,2-Dichloropropane	0.084	0.085	2.6	12	4240
2,4-Dimethylphenol	97	730	17	30000	7240
2,4-Dinitrotoluene	7.2	170	1.1	3800	669
2,6-Dinitrotoluene	3.9	87	0.61	1900	1400
2-Chloronaphthalene	22	22	230	2200	669
Biphenyl	360	980	83	48000	201
Bis (2-ethylhexyl) phthalate	1100	2800	280	86000	51.7
Bromobenzene	4.7	4.9	18	520	4580
Bromodichloromethane	0.061	0.070	0.068	7.6	6570
Bromoform	13	23	4.6	3100	12000
Butyl benzyl phthalate	7200	44000	1300	950000	154
Chloroethane	18	18	380	2100	5710
Chloromethane	0.013	0.013	0.23	1.6	2990
Cis 1,2 Dichloroethene	0.37	0.39	1.0	47	12900
Dichloromethane	1.7	4.5	0.34	560	15300
Diethyl Phthalate	570	6300	94	290000	65
Di-n-butyl phthalate	67	450	12	15000	27.3
Di-n-octyl phthalate	3100	3400	3900	89000	196
Hexachloroethane	1.1	1.3	1.6	120	48.1
Isopropylbenzene	64	67	190	7700	2250
Methyl <i>tert</i> -butyl ether	160	220	90	24000	62700
Propylbenzene	190	230	200	21000	2330
Styrene	43	170	8.7	11000	3350
Total Cresols (2-, 3- and 4-methylphenol)	400	6900	63	180000	73300
<i>Trans</i> 1,2 Dichloroethene	0.70	0.71	4.0	81	12600
Tributyl tin oxide	1.3	5.7	0.24	200	241

Notes

It is strongly recommended that the accompanying EIC/AGS/CL:AIRE GAC report is read and understood if using these GAC.

GAC in highlighted boxes exceed soil saturation concentration. Soil concentrations above soil saturation may indicate that NAPL is present. Risks from NAPL may need to be considered separately.

Appendix H

Hazard Index Spreadsheets

$$HI = \sum_{Fi=1}^{16} HQ \text{ Fi} = \frac{\text{Measured concentration Fi (mg/kg)}}{\text{SGV/GAC Fi (mg/kg)}}$$

where: HI = Hazard Index
 HQ = Hazard Quotient
 Fi = Fraction I
 SGV/GAC = Soil Guideline Value or Generic Assessment Criteria

Residential without Plant Uptake Land Use

Job

Dantzic Street, Manchester

Job No.

LKC 20 1060

SOM

6%

Comment

Based upon the highest concentrations (WS104 1.2-1.5m) as a conservative measure.

Residential Without Plant Uptake							
	1% SGV/SSV	2.50% SGV/GAC	6% SGV/SSV	Max Soil concn.	HQ (1%SOM)	HQ (2.5%SOM)	HQ (6% SOM)
Aliphatic							
EC5-EC6	42	78	160	1	0.0238095	0.01282051	0.00625
EC6-EC8	100	230	530	1	0.01	0.00434783	0.00188679
EC8-EC10	27	65	150	1	0.037037	0.01538462	0.00666667
EC10-EC12	130	330	760	21.0	0.1615385	0.06363636	0.02763158
EC12-EC16	1100	2400	4300	44	0.04	0.01833333	0.01023256
EC16-EC21				43			
EC21-EC35	65000	92000	110000	220	0.0006615	0.00046739	0.00039091
EC35-EC44	65000	92000	110000	1	1.538E-05	1.087E-05	9.0909E-06
Aromatic							
EC5-EC7 (benzene)	370	690	1400	1	0.0027027	0.00144928	0.00071429
EC7-EC8 (tolulene)	860	1800	3900	1	0.0011628	0.00055556	0.00025641
EC8-EC10	47	110	270	1	0.0212766	0.00909091	0.0037037
EC10-EC12	250	590	1200	1.0	0.004	0.00169492	0.00083333
EC12-EC16	1800	2300	2500	26	0.0144444	0.01130435	0.0104
EC16-EC21	1900	1900	1900	92	0.0484211	0.04842105	0.04842105
EC21-EC35	1900	1900	1900	1300	0.6842105	0.68421053	0.68421053
EC35-EC44	1900	1900	1900	12	0.0063158	0.00631579	0.00631579

HI	1.06	0.88	0.81
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Sample number	MAX or USE
Depth	
Aliphatic	
EC5-EC6	1
EC6-EC8	1
EC8-EC10	1
EC10-EC12	21
EC12-EC16	44
EC16-EC21	43
EC21-EC35	220
EC35-EC44	1
Aromatic	
EC5-EC7 (benzene)	1
EC7-EC8 (tolulene)	1
EC8-EC10	1
EC10-EC12	1
EC12-EC16	26
EC16-EC21	92
EC21-EC35	1300
EC35-EC44	12

$$HI = \sum_{Fi=1}^{16} HQ Fi = \frac{\text{Measured concentration } Fi \text{ (mg/kg)}}{SGV/GAC \text{ } Fi \text{ (mg/kg)}}$$

where: HI = Hazard Index
 HQ = Hazard Quotient
 Fi = Fraction i
 SGV/GAC = Soil Guideline Value or Generic Assessment Criteria

$$HI = \sum_{Fi=1}^{16} HQ Fi = \frac{\text{Measured concentration } Fi \text{ (mg/kg)}}{SGV/GAC \text{ } Fi \text{ (mg/kg)}}$$

where: HI = Hazard Index
 HQ = Hazard Quotient
 Fi = Fraction i
 SGV/GAC = Soil Guideline Value or Generic Assessment Criteria

Job	Dantzic Street, Manchester
Job No.	LKC 20 1060
SOM	1%
Comment	Based upon the highest concentrations (WS101 0.8-1.2m) as a conservative measure.

Sample number	MAX or US
Depth	
Aliphatic	
EC5-EC6	1
EC6-EC8	1
EC8-EC10	1
EC10-EC12	1
EC12-EC16	8
EC16-EC21	1
EC21-EC35	140
EC35-EC44	1
Aromatic	
EC5-EC7 (benzene)	1
EC7-EC8 (tolulene)	1
EC8-EC10	1
EC10-EC12	1
EC12-EC16	1.6
EC16-EC21	44
EC21-EC35	990
EC35-EC44	14

	1%	2.50%	6%	Max Soil	HQ	HQ	HQ
	SGV/SSV	SGV/GAC	SGV/SSV	concn.	(1% SOM)	(2.5% SOM)	(6% SOM)
Aliphatic							
EC5-EC6	42	78	160	1	0.0238095	0.01282051	0.00625
EC6-EC8	100	230	530	1	0.01	0.00434783	0.00188679
EC8-EC10	27	65	150	1	0.037037	0.01538462	0.00666667
EC10-EC12	130	330	760	1.0	0.0076923	0.0030303	0.00131579
EC12-EC16	1100	2400	4300	8	0.0072727	0.00333333	0.00186047
EC16-EC21				1			
EC21-EC35	65000	92000	110000	140	1.538E-05	1.087E-05	9.0909E-06
EC35-EC44	65000	92000	110000	1	1.538E-05	1.087E-05	9.0909E-06
Aromatic							
EC5-EC7 (benzene)	370	690	1400	1	0.0027027	0.00144928	0.00071429
EC7-EC8 (toluene)	860	1800	3900	1	0.0011628	0.00055556	0.00025641
EC8-EC10	47	110	270	1	0.0212766	0.00909091	0.0037037
EC10-EC12	250	590	1200	1.0	0.004	0.00169492	0.00083333
EC12-EC16	1800	2300	2500	2	0.0008889	0.00069565	0.00064
EC16-EC21	1900	1900	1900	44	0.0231579	0.02315789	0.02315789
EC21-EC35	1900	1900	1900	990	0.5210526	0.52105263	0.52105263
EC35-EC44	1900	1900	1900	14	0.0073684	0.00736842	0.00736842

HI	0.67	0.60	0.58
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Appendix I

HazWaste Online Classification Report

Waste Classification Report



M5CVH-7UV46-87WTT

Job name

LKC 20 1060[2]

Description/Comments

Project

LKC 20 1060

Site

Dantzic Street, Manchester

Related Documents

#	Name	Description
1	HWOL_20-05856-20200303 164618.hwol	.hwol file used to create the Job

Waste Stream Template

Example waste stream template for contaminated soils

Classified by

Name: Peter Dunn	Company: LK Group	HazWasteOnline™ Training Record:	
Date: 04 Mar 2020 14:18 GMT	Unit 29, Eton Business Park	Course	Date
Telephone: 0161 763 7200	Eton Hill Rd, Radcliffe	Hazardous Waste Classification	17 Sep 2019
	Manchester	Advanced Hazardous Waste Classification	18 Sep 2019
	M26 2ZS		

Report

Created by: Peter Dunn
Created date: 04 Mar 2020 14:18 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	WS201 D2-974935-20/02/2020-0.70	0.70-1.00	Non Hazardous		3
2	WS201 D4-974937-20/02/2020-2.00	2.00-2.70	Non Hazardous		9
3	WS202 D4-974940-20/02/2020-2.50	2.50-2.80	Non Hazardous		14
4	WS203 D3-974942-20/02/2020-1.40	1.40-1.90	Non Hazardous		20
5	WS204 D2-974944-20/02/2020-0.30	0.30-0.40	Non Hazardous		26
6	WS205 D3-974947-20/02/2020-2.00	2.00-2.70	Hazardous	HP 3(i), HP 7, HP 11, HP 14	32

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Appendix B: Rationale for selection of metal species	43
Appendix C: Version	44

Classification of sample: WS201 D2-974935-20/02/2020-0.70

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS201 D2-974935-20/02/2020-0.70	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.70-1.00 m		
Moisture content:		
20%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 20% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				15 mg/kg	1.32	15.844 mg/kg	0.00158 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				1.1 mg/kg	3.22	2.833 mg/kg	0.000283 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.29 mg/kg	1.142	0.265 mg/kg	0.0000265 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide }				13 mg/kg	1.462	15.2 mg/kg	0.00152 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				32 mg/kg	1.126	28.823 mg/kg	0.00288 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	41 mg/kg	1.56	51.162 mg/kg	0.00328 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				0.16 mg/kg	1.353	0.173 mg/kg	0.0000173 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				20 mg/kg	2.976	47.62 mg/kg	0.00476 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.51 mg/kg	2.554	1.042 mg/kg	0.000104 %	✓	
	034-002-00-8									
11	zinc { zinc chromate }				47 mg/kg	2.774	104.308 mg/kg	0.0104 %	✓	
	024-007-00-3									
12	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number								
14		benzene				0.0016 mg/kg		0.0012 mg/kg	0.000000128 %	✓		
		601-020-00-8	200-753-7	71-43-2								
15		toluene				0.016 mg/kg		0.0128 mg/kg	0.00000128 %	✓		
		601-021-00-3	203-625-9	108-88-3								
16	■	ethylbenzene				0.0015 mg/kg		0.0012 mg/kg	0.00000012 %	✓		
		601-023-00-4	202-849-4	100-41-4								
17		xylene				0.0054 mg/kg		0.0043 mg/kg	0.000000432 %	✓		
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
18		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD	
		006-007-00-5										
19	■	pH				7.4 pH		7.4 pH	7.4 pH			
				PH								
20		naphthalene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		601-052-00-2	202-049-5	91-20-3								
21	■	acenaphthylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			205-917-1	208-96-8								
22	■	acenaphthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			201-469-6	83-32-9								
23	■	fluorene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			201-695-5	86-73-7								
24	■	phenanthrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			201-581-5	85-01-8								
25	■	anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			204-371-1	120-12-7								
26	■	fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			205-912-4	206-44-0								
27	■	pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			204-927-3	129-00-0								
28		benzo[a]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		601-033-00-9	200-280-6	56-55-3								
29		chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		601-048-00-0	205-923-4	218-01-9								
30		benzo[b]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		601-034-00-4	205-911-9	205-99-2								
31		benzo[k]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		601-036-00-5	205-916-6	207-08-9								
32		benzo[a]pyrene; benzo[def]chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		601-032-00-3	200-028-5	50-32-8								
33	■	indeno[123-cd]pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			205-893-2	193-39-5								
34		dibenz[a,h]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		601-041-00-2	200-181-8	53-70-3								
35	■	benzo[ghi]perylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
			205-883-8	191-24-2								
36		phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD	
		604-001-00-2	203-632-7	108-95-2								
37	■	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD	
			203-458-1, 200-863-5	107-06-2, 75-34-3								
38		tetrachloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD	
		602-028-00-4	204-825-9	127-18-4								
39		carbon tetrachloride; tetrachloromethane				0.011 mg/kg		0.0088 mg/kg	0.00000088 %	✓		
		602-008-00-5	200-262-8	56-23-5								
40		trichloroethylene; trichloroethene				5.4 mg/kg		4.32 mg/kg	0.000432 %	✓		
		602-027-00-9	201-167-4	79-01-6								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
41	vinyl chloride; chloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-023-00-7	200-831-0	75-01-4							
42	hexachlorobenzene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	602-065-00-6	204-273-9	118-74-1							
43	vanadium { divanadium pentaoxide; vanadium pentoxide }				19 mg/kg	1.785	27.135 mg/kg	0.00271 %	✓	
	023-001-00-8	215-239-8	1314-62-1							
44	dichlorodifluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		200-893-9	75-71-8							
45	chloromethane; methyl chloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-001-00-7	200-817-4	74-87-3							
46	bromomethane; methylbromide				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	602-002-00-2	200-813-2	74-83-9							
47	chloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	602-009-00-0	200-830-5	75-00-3							
48	trichlorofluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
		200-892-3	75-69-4							
49	1,1-dichloroethylene; vinylidene chloride				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	602-025-00-8	200-864-0	75-35-4							
50	bromochloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		200-826-3	74-97-5							
51	chloroform; trichloromethane				0.034 mg/kg		0.0272 mg/kg	0.00000272 %	✓	
	602-006-00-4	200-663-8	67-66-3							
52	1,1,1-trichloroethane; methyl chloroform				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-013-00-2	200-756-3	71-55-6							
53	1,1-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-031-00-0	209-253-3	563-58-6							
54	1,2-dichloropropane; propylene dichloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-020-00-0	201-152-2	78-87-5							
55	dibromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-003-00-8	200-824-2	74-95-3							
56	bromodichloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		200-856-7	75-27-4							
57	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]							
58	trans-1,3-dichloropropene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		431-460-4	10061-02-6							
59	1,1,2-trichloroethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	602-014-00-8	201-166-9	79-00-5							
60	1,3-dichloropropane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		205-531-3	142-28-9							
61	dibromochloromethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
		204-704-0	124-48-1							
62	1,2-dibromoethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	602-010-00-6	203-444-5	106-93-4							
63	chlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-033-00-1	203-628-5	108-90-7							
64	1,1,1,2-tetrachloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		211-135-1	630-20-6							
65	styrene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-026-00-0	202-851-5	100-42-5							
66	bromoform; tribromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-007-00-X	200-854-6	75-25-2							
67	bromobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-060-00-9	203-623-8	108-86-1							
68	1,2,3-trichloropropane				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
	602-062-00-X	202-486-1	96-18-4							
69	mesitylene; 1,3,5-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-025-00-5	203-604-4	108-67-8							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
70	tert-butylbenzene	202-632-4	98-06-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
71	1,2,4-trimethylbenzene	601-043-00-3	202-436-9	95-63-6	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
72	sec-butylbenzene	205-227-0	135-98-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
73	1,3-dichlorobenzene	602-067-00-7	208-792-1	541-73-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
74	4-isopropyltoluene	202-796-7	99-87-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
75	1,4-dichlorobenzene; p-dichlorobenzene	602-035-00-2	203-400-5	106-46-7	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
76	n-butylbenzene	203-209-7	104-51-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
77	1,2-dichlorobenzene; o-dichlorobenzene	602-034-00-7	202-425-9	95-50-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
78	1,2-dibromo-3-chloropropane	602-021-00-6	202-479-3	96-12-8	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
79	1,2,4-trichlorobenzene	602-087-00-6	204-428-0	120-82-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
80	hexachlorobutadiene	201-765-5	87-68-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
81	1,2,3-trichlorobenzene	201-757-1	87-61-6		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
82	carbon disulphide	006-003-00-3	200-843-6	75-15-0	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
83	dimethylnitrosoamine; N-nitrosodimethylamine	612-077-00-3	200-549-8	62-75-9	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
84	2-chlorophenol; [1] 4-chlorophenol; [2] 3-chlorophenol; [3] chlorophenol [4]	604-008-00-0	202-433-2 [1] 203-402-6 [2] 203-582-6 [3] 246-691-4 [4]	95-57-8 [1] 106-48-9 [2] 108-43-0 [3] 25167-80-0 [4]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
85	bis(2-chloroethyl) ether	603-029-00-2	203-870-1	111-44-4	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
86	hexachloroethane	200-666-4	67-72-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
87	nitrosodipropylamine	612-098-00-8	210-698-0	621-64-7	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
88	nitrobenzene	609-003-00-7	202-716-0	98-95-3	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
89	3,5,5-trimethylcyclohex-2-enone; isophorone	606-012-00-8	201-126-0	78-59-1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
90	2-nitrophenol	201-857-5	88-75-5		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
91	3,4-xyleneol; [1] 2,5-xyleneol; [2] 2,4-xyleneol; [3] 2,3-xyleneol; [4] 2,6-xyleneol; [5] xyleneol; [6] 2,4(or 2,5)-xyleneol [7]	604-006-00-X	202-439-5 [1] 202-461-5 [2] 203-321-6 [3] 208-395-3 [4] 209-400-1 [5] 215-089-3 [6] 276-245-4 [7]	95-65-8 [1] 95-87-4 [2] 105-67-9 [3] 526-75-0 [4] 576-26-1 [5] 1300-71-6 [6] 71975-58-1 [7]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
92	bis(2-chloroethoxy)methane	203-920-2	111-91-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
93	2,4-dichlorophenol	604-011-00-7	204-429-6	120-83-2	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
94	4-chloroaniline	612-137-00-9	203-401-0	106-47-8	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
95	chlorocresol; 4-chloro-m-cresol; 4-chloro-3-methylphenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-014-00-3	200-431-6	59-50-7							
96	2-methyl naphthalene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		202-078-3	91-57-6							
97	4-nitrophenol; p-nitrophenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	609-015-00-2	202-811-7	100-02-7							
98	hexachlorocyclopentadiene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	602-078-00-7	201-029-3	77-47-4							
99	2,4,6-trichlorophenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-018-00-5	201-795-9	88-06-2							
100	2,4,5-trichlorophenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-017-00-X	202-467-8	95-95-4							
101	2-chloronaphthalene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		202-079-9	91-58-7							
102	dimethyl phthalate				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-011-6	131-11-3							
103	2,6-dinitrotoluene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	609-049-00-8	210-106-0	606-20-2							
104	dibenzofuran				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-071-3	132-64-9							
105	4-chlorophenylphenylether				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		230-281-7	7005-72-3							
106	2,4-dinitrotoluene; [1] dinitrotoluene [2]				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	609-007-00-9	204-450-0 [1] 246-836-1 [2]	121-14-2 [1] 25321-14-6 [2]							
107	diethyl phthalate				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-550-6	84-66-2							
108	DNOC (ISO); 4,6-dinitro-o-cresol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	609-020-00-X	208-601-1	534-52-1							
109	azobenzene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	611-001-00-6	203-102-5	103-33-3							
110	4-bromophenylphenylether				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		202-952-4	101-55-3							
111	pentachlorophenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-002-00-8	201-778-6	87-86-5							
112	carbazole				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-696-0	86-74-8							
113	dibutyl phthalate; DBP				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	607-318-00-4	201-557-4	84-74-2							
114	BBP; benzyl butyl phthalate				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	607-430-00-3	201-622-7	85-68-7							
115	bis(2-ethylhexyl) phthalate; di-(2-ethylhexyl) phthalate; DEHP				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	607-317-00-9	204-211-0	117-81-7							
116	di-n-octyl phthalate				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-214-7	117-84-0							
117	m-cresol; [1] o-cresol; [2] p-cresol; [3] mix-cresol [4]				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	604-004-00-9	203-577-9 [1] 202-423-8 [2] 203-398-6 [3] 215-293-2 [4]	108-39-4 [1] 95-48-7 [2] 106-44-5 [3] 1319-77-3 [4]							
118	1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<1.001 mg/kg		<1.001 mg/kg	<0.0001 %		<LOD
	602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]							
119	cumene; [1] propylbenzene [2]				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-024-00-X	202-704-5 [1] 203-132-9 [2]	98-82-8 [1] 103-65-1 [2]							

