



PHASE 2 CONTAMINATED LAND ASSESSMENT

1628 - Millbrook Manor, Knowsley

Brendan Cain

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Limitations

This report was produced by Soilutions Ltd for Brendan Cain as the Phase 2 Geo-environmental Assessment Report on the site of Millbrook Manor, Knowsley to identify possible areas of contamination and provide an assessment of potential ground related development constraints.

This report may not be used by any person other than Brendan Cain and must not be relied upon by any other party without the explicit written permission of Soilutions Ltd. In any event, Soilutions Ltd accepts no liability for any costs, liabilities or losses arising as a result of the use or reliance upon the contents of this report by any person other than Brendan Cain, or by the client if payment in full has not been received.

All parties to this report do not intend any of the terms of the Contracts (Rights of Third-Party Act 1999) to apply to this report. Please note that this report does not purport to provide definitive legal advice.

The recommendations made in this report are based on the findings of the intrusive ground investigation undertaken by Soilutions Ltd on 17th May, 11th July and 24th August 2023.

The ground investigation has been designed to provide both targeted and untargeted coverage of the site at spacing in broad compliance with BS10175 2011+A1 2017. The spacing has been determined to give a reasonable indication of ground conditions and contamination across the site within the constraints of a cost-effective ground investigation. Ground conditions between exploratory hole locations cannot be guaranteed and allowance should be made in the design of the project (including foundation design and remediation strategy) for variation in ground conditions and the presence of unexpected contamination between exploratory holes.



EXECUTIVE SUMMARY

1. EXECUTIVE SUMMARY

Soilutions has been commissioned by Brendan Cain to provide a Phase 2 Geo-environmental Assessment report providing information on likely constraints to the development of the site, parameters for design and recommendations for any mitigation measures should they be required.

The site is located to the east of Knowsley Lane, approximately 0.40 km north of Knowsley village centre. The approximate National Grid Reference for the centre of the site is (NGR) 343480, 396000. It is proposed to develop the northern portion of the site through the construction of a single new residential dwelling and associated gardens. It is understood that the central portion of the site is being soft landscaped as a communal outdoor space for the Millbrook Manor which has been converted into residential dwellings under a separate planning permission.

The ground investigation comprised ten trial pits to obtain representative disturbed soil samples to forward for geo-environmental analysis. Following review of analytical results two rounds of delineation soil sampling were undertaken by trial pit and hand pit to define the extents of impacted soil on the site.

The geology of the site comprises made ground and superficial Shirdley Hill Sand deposits overlying bedrock deposits of the Chester Formation. Made ground comprised gravelly fine to coarse sand to a maximum depth of 0.6 m bgl across the entire site. The superficial deposits comprised a gravelly sand horizon overlying a sandy gravelly clay to a maximum proven depth of 3.0 m bgl at the termination of the trial pits. Bedrock was not encountered in any of the trial pits on the site.

Elevated concentrations of contaminants above generic assessment criteria have been identified within the near surface soils in two trial pits on the central soft landscaped portion of the site. Elevated levels of benzo(a)pyrene (BaP) were identified in one trial pit and asbestos was detected in a further trial pit. Mitigation is considered necessary and should comprise excavation and off-site disposal of the asbestos impacted soil and either off-site disposal of the BaP impacted soil, or retention onsite under a capping layer.

Low-level exceedances of the controlled waters screening criteria for polycyclic aromatic hydrocarbons (PAHs) were returned in leachate samples from the shallow soils in trial pit TP01. However, as PAHs exhibit low mobility, no evidence of groundwater was encountered in the trial pits, and attenuation was noted with depth in the trial pit, mitigation is not considered necessary. Likewise, for surface water, the identified exceedance is sufficiently far from the nearest surface watercourse that due to the low mobility of PAHs, mitigation relating to surface water is not considered necessary.

No sources of ground gas were identified in the Phase 1 Desk Study or this investigation. No ground gas monitoring has been undertaken.

The executive summary contains an overview of key findings and conclusions. However, no reliance should be placed on the executive summary until the whole of the report has been read. Other sections of the report may contain information which puts into context the findings noted within the executive summary.



INTRODUCTION

2. INTRODUCTION

2.1. Background

Soilutions were commissioned by Brendan Cain (the Client) to conduct a Phase 2 Intrusive Ground Investigation for their site Millbrook Manor, Knowsley (the site). The Phase 2 investigation is required as a result of the findings of Phase 1 Desk Studies (Ref: 1628 – *Millbrook Manor, Knowsley Phase 1 Desk Study*) undertaken by Soilutions Ltd in April 2023 and *Stage 1 Desktop Study and Risk Assessment at Millbrook Manor, Knowsley, Lane, Knowsley Village* undertaken by Your Environment in 2017.

The Phase 2 Intrusive Ground Investigation report has been prepared in general accordance with the Environment Agency's Land Contamination Risk Management (LCRM) guidance (Ref. 34) and BS10175: 2011+A2:2017 (Code of Practice for the Investigation of Potentially Contaminated Sites) (Ref. 4).

2.2. Objectives and Scope of Work

The ground investigation was carried out to identify existing ground conditions at the site and provide details of possible constraints to the development, parameters for design and recommendations for mitigation, if required.

The recommendations made in this report are based on the findings of the intrusive ground investigation carried out by Soilutions Ltd on 17th May 2023, and further intrusive works carried out on 11th July 2023 and 24th August 2023.

The report presents the following information:

- a summary of any previous Geo-environmental Reports provided to or produced by Soilutions Ltd;
- details of the ground investigation undertaken and the ground conditions encountered;
- details and results of the contamination analysis;
- assessment of contamination analysis;
- recommendations for mitigating constraints to the proposed development where appropriate.

The aims of this report are to:

- establish the geological and hydrogeological conditions using existing available/published information;
- summarise available information and identify site specific environmental hazards which may place a constraint upon the proposed site use;
- produce an updated Conceptual Site Model identifying potential pollution linkages between sources of contamination, pathways and receptors.

2.3. Proposed Development

It is proposed to develop the northern portion of the site by constructing a new residential dwelling and associated gardens on the site, with a blockwork driveway providing access on the eastern boundary off Old Meadow. The wider development of the Millbrook Manor property includes internal renovations to the Manor building as well as hard and soft landscaping across the central portion of the property.

A proposed development plan is included in **Appendix I**.



SETTING

3. SETTING

3.1. Location

The site is located off Knowsley Lane, 400m north of Knowsley village. The area of the proposed new dwelling and gardens is irregular in shape and approximately 0.093 ha in area and forms the northern third of the overall site. The approximate national grid reference is 343480, 396000. The wider site is an irregular shape with an area of 0.35Ha, the approximate national grid reference is 343484, 395977. A site location plan is included in **Appendix I**.

3.2. Site Description

The site is currently the location of Millbrook Manor, a former school and latterly a restaurant converted into residential dwellings. The area of the proposed new residential lot is a vacant disused carpark north of Millbrook Manor and is overgrown with shrubs and weeds. This northern portion of the site has been used for storage of building rubble during redevelopment of Millbrook Manor immediately to the south of the site.

The site is bound by temporary site fencing around the east, west and northern boundaries with mature trees and hedging around the northern and western boundaries. Around Millbrook Manor the boundaries are as follows; to the west by a stone wall and iron fence and by mature hedges to the east and south.

Vegetation at the site comprises mature deciduous trees and bushes along the northern and western boundaries with an evergreen hedge in the southeast portion of the site.

The topography of the site is generally flat lying. Levels on the Ordnance Survey maps are between 34 and 35 metres above Ordnance Datum (mAOD).

Vehicle access at the site is off Old Meadow in the northeast corner of the site.

Service and utility plans provided by the client indicate that an out of use 11Kv power line runs adjacent to the western site boundary within the footpath of Knowsley Lane, telecoms, electrical and gas lines are all within the road corridor of Knowsley Lane. The plans indicate that there are no services recorded under the proposed dwelling location on the site. Development plans indicate that new drainage will be laid from the southeast corner of the proposed dwelling to join the common drain for the Millbrook Manor buildings.

3.3. Site Vicinity

The area around the site is occupied by:

North	Mill Lane, with unnamed stream and fields beyond
East	Woodland and residential houses with gardens
South	Residential with St Mary's Church beyond
West	Knowsley Lane with residential houses and fields beyond

3.4. Investigation History

The following reports have been produced for the site:

Table 1: Table summarising previous reports.

Company	Date	Site Name	Report Title
Your Environment	2017	Millbrook Manor, Knowsley	Stage 1: Desktop Study and Risk Assessment at Millbrook Manor, Knowsley, Lane, Knowsley Village
Soilutions Ltd	2023	Millbrook Manor, Knowsley	Phase 1 Desk Study. 1628 – Millbrook Manor, Knowsley.

Having reviewed these reports, they are thought to be a reliable assessment of the site as it was recently undertaken and contains all of the information required for a Phase 1 Desk Study Report including a preliminary conceptual site model identifying potential sources of

contamination, pathways for exposure and potentially sensitive receptors – human and environmental.

The findings of the Phase 1 report are summarised in Table 2:

Table 2: Table summarising the geo-environmental setting of the site.

Site Description	The site comprises a vacant former car park, Millbrook Manor and a vacant portion of the site to be landscaped. The northern portion of the site is currently in a state of disrepair and overgrown with weeds.	
Site History	The site was vacant woodland for much of its discernible history until developed into its current configuration in the 1990s and has remained unchanged to the time of writing.	
Geology	Made Ground	Made ground is not shown on the BGS mapping. Made ground may be present associated with the development of the site.
	Superficial	Superficial deposits comprising sand of the Shirdley Hill Sand Formation and Devensian Till are expected at the site.
	Bedrock	Bedrock deposits comprising sandstone of the Chester Formation are expected at the site.
	Aquifers	The bedrock deposits are classified as a Principal aquifer. The superficial deposits are a Secondary A aquifer.
Water Environment	Surface Water	The closest surface water feature is an unnamed stream to the immediate northeast of the site forming a tributary of the Knowsley Brook.

3.4.1. Gap Analysis

A review of the report identified the gaps in information detailed in Table 3.

Table 3: Table summarising gaps in information in previous reports.

Data	Recommendations and Comments
Former tank decommissioning	Investigate soils in the vicinity of the former off-site tank for any visual or olfactory evidence of contamination
Chemical testing data	Soil samples are to be collected and submitted for laboratory analysis.

3.4.2. Summary of Previous Risk Assessments

The following sources, pathways and receptors were identified in the Phase 1 reports:

On-site Sources:

Table 4: Table summarising on-site sources identified.

Source	Contaminants
S1: Made ground associated with development of site	Organic and inorganic contaminants including heavy metals, metalloids, phenols and asbestos. Source of total petroleum hydrocarbons (TPHs), polycyclic aromatic hydrocarbons (PAHs).
S2: Historical tank	TPH, PAH
S3: Building rubble	Asbestos, metals, TPH, PAHs.

Off-site Sources:

No significant off-site sources are identified.

Pathways:*Table 5: Table summarising pathways from on-site sources.*

Pathway
P1: Human Uptake
• Dermal contact with soils and dust • Ingestion of soils and dust • Inhalation of soils, dust and vapour • Ingestion of vegetables grown in soil and soil attached to them
P2: Migration in solution through groundwater
P3: Migration along preferential pathways via underground services and drainage runs (pipes, culverts and granular material)
P4: Migration by surface run off
P6: Root uptake

Receptors:*Table 6: Table summarising receptors.*

Source	Contaminants
R1: End Users	Residential occupants of the proposed dwelling.
R2: Controlled Water: Groundwater	The bedrock deposits are classified as a Principal aquifer.
	The superficial deposits are a Secondary A aquifer.
R3: Controlled Water: Surface Water	The closest surface water feature is an unnamed stream immediately to the north of the site.
R4: Property	Services (e.g. drinking water supply pipes) and structures/buildings (concrete used in foundations)
R5: Adjacent Property	Residential properties to the south and east
R6: Proposed Flora and Fauna	Gardens proposed which may include potential for vegetable gardens and fruit planting.

The conceptual site model is reproduced on the following page (**Table 8**).

Preliminary Conceptual Site Model

Table 7: Table summarising the preliminary conceptual site model.

Source		Pathway		Receptor		Severity	Probability	Risk	Comments	Proposed Investigation			
On-Site	S1 Made ground associated with development of site	P1	Human uptake	R1	End Users	Medium	Likely	Moderate	End users may interact with the soils through leisure or maintenance activities. Contamination associated with the neighbouring tank and made ground may be present at the site and may contain asbestos fibres released during demolition of historical structures or imported to site to level the car park. The risk to human health is Moderate .	The extent and composition of potential made ground is unknown and should be determined through ground investigation.			
		P2	Migration in solution through groundwater	R2	Groundwater	Medium	Likely		Moderate	The site is underlain by bedrock of the Chester Formation Sandstone, which is classified as a Principal aquifer. Superficial deposits at the site are a Secondary A aquifer. Contamination associated with Made ground may be present at the site, however, while the made ground is not expected to be extensive, the Shirdley Hill Sand formation is listed as having High Leaching Potential. Groundwater may have contamination associated with the former off-site tank, assumed to have contained heating oil. Based on the information available, the risk to groundwater is considered to be Moderate .	Soil samples collected from the site should be subjected to leachate testing to determine if contamination is present and potential risks to groundwater.		
		P3	Migration through preferential pathways										
		P4	Migration by surface run off										
	S2 Historical tank												
	S3 Building rubble												
	P2	Migration in solution through groundwater	R3	Surface Water	Mild	Low	Low	The nearest surface water feature is an unnamed stream to the north of the site. Contamination associated with made ground may be present at the site. Due to the nature of the surfaces currently on site (hardstanding / well vegetated) and proposed for the future (building footprint, large driveway and gardens), it is considered less likely that contamination will reach the surface water feature by overland flow, with transport via groundwater more likely. Based on the information available, the risk to surface water is considered to be Low .	No further investigation required				
	P3	Migration through preferential pathways											
	P4	Migration by surface run off											
	P2	Migration in solution through groundwater	R1	End Users	Medium	Low	Moderate/Low	Historic off-site storage of fuels/oils may have resulted in spills and leaks of product that could migrate along preferential natural structures as well as man-made pathways. The historical tank in the vicinity of the site is deemed to be a potential source of TPHs / PAHs. Groundwater is assumed to be in continuity with the unnamed watercourse north of the site. The site is located between the former tank location and the watercourse so free phase or dissolved TPH/PAH may be transported via groundwater beneath the site – the only viable exposure pathway is vapour inhalation. The risk presented by the former tank is Moderate/Low .	The ground investigation noted above should include one sampling location in the closest proximity possible to the historic tank to establish any potential migration of TPH/PAH across the site boundary.				
	P3	Migration through preferential pathways											
	P5	Ground gas and vapour migration											
	P2	Migration in solution through groundwater	R4	Property	Medium	Low	Moderate/Low	Made ground and the underlying natural geology may contain contaminants that could migrate along preferential natural structures as well as man-made pathways. It is possible that made ground and natural deposits may contain sulphates and therefore present a risk to buried concrete and water pipes. At this stage, the risk to buried structures is considered to be Moderate/Low .	The water supplier may require full UKWIR testing which should be carried out in the construction phase.				
	P3	Migration through preferential pathways											
	P4	Migration by surface run off	R5	Adjacent Property									
	P5	Ground gas and vapour migration											
	P6	Root uptake	R6	Proposed Flora and Fauna	Minor	Low	Negligible	The plans indicate gardens which may include vegetable planting or fruit bearing trees in soft landscaping. The sources, if present, are unlikely to present a significant risk to flora and fauna on site. Provided this remains the case the risk of uptake to proposed flora and fauna is Negligible .	No further action required.				



FIELDWORKS

4. FIELDWORKS

4.1. Investigation Strategy

The investigation was designed as part of the Phase 1 report. The rationale is summarised in the table below. In accordance with BS10175 2011+A1 2017 (Ref 4) and Eurocode 7 (Ref 5) the investigation was carried out at a spacing of approximately 12 m.

Table 8: Table summarising proposed site investigation.

Hole Ref	Type	Target Depth (m bgl)	Location	Well	Specifics
TP01	TP	3	SE corner of soft landscaped area, as close as practicable to former off-site tank	No	Targeted – assessment of potential migration from historical tank to the south of site
TP02	TP	3	SW corner of residential gardens	No	Untargeted, beneath proposed building footprint
TP03	TP	3	NW portion of residential gardens	No	Untargeted, proposed garden area
TP04	TP	3	NE portion of residential gardens	No	Untargeted, proposed garden area
TP05	TP	3	Central site	No	Untargeted, beneath proposed building footprint

TP: Trial Pit

4.2. Site Work

The initial site work detailed in Table 9 above was carried out on 17th May 2023. Where applicable, the fieldwork was undertaken in accordance with BS5930:2015 Code of Practice for Site Investigations (Ref. 3) and BS10175:2011+A1:2017 Investigation of Potentially Contaminated Sites (Ref. 4).

All exploratory holes were logged by a Soilutions Ltd engineer. Exploratory hole logs are included in **Appendix V**.

3.4.3. Further Site Work 11th July 2023

Following the identification of contaminants above the residential GAC in one location during the May 2023 investigation, a supplementary site investigation was carried out on 11th July 2023. The additional investigation included delineation soil sampling around an exceedance of the assessment criteria identified in the initial stage of the ground investigation and included advancing trial pits across the common area to the south of the new residential site where soft landscaping is proposed between the residence and Millbrook Manor. The additional investigation included the following intrusive works:

Table 9: Table summarising additional PAH site investigation.

Hole Ref	Type	Target Depth (m bgl)	Location	Well	Specifics
TP06	TP	2.0	W of TP01 in S portion of soft landscaped area	No	Untargeted to provide general coverage of soft landscaped area
TP08	TP	2.0	S of proposed dwelling in soft landscaped area	No	Untargeted to provide general coverage of soft landscaped area
TP09	TP	2.0	W portion of soft landscaped area	No	Untargeted to provide general coverage of soft landscaped area
TP10	TP	2.0	NE corner of Soft Landscaping area	No	Untargeted, proposed garden area
HP1	HP	0.5	2.5m E of TP01	No	Targeted – delineation of exceedance
HP3	HP	0.5	2.5m N of TP01	No	Targeted – delineation of exceedance
HP4	HP	0.5	5.0m N of TP01	No	Targeted – delineation of exceedance
HP5	HP	0.5	2.5m W of TP01	No	Targeted – delineation of exceedance

3.4.4. Further Site Work – 24th August 2023

As asbestos was detected in one soil sample from the 11th July soil sampling, a further round of sampling was undertaken on 24th August to delineate the asbestos impacted area.