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
120		2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4]				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	602-040-00-X	202-424-3 [1]	95-49-8 [1]								
		203-580-5 [2]	108-41-8 [2]								
		203-397-0 [3]	106-43-4 [3]								
		246-698-2 [4]	25168-05-2 [4]								
121		o-nitroaniline; [1] m-nitroaniline; [2] p-nitroaniline [3]				<1.5 mg/kg		<1.5 mg/kg	<0.00015 %		<LOD
	612-012-00-9	201-855-4 [1]	88-74-4 [1] 99-09-2								
		202-729-1 [2]	[2] 100-01-6 [3]								
		202-810-1 [3]									
Total:									0.0323 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- ND** Not detected
- CLP: Note 1 Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because Concentrations at less than 1.0% are "unlikely to be flammable". Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 1.28e-07%)
toluene: (conc.: 1.28e-06%)
ethylbenzene: (conc.: 1.2e-07%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

xylene: (conc.: 4.32e-07%)

Classification of sample: WS201 D4-974937-20/02/2020-2.00

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS201 D4-974937-20/02/2020-2.00	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
2.00-2.70 m		
Moisture content:		
14%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 14% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
2	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
3	toluene				0.0025 mg/kg		0.0021 mg/kg	0.000000215 %	✓	
	601-021-00-3	203-625-9	108-88-3							
4	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
5	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
6	naphthalene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
7	acenaphthylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-917-1	208-96-8							
8	acenaphthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-469-6	83-32-9							
9	fluorene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-695-5	86-73-7							
10	phenanthrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-581-5	85-01-8							
11	anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-371-1	120-12-7							
12	fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-912-4	206-44-0							
13	pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-927-3	129-00-0							
14	benzo[a]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-033-00-9	200-280-6	56-55-3							

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
15	chrysene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	601-048-00-0	205-923-4	218-01-9									
16	benzo[b]fluoranthene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	601-034-00-4	205-911-9	205-99-2									
17	benzo[k]fluoranthene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	601-036-00-5	205-916-6	207-08-9									
18	benzo[a]pyrene; benzo[def]chrysene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	601-032-00-3	200-028-5	50-32-8									
19	indeno[123-cd]pyrene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		205-893-2	193-39-5									
20	dibenz[a,h]anthracene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
21	benzo[ghi]perylene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		205-883-8	191-24-2									
22	phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2									
23	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.003	mg/kg		<0.003	mg/kg	<0.0000003 %		<LOD
		203-458-1, 200-863-5	107-06-2, 75-34-3									
24	tetrachloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-028-00-4	204-825-9	127-18-4									
25	carbon tetrachloride; tetrachloromethane				0.043	mg/kg		0.037	mg/kg	0.0000037 %	✓	
	602-008-00-5	200-262-8	56-23-5									
26	trichloroethylene; trichloroethene				0.072	mg/kg		0.0619	mg/kg	0.00000619 %	✓	
	602-027-00-9	201-167-4	79-01-6									
27	vinyl chloride; chloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-023-00-7	200-831-0	75-01-4									
28	hexachlorobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	602-065-00-6	204-273-9	118-74-1									
29	dichlorodifluoromethane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		200-893-9	75-71-8									
30	chloromethane; methyl chloride				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-001-00-7	200-817-4	74-87-3									
31	bromomethane; methylbromide				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	602-002-00-2	200-813-2	74-83-9									
32	chloroethane				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	602-009-00-0	200-830-5	75-00-3									
33	trichlorofluoromethane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		200-892-3	75-69-4									
34	1,1-dichloroethylene; vinylidene chloride				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	602-025-00-8	200-864-0	75-35-4									
35	bromochloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		200-826-3	74-97-5									
36	chloroform; trichloromethane				0.01	mg/kg		0.0086	mg/kg	0.00000086 %	✓	
	602-006-00-4	200-663-8	67-66-3									
37	1,1,1-trichloroethane; methyl chloroform				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-013-00-2	200-756-3	71-55-6									
38	1,1-dichloropropene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-031-00-0	209-253-3	563-58-6									
39	1,2-dichloropropane; propylene dichloride				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-020-00-0	201-152-2	78-87-5									
40	dibromomethane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-003-00-8	200-824-2	74-95-3									
41	bromodichloromethane				<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
		200-856-7	75-27-4									
42	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]									
43	trans-1,3-dichloropropene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		431-460-4	10061-02-6									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
44	1,1,2-trichloroethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-014-00-8	201-166-9	79-00-5								
45	1,3-dichloropropane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		205-531-3	142-28-9								
46	dibromochloromethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		204-704-0	124-48-1								
47	1,2-dibromoethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
	602-010-00-6	203-444-5	106-93-4								
48	chlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-033-00-1	203-628-5	108-90-7								
49	1,1,1,2-tetrachloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		211-135-1	630-20-6								
50	styrene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-026-00-0	202-851-5	100-42-5								
51	bromoform; tribromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-007-00-X	200-854-6	75-25-2								
52	bromobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-060-00-9	203-623-8	108-86-1								
53	1,2,3-trichloropropane				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	602-062-00-X	202-486-1	96-18-4								
54	mesitylene; 1,3,5-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-025-00-5	203-604-4	108-67-8								
55	tert-butylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		202-632-4	98-06-6								
56	1,2,4-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-043-00-3	202-436-9	95-63-6								
57	sec-butylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		205-227-0	135-98-8								
58	1,3-dichlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-067-00-7	208-792-1	541-73-1								
59	4-isopropyltoluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		202-796-7	99-87-6								
60	1,4-dichlorobenzene; p-dichlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-035-00-2	203-400-5	106-46-7								
61	n-butylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		203-209-7	104-51-8								
62	1,2-dichlorobenzene; o-dichlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-034-00-7	202-425-9	95-50-1								
63	1,2-dibromo-3-chloropropane				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	602-021-00-6	202-479-3	96-12-8								
64	1,2,4-trichlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-087-00-6	204-428-0	120-82-1								
65	hexachlorobutadiene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		201-765-5	87-68-3								
66	1,2,3-trichlorobenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		201-757-1	87-61-6								
67	dimethylnitrosoamine; N-nitrosodimethylamine				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	612-077-00-3	200-549-8	62-75-9								
68	2-chlorophenol; [1] 4-chlorophenol; [2] 3-chlorophenol; [3] chlorophenol [4]				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	604-008-00-0	202-433-2 [1] 203-402-6 [2] 203-582-6 [3] 246-691-4 [4]	95-57-8 [1] 106-48-9 [2] 108-43-0 [3] 25167-80-0 [4]								
69	bis(2-chloroethyl) ether				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	603-029-00-2	203-870-1	111-44-4								
70	hexachloroethane				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
		200-666-4	67-72-1								
71	nitrosodipropylamine				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	612-098-00-8	210-698-0	621-64-7								

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
72	nitrobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-003-00-7	202-716-0	98-95-3									
73	3,5,5-trimethylcyclohex-2-enone; isophorone				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	606-012-00-8	201-126-0	78-59-1									
74	2-nitrophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		201-857-5	88-75-5									
75	3,4-xyleneol; [1] 2,5-xyleneol; [2] 2,4-xyleneol; [3] 2,3-xyleneol; [4] 2,6-xyleneol; [5] xyleneol; [6] 2,4(or 2,5)-xyleneol [7]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-006-00-X	202-439-5 [1]	95-65-8 [1] 95-87-4									
		202-461-5 [2]	[2] 105-67-9 [3]									
		203-321-6 [3]	526-75-0 [4]									
		208-395-3 [4]	576-26-1 [5]									
		209-400-1 [5]	1300-71-6 [6]									
		215-089-3 [6]	71975-58-1 [7]									
		276-245-4 [7]										
76	bis(2-chloroethoxy)methane				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		203-920-2	111-91-1									
77	2,4-dichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-011-00-7	204-429-6	120-83-2									
78	4-chloroaniline				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	612-137-00-9	203-401-0	106-47-8									
79	chlorocresol; 4-chloro-m-cresol; 4-chloro-3-methylphenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-014-00-3	200-431-6	59-50-7									
80	2-methyl naphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		202-078-3	91-57-6									
81	4-nitrophenol; p-nitrophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-015-00-2	202-811-7	100-02-7									
82	hexachlorocyclopentadiene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	602-078-00-7	201-029-3	77-47-4									
83	2,4,6-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-018-00-5	201-795-9	88-06-2									
84	2,4,5-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-017-00-X	202-467-8	95-95-4									
85	2-chloronaphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		202-079-9	91-58-7									
86	dimethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		205-011-6	131-11-3									
87	2,6-dinitrotoluene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-049-00-8	210-106-0	606-20-2									
88	dibenzofuran				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		205-071-3	132-64-9									
89	4-chlorophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		230-281-7	7005-72-3									
90	2,4-dinitrotoluene; [1] dinitrotoluene [2]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-007-00-9	204-450-0 [1]	121-14-2 [1]									
		246-836-1 [2]	25321-14-6 [2]									
91	diethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		201-550-6	84-66-2									
92	DNOC (ISO); 4,6-dinitro-o-cresol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-020-00-X	208-601-1	534-52-1									
93	azobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	611-001-00-6	203-102-5	103-33-3									
94	4-bromophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		202-952-4	101-55-3									
95	pentachlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-002-00-8	201-778-6	87-86-5									
96	carbazole				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		201-696-0	86-74-8									
97	dibutyl phthalate; DBP				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-318-00-4	201-557-4	84-74-2									

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number							
98		BBP; benzyl butyl phthalate				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		607-430-00-3	201-622-7	85-68-7							
99		bis(2-ethylhexyl) phthalate; di-(2-ethylhexyl) phthalate; DEHP				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		607-317-00-9	204-211-0	117-81-7							
100		di-n-octyl phthalate				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
			204-214-7	117-84-0							
101		m-cresol; [1] o-cresol; [2] p-cresol; [3] mix-cresol [4]				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
		604-004-00-9	203-577-9 [1] 202-423-8 [2] 203-398-6 [3] 215-293-2 [4]	108-39-4 [1] 95-48-7 [2] 106-44-5 [3] 1319-77-3 [4]							
102		1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<1.001 mg/kg		<1.001 mg/kg	<0.0001 %		<LOD
		602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]							
103		cumene; [1] propylbenzene [2]				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		601-024-00-X	202-704-5 [1] 203-132-9 [2]	98-82-8 [1] 103-65-1 [2]							
104		2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4]				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]							
105		o-nitroaniline; [1] m-nitroaniline; [2] p-nitroaniline [3]				<1.5 mg/kg		<1.5 mg/kg	<0.00015 %		<LOD
		612-012-00-9	201-855-4 [1] 202-729-1 [2] 202-810-1 [3]	88-74-4 [1] 99-09-2 [2] 100-01-6 [3]							
Total:									0.00308 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection
ND	Not detected

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because Concentrations at less than 1.0% are "unlikely to be flammable". Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

toluene: (conc.: 2.15e-07%)

Classification of sample: WS202 D4-974940-20/02/2020-2.50



Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS202 D4-974940-20/02/2020-2.50	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
2.50-2.80 m		
Moisture content:		
9.9%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 9.9% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				5.4 mg/kg	1.32	6.424 mg/kg	0.000642 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	boron { diboron trioxide; boric oxide }				<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
3	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %			<LOD
	048-002-00-0	215-146-2	1306-19-0								
4	chromium in chromium(III) compounds { chromium(III) oxide }				14 mg/kg	1.462	18.436 mg/kg	0.00184 %	✓		
		215-160-9	1308-38-9								
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
6	copper { dicopper oxide; copper (I) oxide }				12 mg/kg	1.126	12.173 mg/kg	0.00122 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	11 mg/kg	1.56	15.459 mg/kg	0.000991 %	✓		
	082-004-00-2	231-846-0	7758-97-6								
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel chromate }				16 mg/kg	2.976	42.906 mg/kg	0.00429 %	✓		
	028-035-00-7	238-766-5	14721-18-7								
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.32 mg/kg	2.554	0.736 mg/kg	0.0000736 %	✓		
	034-002-00-8										
11	zinc { zinc chromate }				27 mg/kg	2.774	67.487 mg/kg	0.00675 %	✓		
	024-007-00-3										
12	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
15	toluene				0.0012 mg/kg		0.001 mg/kg	0.000000108 %	✓	
	601-021-00-3	203-625-9	108-88-3							
16	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
17	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
19	pH				7.7 pH		7.7 pH	7.7 pH		
			PH							
20	naphthalene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
21	acenaphthylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-917-1	208-96-8							
22	acenaphthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-469-6	83-32-9							
23	fluorene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-695-5	86-73-7							
24	phenanthrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-581-5	85-01-8							
25	anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-371-1	120-12-7							
26	fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-912-4	206-44-0							
27	pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-927-3	129-00-0							
28	benzo[a]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
29	chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
30	benzo[b]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
31	benzo[k]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
32	benzo[a]pyrene; benzo[def]chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
33	indeno[123-cd]pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-893-2	193-39-5							
34	dibenz[a,h]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
35	benzo[ghi]perylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-883-8	191-24-2							
36	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
37	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
		203-458-1, 200-863-5	107-06-2, 75-34-3							
38	tetrachloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-028-00-4	204-825-9	127-18-4							
39	carbon tetrachloride; tetrachloromethane				0.0026 mg/kg		0.0023 mg/kg	0.000000234 %	✓	
	602-008-00-5	200-262-8	56-23-5							
40	trichloroethylene; trichloroethene				0.058 mg/kg		0.0523 mg/kg	0.00000523 %	✓	
	602-027-00-9	201-167-4	79-01-6							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
41	vinyl chloride; chloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-023-00-7	200-831-0	75-01-4								
42	hexachlorobenzene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	602-065-00-6	204-273-9	118-74-1								
43	vanadium { divanadium pentaoxide; vanadium pentoxide }				12 mg/kg	1.785	19.301 mg/kg	0.00193 %		✓	
	023-001-00-8	215-239-8	1314-62-1								
44	dichlorodifluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		200-893-9	75-71-8								
45	chloromethane; methyl chloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-001-00-7	200-817-4	74-87-3								
46	bromomethane; methylbromide				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	602-002-00-2	200-813-2	74-83-9								
47	chloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
	602-009-00-0	200-830-5	75-00-3								
48	trichlorofluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		200-892-3	75-69-4								
49	1,1-dichloroethylene; vinylidene chloride				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	602-025-00-8	200-864-0	75-35-4								
50	bromochloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
		200-826-3	74-97-5								
51	chloroform; trichloromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-006-00-4	200-663-8	67-66-3								
52	1,1,1-trichloroethane; methyl chloroform				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-013-00-2	200-756-3	71-55-6								
53	1,1-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-031-00-0	209-253-3	563-58-6								
54	1,2-dichloropropane; propylene dichloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-020-00-0	201-152-2	78-87-5								
55	dibromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-003-00-8	200-824-2	74-95-3								
56	bromodichloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
		200-856-7	75-27-4								
57	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]								
58	trans-1,3-dichloropropene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		431-460-4	10061-02-6								
59	1,1,2-trichloroethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-014-00-8	201-166-9	79-00-5								
60	1,3-dichloropropane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		205-531-3	142-28-9								
61	dibromochloromethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		204-704-0	124-48-1								
62	1,2-dibromoethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
	602-010-00-6	203-444-5	106-93-4								
63	chlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-033-00-1	203-628-5	108-90-7								
64	1,1,1,2-tetrachloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		211-135-1	630-20-6								
65	styrene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-026-00-0	202-851-5	100-42-5								
66	bromoform; tribromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-007-00-X	200-854-6	75-25-2								
67	bromobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-060-00-9	203-623-8	108-86-1								
68	1,2,3-trichloropropane				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	602-062-00-X	202-486-1	96-18-4								
69	mesitylene; 1,3,5-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-025-00-5	203-604-4	108-67-8								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
70	tert-butylbenzene	202-632-4	98-06-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
71	1,2,4-trimethylbenzene	601-043-00-3	202-436-9	95-63-6	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
72	sec-butylbenzene	205-227-0	135-98-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
73	1,3-dichlorobenzene	602-067-00-7	208-792-1	541-73-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
74	4-isopropyltoluene	202-796-7	99-87-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
75	1,4-dichlorobenzene; p-dichlorobenzene	602-035-00-2	203-400-5	106-46-7	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
76	n-butylbenzene	203-209-7	104-51-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
77	1,2-dichlorobenzene; o-dichlorobenzene	602-034-00-7	202-425-9	95-50-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
78	1,2-dibromo-3-chloropropane	602-021-00-6	202-479-3	96-12-8	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
79	1,2,4-trichlorobenzene	602-087-00-6	204-428-0	120-82-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
80	hexachlorobutadiene	201-765-5	87-68-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
81	1,2,3-trichlorobenzene	201-757-1	87-61-6		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
82	carbon disulphide	006-003-00-3	200-843-6	75-15-0	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
83	dimethylnitrosamine; N-nitrosodimethylamine	612-077-00-3	200-549-8	62-75-9	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
84	2-chlorophenol; [1] 4-chlorophenol; [2] 3-chlorophenol; [3] chlorophenol [4]	604-008-00-0	202-433-2 [1] 203-402-6 [2] 203-582-6 [3] 246-691-4 [4]	95-57-8 [1] 106-48-9 [2] 108-43-0 [3] 25167-80-0 [4]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
85	bis(2-chloroethyl) ether	603-029-00-2	203-870-1	111-44-4	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
86	hexachloroethane	200-666-4	67-72-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
87	nitrosodipropylamine	612-098-00-8	210-698-0	621-64-7	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
88	nitrobenzene	609-003-00-7	202-716-0	98-95-3	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
89	3,5-trimethylcyclohex-2-enone; isophorone	606-012-00-8	201-126-0	78-59-1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
90	2-nitrophenol	201-857-5	88-75-5		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
91	3,4-xyleneol; [1] 2,5-xyleneol; [2] 2,4-xyleneol; [3] 2,3-xyleneol; [4] 2,6-xyleneol; [5] xyleneol; [6] 2,4(or 2,5)-xyleneol [7]	604-006-00-X	202-439-5 [1] 202-461-5 [2] 203-321-6 [3] 208-395-3 [4] 209-400-1 [5] 215-089-3 [6] 276-245-4 [7]	95-65-8 [1] 95-87-4 [2] 105-67-9 [3] 526-75-0 [4] 576-26-1 [5] 1300-71-6 [6] 71975-58-1 [7]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
92	bis(2-chloroethoxy)methane	203-920-2	111-91-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
93	2,4-dichlorophenol	604-011-00-7	204-429-6	120-83-2	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
94	4-chloroaniline	612-137-00-9	203-401-0	106-47-8	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
95	chlorocresol; 4-chloro-m-cresol; 4-chloro-3-methylphenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-014-00-3	200-431-6	59-50-7									
96	2-methyl naphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		202-078-3	91-57-6									
97	4-nitrophenol; p-nitrophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-015-00-2	202-811-7	100-02-7									
98	hexachlorocyclopentadiene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	602-078-00-7	201-029-3	77-47-4									
99	2,4,6-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-018-00-5	201-795-9	88-06-2									
100	2,4,5-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-017-00-X	202-467-8	95-95-4									
101	2-chloronaphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		202-079-9	91-58-7									
102	dimethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		205-011-6	131-11-3									
103	2,6-dinitrotoluene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-049-00-8	210-106-0	606-20-2									
104	dibenzofuran				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		205-071-3	132-64-9									
105	4-chlorophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		230-281-7	7005-72-3									
106	2,4-dinitrotoluene; [1] dinitrotoluene [2]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-007-00-9	204-450-0 [1] 246-836-1 [2]	121-14-2 [1] 25321-14-6 [2]									
107	diethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		201-550-6	84-66-2									
108	DNOC (ISO); 4,6-dinitro-o-cresol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-020-00-X	208-601-1	534-52-1									
109	azobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	611-001-00-6	203-102-5	103-33-3									
110	4-bromophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		202-952-4	101-55-3									
111	pentachlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-002-00-8	201-778-6	87-86-5									
112	carbazole				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		201-696-0	86-74-8									
113	dibutyl phthalate; DBP				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-318-00-4	201-557-4	84-74-2									
114	BBP; benzyl butyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-430-00-3	201-622-7	85-68-7									
115	bis(2-ethylhexyl) phthalate; di-(2-ethylhexyl) phthalate; DEHP				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-317-00-9	204-211-0	117-81-7									
116	di-n-octyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		204-214-7	117-84-0									
117	m-cresol; [1] o-cresol; [2] p-cresol; [3] mix-cresol [4]				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-004-00-9	203-577-9 [1] 202-423-8 [2] 203-398-6 [3] 215-293-2 [4]	108-39-4 [1] 95-48-7 [2] 106-44-5 [3] 1319-77-3 [4]									
118	1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<1.001	mg/kg		<1.001	mg/kg	<0.0001 %		<LOD
	602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]									
119	cumene; [1] propylbenzene [2]				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	601-024-00-X	202-704-5 [1] 203-132-9 [2]	98-82-8 [1] 103-65-1 [2]									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
120	2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4] 602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
121	o-nitroaniline; [1] m-nitroaniline; [2] p-nitroaniline [3] 612-012-00-9	201-855-4 [1] 202-729-1 [2] 202-810-1 [3]	88-74-4 [1] 99-09-2 [2] 100-01-6 [3]		<1.5 mg/kg		<1.5 mg/kg	<0.00015 %		<LOD
Total:								0.0222 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- ND Not detected
- CLP: Note 1 Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because Concentrations at less than 1.0% are "unlikely to be flammable". Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

toluene: (conc.: 1.08e-07%)

Classification of sample: WS203 D3-974942-20/02/2020-1.40

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS203 D3-974942-20/02/2020-1.40	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.40-1.90 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
17%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				21	mg/kg	1.32	23.013	mg/kg	0.0023 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.81	mg/kg	3.22	2.165	mg/kg	0.000216 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.78	mg/kg	1.142	0.74	mg/kg	0.000074 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	chromium in chromium(III) compounds { chromium(III) oxide }				30	mg/kg	1.462	36.393	mg/kg	0.00364 %	✓	
		215-160-9	1308-38-9									
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
6	copper { dicopper oxide; copper (I) oxide }				67	mg/kg	1.126	62.611	mg/kg	0.00626 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	280	mg/kg	1.56	362.501	mg/kg	0.0232 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
8	mercury { mercury dichloride }				0.35	mg/kg	1.353	0.393	mg/kg	0.0000393 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
9	nickel { nickel chromate }				29	mg/kg	2.976	71.639	mg/kg	0.00716 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.45	mg/kg	2.554	0.954	mg/kg	0.0000954 %	✓	
	034-002-00-8											
11	zinc { zinc chromate }				150	mg/kg	2.774	345.381	mg/kg	0.0345 %	✓	
	024-007-00-3											
12	TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH									
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
15	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
16	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
17	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
19	pH				8.5 pH		8.5 pH	8.5 pH		
			PH							
20	naphthalene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
21	acenaphthylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-917-1	208-96-8							
22	acenaphthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-469-6	83-32-9							
23	fluorene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-695-5	86-73-7							
24	phenanthrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-581-5	85-01-8							
25	anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-371-1	120-12-7							
26	fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-912-4	206-44-0							
27	pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-927-3	129-00-0							
28	benzo[a]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
29	chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
30	benzo[b]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
31	benzo[k]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
32	benzo[a]pyrene; benzo[def]chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
33	indeno[123-cd]pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-893-2	193-39-5							
34	dibenz[a,h]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
35	benzo[ghi]perylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-883-8	191-24-2							
36	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
37	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
		203-458-1, 200-863-5	107-06-2, 75-34-3							
38	tetrachloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-028-00-4	204-825-9	127-18-4							
39	carbon tetrachloride; tetrachloromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-008-00-5	200-262-8	56-23-5							
40	trichloroethylene; trichloroethene				0.029 mg/kg		0.0241 mg/kg	0.00000241 %	✓	
	602-027-00-9	201-167-4	79-01-6							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
41	vinyl chloride; chloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-023-00-7	200-831-0	75-01-4								
42	hexachlorobenzene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	602-065-00-6	204-273-9	118-74-1								
43	vanadium { divanadium pentaoxide; vanadium pentoxide }				26 mg/kg	1.785	38.524 mg/kg	0.00385 %		✓	
	023-001-00-8	215-239-8	1314-62-1								
44	dichlorodifluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		200-893-9	75-71-8								
45	chloromethane; methyl chloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-001-00-7	200-817-4	74-87-3								
46	bromomethane; methylbromide				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	602-002-00-2	200-813-2	74-83-9								
47	chloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
	602-009-00-0	200-830-5	75-00-3								
48	trichlorofluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		200-892-3	75-69-4								
49	1,1-dichloroethylene; vinylidene chloride				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	602-025-00-8	200-864-0	75-35-4								
50	bromochloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
		200-826-3	74-97-5								
51	chloroform; trichloromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-006-00-4	200-663-8	67-66-3								
52	1,1,1-trichloroethane; methyl chloroform				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-013-00-2	200-756-3	71-55-6								
53	1,1-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-031-00-0	209-253-3	563-58-6								
54	1,2-dichloropropane; propylene dichloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-020-00-0	201-152-2	78-87-5								
55	dibromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-003-00-8	200-824-2	74-95-3								
56	bromodichloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
		200-856-7	75-27-4								
57	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]								
58	trans-1,3-dichloropropene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		431-460-4	10061-02-6								
59	1,1,2-trichloroethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-014-00-8	201-166-9	79-00-5								
60	1,3-dichloropropane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		205-531-3	142-28-9								
61	dibromochloromethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		204-704-0	124-48-1								
62	1,2-dibromoethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
	602-010-00-6	203-444-5	106-93-4								
63	chlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-033-00-1	203-628-5	108-90-7								
64	1,1,1,2-tetrachloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		211-135-1	630-20-6								
65	styrene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-026-00-0	202-851-5	100-42-5								
66	bromoform; tribromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-007-00-X	200-854-6	75-25-2								
67	bromobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-060-00-9	203-623-8	108-86-1								
68	1,2,3-trichloropropane				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	602-062-00-X	202-486-1	96-18-4								
69	mesitylene; 1,3,5-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-025-00-5	203-604-4	108-67-8								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
70	tert-butylbenzene	202-632-4	98-06-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
71	1,2,4-trimethylbenzene	601-043-00-3	202-436-9	95-63-6	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
72	sec-butylbenzene	205-227-0	135-98-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
73	1,3-dichlorobenzene	602-067-00-7	208-792-1	541-73-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
74	4-isopropyltoluene	202-796-7	99-87-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
75	1,4-dichlorobenzene; p-dichlorobenzene	602-035-00-2	203-400-5	106-46-7	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
76	n-butylbenzene	203-209-7	104-51-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
77	1,2-dichlorobenzene; o-dichlorobenzene	602-034-00-7	202-425-9	95-50-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
78	1,2-dibromo-3-chloropropane	602-021-00-6	202-479-3	96-12-8	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
79	1,2,4-trichlorobenzene	602-087-00-6	204-428-0	120-82-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
80	hexachlorobutadiene	201-765-5	87-68-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
81	1,2,3-trichlorobenzene	201-757-1	87-61-6		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
82	carbon disulphide	006-003-00-3	200-843-6	75-15-0	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
83	dimethylnitrosamine; N-nitrosodimethylamine	612-077-00-3	200-549-8	62-75-9	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
84	2-chlorophenol; [1] 4-chlorophenol; [2] 3-chlorophenol; [3] chlorophenol [4]	604-008-00-0	202-433-2 [1] 203-402-6 [2] 203-582-6 [3] 246-691-4 [4]	95-57-8 [1] 106-48-9 [2] 108-43-0 [3] 25167-80-0 [4]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
85	bis(2-chloroethyl) ether	603-029-00-2	203-870-1	111-44-4	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
86	hexachloroethane	200-666-4	67-72-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
87	nitrosodipropylamine	612-098-00-8	210-698-0	621-64-7	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
88	nitrobenzene	609-003-00-7	202-716-0	98-95-3	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
89	3,5-trimethylcyclohex-2-enone; isophorone	606-012-00-8	201-126-0	78-59-1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
90	2-nitrophenol	201-857-5	88-75-5		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
91	3,4-xyleneol; [1] 2,5-xyleneol; [2] 2,4-xyleneol; [3] 2,3-xyleneol; [4] 2,6-xyleneol; [5] xyleneol; [6] 2,4(or 2,5)-xyleneol [7]	604-006-00-X	202-439-5 [1] 202-461-5 [2] 203-321-6 [3] 208-395-3 [4] 209-400-1 [5] 215-089-3 [6] 276-245-4 [7]	95-65-8 [1] 95-87-4 [2] 105-67-9 [3] 526-75-0 [4] 576-26-1 [5] 1300-71-6 [6] 71975-58-1 [7]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
92	bis(2-chloroethoxy)methane	203-920-2	111-91-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
93	2,4-dichlorophenol	604-011-00-7	204-429-6	120-83-2	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
94	4-chloroaniline	612-137-00-9	203-401-0	106-47-8	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
95	chlorocresol; 4-chloro-m-cresol; 4-chloro-3-methylphenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-014-00-3	200-431-6	59-50-7									
96	2-methyl naphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	202-078-3		91-57-6									
97	4-nitrophenol; p-nitrophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-015-00-2	202-811-7	100-02-7									
98	hexachlorocyclopentadiene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	602-078-00-7	201-029-3	77-47-4									
99	2,4,6-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-018-00-5	201-795-9	88-06-2									
100	2,4,5-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-017-00-X	202-467-8	95-95-4									
101	2-chloronaphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	202-079-9		91-58-7									
102	dimethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	205-011-6		131-11-3									
103	2,6-dinitrotoluene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-049-00-8	210-106-0	606-20-2									
104	dibenzofuran				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	205-071-3		132-64-9									
105	4-chlorophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	230-281-7		7005-72-3									
106	2,4-dinitrotoluene; [1] dinitrotoluene [2]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-007-00-9	204-450-0 [1] 246-836-1 [2]	121-14-2 [1] 25321-14-6 [2]									
107	diethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	201-550-6		84-66-2									
108	DNOC (ISO); 4,6-dinitro-o-cresol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-020-00-X	208-601-1	534-52-1									
109	azobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	611-001-00-6	203-102-5	103-33-3									
110	4-bromophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	202-952-4		101-55-3									
111	pentachlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-002-00-8	201-778-6	87-86-5									
112	carbazole				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	201-696-0		86-74-8									
113	dibutyl phthalate; DBP				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-318-00-4	201-557-4	84-74-2									
114	BBP; benzyl butyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-430-00-3	201-622-7	85-68-7									
115	bis(2-ethylhexyl) phthalate; di-(2-ethylhexyl) phthalate; DEHP				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-317-00-9	204-211-0	117-81-7									
116	di-n-octyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	204-214-7		117-84-0									
117	m-cresol; [1] o-cresol; [2] p-cresol; [3] mix-cresol [4]				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-004-00-9	203-577-9 [1] 202-423-8 [2] 203-398-6 [3] 215-293-2 [4]	108-39-4 [1] 95-48-7 [2] 106-44-5 [3] 1319-77-3 [4]									
118	1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<1.001	mg/kg		<1.001	mg/kg	<0.0001 %		<LOD
	602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]									
119	cumene; [1] propylbenzene [2]				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	601-024-00-X	202-704-5 [1] 203-132-9 [2]	98-82-8 [1] 103-65-1 [2]									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
120	2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4] 602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
121	o-nitroaniline; [1] m-nitroaniline; [2] p-nitroaniline [3] 612-012-00-9	201-855-4 [1] 202-729-1 [2] 202-810-1 [3]	88-74-4 [1] 99-09-2 [2] 100-01-6 [3]		<1.5 mg/kg		<1.5 mg/kg	<0.00015 %		<LOD
Total:								0.0857 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- ND** Not detected
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS204 D2-974944-20/02/2020-0.30