The additional investigation included the following intrusive works:

Table 10: Table summarising additional asbestos site investigation.

Hole Ref	Type	Target Depth (m bgl)	Location	Well	Specifics
TP2-3	TP	0.5	2.5m S of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-5	TP	0.5	SW of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-7	TP	0.5	SE of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-10	TP	0.5	2.5m W of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-11	TP	0.5	2.5m E of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-13	TP	0.5	NW of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-14	TP	0.5	2.5m N of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-15	TP	0.5	NE of ACM detection on grid	No	Delineation grid around ACM exceedance
TP2-17	TP	0.5	5m N of ACM detection, inside new residential lot	No	Delineation of ACM as well as infill sample to complete assessment of residential lot.

4.3. Strata

Based on the findings of the Phase 1 report, the strata at the site were expected to comprise made ground overlying superficial Shirdley Hill Sand Formation deposits and bedrock of the Chester Formation. The encountered geology partially confirms the published information as a thin horizon of made ground was found to overlay soils consistent with the description of the Shirdley Hill Sand Formation but the bedrock was not proved as it was not encountered in the trial pits. The geology encountered at the site is detailed in the table below.

Table 11: Table summarising geology encountered during the site investigation.

Strata		Depth (m bgl)	Thickness (m)	Description
Anthropogenic	TOPSOIL	0.00 - 0.10	0.10	Grey to dark brown silty gravelly fine to medium SAND. Gravel is fine to medium sub-angular to sub-rounded of mixed lithologies.
	MADE GROUND	0.00 - 0.05	0.05	Asphalt
		0.05 - 0.60	0.55	Brown gravelly SAND
Superficial	Shirdley Hill Sand Formation	0.30 - 1.20	0.80	Reddish brown silty fine to medium SAND
		0.80 - 2.20	1.40	Reddish brown gravelly CLAY
		2.20 - 3.00	0.80	Reddish brown sandy CLAY
Bedrock	Chester Formation	-	-	Not encountered to maximum extent of excavations (3.00m bgl)

4.4. Laboratory Testing

4.4.1. Sample Collection

Geo-environmental samples, placed in plastic tubs and glass jars supplied by the laboratory, were obtained specifically for chemical analysis. The samples were couriered to UKAS accredited laboratories for further examination and testing.

4.4.2. Chemical Analysis

Laboratory testing schedules were prepared by Soilutions Ltd. The testing was carried out by Chemtech Ltd (UKAS Number 2531).

The geo-environmental samples were stored in cool boxes and delivered to the laboratory by courier. Chemical analysis was scheduled on ten soil samples for the presence of a selected suite of potential contaminants as outlined in the tables below:

Table 12: Table summarising scheduled chemical analysis.

Hole Ref	Sample Depth (m bgl)	Chemical Testing	Material	Rationale
TP01	0.3	Standard Soil Suite, asbestos identification, leachate suite, organic matter	Made ground	Targeted – Assessment of migration from the historical tank to the south of the site
TP01	1.0	Standard soil suite, leachate suite	Sand	Targeted – as above
TP02	0.2	Standard soil suite, asbestos identification	Made ground	Untargeted
TP02	2.8	Standard soil suite, leachate suite, organic matter	Clay	Untargeted

Hole Ref	Sample Depth (m bgl)	Chemical Testing	Material	Rationale
TP03	0.3	Standard soil suite, asbestos identification	Made ground	Untargeted
TP03	0.9	Standard soil suite,	Sand	Untargeted
TP04	0.2	Standard soil suite, asbestos identification, organic matter	Made ground	Untargeted
TP04	0.8	Standard soil suite, organic matter	Sand	Untargeted
TP05	0.3	Standard soil suite, asbestos identification,	Made ground	Untargeted
TP05	1.8	Standard soil suite	Clay	Untargeted
TP06	0.3	Standard soil suite, asbestos identification,	Made ground	Untargeted
TP06	1.3	Standard soil suite	Sand	Untargeted
TP08	0.3	Standard soil suite, asbestos identification,	Made ground	Untargeted
TP08	0.6	Standard soil suite	Sand	Untargeted
TP09	0.3	Standard soil suite, asbestos identification,	Made ground	Untargeted
TP09	1.3	Standard soil suite	Sand	Untargeted
TP10	0.3	Standard soil suite, asbestos identification,	Made ground	Untargeted
TP10	1.8	Standard soil suite	Clay	Untargeted
HP1	0.3	PAH	Made ground	Targeted - delineation
HP3	0.4	PAH	Made ground	Targeted - delineation
HP4	0.5	PAH	Made ground	Targeted - delineation
HP5	0.5	PAH	Made ground	Targeted - delineation
TP2-3	0.3	Asbestos ID	Made ground	Targeted - delineation
TP2-5	0.5	Asbestos ID	Made ground	Targeted - delineation
TP2-7	0.2	Asbestos ID	Made ground	Targeted - delineation
TP2-10	0.47	Asbestos ID	Made ground	Targeted - delineation
TP2-11	0.3	Asbestos ID	Made ground	Targeted - delineation
TP2-13	0.2	Asbestos ID	Made ground	Targeted - delineation
TP2-14	0.3	Asbestos ID	Made ground	Targeted - delineation
TP2-15	0.2	Asbestos ID	Made ground	Targeted - delineation
TP2-17	0.3	Standard soil suite, asbestos identification,	Made ground	Targeted - delineation and infill sampling of residential garden

Table 13: Table summarising Soilutions standard chemical testing suites for samples.

Material	Contaminants			
Soil	Metals		Inorganics/Other	
	Arsenic	Lead	pH	
	Aluminium	Manganese	Asbestos Identification (Made Ground Only)	
	Boron (Water Soluble)	Mercury (total)	Cyanide, total and free	
	Cadmium	Nickel	Organic Matter	
	Chromium (III and VI)	Selenium	Sulphide and Sulphate as SO ₄	
	Copper	Zinc		
	Total Phenol	Speciated and Total Petroleum Hydrocarbons (TPHs)	Speciated Polycyclic Aromatic Hydrocarbons (PAHs)	
Leachate	Metals		Inorganics/Other	
	Arsenic	Lead	pH	Soluble Sulphate
	Boron	Mercury (total)	Cyanide, total	
	Cadmium	Nickel	Sulphide	
	Chromium (III and VI)	Selenium	Hardness	
	Copper	Zinc	Chloride	
	Total Phenol	Speciated and Total Petroleum Hydrocarbons (TPHs)	Speciated Polycyclic Aromatic Hydrocarbons (PAHs)	

4.5. Groundwater

Groundwater was not encountered in any test pit during the site investigation. Localised perched water was noted where more clay rich lenses were identified.

4.6. Contamination

With the exception of shallow made ground in TP01, visual or olfactory evidence of contamination was not encountered during the site investigation. Cobbles of asphalt and clinker were noted in the made ground horizon of trial pit TP01.



ENVIRONMENTAL APPRAISAL

5. ENVIRONMENTAL APPRAISAL

5.1. Risk Assessment Methodology

In accordance with the Environment Agency's Land Contamination Risk Management (LCRM) guidance (Ref 34), there are three tiers of environmental risk assessment:

Table 14: Table summarising environmental risk assessment tiers.

Tier 1	Identification of possible pollutant linkages and creation of PCSM
Tier 2	Non-site-specific assessment of chemical data using generic assessment criteria (GAC)
Tier 3	Site-specific assessment of chemical data using site specific assessment criteria (SSAC) where GAC are not available or applicable.

This report comprises a Tier 2 assessment and includes an updated conceptual site model (CSM). The results of the environmental laboratory testing have been compared to the following GAC:

Table 15: Table detailing GAC used in risk assessment.

LQM/CIEH	Suitable For Use Levels (S4ULs)
CLEA	Soil Guideline Values (SGVs)
DEFRA	Category 4 Screening Levels (C4SLs)

The proposed development of the northern half of the site comprises a single residential dwelling with gardens, therefore in the residential section in the north the standard exposure scenario of residential with plant uptake has been used to determine the source/pathway/receptor linkages for human health. Across the central soft landscaping section of the Millbrook Manor portion, which is a common area with soft landscaping, but with no potential for growing homegrown produce, the less conservative GAC for residential land use without plant uptake have been applied.

Water, flora and fauna and property receptors have also been included in the CSM.

The assessment of PAHs is undertaken using the surrogate marker approach; recommended by Health Protection Agency (2010) guidance (Ref 36), providing the PAH profile is sufficient similar to the coal tars tested by Culp et al (1998). Where PAH profile is not sufficiently coal tar like the TEF method is adopted using the LQM and CIEH S4ULs. Prior to assessment a PAH profile is generated for all samples analysed for PAH using the LQM PAH Profiling Tool v1.3, the graphical output is presented in **Appendix II**.

5.2. Quantitative Risk Assessment

5.2.1. Human Health

The soil samples subjected to chemical analysis detailed in section 4.4.3 provide the basis for characterising the soils to outline the potential impact on human health.

Metals, Organic and Inorganic Contamination

The screening process for on-site human health receptors show that the GAC, representative of acceptable risk for both residential without plant uptake and with plant uptake scenarios, for PAHs were exceeded in the surficial made ground soil sample at one trial pit location (TP01, 0.3m).

One surficial soil sample (TP02, 0.2m) within the proposed northern residential section returned a concentration of lead in excess of the GAC for residential with plant uptake scenario. One soil sample (TP09 0.3m) from the common soft landscaped area also returned a concentration of lead above the GAC for residential without plant uptake scenario.

The screening process for on-site human health receptors show that the GAC, representative of acceptable risk for a residential with plant uptake setting were exceeded by lead and PAHs, as detailed in the table below.

Table 16: Table detailing samples exceeding GAC for metal, organic and inorganic contaminants in soils.

Contaminant	GAC (mg/kg)	Concentrations (mg/kg) Sampling Location and Depth (m bgl)	Number of Exceedances
Lead	200 ³	220 – TP02 – 0.2m	1
Lead	310 ⁵	419 – TP09 – 0.3m	1
Benzo(a)pyrene Surrogate Marker	5.3 ¹	5.71 – TP01 – 0.3m	1

¹S4UL ²SGV ³C4SL (homegrown produce) ⁴LQM/CIEH GAC ⁵C4SL (without plant uptake)

Asbestos

All of the soil samples derived of Made Ground were submitted for asbestos screen and identification. Asbestos fibres were only identified in one sample.

Asbestos quantification testing has been carried out on the sample. The results are summarised below (**Table 17**).

Table 17: Table detailing asbestos exceedances.

Contaminant	GAC	Concentrations (%) Sampling Location and Depth (m)	Number of Exceedances
Asbestos	Present	0.002% – TP10 – 0.3m	1

The assessment criteria was exceeded by one sample, detailed above. Further delineation sampling around the asbestos exceedance on a 2.5m grid pattern returned no further detections of asbestos.

TPHs

Levels of TPHs above the limit of detection but below the individual assessment criteria have been identified. A Hazard Index (HI) has been produced for the site in accordance with the guidance given in Environment Agency document “SR3 – Updated Technical Background to the CLEA Model” (Ref 33). The calculation below, taken from SR3, has been used to produce the HI.

$$HI = \sum_i^9 HQ_i$$

$$HQ_i = \frac{\text{Measured Concentration } i}{GAC_i}$$

HI – Hazard Index

HQ_i – Hazard Quotient

A summary of the HI values is included below (**Table 16**).

Table 18: Table detailing Hazard Index calculations.

Determinant	Samples Tested	Maximum Individual HI	Mean HI	HI GAC	Exceedances
TPH Hazard Index	10	0.7	0.3	1.0	None

The detected concentrations of TPH across the site are comparatively elevated in the shallow soils in TP01. It is possible that the source of the elevated TPHs in TP01 are resulting from migration of historical spills or leaks from the former tank located immediately to the north of the Millbrook Manor and associated with the heating system in the former school. However, as heating oils are usually kerosene (C12-15 carbon chain length) and the majority of TPH detections are in >C16 bands, it is unlikely that the tank to is the source of TPH in this sample. It is also noted that the TP01 location is also located to the south of the former carpark surface, and the TPH concentrations may be reflective of run off from the carpark infiltrating the shallow soils.

In a similar location, TP04, situated off the northern edge of the former carpark also returned comparatively elevated TPH concentrations in the same >C16 chain lengths. Furthermore, as the PAH profile, discussed above, matches coal tar, it is considered that the likely source of the elevated PAH and TPH is from the tar seal and run off from the car park, rather than migration from the historical tank.

Risk Assessment

Proposed New Residential Lot – Residential with plant uptake

All soil samples in the proposed new residential lot returned concentrations of contaminants of concern within the residential with produce GAC. While TP02 0.2m returned a concentration of lead of 220mg/kg this is not considered to present a risk as it is not considered representative of the soil quality across the proposed property as it represents a marginal exceedance of the GAC and all other samples are more than an order of magnitude below that level.

All soil within the proposed new residential lot is therefore considered to be appropriate for use and is considered highly unlikely to present a potentially significant risk to human health.

Soft Landscaping Area – Residential without plant uptake

The screening criteria representative of acceptably low risk to the end use scenario were exceeded for benzo(a)pyrene in one location within a sample of made ground while the GAC was exceeded for lead in another single made ground sample. It is noted in the trial pit logs that cobbles including asphalt and clinker were observed in the made ground horizon of trial pit TP01, these are considered the likely source of the elevated PAH.

Additionally, asbestos was detected in one soil sample TP10 0.3m from the northwest corner of the proposed soft landscaped area. Quantitative analysis of the sample returned a concentration of 0.002%w/w. Further delineation soil sampling was undertaken on a 2.5m grid pattern around the exceedance which returned no further detections of asbestos.

TP09 0.3m returned an apparent exceedance of the residential (without plant uptake) GAC for lead, statistical analysis to calculate a U95th percentile value for lead indicates that the detected concentration of lead in TP09 0.3m is a statistically insignificant outlier. The calculated 95th percentile mean (calculated using Pro UCL) for lead across the made ground soil samples is 227.6mg/kg, indicating with 95% probability that the concentration of lead across the horizon will not exceed this concentration. As the detected concentration of lead in TP09 0.3m of 419mg/kg is less than twice the 95% UCL mean it is not regarded as a hotspot and can therefore be disregarded as an outlier.

While the minimum statistically defensible number of samples for the 95% UCL calculation is generally accepted to be 10 samples, as the made ground horizon was observed to be relatively homogenous across the site, and the sample locations are generally positioned using a systematic, untargeted approach, the use of the 95% UCL calculation is justified in this case.

We therefore consider that there is a potentially significant risk associated with the interaction between PAH and asbestos in the near surface soils and end users of the site.

Mitigation measures and recommendations in relation to the contamination identified are made in Section 6.3 below.

5.2.2. Ground Gases

Potential sources of ground gases have not been identified in the site vicinity. Ground gas monitoring has not been undertaken as part of this investigation.

5.2.3. Groundwater

The leachate samples subjected to chemical analysis detailed in section 4.4.3 provide the basis for characterising the risk posed to groundwater by the site. The site is underlain by an Environment Agency Principal Aquifer bedrock aquifer and Secondary A superficial aquifer.

Metals, Organic and Inorganic Contamination

The screening process for groundwater receptors show that the EQS/DWS values, representative of minimal risk, were marginally exceeded by certain PAHs, as detailed in Table 19 below.

Table 19: Table detailing samples exceeding GAC for metal, organic and inorganic contaminants in groundwater.

Contaminant	Screening Criteria	Concentrations (ug/l) Sampling Location and Depth (m)	Number of Exceedances
Fluoranthene	0.1 ¹	0.5 - TP01 - 0.3m 0.2 - TP01 - 1.0m	2
Pyrene	0.1 ¹	0.4 - TP01 - 0.3m	1
Sum of PAH	0.1 ²	0.5 - TP01 - 0.3m	1

¹EQS ²DWS

Risk Assessment

The above results represent marginal exceedances of the relevant criteria in surficial soil samples only. The leachate extraction process for the analysis of leachate is representative of a realistic worst-case scenario of potential conditions on site, the reported leachate concentration also does not include assessment of other environmental factors such as dilution or attenuation with distance from the source. In addition, the depth of made ground was less than 1.0m with a clay horizon identified in trial pits underlying the impacted made ground horizon so the potential for any significant volume of unidentified contaminants to affect groundwater is considered low.

Soilutions therefore considers that there is unlikely to be a potentially significant risk associated with the interaction between the near surface soils and groundwater, mitigation measures should not be required. Furthermore, if the impacted soil in TP01 is remediated through offsite disposal, any residual risk would be removed during the human health driven remediation.

5.2.4. Surface Water

The nearest surface water feature to the site is an unnamed stream, approximately 8 m to the northeast of the site boundary. Due to the site surfaces (hardstanding and vegetative cover and proposed dwelling and vegetated gardens) it was concluded in the Phase 1 Desk Study that overland flow was unlikely to impact the unnamed stream, interaction with groundwater was considered to be a more likely pathway.

While minor exceedances of the EQS are recorded in the surficial leaching testing in TP01, as there was no evidence of groundwater interaction with the subsurface soils to a depth of 3.0m bgl on the site, and clear attenuation of the contaminants is observed between 0.3m and 1.0m samples in TP01. Additionally, PAH compounds exceeding the GAC exhibit low solubility and mobility in soils and are unlikely to migrate to the nearby stream.

Soilutions consider that it is highly unlikely that the elevated concentrations of PAHs in the made ground at TP01 presents a potentially significant risk to surface waters. As with the

groundwater assessment above, should the TP01 shallow soils be remediated, any residual risk to surface waters will also be removed.

Remediation in relation to surface water is not required.

5.3. Mitigation Measures

5.3.1. Human Health

No mitigation measures are considered necessary within the proposed new residential lot in the northern half of the site.

The concentrations of PAHs and asbestos recorded in the soft landscaped area across the central portion of the site are considered to pose a potentially significant risk to the proposed end users through potential interaction with the soil. These contaminants have low volatility (PAHs) and thus the exposure risks are dominated by a combination of the following pathways:

- Inhalation of dust and fibres (Asbestos)
- Ingestion (PAH)
- Dermal (PAH)

If the areas of the exceedances are to be located beneath hard standing or the building footprint, then the hard cover effectively acts as capping and breaks the source pathway receptor linkage as the near surface soils will either be retained beneath hardstanding, retained within landscaping or removed from site to a suitably licensed waste management facility.

As the PAH exceedance is limited to the shallow soil (<1.0m) in TP01 and delineation sampling has shown it to be a limited hotspot, targeted hotspot excavation and offsite disposal of the impacted soil is considered a cost effective and viable option. This would remove the source of the contamination, breaking the source pathway receptor linkage. Furthermore, this would work to further reduce any residual risks to groundwater and surface water.

Alternatively, a capping system could be utilised to break the source pathway receptor linkage by removing the pathway from the relationship. Where the contaminated soils are located in areas of soft landscaping, a layer of clean capping material will be required. If capping were to be chosen as the option to mitigate the risk posed by PAH, this would be subject to Environmental Health Officer (EHO) approval.

In order to address the asbestos impacted soil around TP10, delineation soil sampling has shown that the hotspot is limited in extent and targeted excavation and offsite disposal is considered to be the most cost effective and pragmatic approach.

All construction and maintenance workers operating at the site should be advised of the potential for contact with the relatively high concentrations of PAHs and presence of asbestos within the made ground materials. Appropriate health and safety precautions should be adopted during any excavation works to avoid exposure to contaminated soils and dust. Reference to the HSE document HSG 66 'Protection of workers and the General Public during Redevelopment of Contaminated Land' (Ref 21).

Should any obvious evidence of unexpected contamination be encountered during the redevelopment works it should be reported to Soilutions so that an inspection can be made and appropriate sampling and assessment work be carried out.

The approval of the local Environmental Health Officer should be sought with respect to the soil contamination assessment and mitigation proposals.

5.3.2. Ground Gas

As the Phase 1 Desk Study did not identify any potential ground gas sources, no ground gas monitoring has been undertaken as part of this investigation.

5.3.3. Groundwater

Low level exceedances of the EQS and DWS were recorded in leachate samples from the made ground horizon at the site. Due to the distance to groundwater, the underlying clay horizon and the low level of risk associated with the exceedances in leachate samples, it is considered unlikely that a potentially significant risk to underlying groundwater is present at the site. Remediation in relation to groundwater is not required, additionally, if the source area in the made ground on-site is removed, this will further reduce any residual risk to ground water.

5.3.4. Surface Water

As noted above for groundwater, low level exceedances of the EQS were noted for PAHs in one trial pit location. As the exceedances were within the uppermost 1.0m of soil and no evidence of groundwater interaction was noted, there is not considered to be a viable pathway to the surface water adjacent to the site. Additionally, PAH compounds exceeding the EQS/DWS are low mobility and unlikely to be carried to the stream by groundwater transport.

For that reason, it is considered unlikely that a potentially significant risk to surface water exists at the site. Remediation in relation to surface water is not required additionally, if the source area in the made ground on-site is removed, this will further reduce any residual risk to ground water.

5.4. Water Supply

A full UKWIR suite was outside the scope of this investigation. A UKWIR suite of testing may be required by the utility provider. The client should liaise with the provider and, if necessary, the contractor should undertake appropriate UKWIR soil testing where pipes are to be laid. The environmental testing carried out for the site has been compared to the following document in order to give an initial indication of the most appropriate pipe material that should be used upon the site for mains water supply:

‘Guidance for the selection of water supply pipes to be used in Brownfield sites – UK Water Industry Research – Ref: 10/WM/03/21.’ (Ref 24)

Based on the chemical analysis report it is considered that specialist materials are likely to be required for water supply pipes at the site due to TPH levels encountered in TP01. However, confirmation of supply pipes should be sought from utility providers.

Relatively elevated levels of PAH have been identified on site. Any pipe backfill material installed should be selected with the contamination in mind and agreed with the water supplier.

5.5. Waste Classification

The results of the chemical testing have been assessed using web-based software for classifying hazardous waste, using HazWasteOnline™. The materials from TP01 at 0.3m depth are classified as hazardous due to the TPH contaminant levels exhibited. The materials across the remainder of the site are classified as non-hazardous waste. While certified as non-hazardous it is noted that soils from the TP10 0.3m area also contain asbestos at 0.002%. The results are included in **APPENDIX III**.

5.6. Updated Conceptual Site Model

The PCSM and Summary of plausible pollutant linkages was produced by undertaking a Source-Pathway-Receptor analysis of the site and is present in the Desk Study (Ref. 1). Based on the findings of this and the previous investigation, the conceptual site model has been updated and is presented in **Table 18** below.

The risk assessments presented in this report should be reviewed if any unexpected contamination is encountered during site work.

Updated Conceptual Site Model

Table 20: Table detailing updated conceptual site model.

Source		Pathway		Receptor		Severity	Probability	Risk	Comments	Recommendations
On-Site	S1 Made ground associated with development of the site S2 Historical tank S3 Building rubble	P1	Human uptake	R1	End Users	Medium	Unlikely	Low	Elevated concentrations of BaP and asbestos above the GAC have been identified in the made ground material in two trial pit locations at the site. It is possible that end users/construction workers will handle the soils. Construction workers should be made aware of the potential for contact with soils containing ACM, BaP and other PAHs and appropriate health and safety precautions implemented to limit contact with contaminated soil and dust. Provided the mitigation measures detailed in section 6.2 are carried out the risk to human health is Low .	Remediation will be required in the southern portion of the site as documented in Section 6.2 below. The impacted soil should be removed from site.
		P2	Migration in solution through groundwater	R2	Groundwater	Medium	Unlikely	Low	The site is underlain by bedrock of the Chester Formation Sandstone, which is classified as a Principal aquifer. Superficial deposits at the site are a Secondary A aquifer. While elevated levels of BaP/PAH have been identified on site. However, as leachate samples only indicated low level exceedances of the EQS/DWS in the uppermost made ground horizon, no evidence of groundwater infiltration was noted during the trial pit excavations to 3m BGL, and a clay stratum underlies the site offering some cover to the underlying aquifer. The risk to groundwater is Low .	Removal of the source area will remove the residual risk to groundwater.
		P3	Migration through preferential pathways							
		P4	Migration by surface run off							
	P2	Migration in solution through groundwater	R3	Surface Water	Mild	Unlikely	Negligible	The nearest surface water feature is an unnamed stream 8m to the northeast of the site. While contamination has been identified on site the water feature is sufficiently far from the identified impacted area site that it is unlikely that contamination will reach surface water through surface run-off. As PAH compounds are low solubility and consequently, low mobility in the soil matrix, it is unlikely that the identified impacts to surficial soil on site will result in impacts to the nearby stream. Based on the information available, the risk to surface water is considered to be Negligible .	Removal of the source area will remove the residual risk to surface water.	
	P3	Migration through preferential pathways								
	P4	Migration by surface run off								
	P2	Migration in solution through groundwater	R1	End Users	Medium	Unlikely	Low	Historic off-site storage of fuels/oils may have resulted in spills and leaks of product that could migrate along preferential natural structures as well as man-made pathways. The historical tank in the vicinity of the site is deemed to be a potential source of TPHs / PAHs. As the TPH detected in TP01 was predominantly longer chain lengths than heating oil (kerosene C12-15), and the PAH detections were consistent with coal tar, it is considered more likely that the source of TPH and PAH is from the tar seal of the former car park as well as run off from the surface.. The risk presented by the former tank is Low .	No further investigation or action required.	
	P3	Migration through preferential pathways								
	P5	Ground gas and vapour migration								
	P2	Migration in solution through groundwater	R4	Property	Medium	Unlikely	Low	Made ground and the underlying natural geology may contain contaminants that could migrate along preferential natural structures as well as man-made pathways. Sulphate and pH testing have been carried out on the made ground and natural soils. A sulphate design class of DS-1 has been determined along with an Aggressive Chemical Environment for Concrete class of AC-1. UKWIR testing has not been carried out as it was outside the scope of this investigation. The risk is considered to be Low .	Confirmation of water supply pipe materials should be obtained from the utility provider.	
	P3	Migration through preferential pathways								
	P4	Migration by surface run off	R5	Adjacent Property						
	P5	Ground gas and vapour migration								
	P6	Root uptake	R6	Proposed Flora and Fauna	Medium	Unlikely	Low	The plans indicate gardens with the potential for vegetable planting or fruit bearing trees in soft landscaping. Provided this remains the case the risk of uptake to proposed flora and fauna is Low .	Remediation as detailed in Section 6.2 below should be carried out to reduce the risk to proposed flora and fauna in the southern portion of the site.	



Remediation Options Appraisal

6. Remediation Options Appraisal

6.1. Chemicals of Concern

Based on the investigation carried out to date, remediation is required at the site due to the chemicals listed in the table below:

Table 21: Table detailing contaminants above the screening criteria which require remediation.

Contaminant	Screening Criteria	Location	Environment
Benzo(a)pyrene	5 ¹	5.71 mg/kg – TP01 – 0.3m	Soil
Asbestos	-	0.002% – TP10 – 0.3m	Soil

¹S4UL

Elevated levels of lead were also identified; however, these have been discounted as a risk because the one exceedance was only elevated slightly above the GAC in the surficial soil, while remaining surface and depth samples were all an order of magnitude lower than the GAC. The lead concentrations in TP02(0.2m) and TP09(0.3m) are not considered a potentially significant risk to end receptors.

6.2. Soil Remediation Options

6.2.1. Hotspot Removal – Excavation and Off-site Disposal

Site investigations have identified that soil contamination is present at depths of up to approximately 0.5 m below ground level, within the made ground horizon. The contamination is highly localised around trial pit TP01 in the southeast of the site (PAH) and around TP10 in the central portion of the site (asbestos).

It may be cost effective to remove only the soils around TP01 and TP10 to a licensed waste site. At this stage, it is estimated that the disposal tonnage will be as follows:

- PAH impacted soil – approximately 17 tonnes (Hazardous Waste)
- Asbestos impacted soil – approximately 11 tonnes (Non-hazardous Waste)

Targeted hotspot removal of the asbestos hotspot is considered the most appropriate mitigation strategy for that area.

Due to the hazardous waste classification of the PAH impacted hotspot, retention on site and capping may be a more cost-effective mitigation strategy.

All soil outside the PAH hotspot around TP01 is classified as non-hazardous waste.

6.2.2. Capping

The installation of a clean capping layer will break the source-pathway-receptor linkage effectively. This will require a layer of clean, imported material to be installed in soft landscaping to 600 mm depth, comprising 150 mm topsoil and 450 mm subsoil. As the exceedance is surficial, the ground could be raised by the capping layer or alternatively, if the site level must be maintained, soil from the non-hazardous classified areas of the site could be removed from site and the impacted material buried beneath permanent hardstanding areas such as the building footprint, driveway or parking areas.

As the contamination is localised, capping may not be the most cost-effective remediation solution. Capping of the impacted surficial soils will result in raising the level of this portion of the site and may therefore, not be the most appropriate strategy.

6.2.3. Natural Degradation

The natural degradation of the impacted soils has been considered. The contaminants identified will not degrade within an appropriate timescale for the project and this remediation option is not considered suitable. Natural degradation is not a suitable approach for asbestos impacted soil.

6.2.4. Chemical Injection

While the injection of treatment chemicals will effectively treat the contaminants of concern (PAH) it may prove a more costly and time-consuming remediation method than delineation and targeted excavation and disposal. Chemical injection may not be suitable for this project. Chemical injection is not a suitable approach for asbestos impacted soil.

6.2.5. Soil Stabilisation

Soil stabilisation allows the retention of soil on site and will reduce the environmental impact of the project, whilst the soils will be effectively remediated in a timely manner. However, for this project it is likely to be prohibitively expensive due to the small treatment area, and small size of the.

6.2.6. Soil Remediation Options Appraisal

At this stage, based on the information gathered by this report, targeted hotspot removal is considered to be the most appropriate remediation method at the site. This will remove the source from the source-pathway-receptor relationship and will also remove residual risk to groundwater and surface water.

It is estimated that excavation and off-site disposal of 17 tonnes of hazardous waste with 11 tonnes of non-hazardous waste and replacement with 30 tonnes of imported topsoil will cost in the region of approximately £5,000.

A remediation strategy will be required to detail the remediation method. This must be approved by the local authority before work commences.

Following remediation, a validation report will also be required by regulators – Soilutions will be happy to provide a scope and costs to undertake the remediation strategy and validation tasks.

Additionally, Soilutions are experienced remediation contractors and waste brokers and would be happy to assist in soil remediation and disposal from the site.



CONCLUSIONS

7. CONCLUSIONS

7.1. Environmental

Elevated levels of BaP and asbestos above the assessment criteria were identified in the soils. Targeted hotspot removal is considered the most cost-effective and appropriate remediation strategies for the site. Suitable measures will need to be in place to protect construction workers and adjacent site users during redevelopment.

For waste purposes, the materials in the area of the identified PAH exceedance are classified as hazardous. Disposal of the asbestos impacted soil is classified as non-hazardous with the addendum that the soil does contain asbestos at 0.002%.

Low-level elevated levels of PAHs above the assessment criteria were identified in the leachate samples. However, as there was no evidence of groundwater infiltration in the trial pits, a clay horizon underlies the site, and the noted attenuation from the impacted surficial horizon to the subsoils, it is considered that there is not a potentially significant risk to groundwater. Additionally, if the impacted soil is removed from site, this will remove any residual risk to groundwater on the site.

The nearest surface water feature is an unnamed stream approximately 8 m to the northeast of the site. While elevated PAHs are recorded in the southeast corner of the site, due to the low solubility and mobility of the exceeding PAHs it is considered unlikely that a potentially significant risk to the stream exists. Additionally, if the impacted soil is removed from site, this will remove any residual risk to surface adjacent to the site.

No potential sources of ground gas were identified in the Phase 1 Desk Studies, or in this investigation. Ground gas monitoring has not been undertaken.

A remedial options appraisal has been carried out. Targeted hotspot removal of asbestos impacted soil is considered to be the most appropriate remediation method. A remediation strategy and subsequent verification statement should be produced for the site and approved by the local authority.



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8. REFERENCES

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APPENDIX I

Figures

- Site Location Plan
- Site Boundary Plan
- Proposed Development Plan
- Site Investigation Layout Plan



SITE: MILLBROOK MANOR, KNOWSLEY		DRAWING NO: 1628/001		PROJECT NO: 1628	DATE: 6.9.23	soilutions soilutions.co.uk 0800 0209 307 info@soilutions.co.uk
TITLE: SITE LOCATION PLAN		SCALE (A3) 1:10000	DRAWN DW	CHECKED JC	REVISION 0	



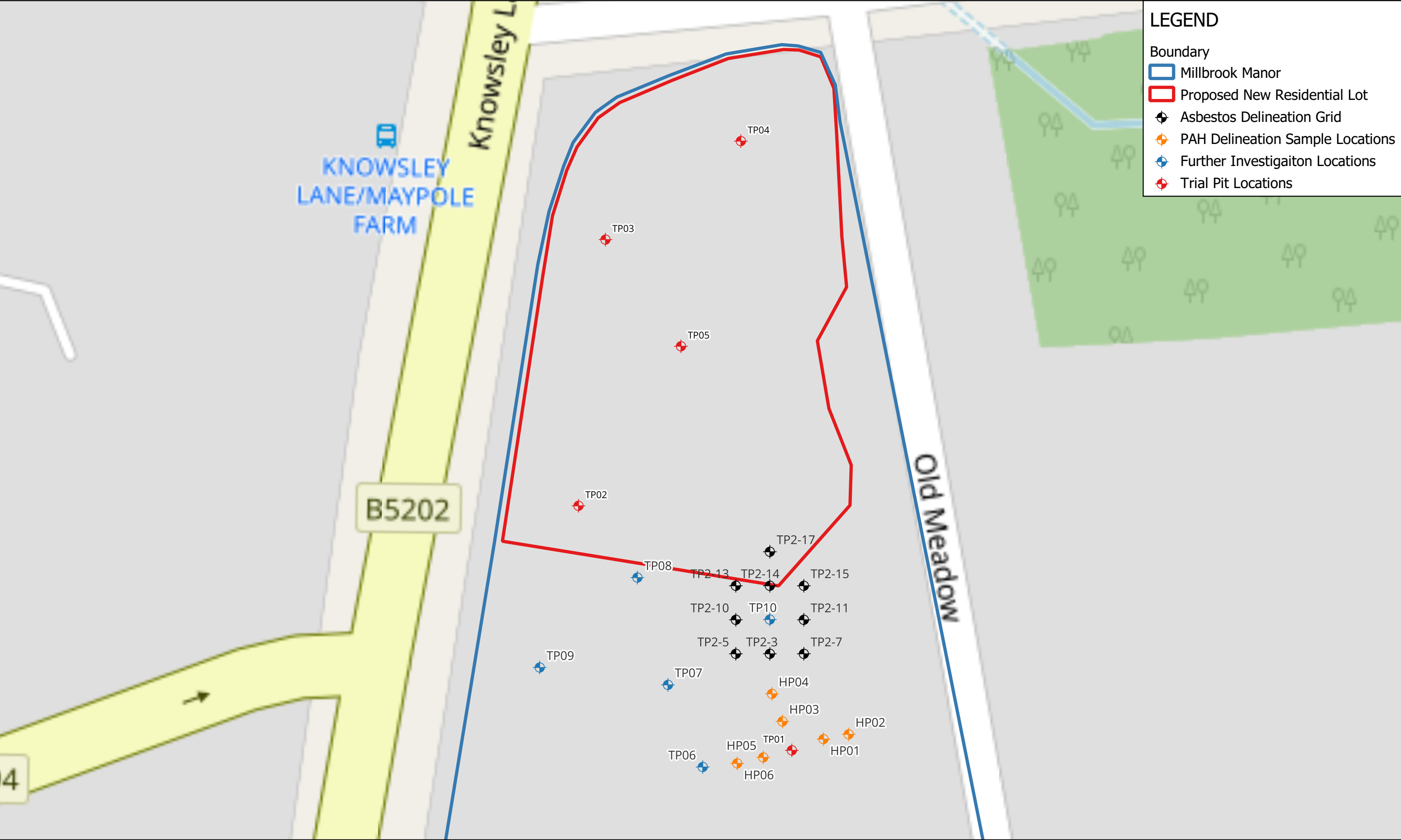
LEGEND

Boundary

Millbrook Manor

Proposed New Residential Lot

SITE: MILLBROOK MANOR, KNOWSLEY	DRAWING NO: 1628/002		PROJECT NO: 1628	DATE: 6.9.23	soilutions soilutions.co.uk 0800 0209 307 info@soilutions.co.uk
	SCALE (A3) 1:250	DRAWN DW	CHECKED JC	REVISION 0	