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS204 D2-974944-20/02/2020-0.30	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30-0.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
16%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
1		arsenic { arsenic trioxide }				8.6	mg/kg	1.32	9.538	mg/kg	0.000954 %	✓		
		033-003-00-0	215-481-4	1327-53-3										
2		boron { diboron trioxide; boric oxide }				0.48	mg/kg	3.22	1.298	mg/kg	0.00013 %	✓		
		005-008-00-8	215-125-8	1303-86-2										
3		cadmium { cadmium oxide }				0.15	mg/kg	1.142	0.144	mg/kg	0.0000144 %	✓		
		048-002-00-0	215-146-2	1306-19-0										
4		chromium in chromium(III) compounds { chromium(III) oxide }				23	mg/kg	1.462	28.237	mg/kg	0.00282 %	✓		
			215-160-9	1308-38-9										
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD	
		024-001-00-0	215-607-8	1333-82-0										
6		copper { dicopper oxide; copper (I) oxide }				18	mg/kg	1.126	17.023	mg/kg	0.0017 %	✓		
		029-002-00-X	215-270-7	1317-39-1										
7		lead { lead chromate }			1	21	mg/kg	1.56	27.515	mg/kg	0.00176 %	✓		
		082-004-00-2	231-846-0	7758-97-6										
8		mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD	
		080-010-00-X	231-299-8	7487-94-7										
9		nickel { nickel chromate }				27	mg/kg	2.976	67.502	mg/kg	0.00675 %	✓		
		028-035-00-7	238-766-5	14721-18-7										
10		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.42	mg/kg	2.554	0.901	mg/kg	0.0000901 %	✓		
		034-002-00-8												
11		zinc { zinc chromate }				58	mg/kg	2.774	135.156	mg/kg	0.0135 %	✓		
		024-007-00-3												
12		TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD	
				TPH										
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD	
		603-181-00-X	216-653-1	1634-04-4										

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
15	toluene				0.0012 mg/kg		0.001 mg/kg	0.000000101 %	✓	
	601-021-00-3	203-625-9	108-88-3							
16	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
17	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
19	pH				7.8 pH		7.8 pH	7.8 pH		
			PH							
20	naphthalene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
21	acenaphthylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-917-1	208-96-8							
22	acenaphthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-469-6	83-32-9							
23	fluorene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-695-5	86-73-7							
24	phenanthrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		201-581-5	85-01-8							
25	anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-371-1	120-12-7							
26	fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-912-4	206-44-0							
27	pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		204-927-3	129-00-0							
28	benzo[a]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
29	chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
30	benzo[b]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
31	benzo[k]fluoranthene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
32	benzo[a]pyrene; benzo[def]chrysene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
33	indeno[123-cd]pyrene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-893-2	193-39-5							
34	dibenz[a,h]anthracene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
35	benzo[ghi]perylene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
		205-883-8	191-24-2							
36	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
37	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.003 mg/kg		<0.003 mg/kg	<0.0000003 %		<LOD
		203-458-1, 200-863-5	107-06-2, 75-34-3							
38	tetrachloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-028-00-4	204-825-9	127-18-4							
39	carbon tetrachloride; tetrachloromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	602-008-00-5	200-262-8	56-23-5							
40	trichloroethylene; trichloroethene				0.062 mg/kg		0.0521 mg/kg	0.00000521 %	✓	
	602-027-00-9	201-167-4	79-01-6							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
41	vinyl chloride; chloroethylene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-023-00-7	200-831-0	75-01-4								
42	hexachlorobenzene				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	602-065-00-6	204-273-9	118-74-1								
43	vanadium { divanadium pentaoxide; vanadium pentoxide }				21 mg/kg	1.785	31.491 mg/kg	0.00315 %		✓	
	023-001-00-8	215-239-8	1314-62-1								
44	dichlorodifluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		200-893-9	75-71-8								
45	chloromethane; methyl chloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-001-00-7	200-817-4	74-87-3								
46	bromomethane; methylbromide				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	602-002-00-2	200-813-2	74-83-9								
47	chloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
	602-009-00-0	200-830-5	75-00-3								
48	trichlorofluoromethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
		200-892-3	75-69-4								
49	1,1-dichloroethylene; vinylidene chloride				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	602-025-00-8	200-864-0	75-35-4								
50	bromochloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
		200-826-3	74-97-5								
51	chloroform; trichloromethane				0.0013 mg/kg		0.001 mg/kg	0.000000109 %		✓	
	602-006-00-4	200-663-8	67-66-3								
52	1,1,1-trichloroethane; methyl chloroform				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-013-00-2	200-756-3	71-55-6								
53	1,1-dichloropropene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-031-00-0	209-253-3	563-58-6								
54	1,2-dichloropropane; propylene dichloride				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-020-00-0	201-152-2	78-87-5								
55	dibromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-003-00-8	200-824-2	74-95-3								
56	bromodichloromethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
		200-856-7	75-27-4								
57	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]								
58	trans-1,3-dichloropropene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		431-460-4	10061-02-6								
59	1,1,2-trichloroethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-014-00-8	201-166-9	79-00-5								
60	1,3-dichloropropane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		205-531-3	142-28-9								
61	dibromochloromethane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		204-704-0	124-48-1								
62	1,2-dibromoethane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %			<LOD
	602-010-00-6	203-444-5	106-93-4								
63	chlorobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-033-00-1	203-628-5	108-90-7								
64	1,1,1,2-tetrachloroethane				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
		211-135-1	630-20-6								
65	styrene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-026-00-0	202-851-5	100-42-5								
66	bromoform; tribromomethane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-007-00-X	200-854-6	75-25-2								
67	bromobenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	602-060-00-9	203-623-8	108-86-1								
68	1,2,3-trichloropropane				<0.05 mg/kg		<0.05 mg/kg	<0.000005 %			<LOD
	602-062-00-X	202-486-1	96-18-4								
69	mesitylene; 1,3,5-trimethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-025-00-5	203-604-4	108-67-8								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
70	tert-butylbenzene	202-632-4	98-06-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
71	1,2,4-trimethylbenzene	601-043-00-3	202-436-9	95-63-6	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
72	sec-butylbenzene	205-227-0	135-98-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
73	1,3-dichlorobenzene	602-067-00-7	208-792-1	541-73-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
74	4-isopropyltoluene	202-796-7	99-87-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
75	1,4-dichlorobenzene; p-dichlorobenzene	602-035-00-2	203-400-5	106-46-7	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
76	n-butylbenzene	203-209-7	104-51-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
77	1,2-dichlorobenzene; o-dichlorobenzene	602-034-00-7	202-425-9	95-50-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
78	1,2-dibromo-3-chloropropane	602-021-00-6	202-479-3	96-12-8	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
79	1,2,4-trichlorobenzene	602-087-00-6	204-428-0	120-82-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
80	hexachlorobutadiene	201-765-5	87-68-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
81	1,2,3-trichlorobenzene	201-757-1	87-61-6		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
82	carbon disulphide	006-003-00-3	200-843-6	75-15-0	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
83	dimethylnitrosamine; N-nitrosodimethylamine	612-077-00-3	200-549-8	62-75-9	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
84	2-chlorophenol; [1] 4-chlorophenol; [2] 3-chlorophenol; [3] chlorophenol [4]	604-008-00-0	202-433-2 [1] 203-402-6 [2] 203-582-6 [3] 246-691-4 [4]	95-57-8 [1] 106-48-9 [2] 108-43-0 [3] 25167-80-0 [4]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
85	bis(2-chloroethyl) ether	603-029-00-2	203-870-1	111-44-4	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
86	hexachloroethane	200-666-4	67-72-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
87	nitrosodipropylamine	612-098-00-8	210-698-0	621-64-7	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
88	nitrobenzene	609-003-00-7	202-716-0	98-95-3	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
89	3,5-trimethylcyclohex-2-enone; isophorone	606-012-00-8	201-126-0	78-59-1	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
90	2-nitrophenol	201-857-5	88-75-5		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
91	3,4-xyleneol; [1] 2,5-xyleneol; [2] 2,4-xyleneol; [3] 2,3-xyleneol; [4] 2,6-xyleneol; [5] xyleneol; [6] 2,4(or 2,5)-xyleneol [7]	604-006-00-X	202-439-5 [1] 202-461-5 [2] 203-321-6 [3] 208-395-3 [4] 209-400-1 [5] 215-089-3 [6] 276-245-4 [7]	95-65-8 [1] 95-87-4 [2] 105-67-9 [3] 526-75-0 [4] 576-26-1 [5] 1300-71-6 [6] 71975-58-1 [7]	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
92	bis(2-chloroethoxy)methane	203-920-2	111-91-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
93	2,4-dichlorophenol	604-011-00-7	204-429-6	120-83-2	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
94	4-chloroaniline	612-137-00-9	203-401-0	106-47-8	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
95	chlorocresol; 4-chloro-m-cresol; 4-chloro-3-methylphenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-014-00-3	200-431-6	59-50-7									
96	2-methyl naphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	202-078-3		91-57-6									
97	4-nitrophenol; p-nitrophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-015-00-2	202-811-7	100-02-7									
98	hexachlorocyclopentadiene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	602-078-00-7	201-029-3	77-47-4									
99	2,4,6-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-018-00-5	201-795-9	88-06-2									
100	2,4,5-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-017-00-X	202-467-8	95-95-4									
101	2-chloronaphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	202-079-9		91-58-7									
102	dimethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	205-011-6		131-11-3									
103	2,6-dinitrotoluene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-049-00-8	210-106-0	606-20-2									
104	dibenzofuran				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	205-071-3		132-64-9									
105	4-chlorophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	230-281-7		7005-72-3									
106	2,4-dinitrotoluene; [1] dinitrotoluene [2]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-007-00-9	204-450-0 [1] 246-836-1 [2]	121-14-2 [1] 25321-14-6 [2]									
107	diethyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	201-550-6		84-66-2									
108	DNOC (ISO); 4,6-dinitro-o-cresol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-020-00-X	208-601-1	534-52-1									
109	azobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	611-001-00-6	203-102-5	103-33-3									
110	4-bromophenylphenylether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	202-952-4		101-55-3									
111	pentachlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-002-00-8	201-778-6	87-86-5									
112	carbazole				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	201-696-0		86-74-8									
113	dibutyl phthalate; DBP				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-318-00-4	201-557-4	84-74-2									
114	BBP; benzyl butyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-430-00-3	201-622-7	85-68-7									
115	bis(2-ethylhexyl) phthalate; di-(2-ethylhexyl) phthalate; DEHP				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	607-317-00-9	204-211-0	117-81-7									
116	di-n-octyl phthalate				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	204-214-7		117-84-0									
117	m-cresol; [1] o-cresol; [2] p-cresol; [3] mix-cresol [4]				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	604-004-00-9	203-577-9 [1] 202-423-8 [2] 203-398-6 [3] 215-293-2 [4]	108-39-4 [1] 95-48-7 [2] 106-44-5 [3] 1319-77-3 [4]									
118	1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]				<1.001	mg/kg		<1.001	mg/kg	<0.0001 %		<LOD
	602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]	540-59-0 [1] 156-59-2 [2] 156-60-5 [3]									
119	cumene; [1] propylbenzene [2]				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	601-024-00-X	202-704-5 [1] 203-132-9 [2]	98-82-8 [1] 103-65-1 [2]									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
120	2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4] 602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]	95-49-8 [1] 108-41-8 [2] 106-43-4 [3] 25168-05-2 [4]		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
121	o-nitroaniline; [1] m-nitroaniline; [2] p-nitroaniline [3] 612-012-00-9	201-855-4 [1] 202-729-1 [2] 202-810-1 [3]	88-74-4 [1] 99-09-2 [2] 100-01-6 [3]		<1.5 mg/kg		<1.5 mg/kg	<0.00015 %		<LOD
Total:								0.0352 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1 Only the metal concentration has been used for classification	

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because Concentrations at less than 1.0% are "unlikely to be flammable". Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

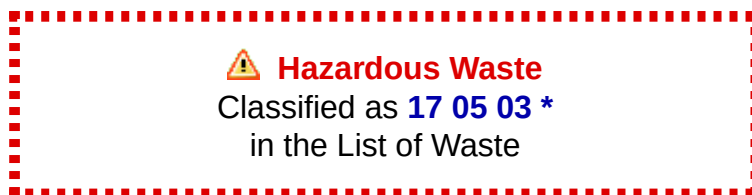
Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

toluene: (conc.: 1.01e-07%)

Classification of sample: WS205 D3-974947-20/02/2020-2.00



Sample details

Sample Name:	LoW Code:
WS205 D3-974947-20/02/2020-2.00	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
2.00-2.70 m	
Moisture content:	
15%	
(wet weight correction)	

Hazard properties

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to hazardous because Concentrations at less than 1.0% are "unlikely to be flammable".
Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 2.98e-07%)

toluene: (conc.: 1.87e-06%)

ethylbenzene: (conc.: 5.61e-06%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 1.615%)

xylene: (conc.: 0.00001%)

mesitylene; 1,3,5-trimethylbenzene: (conc.: 5.95e-06%)

1,2,4-trimethylbenzene: (conc.: 0.00002%)

cumene; [1] propylbenzene [2]: (conc.: 1.11e-06%)

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1.615%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1.615%)

HP 14: Ecotoxic "waste which presents or may present immediate or delayed risks for one or more sectors of the environment"

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

naphthalene: (conc.: 0.187%)

Aquatic Chronic 2; H411 "Toxic to aquatic life with long lasting effects."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 1.615%)

Determinands

Moisture content: 15% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				7.6 mg/kg	1.32	8.529 mg/kg	0.000853 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.14 mg/kg	1.142	0.136 mg/kg	0.0000136 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide }				22 mg/kg	1.462	27.331 mg/kg	0.00273 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				14 mg/kg	1.126	13.398 mg/kg	0.00134 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	14 mg/kg	1.56	18.562 mg/kg	0.00119 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				26 mg/kg	2.976	65.775 mg/kg	0.00658 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.35 mg/kg	2.554	0.76 mg/kg	0.000076 %	✓	
	034-002-00-8									
11	zinc { zinc chromate }				51 mg/kg	2.774	120.259 mg/kg	0.012 %	✓	
	024-007-00-3									
12	TPH (C6 to C40) petroleum group		TPH		19000 mg/kg		16150 mg/kg	1.615 %	✓	
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
14	benzene				0.0035 mg/kg		0.0029 mg/kg	0.000000298 %	✓	
	601-020-00-8	200-753-7	71-43-2							
15	toluene				0.022 mg/kg		0.0187 mg/kg	0.00000187 %	✓	
	601-021-00-3	203-625-9	108-88-3							
16	ethylbenzene				0.066 mg/kg		0.0561 mg/kg	0.00000561 %	✓	
	601-023-00-4	202-849-4	100-41-4							
17	xylene				0.19 mg/kg		0.161 mg/kg	0.0000161 %	✓	
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									

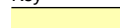
#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
19	● pH				7.8	pH		7.8	pH	7.8 pH		
20	naphthalene				2200	mg/kg		1870	mg/kg	0.187 %	✓	
	601-052-00-2	202-049-5	91-20-3									
21	● acenaphthylene				13	mg/kg		11.05	mg/kg	0.00111 %	✓	
		205-917-1	208-96-8									
22	● acenaphthene				130	mg/kg		110.5	mg/kg	0.0111 %	✓	
		201-469-6	83-32-9									
23	● fluorene				130	mg/kg		110.5	mg/kg	0.0111 %	✓	
		201-695-5	86-73-7									
24	● phenanthrene				460	mg/kg		391	mg/kg	0.0391 %	✓	
		201-581-5	85-01-8									
25	● anthracene				82	mg/kg		69.7	mg/kg	0.00697 %	✓	
		204-371-1	120-12-7									
26	● fluoranthene				91	mg/kg		77.35	mg/kg	0.00774 %	✓	
		205-912-4	206-44-0									
27	● pyrene				64	mg/kg		54.4	mg/kg	0.00544 %	✓	
		204-927-3	129-00-0									
28	benzo[a]anthracene				11	mg/kg		9.35	mg/kg	0.000935 %	✓	
	601-033-00-9	200-280-6	56-55-3									
29	chrysene				15	mg/kg		12.75	mg/kg	0.00128 %	✓	
	601-048-00-0	205-923-4	218-01-9									
30	benzo[b]fluoranthene				2.4	mg/kg		2.04	mg/kg	0.000204 %	✓	
	601-034-00-4	205-911-9	205-99-2									
31	benzo[k]fluoranthene				1.9	mg/kg		1.615	mg/kg	0.000162 %	✓	
	601-036-00-5	205-916-6	207-08-9									
32	benzo[a]pyrene; benzo[def]chrysene				1.5	mg/kg		1.275	mg/kg	0.000127 %	✓	
	601-032-00-3	200-028-5	50-32-8									
33	● indeno[123-cd]pyrene				2.6	mg/kg		2.21	mg/kg	0.000221 %	✓	
		205-893-2	193-39-5									
34	dibenz[a,h]anthracene				15	mg/kg		12.75	mg/kg	0.00128 %	✓	
	601-041-00-2	200-181-8	53-70-3									
35	● benzo[ghi]perylene				4.9	mg/kg		4.165	mg/kg	0.000417 %	✓	
		205-883-8	191-24-2									
36	phenol				50	mg/kg		42.5	mg/kg	0.00425 %	✓	
	604-001-00-2	203-632-7	108-95-2									
37	● 1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.003	mg/kg		<0.003	mg/kg	<0.0000003 %		<LOD
		203-458-1, 200-863-5	107-06-2, 75-34-3									
38	tetrachloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-028-00-4	204-825-9	127-18-4									
39	carbon tetrachloride; tetrachloromethane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-008-00-5	200-262-8	56-23-5									
40	trichloroethylene; trichloroethene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-027-00-9	201-167-4	79-01-6									
41	vinyl chloride; chloroethylene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-023-00-7	200-831-0	75-01-4									
42	hexachlorobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	602-065-00-6	204-273-9	118-74-1									
43	● vanadium { divanadium pentaoxide; vanadium pentoxide }				21	mg/kg	1.785	31.866	mg/kg	0.00319 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
44	● dichlorodifluoromethane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		200-893-9	75-71-8									
45	chloromethane; methyl chloride				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-001-00-7	200-817-4	74-87-3									
46	bromomethane; methylbromide				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	602-002-00-2	200-813-2	74-83-9									
47	chloroethane				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	602-009-00-0	200-830-5	75-00-3									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
48	trichlorofluoromethane	200-892-3	75-69-4		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
49	1,1-dichloroethylene; vinylidene chloride	602-025-00-8	200-864-0	75-35-4	<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
50	bromochloromethane	200-826-3	74-97-5		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
51	chloroform; trichloromethane	602-006-00-4	200-663-8	67-66-3	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
52	1,1,1-trichloroethane; methyl chloroform	602-013-00-2	200-756-3	71-55-6	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
53	1,1-dichloropropene	602-031-00-0	209-253-3	563-58-6	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
54	1,2-dichloropropane; propylene dichloride	602-020-00-0	201-152-2	78-87-5	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
55	dibromomethane	602-003-00-8	200-824-2	74-95-3	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
56	bromodichloromethane	200-856-7	75-27-4		<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
57	1,3-dichloropropene; [1] (Z)-1,3-dichloropropene [2]	602-030-00-5	208-826-5 [1] 233-195-8 [2]	542-75-6 [1] 10061-01-5 [2]	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
58	trans-1,3-dichloropropene	431-460-4	10061-02-6		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
59	1,1,2-trichloroethane	602-014-00-8	201-166-9	79-00-5	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
60	1,3-dichloropropane	205-531-3	142-28-9		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
61	dibromochloromethane	204-704-0	124-48-1		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
62	1,2-dibromoethane	602-010-00-6	203-444-5	106-93-4	<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
63	chlorobenzene	602-033-00-1	203-628-5	108-90-7	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
64	1,1,1,2-tetrachloroethane	211-135-1	630-20-6		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
65	styrene	601-026-00-0	202-851-5	100-42-5	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
66	bromoform; tribromomethane	602-007-00-X	200-854-6	75-25-2	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
67	bromobenzene	602-060-00-9	203-623-8	108-86-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
68	1,2,3-trichloropropane	602-062-00-X	202-486-1	96-18-4	<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
69	mesitylene; 1,3,5-trimethylbenzene	601-025-00-5	203-604-4	108-67-8	0.07 mg/kg		0.0595 mg/kg	0.00000595 %	✓	
70	tert-butylbenzene	202-632-4	98-06-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
71	1,2,4-trimethylbenzene	601-043-00-3	202-436-9	95-63-6	0.24 mg/kg		0.204 mg/kg	0.0000204 %	✓	
72	sec-butylbenzene	205-227-0	135-98-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
73	1,3-dichlorobenzene	602-067-00-7	208-792-1	541-73-1	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
74	4-isopropyltoluene	202-796-7	99-87-6		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
75	1,4-dichlorobenzene; p-dichlorobenzene	602-035-00-2	203-400-5	106-46-7	<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
76	n-butylbenzene	203-209-7	104-51-8		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
77	1,2-dichlorobenzene; o-dichlorobenzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-034-00-7	202-425-9	95-50-1									
78	1,2-dibromo-3-chloropropane				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
	602-021-00-6	202-479-3	96-12-8									
79	1,2,4-trichlorobenzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	602-087-00-6	204-428-0	120-82-1									
80	hexachlorobutadiene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		201-765-5	87-68-3									
81	1,2,3-trichlorobenzene				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
		201-757-1	87-61-6									
82	carbon disulphide				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
	006-003-00-3	200-843-6	75-15-0									
83	dimethylnitrosoamine; N-nitrosodimethylamine				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	612-077-00-3	200-549-8	62-75-9									
84	2-chlorophenol; [1] 4-chlorophenol; [2] 3-chlorophenol; [3] chlorophenol [4]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-008-00-0	202-433-2 [1]	95-57-8 [1]									
		203-402-6 [2]	106-48-9 [2]									
		203-582-6 [3]	108-43-0 [3]									
		246-691-4 [4]	25167-80-0 [4]									
85	bis(2-chloroethyl) ether				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	603-029-00-2	203-870-1	111-44-4									
86	hexachloroethane				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		200-666-4	67-72-1									
87	nitrosodipropylamine				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	612-098-00-8	210-698-0	621-64-7									
88	nitrobenzene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-003-00-7	202-716-0	98-95-3									
89	3,5,5-trimethylcyclohex-2-enone; isophorone				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	606-012-00-8	201-126-0	78-59-1									
90	2-nitrophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		201-857-5	88-75-5									
91	3,4-xyleneol; [1] 2,5-xyleneol; [2] 2,4-xyleneol; [3] 2,3-xyleneol; [4] 2,6-xyleneol; [5] xyleneol; [6] 2,4(or 2,5)-xyleneol [7]				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-006-00-X	202-439-5 [1]	95-65-8 [1] 95-87-4									
		202-461-5 [2]	[2] 105-67-9 [3]									
		203-321-6 [3]	526-75-0 [4]									
		208-395-3 [4]	576-26-1 [5]									
		209-400-1 [5]	1300-71-6 [6]									
		215-089-3 [6]	71975-58-1 [7]									
		276-245-4 [7]										
92	bis(2-chloroethoxy)methane				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		203-920-2	111-91-1									
93	2,4-dichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-011-00-7	204-429-6	120-83-2									
94	4-chloroaniline				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	612-137-00-9	203-401-0	106-47-8									
95	chlorocresol; 4-chloro-m-cresol; 4-chloro-3-methylphenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-014-00-3	200-431-6	59-50-7									
96	2-methyl naphthalene				510	mg/kg		433.5	mg/kg	0.0434 %	✓	
		202-078-3	91-57-6									
97	4-nitrophenol; p-nitrophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	609-015-00-2	202-811-7	100-02-7									
98	hexachlorocyclopentadiene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	602-078-00-7	201-029-3	77-47-4									
99	2,4,6-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-018-00-5	201-795-9	88-06-2									
100	2,4,5-trichlorophenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-017-00-X	202-467-8	95-95-4									
101	2-chloronaphthalene				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		202-079-9	91-58-7									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
102	dimethyl phthalate	205-011-6	131-11-3		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
103	2,6-dinitrotoluene	609-049-00-8	210-106-0		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
104	dibenzofuran	205-071-3	132-64-9		220 mg/kg		187 mg/kg	0.0187 %	✓		
105	4-chlorophenylphenylether	230-281-7	7005-72-3		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
106	2,4-dinitrotoluene; [1] dinitrotoluene [2]	609-007-00-9	204-450-0 [1] 246-836-1 [2]		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
107	diethyl phthalate	201-550-6	84-66-2		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
108	DNOC (ISO); 4,6-dinitro-o-cresol	609-020-00-X	208-601-1		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
109	azobenzene	611-001-00-6	203-102-5		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
110	4-bromophenylphenylether	202-952-4	101-55-3		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
111	pentachlorophenol	604-002-00-8	201-778-6		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
112	carbazole	201-696-0	86-74-8		43 mg/kg		36.55 mg/kg	0.00366 %	✓		
113	dibutyl phthalate; DBP	607-318-00-4	201-557-4		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
114	BBP; benzyl butyl phthalate	607-430-00-3	201-622-7		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
115	bis(2-ethylhexyl) phthalate; di-(2-ethylhexyl) phthalate; DEHP	607-317-00-9	204-211-0		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
116	di-n-octyl phthalate	204-214-7	117-84-0		<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
117	m-cresol; [1] o-cresol; [2] p-cresol; [3] mix-cresol [4]	604-004-00-9	203-577-9 [1] 202-423-8 [2] 203-398-6 [3] 215-293-2 [4]		54 mg/kg		45.9 mg/kg	0.00459 %	✓		
118	1,2-dichloroethylene; [1] cis-dichloroethylene; [2] trans-dichloroethylene [3]	602-026-00-3	208-750-2 [1] 205-859-7 [2] 205-860-2 [3]		<1.001 mg/kg		<1.001 mg/kg	<0.0001 %			<LOD
119	cumene; [1] propylbenzene [2]	601-024-00-X	202-704-5 [1] 203-132-9 [2]		0.013 mg/kg		0.011 mg/kg	0.0000011 %	✓		
120	2-chlorotoluene; [1] 3-chlorotoluene; [2] 4-chlorotoluene; [3] chlorotoluene [4]	602-040-00-X	202-424-3 [1] 203-580-5 [2] 203-397-0 [3] 246-698-2 [4]		<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
121	o-nitroaniline; [1] m-nitroaniline; [2] p-nitroaniline [3]	612-012-00-9	201-855-4 [1] 202-729-1 [2] 202-810-1 [3]		<1.5 mg/kg		<1.5 mg/kg	<0.00015 %			<LOD
Total:									1.994 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non CLP determinands

■ **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

■ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Aquatic Chronic 2 H411 , Repr. 2 H361d , Carc. 1B H350 , Muta. 1B H340 , STOT RE 2 H373 , Asp. Tox. 1 H304 , Flam. Liq. 3 H226

■ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4

Description/Comments:

Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)

Additional Hazard Statement(s): Carc. 2 H351

Reason for additional Hazards Statement(s):

03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

■ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

CLP index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

■ **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 1 H310 , Acute Tox. 1 H330 , Acute Tox. 4 H302

■ **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 2 H411 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

■ **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

■ **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Skin Irrit. 2 H315 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Carc. 2 H351 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302

■ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

■ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

■ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

■ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2 H351

■ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

■ **1,1-dichloroethane and 1,2-dichloroethane (combined)** (EC Number: 203-458-1, 200-863-5, CAS Number: 107-06-2, 75-34-3)

Description/Comments: Combines the hazard statements and risk phrases for 1,1-dichloroethane and 1,2-dichloroethane

Data source: N/A

Data source date: 14 Oct 2016

Hazard Statements: Aquatic Chronic 3 H412 , Carc. 1B H350 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315 , Acute Tox. 4 H302 , Flam. Liq. 2 H225

■ **dichlorodifluoromethane** (EC Number: 200-893-9, CAS Number: 75-71-8)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Press. Gas H280 , Ozone 1 H420 , Aquatic Chronic 3 H412

■ **trichlorofluoromethane** (EC Number: 200-892-3, CAS Number: 75-69-4)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Ozone 1 H420 , Acute Tox. 4 H312

■ **bromochloromethane** (EC Number: 200-826-3, CAS Number: 74-97-5)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Ozone 1 H420 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Acute Tox. 4 H332 , Eye Dam. 1 H318 , Skin Corr. 1B H314 , Acute Tox. 4 H312

▪ **bromodichloromethane** (EC Number: 200-856-7, CAS Number: 75-27-4)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Repr. 1A H360, Carc. 1B H350, Muta. 1B H340, STOT SE 3 H335, Eye Irrit. 2 H319, Eye Dam. 1 H318, Skin Irrit. 2 H315, Acute Tox. 4 H302

▪ **trans-1,3-dichloropropene** (EC Number: 431-460-4, CAS Number: 10061-02-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410, STOT SE 3 H335, Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Sens. 1 H317, Skin Irrit. 2 H315, Acute Tox. 3 H311, Asp. Tox. 1 H304, Acute Tox. 3 H301, Flam. Liq. 3 H226

▪ **1,3-dichloropropane** (EC Number: 205-531-3, CAS Number: 142-28-9)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: STOT SE 3 H335, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Flam. Liq. 3 H226, Flam. Liq. 2 H225, Acute Tox. 4 H332

▪ **dibromochloromethane** (EC Number: 204-704-0, CAS Number: 124-48-1)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 3;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 2 H411, Muta. 2 H341, STOT SE 3 H336, STOT SE 3 H335, Acute Tox. 4 H332, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Acute Tox. 4 H312, Acute Tox. 4 H302

▪ **1,1,1,2-tetrachloroethane** (EC Number: 211-135-1, CAS Number: 630-20-6)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Skin Irrit. 2 H315, Aquatic Chronic 3 H412, Acute Tox. 4 H312, Carc. 2 H351, Acute Tox. 4 H332, Eye Dam. 1 H318, Acute Tox. 3 H331, Eye Irrit. 2 H319, Acute Tox. 1 H310, Acute Tox. 4 H302

▪ **tert-butylbenzene** (EC Number: 202-632-4, CAS Number: 98-06-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 2 H411, Asp. Tox. 1 H304, STOT SE 3 H335, Acute Tox. 4 H332, Acute Tox. 3 H331, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Flam. Liq. 3 H226

▪ **sec-butylbenzene** (EC Number: 205-227-0, CAS Number: 135-98-8)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 2 H411, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Asp. Tox. 1 H304, Flam. Liq. 3 H226

▪ **4-isopropyltoluene** (EC Number: 202-796-7, CAS Number: 99-87-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 2 H411, STOT SE 3 H335, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Asp. Tox. 1 H304, Flam. Liq. 3 H226

▪ **n-butylbenzene** (EC Number: 203-209-7, CAS Number: 104-51-8)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410, Aquatic Acute 1 H400, Eye Irrit. 2 H319, Skin Irrit. 2 H315, Flam. Liq. 3 H226

▪ **hexachlorobutadiene** (EC Number: 201-765-5, CAS Number: 87-68-3)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 3;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410, Aquatic Acute 1 H400, STOT SE 2 H371, Repr. 2 H361, Carc. 2 H351, Acute Tox. 2 H330, Eye Irrit. 2 H319, Skin Sens. 1 H317, Skin Irrit. 2 H315, Acute Tox. 2 H310, Acute Tox. 3 H301

■ **1,2,3-trichlorobenzene** (EC Number: 201-757-1, CAS Number: 87-61-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 3 H410 , Aquatic Acute 1 H400 , STOT SE 3 H336 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315 , Acute Tox. 4 H302

■ **hexachloroethane** (EC Number: 200-666-4, CAS Number: 67-72-1)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: STOT RE 2 H373 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Carc. 2 H351 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

■ **2-nitrophenol** (EC Number: 201-857-5, CAS Number: 88-75-5)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT RE 2 H373 , STOT SE 3 H335 , Acute Tox. 4 H332 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315 , Acute Tox. 4 H312 , Acute Tox. 4 H302

■ **bis(2-chloroethoxy)methane** (EC Number: 203-920-2, CAS Number: 111-91-1)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: STOT RE 2 H373 , STOT SE 1 H370 , Acute Tox. 2 H330 , Acute Tox. 1 H330 , Acute Tox. 4 H312 , Acute Tox. 3 H301

■ **2-methyl naphthalene** (EC Number: 202-078-3, CAS Number: 91-57-6)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H336 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315 , Acute Tox. 4 H302

■ **2-chloronaphthalene** (EC Number: 202-079-9, CAS Number: 91-58-7)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

■ **dimethyl phthalate** (EC Number: 205-011-6, CAS Number: 131-11-3)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 3 H412 , Repr. 2 H361 , STOT SE 3 H336 , STOT SE 3 H335 , Acute Tox. 3 H331 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

■ **dibenzofuran** (EC Number: 205-071-3, CAS Number: 132-64-9)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 2 H411 , Acute Tox. 4 H332 , Acute Tox. 4 H312 , Acute Tox. 4 H302

■ **4-chlorophenylphenylether** (EC Number: 230-281-7, CAS Number: 7005-72-3)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Eye Dam. 1 H318 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , Acute Tox. 4 H302

■ **diethyl phthalate** (EC Number: 201-550-6, CAS Number: 84-66-2)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410 , Skin Sens. 1 H317 , STOT SE 3 H336 , Acute Tox. 4 H302 , Repr. 2 H361 , STOT RE 2 H373 , STOT SE 3 H335 , Acute Tox. 3 H311 , Acute Tox. 3 H331 , Skin Irrit. 2 H315

▪ **4-bromophenylphenylether** (EC Number: 202-952-4, CAS Number: 101-55-3)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Eye Irrit. 2 H319 , Eye Dam. 1 H318 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , Acute Tox. 4 H302

▪ **carbazole** (EC Number: 201-696-0, CAS Number: 86-74-8)

Description/Comments: VOC; Data from C&L Inventory Database; IARC considers substance Group 2B;

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Acute Tox. 3 H301 , Acute Tox. 3 H311 , Acute Tox. 3 H331 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Carc. 2 H351 , Muta. 2 H341 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315 , Acute Tox. 4 H302

▪ **di-n-octyl phthalate** (EC Number: 204-214-7, CAS Number: 117-84-0)

Description/Comments: VOC; Data from C&L Inventory Database

Data source: <https://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 02 Mar 2017

Hazard Statements: Aquatic Chronic 4 H413 , Eye Irrit. 2 H319 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 2 H361

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

boron {diboron trioxide; boric oxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worst case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil. (edit as required)

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

vanadium {divanadium pentaoxide; vanadium pentoxide}

worst case/most likely scenario

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.1, May 2018**

HazWasteOnline Classification Engine Version: 2020.52.4178.8324 (21 Feb 2020)

HazWasteOnline Database: 2020.52.4178.8324 (21 Feb 2020)

This classification utilises the following guidance and legislation:

WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004

1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010

2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Waste Classification Report



ULM6J-J9FZW-LK3BB

Job name

LKC 20 1060

Description/Comments

Project

LKC 20 1060

Site

Dantzic Street, Manchester

Related Documents

#	Name	Description
1	HWOL-19-39229-20191204 170730.hwol	.hwol file used to create the Job
2	HWOL-19-40027-20191217 170527.hwol	.hwol file used to create the Job