LEGEND

Boundary

Millbrook Manor

Proposed New Residential Lot

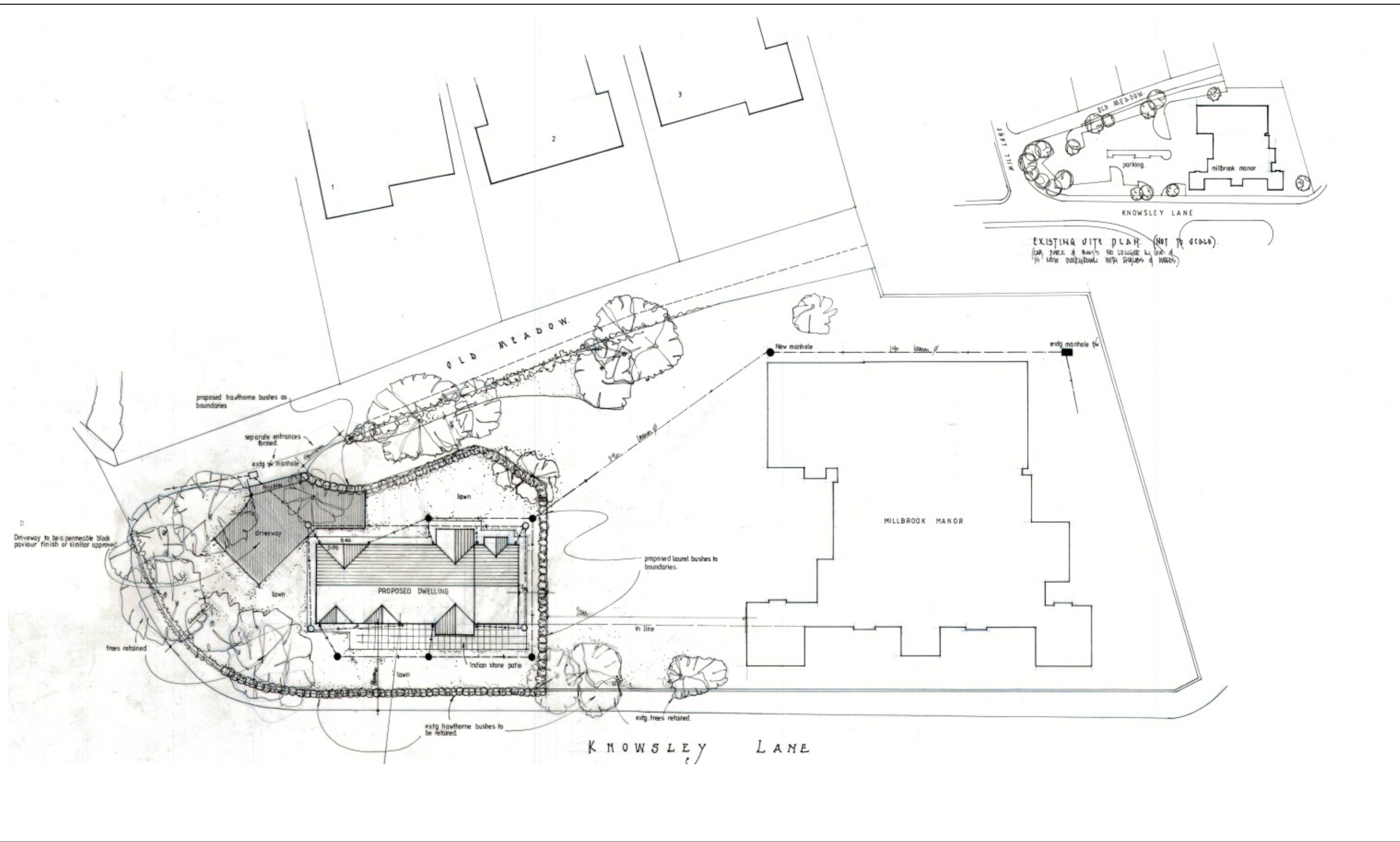
Asbestos Delineation Grid

PAH Delineation Sample Locations

Further Investigation Locations

Trial Pit Locations

SITE: MILLBROOK MANOR, KNOWSLEY	DRAWING NO: 1628/005		PROJECT NO: 1628	DATE: 6.9.23	soilutions soilutions.co.uk 0800 0209 307 info@soilutions.co.uk
	TITLE: SITE INVESTIGATION LAYOUT	SCALE (A3) 1:250	DRAWN DW	CHECKED JC	REVISION 0



SITE: MILLBROOK MANOR, KNOWSLEY	DRAWING NO: 1628/003	PROJECT NO: 1628	DATE: 11.4.23	 soilutions soilutions.co.uk 0800 0209 307 info@soilutions.co.uk
TITLE: PROPOSED DEVELOPMENT PLAN	SCALE (A3) Not to Scale	DRAWN DW	CHECKED MF	REVISION 0



APPENDIX II

Chemical Laboratory Testing Certificates

Test Certificates

Soilutions Generic Assessment Criteria



ANALYTICAL TEST REPORT

Contract no: 124736(1)

Contract name: Millbrook Manor

Client reference: 1628

Clients name: Soilutions

Clients address: 26 New Broompark
Edinburgh
EH5 1RS

Samples received: 14 July 2023

Analysis started: 14 July 2023

Analysis completed: 25 July 2023

Report issued: 25 July 2023

This is a supplementary report to report number 124736 issued 24th July

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by:

E. McCulloch

Ellis McCulloch
Senior Reporting Administrator

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

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

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
124736-1	HP1	0.30	Loamy Sand with Gravel & Roots	-	-	15.8
124736-2	HP3	0.40	Loamy Sand with Gravel & Roots	-	-	22.1
124736-3	HP4	0.50	Loamy Sand with Gravel & Roots	-	-	19.1
124736-4	HP5	0.50	Loamy Sand with Gravel & Roots	-	-	15.1
124736-5	TP6	0.30	Loamy Sand with Gravel & Roots	-	-	23.2
124736-6	TP6	1.30	Sand with Gravel	-	-	14.9
124736-7	TP8	0.30	Loamy Sand with Roots	-	-	22
124736-8	TP8	0.60	Sand with Gravel & Roots	-	-	21.2
124736-9	TP9	0.30	Loamy Sand with Gravel	-	-	16
124736-10	TP9	1.30	Clayey Sand with Gravel & Roots	-	-	16.3
124736-11	TP10	0.30	Sandy Clay with Gravel & Roots	-	-	18
124736-12	TP10	1.80	Sandy Clay	-	-	18.9

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SOILS

Lab number Sample id Depth (m) Date sampled			124736-1 HP1 0.30 11/07/2023	124736-2 HP3 0.40 11/07/2023	124736-3 HP4 0.50 11/07/2023	124736-4 HP5 0.50 11/07/2023	124736-5 TP6 0.30 11/07/2023	124736-6 TP6 1.30 11/07/2023
Test	Method	Units						
Boron (water soluble)	CE063 ^U	mg/kg B	-	-	-	-	<0.5	<0.5
Chromium (VI)	CE146	mg/kg CrVI	-	-	-	-	<1	<1
Arsenic	\$ ^M	mg/kg	-	-	-	-	1.8	2.7
Cadmium	\$ ^M	mg/kg	-	-	-	-	< 0.2	< 0.2
Chromium	\$ ^M	mg/kg	-	-	-	-	7.1	11.9
Copper	\$ ^M	mg/kg	-	-	-	-	9.5	8.7
Lead	\$ ^M	mg/kg	-	-	-	-	15.7	5.4
Mercury	\$ ^M	mg/kg	-	-	-	-	< 0.1	< 0.1
Nickel	\$ ^M	mg/kg	-	-	-	-	5.1	14.6
Selenium	\$ ^M	mg/kg	-	-	-	-	< 1.0	< 1.0
Zinc	\$ ^M	mg/kg	-	-	-	-	15.7	21.6
pH	CE004 ^M	units	-	-	-	-	6.8	7.2
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	-	-	-	-	27	25
Sulphur (free)	CE034 ^M	mg/kg S	-	-	-	-	<10	<10
Sulphide	CE016	mg/kg S ²⁻	-	-	-	-	<10	37
Cyanide (free)	CE077	mg/kg CN	-	-	-	-	<1	<1
Cyanide (total)	CE077	mg/kg CN	-	-	-	-	<1	<1
Phenols (total)	CE078	mg/kg PhOH	-	-	-	-	<0.5	<0.5
Total Organic Carbon (TOC)	CE197	% w/w C	-	-	-	-	-	0.3
Estimate of OMC (calculated from TOC)	CE197	% w/w	-	-	-	-	-	0.5
PAH								
Naphthalene	CE087 ^M	mg/kg	<0.02	<0.02	<0.02	0.06	<0.02	<0.02
Acenaphthylene	CE087 ^M	mg/kg	<0.02	<0.02	<0.02	0.39	<0.02	<0.02
Acenaphthene	CE087 ^M	mg/kg	<0.02	0.04	<0.02	0.27	<0.02	<0.02
Fluorene	CE087 ^U	mg/kg	<0.02	0.02	<0.02	0.41	<0.02	<0.02
Phenanthrene	CE087 ^M	mg/kg	0.12	0.61	0.48	6.50	0.11	<0.02
Anthracene	CE087 ^U	mg/kg	0.07	0.10	0.09	1.74	0.03	<0.02
Fluoranthene	CE087 ^M	mg/kg	0.30	1.23	1.03	7.49	0.20	<0.02
Pyrene	CE087 ^M	mg/kg	0.26	1.14	0.98	6.51	0.19	<0.02
Benzo(a)anthracene	CE087 ^U	mg/kg	0.14	0.55	0.52	3.14	0.09	<0.02
Chrysene	CE087 ^M	mg/kg	0.17	0.52	0.51	2.79	0.09	<0.03
Benzo(b)fluoranthene	CE087 ^M	mg/kg	0.19	0.76	0.70	3.18	0.12	<0.02
Benzo(k)fluoranthene	CE087 ^M	mg/kg	0.08	0.30	0.28	1.27	0.06	<0.03
Benzo(a)pyrene	CE087 ^U	mg/kg	0.17	0.66	0.63	3.03	0.11	<0.02
Indeno(123cd)pyrene	CE087 ^M	mg/kg	0.11	0.48	0.45	1.89	0.07	<0.02
Dibenz(ah)anthracene	CE087 ^M	mg/kg	<0.02	0.09	0.08	0.33	<0.02	<0.02
Benzo(ghi)perylene	CE087 ^M	mg/kg	0.11	0.47	0.41	1.73	0.07	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	1.71	6.96	6.15	40.7	1.13	<0.34
BTEX & TPH								
MTBE	CE192 ^U	mg/kg	-	-	-	-	<0.02	<0.02
Benzene	CE192 ^U	mg/kg	-	-	-	-	<0.01	<0.01

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SOILS

Lab number Sample id Depth (m) Date sampled			124736-1 HP1 0.30 11/07/2023	124736-2 HP3 0.40 11/07/2023	124736-3 HP4 0.50 11/07/2023	124736-4 HP5 0.50 11/07/2023	124736-5 TP6 0.30 11/07/2023	124736-6 TP6 1.30 11/07/2023
Test	Method	Units						
Toluene	CE192 ^U	mg/kg	-	-	-	-	<0.01	<0.01
Ethylbenzene	CE192 ^U	mg/kg	-	-	-	-	<0.01	<0.01
m & p-Xylene	CE192 ^U	mg/kg	-	-	-	-	<0.02	<0.02
o-Xylene	CE192 ^U	mg/kg	-	-	-	-	<0.01	<0.01
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	-	-	-	-	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	-	-	-	-	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	-	-	-	-	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	-	-	-	-	<10	<10
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	-	-	-	-	<10	<10
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	-	-	-	-	<1	<1
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	-	-	-	-	<1	<1
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	-	-	-	-	<1	<1
VPH Aliphatic (>C5-C6)	CE067	mg/kg	-	-	-	-	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	-	-	-	-	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	-	-	-	-	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	-	-	-	-	<6	<6
EPH Aliphatic (>C12-C16)	CE250	mg/kg	-	-	-	-	<6	<6
EPH Aliphatic (>C16-C35)	CE250	mg/kg	-	-	-	-	<15	<15
EPH Aliphatic (>C35-C44)	CE250	mg/kg	-	-	-	-	<10	<10
Total Aliphatic/Aromatic (>C5-C44)	CE225	mg/kg	-	-	-	-	<19	<19
Subcontracted Analysis								
Asbestos (qualitative)	\$	-	-	-	-	-	NAD	-
Form of Asbestos	\$	-	-	-	-	-	-	-
Asbestos (quantitative)	\$	% w/w	-	-	-	-	-	-

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SOILS

Lab number Sample id Depth (m) Date sampled			124736-7 TP8 0.30 11/07/2023	124736-8 TP8 0.60 11/07/2023	124736-9 TP9 0.30 11/07/2023	124736-10 TP9 1.30 11/07/2023	124736-11 TP10 0.30 11/07/2023	124736-12 TP10 1.80 11/07/2023
Test	Method	Units						
Boron (water soluble)	CE063 ^U	mg/kg B	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium (VI)	CE146	mg/kg CrVI	<1	<1	<1	<1	<1	<1
Arsenic	\$ ^M	mg/kg	4.7	1.1	20.2	6.3	4.5	3.9
Cadmium	\$ ^M	mg/kg	< 0.2	< 0.2	0.3	1.6	< 0.2	< 0.2
Chromium	\$ ^M	mg/kg	8.3	6.6	12.8	11.0	16.6	14.9
Copper	\$ ^M	mg/kg	32.2	5.5	176	27.6	17.2	10.8
Lead	\$ ^M	mg/kg	56.6	5.8	419	76.6	34.6	7.9
Mercury	\$ ^M	mg/kg	< 0.1	< 0.1	1.8	0.3	< 0.1	< 0.1
Nickel	\$ ^M	mg/kg	7.3	5.2	17.6	16.3	15.7	16.8
Selenium	\$ ^M	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	\$ ^M	mg/kg	18.4	13.8	127	163	50.5	28.9
pH	CE004 ^M	units	5.8	5.0	7.6	8.5	7.9	6.5
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	53	53	37	30	50	53
Sulphur (free)	CE034 ^M	mg/kg S	<10	<10	13	137	<10	<10
Sulphide	CE016	mg/kg S ²⁻	11	<10	11	<10	<10	<10
Cyanide (free)	CE077	mg/kg CN	<1	<1	<1	<1	<1	<1
Cyanide (total)	CE077	mg/kg CN	<1	<1	<1	<1	<1	<1
Phenols (total)	CE078	mg/kg PhOH	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Organic Carbon (TOC)	CE197	% w/w C	-	-	-	-	0.9	-
Estimate of OMC (calculated from TOC)	CE197	% w/w	-	-	-	-	1.6	-
PAH								
Naphthalene	CE087 ^M	mg/kg	<0.02	<0.02	0.04	<0.02	<0.02	<0.02
Acenaphthylene	CE087 ^M	mg/kg	<0.02	<0.02	0.16	<0.02	<0.02	<0.02
Acenaphthene	CE087 ^M	mg/kg	<0.02	<0.02	0.04	<0.02	<0.02	<0.02
Fluorene	CE087 ^U	mg/kg	<0.02	<0.02	0.05	<0.02	<0.02	<0.02
Phenanthrene	CE087 ^M	mg/kg	0.02	<0.02	1.15	0.12	0.15	<0.02
Anthracene	CE087 ^U	mg/kg	<0.02	<0.02	0.34	0.03	0.04	<0.02
Fluoranthene	CE087 ^M	mg/kg	0.05	<0.02	3.25	0.30	0.22	<0.02
Pyrene	CE087 ^M	mg/kg	0.05	<0.02	3.21	0.31	0.21	<0.02
Benzo(a)anthracene	CE087 ^U	mg/kg	0.02	<0.02	1.64	0.14	0.09	<0.02
Chrysene	CE087 ^M	mg/kg	<0.03	<0.03	1.69	0.12	0.09	<0.03
Benzo(b)fluoranthene	CE087 ^M	mg/kg	0.05	<0.02	2.12	0.23	0.14	<0.02
Benzo(k)fluoranthene	CE087 ^M	mg/kg	<0.03	<0.03	0.96	<0.03	0.06	<0.03
Benzo(a)pyrene	CE087 ^U	mg/kg	0.04	<0.02	2.01	0.19	0.12	<0.02
Indeno(123cd)pyrene	CE087 ^M	mg/kg	0.03	<0.02	1.39	0.12	0.09	<0.02
Dibenz(ah)anthracene	CE087 ^M	mg/kg	<0.02	<0.02	0.32	<0.02	<0.02	<0.02
Benzo(ghi)perylene	CE087 ^M	mg/kg	0.03	<0.02	1.32	0.12	0.10	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	<0.34	<0.34	19.7	1.69	1.31	<0.34
BTEX & TPH								
MTBE	CE192 ^U	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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SOILS

Lab number			124736-7	124736-8	124736-9	124736-10	124736-11	124736-12
Sample id			TP8	TP8	TP9	TP9	TP10	TP10
Depth (m)			0.30	0.60	0.30	1.30	0.30	1.80
Date sampled			11/07/2023	11/07/2023	11/07/2023	11/07/2023	11/07/2023	11/07/2023
Test	Method	Units						
Toluene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
m & p-Xylene	CE192 ^U	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
o-Xylene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	<10	<10	<10	<10	<10	<10
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	<10	<10	<10	<10	<10	<10
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	<1	<1	<1	<1	<1	<1
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	<1	<1	62	<1	10	<1
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	<1	<1	13	<1	<1	<1
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<6	<6	<6	<6	<6	<6
EPH Aliphatic (>C12-C16)	CE250	mg/kg	<6	<6	<6	<6	<6	<6
EPH Aliphatic (>C16-C35)	CE250	mg/kg	<15	<15	<15	<15	<15	<15
EPH Aliphatic (>C35-C44)	CE250	mg/kg	<10	<10	<10	<10	<10	<10
Total Aliphatic/Aromatic (>C5-C44)	CE225	mg/kg	<19	<19	76	<19	<19	<19
Subcontracted Analysis								
Asbestos (qualitative)	\$	-	NAD	-	NAD	-	Chrysotile	-
Form of Asbestos	\$	-	-	-	-	-	Loose Fibres	-
Asbestos (quantitative)	\$	% w/w	-	-	-	-	0.002	-

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE063	Boron (water soluble)	Hot water extract, ICP-OES	Dry	U	0.5	mg/kg B
CE146	Chromium (VI)	Acid extraction, Colorimetry	Dry		1	mg/kg CrVI
\$ ^M	Arsenic	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg
\$ ^M	Cadmium	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg
\$ ^M	Chromium	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg
\$ ^M	Copper	Aqua regia digest, ICP-MS	Dry	M	4	mg/kg
\$ ^M	Lead	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg
\$ ^M	Mercury	Aqua regia digest, ICP-MS	Dry	M	0.1	mg/kg
\$ ^M	Nickel	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg
\$ ^M	Selenium	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg
\$ ^M	Zinc	Aqua regia digest, ICP-MS	Dry	M	4.5	mg/kg
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄
CE034	Sulphur (free)	Solvent extraction, HPLC	Dry	M	10	mg/kg S
CE016	Sulphide	Distillation, Titration	Dry		10	mg/kg S ²⁻
CE077	Cyanide (free)	Extraction, Continuous Flow Colorimetry	As received		1	mg/kg CN
CE077	Cyanide (total)	Extraction, Continuous Flow Colorimetry	As received		1	mg/kg CN
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	As received		0.5	mg/kg PhOH
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE197	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry		0.1	% w/w
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.34	mg/kg
CE192	MTBE	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	Benzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Toluene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Ethylbenzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	m & p-Xylene	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	o-Xylene	Headspace GC-FID	As received	U	0.01	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		15	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		10	mg/kg
CE225	Total Aliphatic/Aromatic (>C5-C44)	Sum of Aliphatic & Aromatic VPH (>C5-C10) & EPH (>C10-C44)	As received		19	mg/kg
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-
\$	Asbestos (quantitative)	HSG 248, Microscopy & Gravimetry	Dry	U	0.001	% w/w

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DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
124736-1	HP1	0.30	N	
124736-2	HP3	0.40	N	
124736-3	HP4	0.50	N	
124736-4	HP5	0.50	N	
124736-5	TP6	0.30	N	
124736-6	TP6	1.30	N	
124736-7	TP8	0.30	N	
124736-8	TP8	0.60	N	
124736-9	TP9	0.30	N	
124736-10	TP9	1.30	N	
124736-11	TP10	0.30	N	
124736-12	TP10	1.80	N	

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ADDITIONAL INFORMATION

Notes

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

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

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

Methods, procedures and performance data are available on request.