Waste Stream Template

Example waste stream template for contaminated soils

Classified by

Name:
Peter Dunn
Date:
19 Dec 2019 12:08 GMT
Telephone:
0161 763 7200

Company:
LK Group
Unit 29, Eton Business Park
Eton Hill Rd, Radcliffe
Manchester
M26 2ZS

Report

Created by: Peter Dunn
Created date: 19 Dec 2019 12:08 GMT

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP101-934774-27/11/2019-0.50	0.50-1.50	Non Hazardous		3
2	TP102-934777-27/11/2019-0.90	0.90-1.10	Non Hazardous		6
3	TP102-934778-27/11/2019-1.00	1.00-1.40	Non Hazardous		8
4	TP103-934779-27/11/2019-0.30	0.30-0.90	Non Hazardous		9
5	TP104-934782-27/11/2019-0.00	0.00-1.00	Non Hazardous		11
6	TP104-934783-27/11/2019-1.70	1.70-2.00	Non Hazardous		13
7	TP105-934784-27/11/2019-0.10	0.10-1.00	Non Hazardous		14
8	SP1-934785-27/11/2019-		Non Hazardous		16
9	SP2-934786-27/11/2019-		Non Hazardous		19
10	WS101-930454-18/11/2019-0.80	0.80-1.20	Hazardous	HP 7, HP 11	22
11	WS101-930456-18/11/2019-2.50	2.50-3.00	Non Hazardous		25

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
12	WS102-930457-18/11/2019-0.00	0.00-0.50	Non Hazardous		26
13	WS103-930460-18/11/2019-0.00	0.00-0.50	Non Hazardous		28
14	WS103-930462-18/11/2019-1.80	1.80-2.20	Non Hazardous		30
15	WS104-930464-18/11/2019-1.20	1.20-1.50	Hazardous	HP 7, HP 11	31
16	WS105-930466-18/11/2019-0.30	0.30-0.60	Hazardous	HP 8	34
17	WS105-930467-18/11/2019-1.00	1.00-1.20	Non Hazardous		36
18	WS105-930468-18/11/2019-2.00	2.00-2.50	Non Hazardous		39

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	40
Appendix B: Rationale for selection of metal species	41
Appendix C: Version	42

Classification of sample: TP101-934774-27/11/2019-0.50

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP101-934774-27/11/2019-0.50	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50-1.50 m		
Moisture content:		
11%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				5.7 mg/kg	1.32	6.698 mg/kg	0.00067 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide }				20 mg/kg	1.462	26.016 mg/kg	0.0026 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				9.1 mg/kg	1.126	9.119 mg/kg	0.000912 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	15 mg/kg	1.56	20.824 mg/kg	0.00134 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				16 mg/kg	2.976	42.382 mg/kg	0.00424 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.3 mg/kg	2.554	0.682 mg/kg	0.0000682 %	✓	
	034-002-00-8									
11	zinc { zinc oxide }				46 mg/kg	1.245	50.959 mg/kg	0.0051 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
12	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
14	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
15	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
16	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
17	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				0.7 mg/kg	1.884	1.174 mg/kg	0.000117 %		✓	
	006-007-00-5										
19	pH				6.6 pH		6.6 pH	6.6 pH			
20	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
21	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-917-1	208-96-8								
22	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-469-6	83-32-9								
23	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-695-5	86-73-7								
24	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-581-5	85-01-8								
25	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-371-1	120-12-7								
26	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-912-4	206-44-0								
27	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-927-3	129-00-0								
28	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
29	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
30	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
31	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
32	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
33	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-893-2	193-39-5								
34	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
35	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-883-8	191-24-2								
36	vanadium { divanadium pentaoxide; vanadium pentoxide }				26 mg/kg	1.785	41.309 mg/kg	0.00413 %		✓	
	023-001-00-8	215-239-8	1314-62-1								
Total:									0.0206 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1 Only the metal concentration has been used for classification	

Classification of sample: TP102-934777-27/11/2019-0.90

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP102-934777-27/11/2019-0.90	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.90-1.10 m		
Moisture content:		
3.2%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 3.2% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				4.3	mg/kg	1.32	5.496	mg/kg	0.00055 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	cadmium { cadmium oxide }				0.31	mg/kg	1.142	0.343	mg/kg	0.0000343 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
3	chromium in chromium(III) compounds { chromium(III) oxide }				5.4	mg/kg	1.462	7.64	mg/kg	0.000764 %	✓	
		215-160-9	1308-38-9									
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
5	copper { dicopper oxide; copper (I) oxide }				4.5	mg/kg	1.126	4.904	mg/kg	0.00049 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	lead { lead chromate }			1	6.4	mg/kg	1.56	9.663	mg/kg	0.00062 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
7	mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
8	nickel { nickel chromate }				7.6	mg/kg	2.976	21.896	mg/kg	0.00219 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
	034-002-00-8											
10	zinc { zinc oxide }				20	mg/kg	1.245	24.098	mg/kg	0.00241 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	pH				8.3	pH		8.3	pH	8.3 pH		
12	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
13	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
14	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
15	fluorene	201-695-5	86-73-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
16	phenanthrene	201-581-5	85-01-8		0.22 mg/kg		0.213 mg/kg	0.0000213 %	✓	
17	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	fluoranthene	205-912-4	206-44-0		0.44 mg/kg		0.426 mg/kg	0.0000426 %	✓	
19	pyrene	204-927-3	129-00-0		0.67 mg/kg		0.649 mg/kg	0.0000649 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.41 mg/kg		0.397 mg/kg	0.0000397 %	✓	
21	chrysene	601-048-00-0	205-923-4		1.5 mg/kg		1.452 mg/kg	0.000145 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		1.4 mg/kg		1.355 mg/kg	0.000136 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.47 mg/kg		0.455 mg/kg	0.0000455 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		1.4 mg/kg		1.355 mg/kg	0.000136 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.58 mg/kg		0.561 mg/kg	0.0000561 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.33 mg/kg		0.319 mg/kg	0.0000319 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		0.83 mg/kg		0.803 mg/kg	0.0000803 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		31 mg/kg	1.785	53.57 mg/kg	0.00536 %	✓	
Total:								0.0134 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP102-934778-27/11/2019-1.00



Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP102-934778-27/11/2019-1.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00-1.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
8.2%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.2% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	• pH				8.1 pH		8.1	pH	8.1 pH		
			PH								
Total:									0%		

Key

- User supplied data
- Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP103-934779-27/11/2019-0.30

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP103-934779-27/11/2019-0.30	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.30-0.90 m		
Moisture content:		
6.6%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 6.6% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				15 mg/kg	1.32	18.498 mg/kg	0.00185 %	✓		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.42 mg/kg	1.142	0.448 mg/kg	0.0000448 %	✓		
	048-002-00-0	215-146-2	1306-19-0								
3	chromium in chromium(III) compounds { chromium(III) oxide }				18 mg/kg	1.462	24.572 mg/kg	0.00246 %	✓		
		215-160-9	1308-38-9								
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
5	copper { dicopper oxide; copper (I) oxide }				29 mg/kg	1.126	30.496 mg/kg	0.00305 %	✓		
	029-002-00-X	215-270-7	1317-39-1								
6	lead { lead chromate }			1	85 mg/kg	1.56	123.834 mg/kg	0.00794 %	✓		
	082-004-00-2	231-846-0	7758-97-6								
7	mercury { mercury dichloride }				0.27 mg/kg	1.353	0.341 mg/kg	0.0000341 %	✓		
	080-010-00-X	231-299-8	7487-94-7								
8	nickel { nickel chromate }				20 mg/kg	2.976	55.597 mg/kg	0.00556 %	✓		
	028-035-00-7	238-766-5	14721-18-7								
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %			<LOD
	034-002-00-8										
10	zinc { zinc oxide }				97 mg/kg	1.245	112.769 mg/kg	0.0113 %	✓		
	030-013-00-7	215-222-5	1314-13-2								
11	pH				11.2 pH		11.2 pH	11.2 pH			
12	naphthalene				0.48 mg/kg		0.448 mg/kg	0.0000448 %	✓		
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				0.12 mg/kg		0.112 mg/kg	0.0000112 %	✓		
		205-917-1	208-96-8								
14	acenaphthene				3 mg/kg		2.802 mg/kg	0.00028 %	✓		
		201-469-6	83-32-9								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
15	fluorene		201-695-5	86-73-7		2.1	mg/kg		1.961	mg/kg	0.000196 %	✓	
16	phenanthrene		201-581-5	85-01-8		19	mg/kg		17.746	mg/kg	0.00177 %	✓	
17	anthracene		204-371-1	120-12-7		4.8	mg/kg		4.483	mg/kg	0.000448 %	✓	
18	fluoranthene		205-912-4	206-44-0		23	mg/kg		21.482	mg/kg	0.00215 %	✓	
19	pyrene		204-927-3	129-00-0		20	mg/kg		18.68	mg/kg	0.00187 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		9	mg/kg		8.406	mg/kg	0.000841 %	✓	
21	chrysene	601-048-00-0	205-923-4	218-01-9		9.8	mg/kg		9.153	mg/kg	0.000915 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		11	mg/kg		10.274	mg/kg	0.00103 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		4.6	mg/kg		4.296	mg/kg	0.00043 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		9.9	mg/kg		9.247	mg/kg	0.000925 %	✓	
25	indeno[123-cd]pyrene		205-893-2	193-39-5		6.2	mg/kg		5.791	mg/kg	0.000579 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		1.4	mg/kg		1.308	mg/kg	0.000131 %	✓	
27	benzo[ghi]perylene		205-883-8	191-24-2		5.7	mg/kg		5.324	mg/kg	0.000532 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		29	mg/kg	1.785	48.354	mg/kg	0.00484 %	✓	
Total:											0.0493 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP104-934782-27/11/2019-0.00

✓ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP104-934782-27/11/2019-0.00	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00-1.00 m		
Moisture content:		
9%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 9% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				20 mg/kg	1.32	24.03	mg/kg	0.0024 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.47 mg/kg	1.142	0.489	mg/kg	0.0000489 %	✓	
	048-002-00-0	215-146-2	1306-19-0								
3	chromium in chromium(III) compounds { chromium(III) oxide }				56 mg/kg	1.462	74.481	mg/kg	0.00745 %	✓	
		215-160-9	1308-38-9								
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
5	copper { dicopper oxide; copper (I) oxide }				110 mg/kg	1.126	112.701	mg/kg	0.0113 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
6	lead { lead chromate }			1	130 mg/kg	1.56	184.526	mg/kg	0.0118 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
7	mercury { mercury dichloride }				0.42 mg/kg	1.353	0.517	mg/kg	0.0000517 %	✓	
	080-010-00-X	231-299-8	7487-94-7								
8	nickel { nickel chromate }				32 mg/kg	2.976	86.669	mg/kg	0.00867 %	✓	
	028-035-00-7	238-766-5	14721-18-7								
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.86 mg/kg	2.554	1.998	mg/kg	0.0002 %	✓	
	034-002-00-8										
10	zinc { zinc oxide }				230 mg/kg	1.245	260.519	mg/kg	0.0261 %	✓	
	030-013-00-7	215-222-5	1314-13-2								
11	pH		PH		9.2 pH		9.2	pH	9.2 pH		
12	naphthalene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8								
14	acenaphthene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9								

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
15	fluorene	201-695-5	86-73-7		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
16	phenanthrene	201-581-5	85-01-8		0.62	mg/kg		0.564	mg/kg	0.0000564 %	✓	
17	anthracene	204-371-1	120-12-7		0.13	mg/kg		0.118	mg/kg	0.0000118 %	✓	
18	fluoranthene	205-912-4	206-44-0		1.1	mg/kg		1.001	mg/kg	0.0001 %	✓	
19	pyrene	204-927-3	129-00-0		1.1	mg/kg		1.001	mg/kg	0.0001 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.52	mg/kg		0.473	mg/kg	0.0000473 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.62	mg/kg		0.564	mg/kg	0.0000564 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.77	mg/kg		0.701	mg/kg	0.0000701 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.25	mg/kg		0.228	mg/kg	0.0000228 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.66	mg/kg		0.601	mg/kg	0.0000601 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.46	mg/kg		0.419	mg/kg	0.0000419 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		0.45	mg/kg		0.41	mg/kg	0.000041 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		30	mg/kg	1.785	48.736	mg/kg	0.00487 %	✓	
Total:										0.0736 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP104-934783-27/11/2019-1.70

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP104-934783-27/11/2019-1.70	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.70-2.00 m		
Moisture content:		
13%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 13% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	• pH				7.8 pH		7.8 pH	7.8 pH		
			PH							
Total:								0%		

Key

- User supplied data
- Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP105-934784-27/11/2019-0.10

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP105-934784-27/11/2019-0.10	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.10-1.00 m		
Moisture content:		
9.2%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 9.2% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				26 mg/kg	1.32	31.17 mg/kg	0.00312 %		✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.77 mg/kg	1.142	0.799 mg/kg	0.0000799 %		✓	
	048-002-00-0	215-146-2	1306-19-0								
3	chromium in chromium(III) compounds { chromium(III) oxide }				160 mg/kg	1.462	212.335 mg/kg	0.0212 %		✓	
		215-160-9	1308-38-9								
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
5	copper { dicopper oxide; copper (I) oxide }				250 mg/kg	1.126	255.577 mg/kg	0.0256 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
6	lead { lead chromate }			1	210 mg/kg	1.56	297.426 mg/kg	0.0191 %		✓	
	082-004-00-2	231-846-0	7758-97-6								
7	mercury { mercury dichloride }				0.27 mg/kg	1.353	0.332 mg/kg	0.0000332 %		✓	
	080-010-00-X	231-299-8	7487-94-7								
8	nickel { nickel chromate }				70 mg/kg	2.976	189.171 mg/kg	0.0189 %		✓	
	028-035-00-7	238-766-5	14721-18-7								
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %			<LOD
	034-002-00-8										
10	zinc { zinc oxide }				220 mg/kg	1.245	248.644 mg/kg	0.0249 %		✓	
	030-013-00-7	215-222-5	1314-13-2								
11	pH				8.9 pH		8.9 pH	8.9 pH			
12	naphthalene				4.2 mg/kg		3.814 mg/kg	0.000381 %		✓	
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				1.5 mg/kg		1.362 mg/kg	0.000136 %		✓	
		205-917-1	208-96-8								
14	acenaphthene				8 mg/kg		7.264 mg/kg	0.000726 %		✓	
		201-469-6	83-32-9								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
15	fluorene	201-695-5	86-73-7		7.8 mg/kg		7.082 mg/kg	0.000708 %	✓	
16	phenanthrene	201-581-5	85-01-8		52 mg/kg		47.216 mg/kg	0.00472 %	✓	
17	anthracene	204-371-1	120-12-7		13 mg/kg		11.804 mg/kg	0.00118 %	✓	
18	fluoranthene	205-912-4	206-44-0		52 mg/kg		47.216 mg/kg	0.00472 %	✓	
19	pyrene	204-927-3	129-00-0		48 mg/kg		43.584 mg/kg	0.00436 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		22 mg/kg		19.976 mg/kg	0.002 %	✓	
21	chrysene	601-048-00-0	205-923-4		23 mg/kg		20.884 mg/kg	0.00209 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		25 mg/kg		22.7 mg/kg	0.00227 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		9.9 mg/kg		8.989 mg/kg	0.000899 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		24 mg/kg		21.792 mg/kg	0.00218 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		14 mg/kg		12.712 mg/kg	0.00127 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		3.5 mg/kg		3.178 mg/kg	0.000318 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		12 mg/kg		10.896 mg/kg	0.00109 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		30 mg/kg	1.785	48.628 mg/kg	0.00486 %	✓	
29	asbestos	650-013-00-6	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		20 mg/kg		18.16 mg/kg	0.00182 %	✓	
Total:								0.149 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: SP1-934785-27/11/2019-