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

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

Samples will be disposed of 4 weeks from initial receipt unless otherwise instructed.

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

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

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

Moisture Content Calculated on a Wet Weight basis



ANALYTICAL TEST REPORT

Contract no: 122934

Contract name: 1628 - Millbrook Manor

Client reference: -

Clients name: Soilutions

Clients address: 26 New Broompark
Edinburgh
EH5 1RS

Samples received: 19 May 2023

Analysis started: 19 May 2023

Analysis completed: 05 June 2023

Report issued: 05 June 2023

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by:

Abbie Neasham-Bourn
Senior Reporting Administrator

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

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

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
122934-1	TP1	0.30	Sandy Loam with Gravel	-	-	6.9
122934-2	TP1	1.00	Sandy Clay	-	-	7.7
122934-3	TP2	0.20	Sandy Loam with Gravel & Roots	-	-	12.6
122934-4	TP2	2.80	Sandy Clay	-	-	11.6
122934-5	TP3	0.30	Sandy Clay with Gravel & Roots	-	-	8.4
122934-6	TP3	0.90	Sandy Clay with Gravel	-	-	10.0
122934-7	TP4	0.20	Sandy Clay with Gravel & Roots	-	-	7.9
122934-8	TP4	0.80	Sandy Clay with Gravel	-	-	7.2
122934-9	TP5	0.30	Sand with Gravel	-	-	7.5
122934-10	TP5	1.80	Sandy Clay with Gravel	-	-	9.9

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SOILS

Lab number Sample id Depth (m) Date sampled			122934-1 TP1 0.30 17/05/2023	122934-2 TP1 1.00 17/05/2023	122934-3 TP2 0.20 17/05/2023	122934-4 TP2 2.80 17/05/2023	122934-5 TP3 0.30 17/05/2023	122934-6 TP3 0.90 17/05/2023
Test	Method	Units						
Arsenic (total)	\$	mg/kg As	8.7	1.6	16.8	7.9	5.1	1.8
Boron (water soluble)	CE063 ^U	mg/kg B	0.9	<0.5	0.6	<0.5	<0.5	<0.5
Cadmium (total)	\$	mg/kg Cd	0.2	< 0.2	0.5	< 0.2	< 0.2	< 0.2
Chromium (total)	\$	mg/kg Cr	27.6	32.7	60.3	43.7	35.9	25.1
Chromium (VI)	CE146	mg/kg CrVI	<1	<1	<1	<1	<1	<1
Copper (total)	\$	mg/kg Cu	63.0	10.4	71.4	20.8	13.9	6.4
Lead (total)	\$	mg/kg Pb	56.6	9.2	220.0	15.2	15.9	8.7
Mercury (total)	\$	mg/kg Hg	< 0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.1
Nickel (total)	\$	mg/kg Ni	17.8	12.2	32.8	33.0	20.4	6.4
Selenium (total)	\$	mg/kg Se	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (total)	\$	mg/kg Zn	51.9	15.3	130.0	45.0	35.5	16.8
pH	CE004 ^M	units	8.3	8.2	7.9	5.5	6.6	7.1
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	178	1689	311	132	90	106
Sulphur (free)	CE034 ^M	mg/kg S	170	12	11	<10	<10	<10
Sulphide	CE016	mg/kg S ²⁻	192	<10	40	<10	<10	<10
Cyanide (free)	CE077	mg/kg CN	<1	<1	<1	<1	<1	<1
Cyanide (total)	CE077	mg/kg CN	<1	<1	3.1	<1	<1	<1
Phenols (total)	CE078	mg/kg PhOH	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Organic Carbon (TOC)	CE197	% w/w C	5.1	-	-	<0.1	-	-
Estimate of OMC (calculated from TOC)	CE197	% w/w	8.8	-	-	<0.1	-	-
PAH								
Naphthalene	CE087 ^M	mg/kg	0.67	<0.02	0.04	<0.02	<0.02	<0.02
Acenaphthylene	CE087 ^M	mg/kg	0.06	<0.02	0.06	<0.02	<0.02	<0.02
Acenaphthene	CE087 ^M	mg/kg	0.10	<0.02	0.05	<0.02	<0.02	<0.02
Fluorene	CE087 ^U	mg/kg	0.13	<0.02	0.06	<0.02	<0.02	<0.02
Phenanthrene	CE087 ^M	mg/kg	1.83	<0.02	1.56	<0.02	<0.02	<0.02
Anthracene	CE087 ^U	mg/kg	0.71	<0.02	0.33	<0.02	<0.02	<0.02
Fluoranthene	CE087 ^M	mg/kg	9.11	0.13	3.56	<0.02	0.04	0.02
Pyrene	CE087 ^M	mg/kg	8.54	0.12	3.28	<0.02	0.04	0.02
Benzo(a)anthracene	CE087 ^U	mg/kg	5.54	0.07	1.75	<0.02	<0.02	<0.02
Chrysene	CE087 ^M	mg/kg	5.55	0.07	2.00	<0.03	<0.03	<0.03
Benzo(b)fluoranthene	CE087 ^M	mg/kg	5.84	0.08	1.99	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	CE087 ^M	mg/kg	2.45	<0.03	0.91	<0.03	<0.03	<0.03
Benzo(a)pyrene	CE087 ^U	mg/kg	5.71	0.07	2.00	<0.02	<0.02	<0.02
Indeno(123cd)pyrene	CE087 ^M	mg/kg	3.23	0.02	1.15	<0.02	<0.02	<0.02
Dibenz(ah)anthracene	CE087 ^M	mg/kg	0.81	<0.02	0.21	<0.02	<0.02	<0.02
Benzo(ghi)perylene	CE087 ^M	mg/kg	3.21	0.02	1.27	<0.02	<0.02	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	53.5	0.59	20.3	<0.34	<0.34	<0.34
BTEX & TPH								
MTBE	CE192 ^U	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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SOILS

Lab number			122934-1	122934-2	122934-3	122934-4	122934-5	122934-6
Sample id			TP1	TP1	TP2	TP2	TP3	TP3
Depth (m)			0.30	1.00	0.20	2.80	0.30	0.90
Date sampled			17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023	17/05/2023
Test	Method	Units						
Toluene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
m & p-Xylene	CE192 ^U	mg/kg	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
o-Xylene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	<10	<10	<10	<10	<10	<10
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	17	<10	<10	<10	<10	<10
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	92	<1	12	<1	<1	<1
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	473	<1	73	<1	<1	<1
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	202	<1	19	<1	<1	<1
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<6	<6	<6	<6	<6	<6
EPH Aliphatic (>C12-C16)	CE250	mg/kg	<6	<6	<6	<6	<6	<6
EPH Aliphatic (>C16-C35)	CE250	mg/kg	434	<15	59	<15	<15	<15
EPH Aliphatic (>C35-C44)	CE250	mg/kg	23	<10	<10	<10	<10	<10
Total Aliphatic/Aromatic (>C5-C44)	CE225	mg/kg	1241	<19	163	<19	<19	<19
Subcontracted Analysis								
Asbestos (qualitative)	\$	-	NAD	-	NAD	-	NAD	-

Chemtech Environmental Limited

SOILS

Lab number Sample id Depth (m) Date sampled			122934-7 TP4 0.20 17/05/2023	122934-8 TP4 0.80 17/05/2023	122934-9 TP5 0.30 17/05/2023	122934-10 TP5 1.80 17/05/2023
Test	Method	Units				
Arsenic (total)	\$	mg/kg As	6.2	1.4	6.6	7.4
Boron (water soluble)	CE063 ^U	mg/kg B	<0.5	<0.5	<0.5	<0.5
Cadmium (total)	\$	mg/kg Cd	0.3	< 0.2	0.3	< 0.2
Chromium (total)	\$	mg/kg Cr	30.5	24.3	44.6	49.1
Chromium (VI)	CE146	mg/kg CrVI	<1	<1	<1	<1
Copper (total)	\$	mg/kg Cu	25.7	7.4	26.9	19.2
Lead (total)	\$	mg/kg Pb	61.7	9.1	75.1	9.7
Mercury (total)	\$	mg/kg Hg	0.2	< 0.1	< 0.1	< 0.1
Nickel (total)	\$	mg/kg Ni	12.5	5.1	13.0	36.4
Selenium (total)	\$	mg/kg Se	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (total)	\$	mg/kg Zn	76.6	13.5	63.9	43.1
pH	CE004 ^M	units	8.1	7.1	7.7	6.2
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	33	29	120	45
Sulphur (free)	CE034 ^M	mg/kg S	12	5	<10	<10
Sulphide	CE016	mg/kg S ²⁻	48	60	28	<10
Cyanide (free)	CE077	mg/kg CN	<1	<1	<1	<1
Cyanide (total)	CE077	mg/kg CN	<1	<1	<1	<1
Phenols (total)	CE078	mg/kg PhOH	<0.5	<0.5	<0.5	<0.5
Total Organic Carbon (TOC)	CE197	% w/w C	2.0	0.8	-	-
Estimate of OMC (calculated from TOC)	CE197	% w/w	3.4	1.3	-	-
PAH						
Naphthalene	CE087 ^M	mg/kg	0.06	<0.02	<0.02	<0.02
Acenaphthylene	CE087 ^M	mg/kg	<0.02	<0.02	<0.02	<0.02
Acenaphthene	CE087 ^M	mg/kg	0.11	<0.02	0.08	<0.02
Fluorene	CE087 ^U	mg/kg	0.08	<0.02	0.03	<0.02
Phenanthrene	CE087 ^M	mg/kg	0.54	<0.02	0.51	<0.02
Anthracene	CE087 ^U	mg/kg	0.14	<0.02	0.07	<0.02
Fluoranthene	CE087 ^M	mg/kg	0.77	0.03	0.85	<0.02
Pyrene	CE087 ^M	mg/kg	0.70	0.03	0.83	<0.02
Benzo(a)anthracene	CE087 ^U	mg/kg	0.34	<0.02	0.43	<0.02
Chrysene	CE087 ^M	mg/kg	0.41	<0.03	0.49	<0.03
Benzo(b)fluoranthene	CE087 ^M	mg/kg	0.40	0.02	0.49	<0.02
Benzo(k)fluoranthene	CE087 ^M	mg/kg	0.19	<0.03	0.19	<0.03
Benzo(a)pyrene	CE087 ^U	mg/kg	0.37	0.02	0.50	<0.02
Indeno(123cd)pyrene	CE087 ^M	mg/kg	0.22	<0.02	0.28	<0.02
Dibenz(ah)anthracene	CE087 ^M	mg/kg	0.04	<0.02	0.04	<0.02
Benzo(ghi)perylene	CE087 ^M	mg/kg	0.28	<0.02	0.36	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	4.65	<0.34	5.15	<0.34
BTEX & TPH						
MTBE	CE192 ^U	mg/kg	<0.02	<0.02	<0.02	<0.02
Benzene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01

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SOILS

Lab number			122934-7	122934-8	122934-9	122934-10
Sample id			TP4	TP4	TP5	TP5
Depth (m)			0.20	0.80	0.30	1.80
Date sampled			17/05/2023	17/05/2023	17/05/2023	17/05/2023
Test	Method	Units				
Toluene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01
Ethylbenzene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01
m & p-Xylene	CE192 ^U	mg/kg	<0.02	<0.02	<0.02	<0.02
o-Xylene	CE192 ^U	mg/kg	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	<10	<10	<10	<10
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	<10	<10	<10	<10
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	<1	<1	<1	<1
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	24	<1	17	<1
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	17	<1	10	<1
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<6	<6	<6	<6
EPH Aliphatic (>C12-C16)	CE250	mg/kg	<6	<6	<6	<6
EPH Aliphatic (>C16-C35)	CE250	mg/kg	519	<15	<15	<15
EPH Aliphatic (>C35-C44)	CE250	mg/kg	22	<10	<10	<10
Total Aliphatic/Aromatic (>C5-C44)	CE225	mg/kg	583	<19	28	<19
Subcontracted Analysis						
Asbestos (qualitative)	\$	-	NAD	-	NAD	-

Chemtech Environmental Limited

PREPARED LEACHATES

Lab number Sample id Depth (m)			122934-1L TP1 0.30	122934-2L TP1 1.00	122934-4L TP2 2.80
Test	Method	Units			
Arsenic (dissolved)	CE128	µg/l As	1.13	0.45	0.39
Boron (dissolved)	CE128	µg/l B	15	15	15
Cadmium (dissolved)	CE128	µg/l Cd	<0.07	<0.07	<0.07
Chromium (dissolved)	CE128	µg/l Cr	0.4	0.7	<0.2
Chromium VI (dissolved)	CE050	µg/l CrVI	<10	<10	<10
Copper (dissolved)	CE128	µg/l Cu	3.7	1.5	0.8
Lead (dissolved)	CE128	µg/l Pb	0.9	0.7	0.3
Mercury (dissolved)	CE128	µg/l Hg	<0.008	<0.008	<0.008
Nickel (dissolved)	CE128	µg/l Ni	<0.5	<0.5	<0.5
Selenium (dissolved)	CE128	µg/l Se	0.37	0.18	0.10
Zinc (dissolved)	CE128	µg/l Zn	<1	<1	5
pH	CE213 ^u	units	7.9	7.9	7.6
Sulphate	CE049 ^u	mg/l SO ₄	4.4	<1.7	10.3
Sulphide	CE249	µg/l S ²⁻	400	<100	400
Cyanide (free)	CE147	µg/l CN	17	19	21
Cyanide (total)	CE147	µg/l CN	5	6	6
Thiocyanate	CE014	µg/l SCN	<200	<200	<200
Phenols (total)	CE148	µg/l PhOH	<10	<10	<10
PAH					
Naphthalene	CE051	µg/l	<0.1	<0.1	<0.1
Acenaphthylene	CE051	µg/l	<0.1	<0.1	<0.1
Acenaphthene	CE051	µg/l	0.3	0.5	<0.1
Fluorene	CE051	µg/l	<0.1	0.6	0.1
Phenanthrene	CE051	µg/l	<0.1	0.1	<0.1
Anthracene	CE051	µg/l	<0.1	<0.1	<0.1
Fluoranthene	CE051	µg/l	0.5	0.2	<0.1
Pyrene	CE051	µg/l	0.4	<0.1	<0.1
Benzo(a)anthracene	CE051	µg/l	<0.1	<0.1	<0.1
Chrysene	CE051	µg/l	0.1	<0.1	<0.1
Benzo(b)fluoranthene	CE051	µg/l	0.3	<0.1	<0.1
Benzo(k)fluoranthene	CE051	µg/l	<0.1	<0.1	<0.1
Benzo(a)pyrene	CE051	µg/l	<0.1	<0.1	<0.1
Indeno(123cd)pyrene	CE051	µg/l	0.2	<0.1	<0.1
Dibenz(ah)anthracene	CE051	µg/l	<0.1	<0.1	<0.1
Benzo(ghi)perylene	CE051	µg/l	<0.1	<0.1	<0.1
PAH (total of USEPA 16)	CE051	µg/l	1.7	<1.6	<1.6

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
\$	Arsenic (total)	Aqua regia digest, ICP-MS	Dry		0.5	mg/kg As
CE063	Boron (water soluble)	Hot water extract, ICP-OES	Dry	U	0.5	mg/kg B
\$	Cadmium (total)	Aqua regia digest, ICP-MS	Dry		0.2	mg/kg Cd
\$	Chromium (total)	Aqua regia digest, ICP-MS	Dry		1	mg/kg Cr
CE146	Chromium (VI)	Acid extraction, Colorimetry	Dry		1	mg/kg CrVI
\$	Copper (total)	Aqua regia digest, ICP-MS	Dry		4	mg/kg Cu
\$	Lead (total)	Aqua regia digest, ICP-MS	Dry		1	mg/kg Pb
\$	Mercury (total)	Aqua regia digest, ICP-MS	Dry		0.1	mg/kg Hg
\$	Nickel (total)	Aqua regia digest, ICP-MS	Dry		1	mg/kg Ni
\$	Selenium (total)	Aqua regia digest, ICP-MS	Dry		1	mg/kg Se
\$	Zinc (total)	Aqua regia digest, ICP-MS	Dry		4.5	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄
CE034	Sulphur (free)	Solvent extraction, HPLC	Dry	M	10	mg/kg S
CE016	Sulphide	Distillation, Titration	Dry		10	mg/kg S ²⁻
CE077	Cyanide (free)	Extraction, Continuous Flow Colorimetry	As received		1	mg/kg CN
CE077	Cyanide (total)	Extraction, Continuous Flow Colorimetry	As received		1	mg/kg CN
CE145	Thiocyanate	Weak acid extraction, Colorimetry	Dry	M	1	mg/kg SCN
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	As received		0.5	mg/kg PhOH
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE197	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry		0.1	% w/w
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.34	mg/kg
CE192	MTBE	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	Benzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Toluene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Ethylbenzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	m & p-Xylene	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	o-Xylene	Headspace GC-FID	As received	U	0.01	mg/kg