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
SP1-934785-27/11/2019-	Chapter:
Moisture content:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
11%	Entry:
(wet weight correction)	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }				25	mg/kg	1.32	29.377	mg/kg	0.00294 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		boron { diboron trioxide; boric oxide }				0.61	mg/kg	3.22	1.748	mg/kg	0.000175 %	✓	
		005-008-00-8	215-125-8	1303-86-2									
3		cadmium { cadmium oxide }				0.7	mg/kg	1.142	0.712	mg/kg	0.0000712 %	✓	
		048-002-00-0	215-146-2	1306-19-0									
4		chromium in chromium(III) compounds { chromium(III) oxide }				17	mg/kg	1.462	22.113	mg/kg	0.00221 %	✓	
			215-160-9	1308-38-9									
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
6		copper { dicopper oxide; copper (I) oxide }				91	mg/kg	1.126	91.186	mg/kg	0.00912 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
7		lead { lead chromate }			1	390	mg/kg	1.56	541.412	mg/kg	0.0347 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
8		mercury { mercury dichloride }				0.37	mg/kg	1.353	0.446	mg/kg	0.0000446 %	✓	
		080-010-00-X	231-299-8	7487-94-7									
9		nickel { nickel chromate }				26	mg/kg	2.976	68.871	mg/kg	0.00689 %	✓	
		028-035-00-7	238-766-5	14721-18-7									
10		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.36	mg/kg	2.554	0.818	mg/kg	0.0000818 %	✓	
		034-002-00-8											
11		zinc { zinc oxide }				190	mg/kg	1.245	210.481	mg/kg	0.021 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
12		TPH (C6 to C40) petroleum group				520	mg/kg		462.8	mg/kg	0.0463 %	✓	
				TPH									
13		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
14		benzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
15	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
16	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
17	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
19	pH				8.4 pH		8.4 pH	8.4 pH		
20	naphthalene				0.72 mg/kg		0.641 mg/kg	0.0000641 %	✓	
	601-052-00-2	202-049-5	91-20-3							
21	acenaphthylene				0.28 mg/kg		0.249 mg/kg	0.0000249 %	✓	
		205-917-1	208-96-8							
22	acenaphthene				1 mg/kg		0.89 mg/kg	0.000089 %	✓	
		201-469-6	83-32-9							
23	fluorene				1.7 mg/kg		1.513 mg/kg	0.000151 %	✓	
		201-695-5	86-73-7							
24	phenanthrene				4 mg/kg		3.56 mg/kg	0.000356 %	✓	
		201-581-5	85-01-8							
25	anthracene				0.91 mg/kg		0.81 mg/kg	0.000081 %	✓	
		204-371-1	120-12-7							
26	fluoranthene				7.2 mg/kg		6.408 mg/kg	0.000641 %	✓	
		205-912-4	206-44-0							
27	pyrene				8.4 mg/kg		7.476 mg/kg	0.000748 %	✓	
		204-927-3	129-00-0							
28	benzo[a]anthracene				3.4 mg/kg		3.026 mg/kg	0.000303 %	✓	
	601-033-00-9	200-280-6	56-55-3							
29	chrysene				4.4 mg/kg		3.916 mg/kg	0.000392 %	✓	
	601-048-00-0	205-923-4	218-01-9							
30	benzo[b]fluoranthene				6 mg/kg		5.34 mg/kg	0.000534 %	✓	
	601-034-00-4	205-911-9	205-99-2							
31	benzo[k]fluoranthene				2.1 mg/kg		1.869 mg/kg	0.000187 %	✓	
	601-036-00-5	205-916-6	207-08-9							
32	benzo[a]pyrene; benzo[def]chrysene				5.5 mg/kg		4.895 mg/kg	0.000489 %	✓	
	601-032-00-3	200-028-5	50-32-8							
33	indeno[123-cd]pyrene				3.5 mg/kg		3.115 mg/kg	0.000312 %	✓	
		205-893-2	193-39-5							
34	dibenz[a,h]anthracene				0.81 mg/kg		0.721 mg/kg	0.0000721 %	✓	
	601-041-00-2	200-181-8	53-70-3							
35	benzo[ghi]perylene				3.5 mg/kg		3.115 mg/kg	0.000312 %	✓	
		205-883-8	191-24-2							
36	vanadium { divanadium pentaoxide; vanadium pentoxide }				26 mg/kg	1.785	41.309 mg/kg	0.00413 %	✓	
	023-001-00-8	215-239-8	1314-62-1							
37	asbestos				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
	650-013-00-6	-----	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5							
Total:								0.134 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because TPH source from ash within sample. No free draining liquid, no olfactory evidence, no anticipated sources identified and no other evidence of hydrocarbon contamination in samples. Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0463%)

Classification of sample: SP2-934786-27/11/2019-

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
SP2-934786-27/11/2019-	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Moisture content:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15% (wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 15% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number					
1	arsenic { arsenic trioxide }							
	033-003-00-0	215-481-4	1327-53-3					
2	boron { diboron trioxide; boric oxide }							
	005-008-00-8	215-125-8	1303-86-2					
3	cadmium { cadmium oxide }							
	048-002-00-0	215-146-2	1306-19-0					
4	chromium in chromium(III) compounds { chromium(III) oxide }							
		215-160-9	1308-38-9					
5	chromium in chromium(VI) compounds { chromium(VI) oxide }							
	024-001-00-0	215-607-8	1333-82-0					
6	copper { dicopper oxide; copper (I) oxide }							
	029-002-00-X	215-270-7	1317-39-1					
7	lead { lead chromate }							
	082-004-00-2	231-846-0	7758-97-6					
8	mercury { mercury dichloride }							
	080-010-00-X	231-299-8	7487-94-7					
9	nickel { nickel chromate }							
	028-035-00-7	238-766-5	14721-18-7					
10	selenium { selenium compounds with the exception of cadmium selenide and those specified elsewhere in this Annex }							
	034-002-00-8							
11	zinc { zinc oxide }							
	030-013-00-7	215-222-5	1314-13-2					
12	TPH (C6 to C40) petroleum group							
			TPH					
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane							
	603-181-00-X	216-653-1	1634-04-4					
14	benzene							
	601-020-00-8	200-753-7	71-43-2					

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
15	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
16	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
17	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %			<LOD
	006-007-00-5										
19	pH				8.1 pH		8.1 pH	8.1 pH			
			PH								
20	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
21	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-917-1	208-96-8								
22	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-469-6	83-32-9								
23	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-695-5	86-73-7								
24	phenanthrene				0.9 mg/kg		0.765 mg/kg	0.0000765 %		✓	
		201-581-5	85-01-8								
25	anthracene				0.35 mg/kg		0.298 mg/kg	0.0000298 %		✓	
		204-371-1	120-12-7								
26	fluoranthene				1.9 mg/kg		1.615 mg/kg	0.000162 %		✓	
		205-912-4	206-44-0								
27	pyrene				1.6 mg/kg		1.36 mg/kg	0.000136 %		✓	
		204-927-3	129-00-0								
28	benzo[a]anthracene				0.68 mg/kg		0.578 mg/kg	0.0000578 %		✓	
	601-033-00-9	200-280-6	56-55-3								
29	chrysene				0.77 mg/kg		0.655 mg/kg	0.0000655 %		✓	
	601-048-00-0	205-923-4	218-01-9								
30	benzo[b]fluoranthene				0.98 mg/kg		0.833 mg/kg	0.0000833 %		✓	
	601-034-00-4	205-911-9	205-99-2								
31	benzo[k]fluoranthene				0.3 mg/kg		0.255 mg/kg	0.0000255 %		✓	
	601-036-00-5	205-916-6	207-08-9								
32	benzo[a]pyrene; benzo[def]chrysene				0.83 mg/kg		0.706 mg/kg	0.0000706 %		✓	
	601-032-00-3	200-028-5	50-32-8								
33	indeno[123-cd]pyrene				0.62 mg/kg		0.527 mg/kg	0.0000527 %		✓	
		205-893-2	193-39-5								
34	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
35	benzo[ghi]perylene				0.69 mg/kg		0.587 mg/kg	0.0000587 %		✓	
		205-883-8	191-24-2								
36	vanadium { divanadium pentaoxide; vanadium pentoxide }				39 mg/kg	1.785	59.179 mg/kg	0.00592 %		✓	
	023-001-00-8	215-239-8	1314-62-1								
Total:									0.238 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- ND Not detected
- CLP: Note 1 Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because TPH source from ash within sample. No free draining liquid, no olfactory evidence, no anticipated sources identified and no other evidence of hydrocarbon contamination in samples. Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

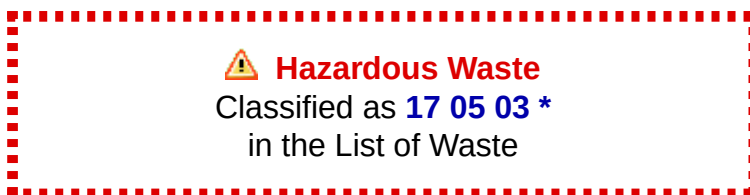
Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0519%)

Classification of sample: WS101-930454-18/11/2019-0.80



Sample details

Sample Name:	LoW Code:
WS101-930454-18/11/2019-0.80	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.80-1.20 m	Entry:
Moisture content:	17 05 03 * (Soil and stones containing hazardous substances)
12%	
(wet weight correction)	

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.106%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.106%)

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				9.1 mg/kg	1.32	10.573 mg/kg	0.00106 %		✓	
	033-003-00-0	215-481-4	1327-53-3								
2	boron { diboron trioxide; boric oxide }				0.96 mg/kg	3.22	2.72 mg/kg	0.000272 %		✓	
	005-008-00-8	215-125-8	1303-86-2								
3	cadmium { cadmium oxide }				0.25 mg/kg	1.142	0.251 mg/kg	0.0000251 %		✓	
	048-002-00-0	215-146-2	1306-19-0								
4	chromium in chromium(III) compounds { chromium(III) oxide }				19 mg/kg	1.462	24.437 mg/kg	0.00244 %		✓	
		215-160-9	1308-38-9								
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
6	copper { dicopper oxide; copper (I) oxide }				20 mg/kg	1.126	19.816 mg/kg	0.00198 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	100 mg/kg	1.56	137.264 mg/kg	0.0088 %		✓	
	082-004-00-2	231-846-0	7758-97-6								

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
8	mercury { mercury dichloride }				0.2	mg/kg	1.353	0.238	mg/kg	0.0000238 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
9	nickel { nickel chromate }				14	mg/kg	2.976	36.668	mg/kg	0.00367 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
	034-002-00-8											
11	zinc { zinc oxide }				160	mg/kg	1.245	175.256	mg/kg	0.0175 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
12	TPH (C6 to C40) petroleum group				1200	mg/kg		1056	mg/kg	0.106 %	✓	
			TPH									
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									
14	benzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2									
15	toluene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3									
16	ethylbenzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
17	xylene				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
19	pH				9.1	pH		9.1	pH	9.1 pH		
			PH									
20	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
21	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
22	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9									
23	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7									
24	phenanthrene				0.64	mg/kg		0.563	mg/kg	0.0000563 %	✓	
		201-581-5	85-01-8									
25	anthracene				0.14	mg/kg		0.123	mg/kg	0.0000123 %	✓	
		204-371-1	120-12-7									
26	fluoranthene				0.87	mg/kg		0.766	mg/kg	0.0000766 %	✓	
		205-912-4	206-44-0									
27	pyrene				0.83	mg/kg		0.73	mg/kg	0.000073 %	✓	
		204-927-3	129-00-0									
28	benzo[a]anthracene				0.37	mg/kg		0.326	mg/kg	0.0000326 %	✓	
	601-033-00-9	200-280-6	56-55-3									
29	chrysene				0.37	mg/kg		0.326	mg/kg	0.0000326 %	✓	
	601-048-00-0	205-923-4	218-01-9									
30	benzo[b]fluoranthene				0.56	mg/kg		0.493	mg/kg	0.0000493 %	✓	
	601-034-00-4	205-911-9	205-99-2									
31	benzo[k]fluoranthene				0.23	mg/kg		0.202	mg/kg	0.0000202 %	✓	
	601-036-00-5	205-916-6	207-08-9									
32	benzo[a]pyrene; benzo[def]chrysene				0.36	mg/kg		0.317	mg/kg	0.0000317 %	✓	
	601-032-00-3	200-028-5	50-32-8									
33	indeno[123-cd]pyrene				0.32	mg/kg		0.282	mg/kg	0.0000282 %	✓	
		205-893-2	193-39-5									

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used	
		CLP index number	EC Number	CAS Number											
34		dibenz[a,h]anthracene				<0.1 mg/kg			<0.1 mg/kg		<0.00001 %			<LOD	
		601-041-00-2	200-181-8	53-70-3											
35	■	benzo[ghi]perylene				0.32 mg/kg			0.282 mg/kg		0.0000282 %		✓		
			205-883-8	191-24-2											
36	🧪	vanadium { divanadium pentaoxide; vanadium pentoxide }				25 mg/kg		1.785	39.274 mg/kg		0.00393 %		✓		
		023-001-00-8	215-239-8	1314-62-1											
Total:												0.146 %			

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1 Only the metal concentration has been used for classification	

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because TPH source from ash within sample. No free draining liquid, no olfactory evidence, no anticipated sources identified and no other evidence of hydrocarbon contamination in samples. Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.106%)

Classification of sample: WS101-930456-18/11/2019-2.50

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS101-930456-18/11/2019-2.50	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
2.50-3.00 m		
Moisture content:		
9.9%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 9.9% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	• pH				8.5 pH		8.5 pH	8.5 pH		
			PH							
Total:								0%		

Key

- User supplied data
- Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: WS102-930457-18/11/2019-0.00



Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS102-930457-18/11/2019-0.00	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00-0.50 m		
Moisture content:		
6.4%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 6.4% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				14 mg/kg	1.32	17.302 mg/kg	0.00173 %		✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				1.1 mg/kg	1.142	1.176 mg/kg	0.000118 %		✓	
	048-002-00-0	215-146-2	1306-19-0								
3	chromium in chromium(III) compounds { chromium(III) oxide }				26 mg/kg	1.462	35.568 mg/kg	0.00356 %		✓	
		215-160-9	1308-38-9								
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
5	copper { dicopper oxide; copper (I) oxide }				51 mg/kg	1.126	53.745 mg/kg	0.00537 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
6	lead { lead chromate }			1	140 mg/kg	1.56	204.398 mg/kg	0.0131 %		✓	
	082-004-00-2	231-846-0	7758-97-6								
7	mercury { mercury dichloride }				0.2 mg/kg	1.353	0.253 mg/kg	0.0000253 %		✓	
	080-010-00-X	231-299-8	7487-94-7								
8	nickel { nickel chromate }				29 mg/kg	2.976	80.788 mg/kg	0.00808 %		✓	
	028-035-00-7	238-766-5	14721-18-7								
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %			<LOD
	034-002-00-8										
10	zinc { zinc oxide }				230 mg/kg	1.245	267.962 mg/kg	0.0268 %		✓	
	030-013-00-7	215-222-5	1314-13-2								
11	pH				9.6 pH		9.6 pH	9.6 pH			
12	naphthalene				0.56 mg/kg		0.524 mg/kg	0.0000524 %		✓	
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				0.14 mg/kg		0.131 mg/kg	0.0000131 %		✓	
		205-917-1	208-96-8								
14	acenaphthene				2.8 mg/kg		2.621 mg/kg	0.000262 %		✓	
		201-469-6	83-32-9								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
15	fluorene	201-695-5	86-73-7		2.1 mg/kg		1.966 mg/kg	0.000197 %	✓	
16	phenanthrene	201-581-5	85-01-8		19 mg/kg		17.784 mg/kg	0.00178 %	✓	
17	anthracene	204-371-1	120-12-7		5 mg/kg		4.68 mg/kg	0.000468 %	✓	
18	fluoranthene	205-912-4	206-44-0		25 mg/kg		23.4 mg/kg	0.00234 %	✓	
19	pyrene	204-927-3	129-00-0		21 mg/kg		19.656 mg/kg	0.00197 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		10 mg/kg		9.36 mg/kg	0.000936 %	✓	
21	chrysene	601-048-00-0	205-923-4		9.9 mg/kg		9.266 mg/kg	0.000927 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		12 mg/kg		11.232 mg/kg	0.00112 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		4.3 mg/kg		4.025 mg/kg	0.000402 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		10 mg/kg		9.36 mg/kg	0.000936 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		6.6 mg/kg		6.178 mg/kg	0.000618 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		1.2 mg/kg		1.123 mg/kg	0.000112 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		6.2 mg/kg		5.803 mg/kg	0.00058 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		35 mg/kg	1.785	58.483 mg/kg	0.00585 %	✓	
Total:								0.0775 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS103-930460-18/11/2019-0.00

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS103-930460-18/11/2019-0.00	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.00-0.50 m		
Moisture content:		
8.2%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 8.2% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				18	mg/kg	1.32	21.817	mg/kg	0.00218 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	cadmium { cadmium oxide }				0.83	mg/kg	1.142	0.87	mg/kg	0.000087 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
3	chromium in chromium(III) compounds { chromium(III) oxide }				39	mg/kg	1.462	52.327	mg/kg	0.00523 %	✓	
		215-160-9	1308-38-9									
4	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
5	copper { dicopper oxide; copper (I) oxide }				59	mg/kg	1.126	60.98	mg/kg	0.0061 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	lead { lead chromate }			1	130	mg/kg	1.56	186.148	mg/kg	0.0119 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
7	mercury { mercury dichloride }				0.17	mg/kg	1.353	0.211	mg/kg	0.0000211 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
8	nickel { nickel chromate }				48	mg/kg	2.976	131.146	mg/kg	0.0131 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.43	mg/kg	2.554	1.008	mg/kg	0.000101 %	✓	
	034-002-00-8											
10	zinc { zinc oxide }				150	mg/kg	1.245	171.397	mg/kg	0.0171 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
11	pH				9.1	pH		9.1	pH	9.1 pH		
12	naphthalene				2.9	mg/kg		2.662	mg/kg	0.000266 %	✓	
	601-052-00-2	202-049-5	91-20-3									
13	acenaphthylene				3.3	mg/kg		3.029	mg/kg	0.000303 %	✓	
		205-917-1	208-96-8									
14	acenaphthene				14	mg/kg		12.852	mg/kg	0.00129 %	✓	
		201-469-6	83-32-9									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
15	fluorene	201-695-5	86-73-7		12 mg/kg		11.016 mg/kg	0.0011 %	✓	
16	phenanthrene	201-581-5	85-01-8		92 mg/kg		84.456 mg/kg	0.00845 %	✓	
17	anthracene	204-371-1	120-12-7		39 mg/kg		35.802 mg/kg	0.00358 %	✓	
18	fluoranthene	205-912-4	206-44-0		260 mg/kg		238.68 mg/kg	0.0239 %	✓	
19	pyrene	204-927-3	129-00-0		220 mg/kg		201.96 mg/kg	0.0202 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		130 mg/kg		119.34 mg/kg	0.0119 %	✓	
21	chrysene	601-048-00-0	205-923-4		140 mg/kg		128.52 mg/kg	0.0129 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		190 mg/kg		174.42 mg/kg	0.0174 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		70 mg/kg		64.26 mg/kg	0.00643 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		170 mg/kg		156.06 mg/kg	0.0156 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		130 mg/kg		119.34 mg/kg	0.0119 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		19 mg/kg		17.442 mg/kg	0.00174 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		86 mg/kg		78.948 mg/kg	0.00789 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		70 mg/kg	1.785	114.716 mg/kg	0.0115 %	✓	
Total:								0.212 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS103-930462-18/11/2019-1.80



Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS103-930462-18/11/2019-1.80	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.80-2.20 m		
Moisture content:		
19%		
(wet weight correction)		

Hazard properties

None identified

Determinands

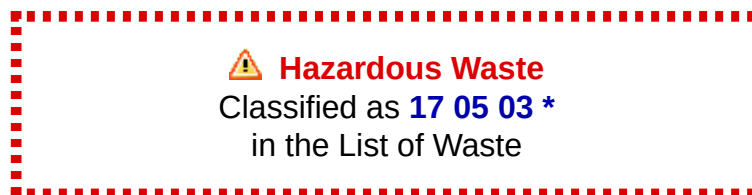
Moisture content: 19% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	• pH				8 pH		8 pH	8pH		
			PH							
Total:								0%		

Key

- User supplied data
- Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: WS104-930464-18/11/2019-1.20



Sample details

Sample Name:	LoW Code:
WS104-930464-18/11/2019-1.20	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.20-1.50 m	Entry:
Moisture content:	17 05 03 * (Soil and stones containing hazardous substances)
14%	
(wet weight correction)	

Hazard properties

HP 7: Carcinogenic "waste which induces cancer or increases its incidence"

Hazard Statements hit:

Carc. 1B; H350 "May cause cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.155%)

HP 11: Mutagenic "waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell"

Hazard Statements hit:

Muta. 1B; H340 "May cause genetic defects [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.155%)

Determinands

Moisture content: 14% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				29 mg/kg	1.32	32.929 mg/kg	0.00329 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				1.4 mg/kg	3.22	3.877 mg/kg	0.000388 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.33 mg/kg	1.142	0.324 mg/kg	0.0000324 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide }				25 mg/kg	1.462	31.423 mg/kg	0.00314 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				100 mg/kg	1.126	96.826 mg/kg	0.00968 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	530 mg/kg	1.56	710.964 mg/kg	0.0456 %	✓	
	082-004-00-2	231-846-0	7758-97-6							

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
8	mercury { mercury dichloride }				0.5	mg/kg	1.353	0.582	mg/kg	0.0000582 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
9	nickel { nickel chromate }				34	mg/kg	2.976	87.026	mg/kg	0.0087 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.43	mg/kg	2.554	0.944	mg/kg	0.0000944 %	✓	
	034-002-00-8											
11	zinc { zinc oxide }				320	mg/kg	1.245	342.545	mg/kg	0.0343 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
12	TPH (C6 to C40) petroleum group				1800	mg/kg		1548	mg/kg	0.155 %	✓	
			TPH									
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4									
14	benzene				0.0016	mg/kg		0.0013	mg/kg	0.000000138 %	✓	
	601-020-00-8	200-753-7	71-43-2									
15	toluene				0.0023	mg/kg		0.0019	mg/kg	0.000000198 %	✓	
	601-021-00-3	203-625-9	108-88-3									
16	ethylbenzene				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4									
17	xylene				<0.002	mg/kg		<0.002	mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				0.6	mg/kg	1.884	0.972	mg/kg	0.0000972 %	✓	
	006-007-00-5											
19	pH				8.4	pH		8.4	pH	8.4 pH		
			PH									
20	naphthalene				3.4	mg/kg		2.924	mg/kg	0.000292 %	✓	
	601-052-00-2	202-049-5	91-20-3									
21	acenaphthylene				0.25	mg/kg		0.215	mg/kg	0.0000215 %	✓	
		205-917-1	208-96-8									
22	acenaphthene				0.4	mg/kg		0.344	mg/kg	0.0000344 %	✓	
		201-469-6	83-32-9									
23	fluorene				1.1	mg/kg		0.946	mg/kg	0.0000946 %	✓	
		201-695-5	86-73-7									
24	phenanthrene				6.4	mg/kg		5.504	mg/kg	0.00055 %	✓	
		201-581-5	85-01-8									
25	anthracene				0.95	mg/kg		0.817	mg/kg	0.0000817 %	✓	
		204-371-1	120-12-7									
26	fluoranthene				8.3	mg/kg		7.138	mg/kg	0.000714 %	✓	
		205-912-4	206-44-0									
27	pyrene				7.7	mg/kg		6.622	mg/kg	0.000662 %	✓	
		204-927-3	129-00-0									
28	benzo[a]anthracene				3.1	mg/kg		2.666	mg/kg	0.000267 %	✓	
	601-033-00-9	200-280-6	56-55-3									
29	chrysene				3.1	mg/kg		2.666	mg/kg	0.000267 %	✓	
	601-048-00-0	205-923-4	218-01-9									
30	benzo[b]fluoranthene				4.5	mg/kg		3.87	mg/kg	0.000387 %	✓	
	601-034-00-4	205-911-9	205-99-2									
31	benzo[k]fluoranthene				1.6	mg/kg		1.376	mg/kg	0.000138 %	✓	
	601-036-00-5	205-916-6	207-08-9									
32	benzo[a]pyrene; benzo[def]chrysene				3.4	mg/kg		2.924	mg/kg	0.000292 %	✓	
	601-032-00-3	200-028-5	50-32-8									
33	indeno[123-cd]pyrene				2.3	mg/kg		1.978	mg/kg	0.000198 %	✓	
		205-893-2	193-39-5									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
34	dibenz[a,h]anthracene				0.43 mg/kg		0.37 mg/kg	0.000037 %	✓	
	601-041-00-2	200-181-8	53-70-3							
35	benzo[ghi]perylene				2.1 mg/kg		1.806 mg/kg	0.000181 %	✓	
		205-883-8	191-24-2							
36	vanadium { divanadium pentaoxide; vanadium pentoxide }				35 mg/kg	1.785	53.734 mg/kg	0.00537 %	✓	
	023-001-00-8	215-239-8	1314-62-1							
Total:								0.27 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1 Only the metal concentration has been used for classification	

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because TPH source from ash within sample. No free draining liquid, no olfactory evidence, no anticipated sources identified and no other evidence of hydrocarbon contamination in samples. Flammability of soils is unlikely to result in a hazardous classification in soils (AGS Waste Classification – A Practitioner's Guide).

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 1.38e-07%)

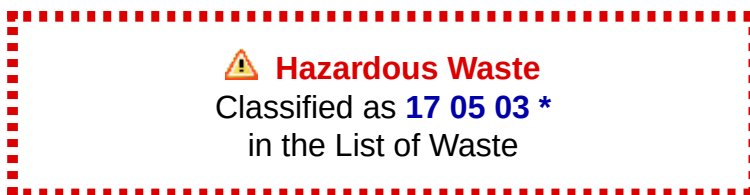
toluene: (conc.: 1.98e-07%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.155%)

Classification of sample: WS105-930466-18/11/2019-0.30



Sample details

Sample Name:	LoW Code:
WS105-930466-18/11/2019-0.30	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30-0.60 m	Entry:
Moisture content:	17 05 03 * (Soil and stones containing hazardous substances)
4.3%	
(wet weight correction)	

Hazard properties

HP 8: Corrosive "waste which on application can cause skin corrosion"

pH; pH "Assumed to be irritant/corrosive because of pH value"

Because of determinand:

pH: (conc.: 11.8 pH)

Determinands

Moisture content: 4.3% Wet Weight Moisture Correction applied (MC)

#	Determinand	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number					
1	arsenic { arsenic trioxide }							
	033-003-00-0	215-481-4	1327-53-3		12 mg/kg	1.32	15.163 mg/kg	0.00152 %
2	cadmium { cadmium oxide }							
	048-002-00-0	215-146-2	1306-19-0		1.3 mg/kg	1.142	1.421 mg/kg	0.000142 %
3	chromium in chromium(III) compounds { chromium(III) oxide }							
		215-160-9	1308-38-9		24 mg/kg	1.462	33.569 mg/kg	0.00336 %
4	chromium in chromium(VI) compounds { chromium(VI) oxide }							
	024-001-00-0	215-607-8	1333-82-0		<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %
5	copper { dicopper oxide; copper (I) oxide }							
	029-002-00-X	215-270-7	1317-39-1		36 mg/kg	1.126	38.789 mg/kg	0.00388 %
6	lead { lead chromate }			1				
	082-004-00-2	231-846-0	7758-97-6		150 mg/kg	1.56	223.911 mg/kg	0.0144 %
7	mercury { mercury dichloride }							
	080-010-00-X	231-299-8	7487-94-7		<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %
8	nickel { nickel chromate }							
	028-035-00-7	238-766-5	14721-18-7		22 mg/kg	2.976	62.662 mg/kg	0.00627 %
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }							
	034-002-00-8				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %
10	zinc { zinc oxide }							
	030-013-00-7	215-222-5	1314-13-2		300 mg/kg	1.245	357.357 mg/kg	0.0357 %
11	pH							
					11.8 pH		11.8 pH	11.8 pH

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
12	naphthalene				5.6 mg/kg		5.359 mg/kg	0.000536 %	✓	
	601-052-00-2	202-049-5	91-20-3							
13	acenaphthylene				0.57 mg/kg		0.545 mg/kg	0.0000545 %	✓	
		205-917-1	208-96-8							
14	acenaphthene				9.4 mg/kg		8.996 mg/kg	0.0009 %	✓	
		201-469-6	83-32-9							
15	fluorene				7.4 mg/kg		7.082 mg/kg	0.000708 %	✓	
		201-695-5	86-73-7							
16	phenanthrene				57 mg/kg		54.549 mg/kg	0.00545 %	✓	
		201-581-5	85-01-8							
17	anthracene				16 mg/kg		15.312 mg/kg	0.00153 %	✓	
		204-371-1	120-12-7							
18	fluoranthene				73 mg/kg		69.861 mg/kg	0.00699 %	✓	
		205-912-4	206-44-0							
19	pyrene				57 mg/kg		54.549 mg/kg	0.00545 %	✓	
		204-927-3	129-00-0							
20	benzo[a]anthracene				26 mg/kg		24.882 mg/kg	0.00249 %	✓	
	601-033-00-9	200-280-6	56-55-3							
21	chrysene				25 mg/kg		23.925 mg/kg	0.00239 %	✓	
	601-048-00-0	205-923-4	218-01-9							
22	benzo[b]fluoranthene				29 mg/kg		27.753 mg/kg	0.00278 %	✓	
	601-034-00-4	205-911-9	205-99-2							
23	benzo[k]fluoranthene				11 mg/kg		10.527 mg/kg	0.00105 %	✓	
	601-036-00-5	205-916-6	207-08-9							
24	benzo[a]pyrene; benzo[def]chrysene				25 mg/kg		23.925 mg/kg	0.00239 %	✓	
	601-032-00-3	200-028-5	50-32-8							
25	indeno[123-cd]pyrene				15 mg/kg		14.355 mg/kg	0.00144 %	✓	
		205-893-2	193-39-5							
26	dibenz[a,h]anthracene				2.8 mg/kg		2.68 mg/kg	0.000268 %	✓	
	601-041-00-2	200-181-8	53-70-3							
27	benzo[ghi]perylene				14 mg/kg		13.398 mg/kg	0.00134 %	✓	
		205-883-8	191-24-2							
28	vanadium { divanadium pentaoxide; vanadium pentoxide }				26 mg/kg	1.785	44.419 mg/kg	0.00444 %	✓	
	023-001-00-8	215-239-8	1314-62-1							
Total:								0.106 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Hazardous result
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- ND Not detected
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: WS105-930467-18/11/2019-1.00

 **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
WS105-930467-18/11/2019-1.00	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.00-1.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
18%	
(wet weight correction)	

Hazard properties

None identified

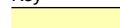
Determinands

Moisture content: 18% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				9.9 mg/kg	1.32	10.718 mg/kg	0.00107 %		✓	
	033-003-00-0	215-481-4	1327-53-3								
2	boron { diboron trioxide; boric oxide }				0.88 mg/kg	3.22	2.323 mg/kg	0.000232 %		✓	
	005-008-00-8	215-125-8	1303-86-2								
3	cadmium { cadmium oxide }				<0.1 mg/kg	1.142	<0.114 mg/kg	<0.0000114 %			<LOD
	048-002-00-0	215-146-2	1306-19-0								
4	chromium in chromium(III) compounds { chromium(III) oxide }				27 mg/kg	1.462	32.359 mg/kg	0.00324 %		✓	
		215-160-9	1308-38-9								
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
6	copper { dicopper oxide; copper (I) oxide }				12 mg/kg	1.126	11.079 mg/kg	0.00111 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
7	lead { lead chromate }			1	25 mg/kg	1.56	31.976 mg/kg	0.00205 %		✓	
	082-004-00-2	231-846-0	7758-97-6								
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
9	nickel { nickel chromate }				24 mg/kg	2.976	58.573 mg/kg	0.00586 %		✓	
	028-035-00-7	238-766-5	14721-18-7								
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.44 mg/kg	2.554	0.921 mg/kg	0.0000921 %		✓	
	034-002-00-8										
11	zinc { zinc oxide }				76 mg/kg	1.245	77.571 mg/kg	0.00776 %		✓	
	030-013-00-7	215-222-5	1314-13-2								
12	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
13	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
14	benzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
15	toluene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
16	ethylbenzene				<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
17	xylene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
18	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %		<LOD
	006-007-00-5									
19	pH				8 pH		8 pH	8pH		
			PH							
20	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
21	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
22	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
23	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
24	phenanthrene				0.63 mg/kg		0.517 mg/kg	0.0000517 %	✓	
		201-581-5	85-01-8							
25	anthracene				0.21 mg/kg		0.172 mg/kg	0.0000172 %	✓	
		204-371-1	120-12-7							
26	fluoranthene				1.5 mg/kg		1.23 mg/kg	0.000123 %	✓	
		205-912-4	206-44-0							
27	pyrene				1.3 mg/kg		1.066 mg/kg	0.000107 %	✓	
		204-927-3	129-00-0							
28	benzo[a]anthracene				0.69 mg/kg		0.566 mg/kg	0.0000566 %	✓	
	601-033-00-9	200-280-6	56-55-3							
29	chrysene				0.59 mg/kg		0.484 mg/kg	0.0000484 %	✓	
	601-048-00-0	205-923-4	218-01-9							
30	benzo[b]fluoranthene				0.48 mg/kg		0.394 mg/kg	0.0000394 %	✓	
	601-034-00-4	205-911-9	205-99-2							
31	benzo[k]fluoranthene				0.32 mg/kg		0.262 mg/kg	0.0000262 %	✓	
	601-036-00-5	205-916-6	207-08-9							
32	benzo[a]pyrene; benzo[def]chrysene				0.85 mg/kg		0.697 mg/kg	0.0000697 %	✓	
	601-032-00-3	200-028-5	50-32-8							
33	indeno[123-cd]pyrene				0.62 mg/kg		0.508 mg/kg	0.0000508 %	✓	
		205-893-2	193-39-5							
34	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
35	benzo[ghi]perylene				0.59 mg/kg		0.484 mg/kg	0.0000484 %	✓	
		205-883-8	191-24-2							
36	vanadium { divanadium pentaoxide; vanadium pentoxide }				34 mg/kg	1.785	49.771 mg/kg	0.00498 %	✓	
	023-001-00-8	215-239-8	1314-62-1							
Total:								0.0283 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: WS105-930468-18/11/2019-2.00

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
WS105-930468-18/11/2019-2.00	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
2.00-2.50 m		
Moisture content:		
8.6%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 8.6% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	• pH				8.3 pH		8.3	pH	8.3 pH		
			PH								
Total:									0%		

Key

- User supplied data
- Determinand defined or amended by HazWasteOnline (see Appendix A)

Appendix A: Classifier defined and non CLP determinands

■ pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

■ chromium(III) oxide (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462
Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

■ TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Aquatic Chronic 2 H411 , Repr. 2 H361d , Carc. 1B H350 , Muta. 1B H340 , STOT RE 2 H373 , Asp. Tox. 1 H304 , Flam. Liq. 3 H226

■ ethylbenzene (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4
Description/Comments:
Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)
Additional Hazard Statement(s): Carc. 2 H351
Reason for additional Hazards Statement(s)/Risk Phrase(s):
03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

■ salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

CLP index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s)/Risk Phrase(s):
14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

■ acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 1 H310 , Acute Tox. 1 H330 , Acute Tox. 4 H302

■ acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 17 Jul 2015
Hazard Statements: Aquatic Chronic 2 H411 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

■ fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 06 Aug 2015
Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

▪ **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Skin Irrit. 2 H315 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Carc. 2 H351 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302

▪ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

▪ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

▪ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

▪ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2 H351

▪ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

boron {diboron trioxide; boric oxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worst case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil. (edit as required)

zinc {zinc oxide}

Worst case compound based on absence of CrVI and assumed metal oxides from a combustion, ash based source.

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

vanadium {divanadium pentaoxide; vanadium pentoxide}

worst case/most likely scenario

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.1, May 2018**

HazWasteOnline Classification Engine Version: 2019.344.4102.8212 (10 Dec 2019)

HazWasteOnline Database: 2019.344.4102.8212 (10 Dec 2019)

This classification utilises the following guidance and legislation:

WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004

1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010

2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Appendix J

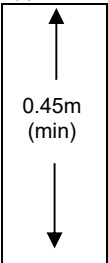
Environmental Cover System Construction

Shared Landscaping

SHARED LANDSCAPING:

To include physical break layer

GROUND LEVEL

 0.45m (min)		150mm (minimum) chemically validated TOPSOIL
		200mm chemically validated SUBSOIL
		100mm (minimum) PHYSICAL BREAK LAYER
		Existing MADE GROUND

Hardstood Areas – No Remediation Required

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- » Geotechnical
- » Contaminated Land
- » Flood Risk and Drainage
- » Asbestos
- » Invasive Species
- » Land Remediation
- » Project Management
- » Land Drilling