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		15	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		10	mg/kg
CE225	Total Aliphatic/Aromatic (>C5-C44)	Sum of Aliphatic & Aromatic VPH (>C5-C10) & EPH (>C10-C44)	As received		19	mg/kg
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

METHOD DETAILS

METHOD	PREPARED LEACHATES	METHOD SUMMARY	STATUS	LOD	UNITS
CE002	Leachate preparation (EA)	L:S 10:1		-	-
CE128	Arsenic (dissolved)	ICP-MS		0.06	µg/l As
CE128	Boron (dissolved)	ICP-MS		8	µg/l B
CE128	Cadmium (dissolved)	ICP-MS		0.07	µg/l Cd
CE128	Chromium (dissolved)	ICP-MS		0.2	µg/l Cr
CE050	Chromium VI (dissolved)	Colorimetry		10	µg/l CrVI
CE128	Copper (dissolved)	ICP-MS		0.4	µg/l Cu
CE128	Lead (dissolved)	ICP-MS		0.2	µg/l Pb
CE128	Mercury (dissolved)	ICP-MS		0.008	µg/l Hg
CE128	Nickel (dissolved)	ICP-MS		0.5	µg/l Ni
CE128	Selenium (dissolved)	ICP-MS		0.07	µg/l Se
CE128	Zinc (dissolved)	ICP-MS		1	µg/l Zn
CE213	pH	Based on BS 1377, pH Meter	U	-	units
CE049	Sulphate	Ion Chromatography	U	1.7	mg/l SO ₄
CE249	Sulphide	Distillation, Titration		100	µg/l S ²⁻
CE147	Cyanide (free)	Continuous Flow Colorimetry		5	µg/l CN
CE147	Cyanide (total)	Continuous Flow Colorimetry		5	µg/l CN
CE014	Thiocyanate	Colorimetry		200	µg/l SCN
CE148	Phenols (total)	Continuous Flow Colorimetry		10	µg/l PhOH
CE051	Naphthalene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Acenaphthylene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Acenaphthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Fluorene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Phenanthrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Anthracene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Fluoranthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Pyrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(a)anthracene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Chrysene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(b)fluoranthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(k)fluoranthene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(a)pyrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Indeno(123cd)pyrene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Dibenz(ah)anthracene	Solvent extraction, GC-MS		0.1	µg/l
CE051	Benzo(ghi)perylene	Solvent extraction, GC-MS		0.1	µg/l
CE051	PAH (total of USEPA 16)	Solvent extraction, GC-MS		1.6	µg/l

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DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
122934-1	TP1	0.30	N	
122934-2	TP1	1.00	N	
122934-3	TP2	0.20	N	
122934-4	TP2	2.80	N	
122934-5	TP3	0.30	N	
122934-6	TP3	0.90	N	
122934-7	TP4	0.20	N	
122934-8	TP4	0.80	N	
122934-9	TP5	0.30	N	
122934-10	TP5	1.80	N	

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ADDITIONAL INFORMATION

Notes

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

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

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

Methods, procedures and performance data are available on request.

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

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

Samples will be disposed of 4 weeks from initial receipt unless otherwise instructed.

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

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

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

Moisture Content Calculated on a Wet Weight basis



ANALYTICAL TEST REPORT

Contract no: 126167

Contract name: Millbrook Manor

Client reference: 1628

Clients name: Soilutions

Clients address: 26 New Broompark
Edinburgh
EH5 1RS

Samples received: 29 August 2023

Analysis started: 29 August 2023

Analysis completed: 05 September 2023

Report issued: 05 September 2023

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by:

E. McCulloch

Ellis McCulloch
Senior Reporting Administrator

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

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

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
126167-9	TP2-17	0.30	Sandy Loamy Clay with Gravel	-	-	11.1

Chemtech Environmental Limited

SOILS

Lab number Sample id Depth (m) Date sampled			126167-1 TP2-5 0.50 24/08/2023	126167-2 TP2-3 0.30 24/08/2023	126167-3 TP2-7 0.20 24/08/2023	126167-4 TP2-10 0.47 24/08/2023	126167-5 TP2-11 0.30 24/08/2023	126167-6 TP2-13 0.20 24/08/2023	126167-7 TP2-14 0.30 24/08/2023	126167-8 TP2-15 0.20 24/08/2023	126167-9 TP2-17 0.30 24/08/2023
Test	Method	Units									
Arsenic (total)	CE264	mg/kg As	-	-	-	-	-	-	-	-	<3
Boron (water soluble)	CE063 ^U	mg/kg B	-	-	-	-	-	-	-	-	<0.5
Cadmium (total)	CE264	mg/kg Cd	-	-	-	-	-	-	-	-	<2
Chromium (total)	CE264	mg/kg Cr	-	-	-	-	-	-	-	-	23.3
Chromium (VI)	CE263	mg/kg CrVI	-	-	-	-	-	-	-	-	<0.04
Copper (total)	CE264	mg/kg Cu	-	-	-	-	-	-	-	-	9.3
Lead (total)	CE264	mg/kg Pb	-	-	-	-	-	-	-	-	16.9
Mercury (total)	CE264	mg/kg Hg	-	-	-	-	-	-	-	-	<3
Nickel (total)	CE264	mg/kg Ni	-	-	-	-	-	-	-	-	7.8
Selenium (total)	CE264	mg/kg Se	-	-	-	-	-	-	-	-	<3
Zinc (total)	CE264	mg/kg Zn	-	-	-	-	-	-	-	-	26.4
pH	CE004 ^M	units	-	-	-	-	-	-	-	-	7.5
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	-	-	-	-	-	-	-	-	44
Sulphur (free)	CE034 ^M	mg/kg S	-	-	-	-	-	-	-	-	<10
Sulphide	CE016	mg/kg S ²⁻	-	-	-	-	-	-	-	-	24
Cyanide (free)	\$	mg/kg CN	-	-	-	-	-	-	-	-	<1
Cyanide (total)	\$	mg/kg CN	-	-	-	-	-	-	-	-	<1
Phenols (total)	CE078	mg/kg PhOH	-	-	-	-	-	-	-	-	<0.5
PAH											
Naphthalene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Acenaphthylene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Acenaphthene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Fluorene	CE087 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.02
Phenanthrene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Anthracene	CE087 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.02
Fluoranthene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Pyrene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Benzo(a)anthracene	CE087 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.02
Chrysene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.03
Benzo(b)fluoranthene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Benzo(k)fluoranthene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.03
Benzo(a)pyrene	CE087 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.02
Indeno(123cd)pyrene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Dibenz(ah)anthracene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
Benzo(ghi)perylene	CE087 ^M	mg/kg	-	-	-	-	-	-	-	-	<0.02
PAH (total of USEPA 16)	CE087	mg/kg	-	-	-	-	-	-	-	-	<0.34
BTEX & TPH											
MTBE	CE192 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.02
Benzene	CE192 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.01
Toluene	CE192 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.01
Ethylbenzene	CE192 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.01
m & p-Xylene	CE192 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.02
o-Xylene	CE192 ^U	mg/kg	-	-	-	-	-	-	-	-	<0.01
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	-	-	-	-	-	-	-	-	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	-	-	-	-	-	-	-	-	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	-	-	-	-	-	-	-	-	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	-	-	-	-	-	-	-	-	<10
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	-	-	-	-	-	-	-	-	<10
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	-	-	-	-	-	-	-	-	<1
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	-	-	-	-	-	-	-	-	<1
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	-	-	-	-	-	-	-	-	<1
VPH Aliphatic (>C5-C6)	CE067	mg/kg	-	-	-	-	-	-	-	-	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	-	-	-	-	-	-	-	-	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	-	-	-	-	-	-	-	-	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	-	-	-	-	-	-	-	-	<6
EPH Aliphatic (>C12-C16)	CE250	mg/kg	-	-	-	-	-	-	-	-	<6
EPH Aliphatic (>C16-C35)	CE250	mg/kg	-	-	-	-	-	-	-	-	<15
EPH Aliphatic (>C35-C44)	CE250	mg/kg	-	-	-	-	-	-	-	-	<10
Total Aliphatic/Aromatic (>C5-C44)	CE225	mg/kg	-	-	-	-	-	-	-	-	<19
Subcontracted Analysis											
Asbestos (qualitative)	\$	-	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE264	Arsenic (total)	Aqua Regia Extraction, ICPOES	Dry		3	mg/kg As
CE063	Boron (water soluble)	Hot water extract, ICP-OES	Dry	U	1	mg/kg B
CE264	Cadmium (total)	Aqua Regia Extraction, ICPOES	Dry		2	mg/kg Cd
CE264	Chromium (total)	Aqua Regia Extraction, ICPOES	Dry		2	mg/kg Cr
CE208	Chromium (III)	Calculation: Cr (total) - Cr (VI)	Dry		1	mg/kg CrIII
CE146	Chromium (VI)	Acid extraction, Colorimetry	Dry		1	mg/kg CrVI
CE263	Chromium (VI)	Discrete Analyser	Dry			mg/kg CrVI
CE264	Copper (total)	Aqua Regia Extraction, ICPOES	Dry		2	mg/kg Cu
CE264	Lead (total)	Aqua Regia Extraction, ICPOES	Dry		3	mg/kg Pb
CE264	Mercury (total)	Aqua Regia Extraction, ICPOES	Dry		2	mg/kg Hg
CE264	Nickel (total)	Aqua Regia Extraction, ICPOES	Dry		3	mg/kg Ni
CE264	Selenium (total)	Aqua Regia Extraction, ICPOES	Dry		3	mg/kg Se
CE264	Zinc (total)	Aqua Regia Extraction, ICPOES	Dry		4	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄
CE034	Sulphur (free)	Solvent extraction, HPLC	Dry	M	10	mg/kg S
CE016	Sulphide	Distillation, Titration	Dry		10	mg/kg S ²⁻
\$	Cyanide (free)	Extraction, Continuous Flow Colorimetry	As received		1	mg/kg CN
\$	Cyanide (total)	Extraction, Continuous Flow Colorimetry	As received		1	mg/kg CN
CE078	Phenols (total)	Extraction, Continuous Flow Colorimetry	As received		0.5	mg/kg PhOH
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.34	mg/kg
CE192	MTBE	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	Benzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Toluene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	Ethylbenzene	Headspace GC-FID	As received	U	0.01	mg/kg
CE192	m & p-Xylene	Headspace GC-FID	As received	U	0.02	mg/kg
CE192	o-Xylene	Headspace GC-FID	As received	U	0.01	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		15	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		10	mg/kg
CE225	Total Aliphatic/Aromatic (>C5-C44)	Sum of Aliphatic & Aromatic VPH (>C5-C10) & EPH (>C10-C44)	As received		19	mg/kg
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
126167-9	TP2-17	0.30	N	

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

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

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

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

Methods, procedures and performance data are available on request.

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

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

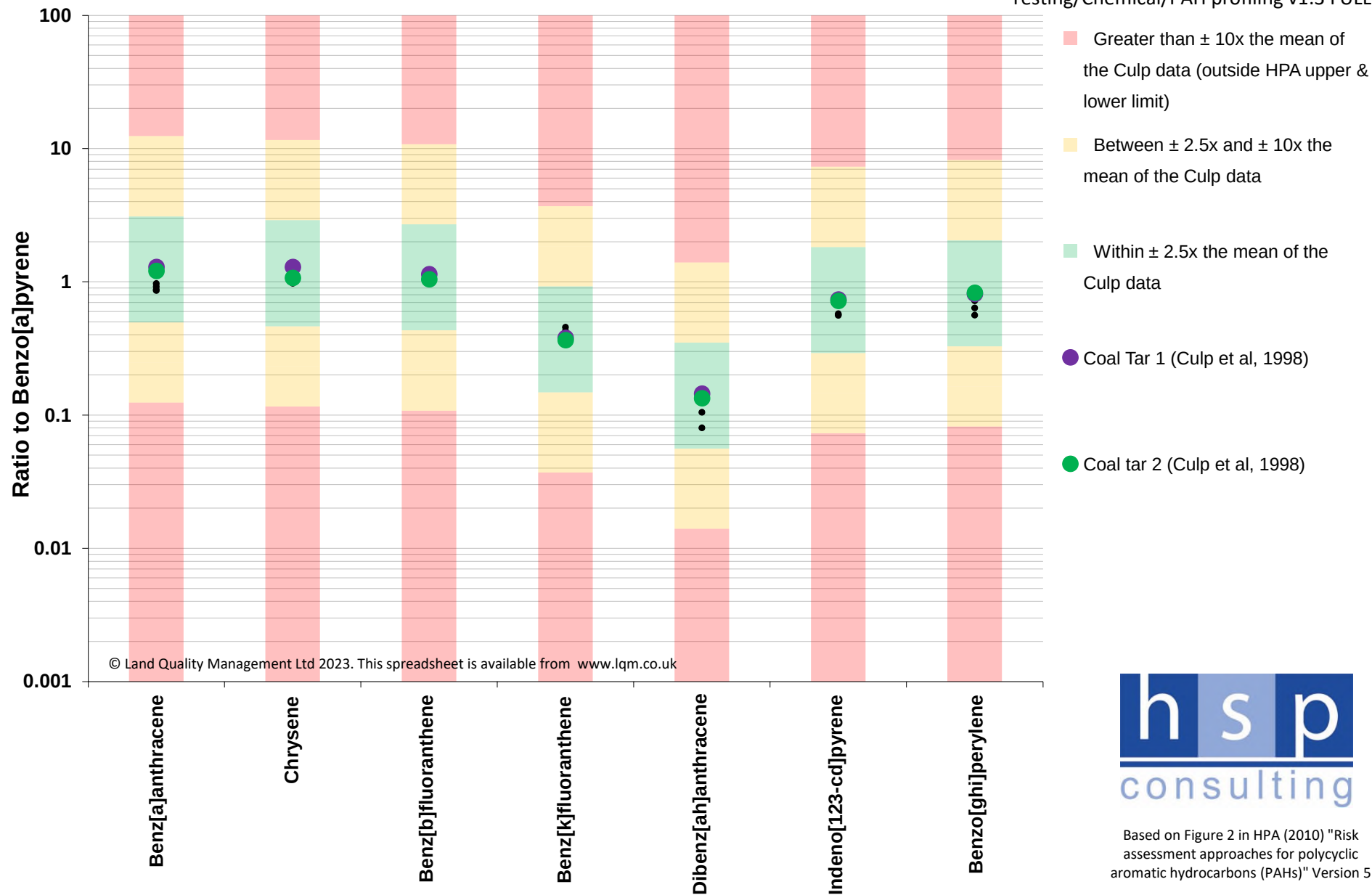
Samples will be disposed of 4 weeks from initial receipt unless otherwise instructed.

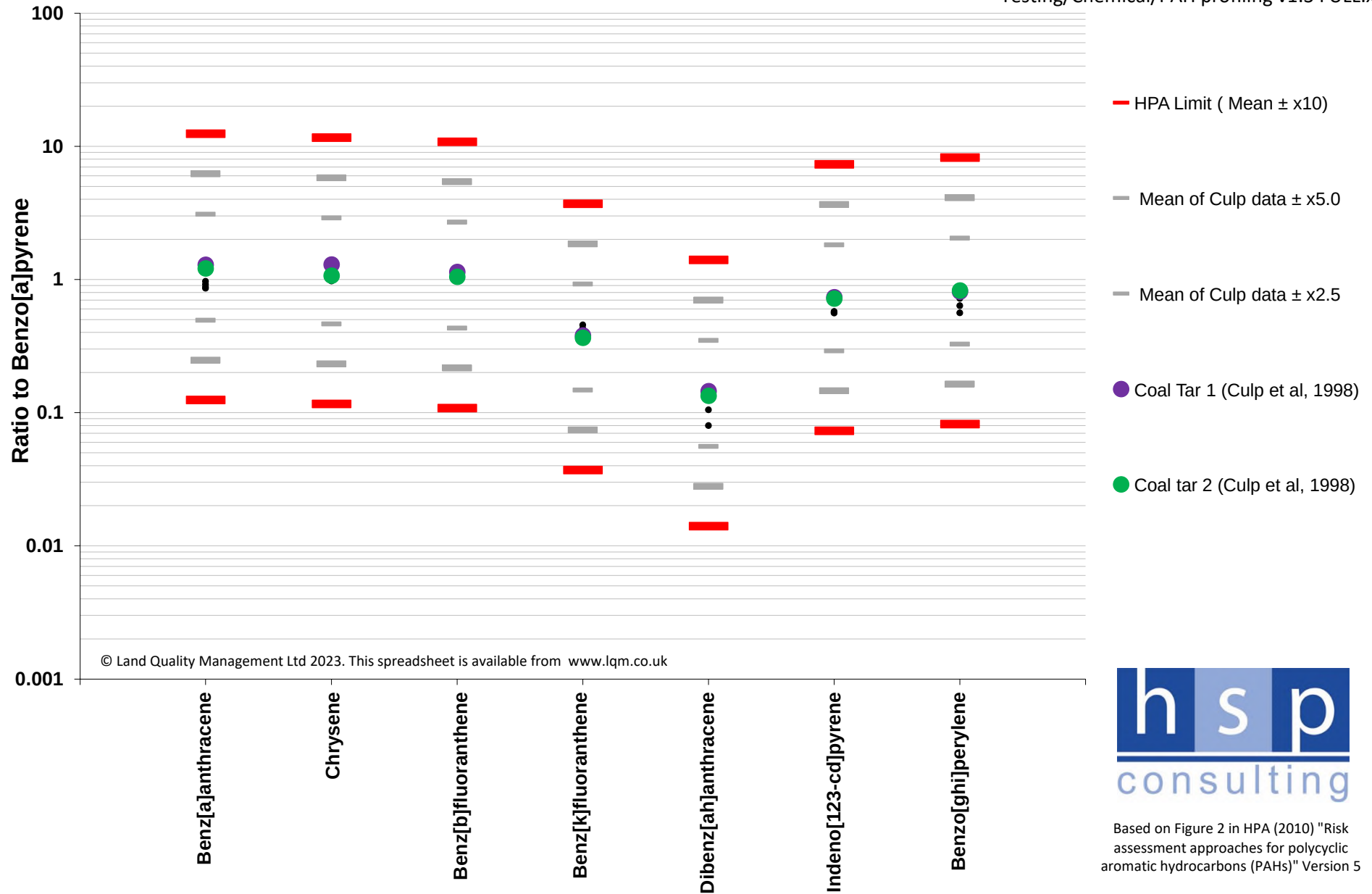
BTEX compounds are identified by retention time only and may include interference from co-eluting compounds.

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

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

Moisture Content Calculated on a Wet Weight basis





		Land Use					
(mg kg ⁻¹ DW)		Residential ^{with}	Residential ^{without}	Allotment	Commercial	POS ^{resi}	POS ^{park}
C4SL & S4UL for a sandy loam @ 6% except pheol @ 1% SOM	Phenol	120	440	23	440 ^{dir} (26000)	440 ^{dir} (10000)	440 ^{dir} (7600)
	Arsenic	37	40	49	640	79	168
	Boron	290	11000	45	240000	21000	46000
	Beryllium	1.7	1.7	35	12	2.2	63
	Cadmium	26	149	4.9	410	220	880
	Chromium (III)	910	910	18000	8600	1500	33000
	Chromium (VI)	21	21	170	49	23	250
	Copper	2400	7100	520	68000	12000	44000
	Lead	200	310	80	2330	630	1300
	Mercury Inorganic	40	56	19	1100	120	240
	<i>Mercury Elemental</i>	<i>1.2</i>	<i>1.2</i>	<i>21</i>	<i>58^{vap} (25.8)</i>	<i>16</i>	<i>30^{vap} (25.8)</i>
	<i>Mercury Methyl</i>	<i>11</i>	<i>15</i>	<i>6</i>	<i>320</i>	<i>40</i>	<i>68</i>
	Nickel	130	180	53	980	230	800
	Selenium	250	430	88	12000	1100	1800
	Vanadium	410	1200	91	9000	2000	5000
	Zinc	3700	40000	620	730000	81000	170000
S4UL @ 1% SOM values in bold are most protective	Benzene	0.87	3.3	0.18	98	140	230
	Ethylbenzene	47	83	16	5700 ^{vap} (518)	24000	17000 ^{vap} (518)
	Toluene	130	880 ^{vap} (869)	22	56000 ^{vap} (869)	56000	87000 ^{vap} (869)
	o-Xylene	60	88	28	6600 ^{sol} (478)	41000	17000^{sol} (478)
	m-Xylene	59	82	31	6200 ^{vap} (625)	41000	17000^{vap} (625)
	p-Xylene	56	79	29	5900^{sol} (576)	41000	17000^{sol} (576)
S4UL @ 1% SOM	Acenaphthene	210	3000 (57.0) ^{sol}	34	84000 (57) ^{sol}	15000	29000
	Acenaphthylene	170	2900 (86.1) ^{sol}	28	83000 (86) ^{sol}	15000	29000
	Anthracene	2400	31000 (1.17) ^{vap}	380	520000	74000	150000
	Benzo(a)anthracene	7.2	11	2.9	170	29	49
	Benzo(a)pyrene SM APPROACH	5	5.3	5.7	76	10	21
	Benzo(a)pyrene (only)	2.2	3.2	0.97	35	5.7	11
	Coal Tar (BaP as surrogate marker)	0.79	1.2	0.32	15	2.2	4.4
	Benzo(b)fluoranthene	2.6	3.9	0.99	44	7.1	13
	Benzo(ghi)perylene	320	360	290	3900	640	1400
	Benzo(k)fluoranthene	77	110	37	1200	190	370
	Chrysene	15.0	30.0	4.1	350	57	93
	Dibenzo(ah)anthracene	0.24	0.31	0.14	3.5	0.57	1.1
	Fluoranthene	280	1500	52	23000	3100	6300
	Fluorene	170	2800 (30.9) ^{sol}	27	63000 (30.9) ^{sol}	9900	20000
	Indeno(123-cd)pyrene	27	45	9.5	500	82	150
	Naphthalene	2.3 f	2.3f	4.1f	190f (76.4) ^{sol}	4900f	1200f (76.4) ^{sol}
	Phenanthrene	95	1300 (36.0) ^{sol}	15	22000	3100	6200
	Pyrene	620	3700	110	54000	7400	15000
S4UL @ 1% SOM	Aliphatic EC 5-6	42	42	730	3200 (304) ^{sol}	570000 (304) ^{sol}	95000 (304) ^{sol}
	Aliphatic EC >6-8	100	100	2300	7800 (144) ^{sol}	600000	150000 (144) ^{sol}
	Aliphatic EC >8-10	27	27	320	2000 (78) ^{sol}	13000	140000 (78) ^{sol}
	Aliphatic EC >10-12	130 (48) ^{vap}	130 (48) ^{vap}	2200	9700 (48) ^{sol}	13000	21000 (48) ^{sol}
	Aliphatic EC >12-16	1100 (24) ^{sol}	1100 (24) ^{sol}	11000	59000 (24) ^{sol}	13000	25000 (24) ^{sol}
	Aliphatic EC >16-35	65000 (8.48) ^{f.sol}	65000 (8.48) ^{f.sol}	260000	1600000	250000	450000
	Aliphatic EC >35-44	65000 (8.48) ^{f.sol}	65000 (8.48) ^{f.sol}	260000	1600000	250000	450000
	Aromatic EC 5-7 (benzene)	70.0	370.0	13	26000 (1220) ^{sol}	56000	76000 (1220) ^{sol}
	Aromatic EC >7-8 (toluene)	130	860	22	56000 (869) ^{vap}	56000	87000 (869) ^{vap}
	Aromatic EC >8-10	34	47	8.6	3500 (613) ^{vap}	5000	7200 (613) ^{vap}
	Aromatic EC >10-12	74	250	13	16000 (364) ^{sol}	5000	9200 (364) ^{sol}
	Aromatic EC >12-16	140	1800	23	36000 (169) ^{sol}	5100	10000
	Aromatic EC >16-21	260	1900	46	28000	3800	7600
	Aromatic EC >21-35	1100	1900	370	28000	3800	7800
	Aromatic EC >35-44	1100	1900	370	28000	3800	7800
	Aliphatic + Aromatic EC >44-70	1600	1900	1200	28000	3800	7800

Note the screening values for organics are at 1% SOM, for 2.5% and 6% SOM



APPENDIX III

HazWasteOnline Waste Classification

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



9JVBE-JL2YC-FBAVX

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Job name

1628 - CON - Millbrook Manor, Knowsley

Description/Comments

Project

Site

Classified by

Name: **Max Fuller**
 Date: **08 Jun 2023 10:34 GMT**
 Telephone: **0800 0209 307**
 Company: **Soilutions Ltd**
26 New Broompark
Edinburgh
EH5 1RS

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

CERTIFIED

Course

Hazardous Waste Classification

Date

06 Oct 2022

Next 3 year Refresher due by Oct 2025

Purpose of classification

2 - Material Characterisation

Address of the waste

Millbrook Manor, Knowsley, Prescot

Post Code L34 0JN

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Made ground beneath former car park

Description of the specific process, sub-process and/or activity that created the waste

Made ground beneath former car park

Description of the waste

MADE GROUND - Light to dark brown gravelly SAND. Gravels are fine to coarse sub angular, and sub rounded with mixed lithology of cobbles of red bricks

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP1, 0.3m	0.3	Hazardous	HP 7, HP 11	3
2	TP1, 1m	1	Non Hazardous		6
3	TP2, 0.2m	0.2	Non Hazardous		9
4	TP2, 2.8m	2.8	Non Hazardous		12
5	TP3, 0.3m	0.3	Non Hazardous		15
6	TP3, 0.9m	0.9	Non Hazardous		18
7	TP4, 0.2m	0.2	Non Hazardous		21
8	TP4, 0.8m	0.8	Non Hazardous		24
9	TP5, 0.3m	0.3	Non Hazardous		27
10	TP5, 1.8m	1.8	Non Hazardous		30

Related documents

#	Name	Description
1	SOILUTIONS STANDARD SUITE CLASSIFICATION	waste stream template used to create this Job

Report

Created by: Max Fuller

Created date: 08 Jun 2023 10:34 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	33
Appendix B: Rationale for selection of metal species	34
Appendix C: Version	35

Classification of sample: TP1, 0.3m

 **Hazardous Waste**
Classified as **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:	
TP1, 0.3m	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
0.3 m		
Moisture content:		
6.9%		
(dry 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.: 0.116%)

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.: 0.116%)

Determinands

Moisture content: 6.9% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				8.7 mg/kg	1.32	10.745 mg/kg	0.00107 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				0.85 mg/kg	3.22	2.56 mg/kg	0.000256 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.2 mg/kg	1.142	0.214 mg/kg	0.0000214 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				27.6 mg/kg	1.462	37.735 mg/kg	0.00377 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				63 mg/kg	1.126	66.353 mg/kg	0.00664 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	56.6 mg/kg		52.947 mg/kg	0.00529 %	✓	
	082-001-00-6									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
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 diiodide }				17.8 mg/kg	5.324	88.655 mg/kg	0.00887 %		✓	
	028-029-00-4	236-666-6	13462-90-3								
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								
11	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				51.9 mg/kg	4.398	213.52 mg/kg	0.0214 %		✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
12	pH		PH		8.3 pH		8.3 pH	8.3 pH			
13	Sulphate (2:1) Water Soluble				178.23 mg/kg		166.726 mg/kg	0.0167 %		✓	
		n/a	n/a								
14	Sulphur (free)				169.66 mg/kg		158.709 mg/kg	0.0159 %		✓	
		231-722-6	7704-34-9								
15	Sulphide				192 mg/kg		179.607 mg/kg	0.018 %		✓	
		231-722-6	7704-34-9								
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	006-006-00-X	200-821-6	74-90-8								
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				0.7 mg/kg		0.655 mg/kg	0.0000655 %		✓	
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				0.1 mg/kg		0.0935 mg/kg	0.00000935 %		✓	
		205-917-1	208-96-8								
21	acenaphthene				0.1 mg/kg		0.0935 mg/kg	0.00000935 %		✓	
		201-469-6	83-32-9								
22	fluorene				0.1 mg/kg		0.0935 mg/kg	0.00000935 %		✓	
		201-695-5	86-73-7								
23	phenanthrene				1.8 mg/kg		1.684 mg/kg	0.000168 %		✓	
		201-581-5	85-01-8								
24	anthracene				0.7 mg/kg		0.655 mg/kg	0.0000655 %		✓	
		204-371-1	120-12-7								
25	fluoranthene				9.1 mg/kg		8.513 mg/kg	0.000851 %		✓	
		205-912-4	206-44-0								
26	pyrene				8.5 mg/kg		7.951 mg/kg	0.000795 %		✓	
		204-927-3	129-00-0								
27	benzo[a]anthracene				5.5 mg/kg		5.145 mg/kg	0.000514 %		✓	
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				5.6 mg/kg		5.239 mg/kg	0.000524 %		✓	
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				5.8 mg/kg		5.426 mg/kg	0.000543 %		✓	
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				2.5 mg/kg		2.339 mg/kg	0.000234 %		✓	
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				5.7 mg/kg		5.332 mg/kg	0.000533 %		✓	
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				3.2 mg/kg		2.993 mg/kg	0.000299 %		✓	
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				0.8 mg/kg		0.748 mg/kg	0.0000748 %		✓	
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				3.2 mg/kg		2.993 mg/kg	0.000299 %		✓	
		205-883-8	191-24-2								

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number										
35		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		603-181-00-X	216-653-1	1634-04-4										
36		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2										
37		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3										
38	●	ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4										
39		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
40		o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]										
			203-396-5 [2]	106-42-3 [2]										
			203-576-3 [3]	108-38-3 [3]										
			215-535-7 [4]	1330-20-7 [4]										
41	●	TPH (C6 to C40) petroleum group				1241.218	mg/kg		1161.102	mg/kg	0.116 %	✓		
				TPH										
Total:												0.22 %		

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)
	Determinand defined by classifier (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
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 No free phase TPH observed during site investigation. Where result>1000mg/kg other HP's flag as hazardous anyhow.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.116%)

Classification of sample: TP1, 1m

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

Sample details

Sample name:	LoW Code:
TP1, 1m	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 m	
Moisture content:	
7.7%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.7% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1		arsenic { arsenic trioxide }				1.6 mg/kg	1.32	1.961 mg/kg	0.000196 %	✓	
		033-003-00-0	215-481-4	1327-53-3							
2		boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
		005-008-00-8	215-125-8	1303-86-2							
3		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
		048-002-00-0	215-146-2	1306-19-0							
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				32.7 mg/kg	1.462	44.376 mg/kg	0.00444 %	✓	
			215-160-9	1308-38-9							
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0							
6		copper { dicopper oxide; copper (I) oxide }				10.4 mg/kg	1.126	10.872 mg/kg	0.00109 %	✓	
		029-002-00-X	215-270-7	1317-39-1							
7		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	9.2 mg/kg		8.542 mg/kg	0.000854 %	✓	
		082-001-00-6									
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 diiodide }				12.2 mg/kg	5.324	60.312 mg/kg	0.00603 %	✓	
		028-029-00-4	236-666-6	13462-90-3							
10		selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
		028-031-00-5	239-125-2	15060-62-5							
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				15.3 mg/kg	4.398	62.477 mg/kg	0.00625 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
12		pH				8.2 pH		8.2 pH	8.2 pH		
				PH							
13		Sulphate (2:1) Water Soluble				1689.2 mg/kg		1568.431 mg/kg	0.157 %	✓	
			n/a	n/a							
14		Sulphur (free)				12.4 mg/kg		11.513 mg/kg	0.00115 %	✓	
			231-722-6	7704-34-9							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
15	Sulphide				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9								
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1	mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8								
17	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 }				<1 mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7								
23	phenanthrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8								
24	anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7								
25	fluoranthene				0.13 mg/kg		0.121	mg/kg	0.0000121 %	✓	
		205-912-4	206-44-0								
26	pyrene				0.12 mg/kg		0.111	mg/kg	0.0000111 %	✓	
		204-927-3	129-00-0								
27	benzo[a]anthracene				0.07 mg/kg		0.065	mg/kg	0.0000065 %	✓	
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				0.07 mg/kg		0.065	mg/kg	0.0000065 %	✓	
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				0.08 mg/kg		0.0743	mg/kg	0.00000743 %	✓	
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				0.07 mg/kg		0.065	mg/kg	0.0000065 %	✓	
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				0.02 mg/kg		0.0186	mg/kg	0.00000186 %	✓	
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				0.02 mg/kg		0.0186	mg/kg	0.00000186 %	✓	
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group		TPH		<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
Total:								0.181 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP2, 0.2m

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

Sample details

Sample name:	LoW Code:
TP2, 0.2m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.2 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
12.6%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 12.6% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				16.8 mg/kg	1.32	19.699 mg/kg	0.00197 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		boron { diboron trioxide; boric oxide }				0.57 mg/kg	3.22	1.63 mg/kg	0.000163 %	✓		
		005-008-00-8	215-125-8	1303-86-2								
3		cadmium { cadmium oxide }				0.5 mg/kg	1.142	0.507 mg/kg	0.0000507 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
4		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				60.3 mg/kg	1.462	78.27 mg/kg	0.00783 %	✓		
			215-160-9	1308-38-9								
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD	
		024-001-00-0	215-607-8	1333-82-0								
6		copper { dicopper oxide; copper (I) oxide }				71.4 mg/kg	1.126	71.393 mg/kg	0.00714 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
7		lead {  lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	220 mg/kg		195.382 mg/kg	0.0195 %	✓		
		082-001-00-6										
8		mercury { mercury dichloride }				0.3 mg/kg	1.353	0.361 mg/kg	0.0000361 %	✓		
		080-010-00-X	231-299-8	7487-94-7								
9		nickel { nickel diiodide }				32.8 mg/kg	5.324	155.095 mg/kg	0.0155 %	✓		
		028-029-00-4	236-666-6	13462-90-3								
10		selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				130 mg/kg	4.398	507.753 mg/kg	0.0508 %	✓		
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
12		pH				7.9 pH		7.9 pH	7.9 pH			
				PH								
13		Sulphate (2:1) Water Soluble				310.91 mg/kg		276.119 mg/kg	0.0276 %	✓		
			n/a	n/a								
14		Sulphur (free)				10.9 mg/kg		9.68 mg/kg	0.000968 %	✓		
			231-722-6	7704-34-9								



#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
15		Sulphide				40	mg/kg		35.524	mg/kg	0.00355 %	✓	
			231-722-6	7704-34-9									
16		hydrogen cyanide; hydrocyanic acid				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		006-006-00-X	200-821-6	74-90-8									
17		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 }				3.05	mg/kg	1.884	5.103	mg/kg	0.00051 %	✓	
		006-007-00-5											
18		phenol				<0.5	mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
19		naphthalene				0.04	mg/kg		0.0355	mg/kg	0.00000355 %	✓	
		601-052-00-2	202-049-5	91-20-3									
20		acenaphthylene				0.06	mg/kg		0.0533	mg/kg	0.00000533 %	✓	
			205-917-1	208-96-8									
21		acenaphthene				0.05	mg/kg		0.0444	mg/kg	0.00000444 %	✓	
			201-469-6	83-32-9									
22		fluorene				0.06	mg/kg		0.0533	mg/kg	0.00000533 %	✓	
			201-695-5	86-73-7									
23		phenanthrene				1.56	mg/kg		1.385	mg/kg	0.000139 %	✓	
			201-581-5	85-01-8									
24		anthracene				0.33	mg/kg		0.293	mg/kg	0.0000293 %	✓	
			204-371-1	120-12-7									
25		fluoranthene				3.56	mg/kg		3.162	mg/kg	0.000316 %	✓	
			205-912-4	206-44-0									
26		pyrene				3.28	mg/kg		2.913	mg/kg	0.000291 %	✓	
			204-927-3	129-00-0									
27		benzo[a]anthracene				1.75	mg/kg		1.554	mg/kg	0.000155 %	✓	
		601-033-00-9	200-280-6	56-55-3									
28		chrysene				2	mg/kg		1.776	mg/kg	0.000178 %	✓	
		601-048-00-0	205-923-4	218-01-9									
29		benzo[b]fluoranthene				1.99	mg/kg		1.767	mg/kg	0.000177 %	✓	
		601-034-00-4	205-911-9	205-99-2									
30		benzo[k]fluoranthene				0.91	mg/kg		0.808	mg/kg	0.0000808 %	✓	
		601-036-00-5	205-916-6	207-08-9									
31		benzo[a]pyrene; benzo[def]chrysene				2	mg/kg		1.776	mg/kg	0.000178 %	✓	
		601-032-00-3	200-028-5	50-32-8									
32		indeno[123-cd]pyrene				1.15	mg/kg		1.021	mg/kg	0.000102 %	✓	
			205-893-2	193-39-5									
33		dibenz[a,h]anthracene				0.21	mg/kg		0.187	mg/kg	0.0000187 %	✓	
		601-041-00-2	200-181-8	53-70-3									
34		benzo[ghi]perylene				1.27	mg/kg		1.128	mg/kg	0.000113 %	✓	
			205-883-8	191-24-2									
35		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
36		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
37		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
38		ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
39		xylene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<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]									
40		o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group				163.226 mg/kg		144.961 mg/kg	0.0145 %	✓	
			TPH							
							Total:	0.153 %		

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)
👤	Determinand defined by classifier (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
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 No free phase TPH observed during site investigation. Where result>1000mg/kg other HP's flag as hazardous anyhow.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0145%)

Classification of sample: TP2, 2.8m

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

Sample details

Sample name:	LoW Code:	
TP2, 2.8m	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)
2.8 m		
Moisture content:		
11.6%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 11.6% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1		arsenic { arsenic trioxide }				7.9 mg/kg	1.32	9.346 mg/kg	0.000935 %	✓	
		033-003-00-0	215-481-4	1327-53-3							
2		boron { diboron trioxide ; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
		005-008-00-8	215-125-8	1303-86-2							
3		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
		048-002-00-0	215-146-2	1306-19-0							
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				43.7 mg/kg	1.462	57.231 mg/kg	0.00572 %	✓	
			215-160-9	1308-38-9							
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0							
6		copper { dicopper oxide ; copper (I) oxide }				20.8 mg/kg	1.126	20.984 mg/kg	0.0021 %	✓	
		029-002-00-X	215-270-7	1317-39-1							
7		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	15.2 mg/kg		13.62 mg/kg	0.00136 %	✓	
		082-001-00-6									
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 diiodide }				33 mg/kg	5.324	157.439 mg/kg	0.0157 %	✓	
		028-029-00-4	236-666-6	13462-90-3							
10		selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
		028-031-00-5	239-125-2	15060-62-5							
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				45 mg/kg	4.398	177.336 mg/kg	0.0177 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
12		pH				5.5 pH		5.5 pH	5.5 pH		
				PH							
13		Sulphate (2:1) Water Soluble				132.31 mg/kg		118.557 mg/kg	0.0119 %	✓	
			n/a	n/a							
14		Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			231-722-6	7704-34-9							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
15	Sulphide				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9								
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1	mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8								
17	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 }				<1 mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7								
23	phenanthrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8								
24	anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7								
25	fluoranthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-912-4	206-44-0								
26	pyrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-927-3	129-00-0								
27	benzo[a]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
			TPH							
Total:								0.0604 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP3, 0.3m

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

Sample details

Sample name:	LoW Code:
TP3, 0.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
8.4%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 8.4% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				5.1 mg/kg	1.32	6.212 mg/kg	0.000621 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				35.9 mg/kg	1.462	48.404 mg/kg	0.00484 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				13.9 mg/kg	1.126	14.437 mg/kg	0.00144 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	15.9 mg/kg		14.668 mg/kg	0.00147 %	✓	
	082-001-00-6									
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 diiodide }				20.4 mg/kg	5.324	100.199 mg/kg	0.01 %	✓	
	028-029-00-4	236-666-6	13462-90-3							
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				35.5 mg/kg	4.398	144.028 mg/kg	0.0144 %	✓	
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
12	pH				6.6 pH		6.6 pH	6.6 pH		
13	Sulphate (2:1) Water Soluble				90.12 mg/kg		83.137 mg/kg	0.00831 %	✓	
		n/a	n/a							
14	Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
15	Sulphide	231-722-6	7704-34-9		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
16	hydrogen cyanide; hydrocyanic acid	006-006-00-X	200-821-6	74-90-8	<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
17	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 }	006-007-00-5			<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
18	phenol	604-001-00-2	203-632-7	108-95-2	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
19	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
20	acenaphthylene		205-917-1	208-96-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
21	acenaphthene		201-469-6	83-32-9	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
22	fluorene		201-695-5	86-73-7	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
23	phenanthrene		201-581-5	85-01-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
24	anthracene		204-371-1	120-12-7	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
25	fluoranthene		205-912-4	206-44-0	0.04 mg/kg		0.0369 mg/kg	0.00000369 %	✓	
26	pyrene		204-927-3	129-00-0	0.04 mg/kg		0.0369 mg/kg	0.00000369 %	✓	
27	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
28	chrysene	601-048-00-0	205-923-4	218-01-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
29	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
30	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
31	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
32	indeno[123-cd]pyrene		205-893-2	193-39-5	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
33	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
34	benzo[ghi]perylene		205-883-8	191-24-2	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
36	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
37	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
38	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
39	xylene	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]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
Total:								0.046 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP3, 0.9m

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

Sample details

Sample name:	LoW Code:	
TP3, 0.9m	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)
0.9 m		
Moisture content:		
10%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 10% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				1.8 mg/kg	1.32	2.161 mg/kg	0.000216 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD	
		005-008-00-8	215-125-8	1303-86-2								
3		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD	
		048-002-00-0	215-146-2	1306-19-0								
4		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				25.1 mg/kg	1.462	33.35 mg/kg	0.00334 %	✓		
			215-160-9	1308-38-9								
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD	
		024-001-00-0	215-607-8	1333-82-0								
6		copper { dicopper oxide; copper (I) oxide }				6.4 mg/kg	1.126	6.551 mg/kg	0.000655 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
7		lead {  lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	8.7 mg/kg		7.909 mg/kg	0.000791 %	✓		
		082-001-00-6										
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 diiodide }				6.4 mg/kg	5.324	30.978 mg/kg	0.0031 %	✓		
		028-029-00-4	236-666-6	13462-90-3								
10		selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				16.8 mg/kg	4.398	67.168 mg/kg	0.00672 %	✓		
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
12		pH				7.1 pH		7.1 pH	7.1 pH			
				PH								
13		Sulphate (2:1) Water Soluble				105.9 mg/kg		96.273 mg/kg	0.00963 %	✓		
			n/a	n/a								
14		Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD	
			231-722-6	7704-34-9								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
15	Sulphide				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9								
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1	mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8								
17	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 }				<1 mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7								
23	phenanthrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8								
24	anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7								
25	fluoranthene				0.02 mg/kg		0.0182	mg/kg	0.00000182 %	✓	
		205-912-4	206-44-0								
26	pyrene				0.02 mg/kg		0.0182	mg/kg	0.00000182 %	✓	
		204-927-3	129-00-0								
27	benzo[a]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group		TPH		<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
Total:								0.0294 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP4, 0.2m

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

Sample details

Sample name:	LoW Code:
TP4, 0.2m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.2 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
7.9%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.9% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used		
		EU CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }				6.2	mg/kg	1.32	7.587	mg/kg	0.000759 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		boron { diboron trioxide; boric oxide }				<0.5	mg/kg	3.22	<1.61	mg/kg	<0.000161 %		<LOD
		005-008-00-8	215-125-8	1303-86-2									
3		cadmium { cadmium oxide }				0.3	mg/kg	1.142	0.318	mg/kg	0.0000318 %	✓	
		048-002-00-0	215-146-2	1306-19-0									
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				30.5	mg/kg	1.462	41.314	mg/kg	0.00413 %	✓	
			215-160-9	1308-38-9									
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
6		copper { dicopper oxide; copper (I) oxide }				25.7	mg/kg	1.126	26.817	mg/kg	0.00268 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
7		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	61.7	mg/kg		57.183	mg/kg	0.00572 %	✓	
		082-001-00-6											
8		mercury { mercury dichloride }				0.2	mg/kg	1.353	0.251	mg/kg	0.0000251 %	✓	
		080-010-00-X	231-299-8	7487-94-7									
9		nickel { nickel diiodide }				12.5	mg/kg	5.324	61.681	mg/kg	0.00617 %	✓	
		028-029-00-4	236-666-6	13462-90-3									
10		selenium { nickel selenate }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
		028-031-00-5	239-125-2	15060-62-5									
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				76.6	mg/kg	4.398	312.216	mg/kg	0.0312 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
12		pH				8.1	pH		8.1	pH	8.1 pH		
13		Sulphate (2:1) Water Soluble				33.27	mg/kg		30.834	mg/kg	0.00308 %	✓	
			n/a	n/a									
14		Sulphur (free)				12	mg/kg		11.121	mg/kg	0.00111 %	✓	
			231-722-6	7704-34-9									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
15	Sulphide	231-722-6	7704-34-9		48 mg/kg		44.486 mg/kg	0.00445 %		✓	
16	hydrogen cyanide; hydrocyanic acid	006-006-00-X	200-821-6	74-90-8	<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
17	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 }	006-007-00-5			<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	phenol	604-001-00-2	203-632-7	108-95-2	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
19	naphthalene	601-052-00-2	202-049-5	91-20-3	0.06 mg/kg		0.0556 mg/kg	0.00000556 %		✓	
20	acenaphthylene		205-917-1	208-96-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
21	acenaphthene		201-469-6	83-32-9	0.11 mg/kg		0.102 mg/kg	0.0000102 %		✓	
22	fluorene		201-695-5	86-73-7	0.08 mg/kg		0.0741 mg/kg	0.00000741 %		✓	
23	phenanthrene		201-581-5	85-01-8	0.54 mg/kg		0.5 mg/kg	0.00005 %		✓	
24	anthracene		204-371-1	120-12-7	0.14 mg/kg		0.13 mg/kg	0.000013 %		✓	
25	fluoranthene		205-912-4	206-44-0	0.77 mg/kg		0.714 mg/kg	0.0000714 %		✓	
26	pyrene		204-927-3	129-00-0	0.7 mg/kg		0.649 mg/kg	0.0000649 %		✓	
27	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.34 mg/kg		0.315 mg/kg	0.0000315 %		✓	
28	chrysene	601-048-00-0	205-923-4	218-01-9	0.41 mg/kg		0.38 mg/kg	0.000038 %		✓	
29	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.4 mg/kg		0.371 mg/kg	0.0000371 %		✓	
30	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.19 mg/kg		0.176 mg/kg	0.0000176 %		✓	
31	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.37 mg/kg		0.343 mg/kg	0.0000343 %		✓	
32	indeno[123-cd]pyrene		205-893-2	193-39-5	0.22 mg/kg		0.204 mg/kg	0.0000204 %		✓	
33	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.04 mg/kg		0.0371 mg/kg	0.00000371 %		✓	
34	benzo[ghi]perylene		205-883-8	191-24-2	0.28 mg/kg		0.259 mg/kg	0.0000259 %		✓	
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
36	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
37	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
38	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
39	xylene	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]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group				582.542 mg/kg		539.89 mg/kg	0.054 %	✓	
			TPH							
Total:								0.115 %		

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)
👤	Determinand defined by classifier (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
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 No free phase TPH observed during site investigation. Where result>1000mg/kg other HP's flag as hazardous anyhow.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.054%)

Classification of sample: TP4, 0.8m

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

Sample details

Sample name:	LoW Code:	
TP4, 0.8m	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)
0.8 m		
Moisture content:		
7.2%		
(dry weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 7.2% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				1.4 mg/kg	1.32	1.724 mg/kg	0.000172 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD	
		005-008-00-8	215-125-8	1303-86-2								
3		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD	
		048-002-00-0	215-146-2	1306-19-0								
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				24.3 mg/kg	1.462	33.13 mg/kg	0.00331 %	✓		
			215-160-9	1308-38-9								
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD	
		024-001-00-0	215-607-8	1333-82-0								
6		copper { dicopper oxide; copper (I) oxide }				7.4 mg/kg	1.126	7.772 mg/kg	0.000777 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
7		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	9.1 mg/kg		8.489 mg/kg	0.000849 %	✓		
		082-001-00-6										
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 diiodide }				5.1 mg/kg	5.324	25.33 mg/kg	0.00253 %	✓		
		028-029-00-4	236-666-6	13462-90-3								
10		selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				13.5 mg/kg	4.398	55.384 mg/kg	0.00554 %	✓		
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
12		pH				7.1 pH		7.1 pH	7.1 pH			
				PH								
13		Sulphate (2:1) Water Soluble				28.54 mg/kg		26.623 mg/kg	0.00266 %	✓		
			n/a	n/a								
14		Sulphur (free)				4.86 mg/kg		4.534 mg/kg	0.000453 %	✓		
			231-722-6	7704-34-9								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
15	Sulphide				60 mg/kg		55.97 mg/kg	0.0056 %	✓	
		231-722-6	7704-34-9							
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8							
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
19	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
20	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
21	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
22	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7							
23	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8							
24	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
25	fluoranthene				0.03 mg/kg		0.028 mg/kg	0.0000028 %	✓	
		205-912-4	206-44-0							
26	pyrene				0.03 mg/kg		0.028 mg/kg	0.0000028 %	✓	
		204-927-3	129-00-0							
27	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
28	chrysene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
29	benzo[b]fluoranthene				0.02 mg/kg		0.0187 mg/kg	0.00000187 %	✓	
	601-034-00-4	205-911-9	205-99-2							
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
31	benzo[a]pyrene; benzo[def]chrysene				0.02 mg/kg		0.0187 mg/kg	0.00000187 %	✓	
	601-032-00-3	200-028-5	50-32-8							
32	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5							
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
34	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-883-8	191-24-2							
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
36	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
37	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
39	xylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<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]							
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
			TPH							
Total:								0.0248 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP5, 0.3m

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

Sample details

Sample name:	LoW Code:
TP5, 0.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
7.5%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.5% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }				6.6	mg/kg	1.32	8.106	mg/kg	0.000811 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		boron { diboron trioxide; boric oxide }				<0.5	mg/kg	3.22	<1.61	mg/kg	<0.000161 %		<LOD
		005-008-00-8	215-125-8	1303-86-2									
3		cadmium { cadmium oxide }				0.3	mg/kg	1.142	0.319	mg/kg	0.0000319 %	✓	
		048-002-00-0	215-146-2	1306-19-0									
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				44.6	mg/kg	1.462	60.638	mg/kg	0.00606 %	✓	
			215-160-9	1308-38-9									
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
6		copper { dicopper oxide; copper (I) oxide }				26.9	mg/kg	1.126	28.173	mg/kg	0.00282 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
7		lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	75.1	mg/kg		69.86	mg/kg	0.00699 %	✓	
		082-001-00-6											
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 diiodide }				13	mg/kg	5.324	64.387	mg/kg	0.00644 %	✓	
		028-029-00-4	236-666-6	13462-90-3									
10		selenium { nickel selenate }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
		028-031-00-5	239-125-2	15060-62-5									
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				63.9	mg/kg	4.398	261.421	mg/kg	0.0261 %	✓	
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]									
12		pH				7.7	pH		7.7	pH	7.7 pH		
13		Sulphate (2:1) Water Soluble				120.32	mg/kg		111.926	mg/kg	0.0112 %	✓	
			n/a	n/a									
14		Sulphur (free)				<10	mg/kg		<10	mg/kg	<0.001 %		<LOD
			231-722-6	7704-34-9									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
15	Sulphide	231-722-6	7704-34-9		28 mg/kg		26.047 mg/kg	0.0026 %		✓	
16	hydrogen cyanide; hydrocyanic acid	006-006-00-X	200-821-6	74-90-8	<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
17	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 }	006-007-00-5			<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
18	phenol	604-001-00-2	203-632-7	108-95-2	<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
19	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
20	acenaphthylene		205-917-1	208-96-8	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
21	acenaphthene		201-469-6	83-32-9	0.08 mg/kg		0.0744 mg/kg	0.00000744 %		✓	
22	fluorene		201-695-5	86-73-7	0.03 mg/kg		0.0279 mg/kg	0.00000279 %		✓	
23	phenanthrene		201-581-5	85-01-8	0.51 mg/kg		0.474 mg/kg	0.0000474 %		✓	
24	anthracene		204-371-1	120-12-7	0.07 mg/kg		0.0651 mg/kg	0.00000651 %		✓	
25	fluoranthene		205-912-4	206-44-0	0.85 mg/kg		0.791 mg/kg	0.0000791 %		✓	
26	pyrene		204-927-3	129-00-0	0.83 mg/kg		0.772 mg/kg	0.0000772 %		✓	
27	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.43 mg/kg		0.4 mg/kg	0.00004 %		✓	
28	chrysene	601-048-00-0	205-923-4	218-01-9	0.49 mg/kg		0.456 mg/kg	0.0000456 %		✓	
29	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.49 mg/kg		0.456 mg/kg	0.0000456 %		✓	
30	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.19 mg/kg		0.177 mg/kg	0.0000177 %		✓	
31	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.5 mg/kg		0.465 mg/kg	0.0000465 %		✓	
32	indeno[123-cd]pyrene		205-893-2	193-39-5	0.28 mg/kg		0.26 mg/kg	0.000026 %		✓	
33	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.04 mg/kg		0.0372 mg/kg	0.00000372 %		✓	
34	benzo[ghi]perylene		205-883-8	191-24-2	0.36 mg/kg		0.335 mg/kg	0.0000335 %		✓	
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
36	benzene	601-020-00-8	200-753-7	71-43-2	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
37	toluene	601-021-00-3	203-625-9	108-88-3	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
38	ethylbenzene	601-023-00-4	202-849-4	100-41-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
39	xylene	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]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]	<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group				27.641 mg/kg		25.712 mg/kg	0.00257 %	✓	
			TPH							
Total:								0.0681 %		

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)
👤	Determinand defined by classifier (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
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 No free phase TPH observed during site investigation. Where result>1000mg/kg other HP's flag as hazardous anyhow.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00257%)

Classification of sample: TP5, 1.8m

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

Sample details

Sample name:	LoW Code:	
TP5, 1.8m	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)
1.8 m		
Moisture content:		
9.9%		
(dry weight correction)		

Hazard properties

None identified

Determinands

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

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				7.4 mg/kg	1.32	8.89 mg/kg	0.000889 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD	
		005-008-00-8	215-125-8	1303-86-2								
3		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD	
		048-002-00-0	215-146-2	1306-19-0								
4		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				49.1 mg/kg	1.462	65.298 mg/kg	0.00653 %	✓		
			215-160-9	1308-38-9								
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD	
		024-001-00-0	215-607-8	1333-82-0								
6		copper { dicopper oxide; copper (I) oxide }				19.2 mg/kg	1.126	19.67 mg/kg	0.00197 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
7		lead {  lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	9.7 mg/kg		8.826 mg/kg	0.000883 %	✓		
		082-001-00-6										
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 diiodide }				36.4 mg/kg	5.324	176.346 mg/kg	0.0176 %	✓		
		028-029-00-4	236-666-6	13462-90-3								
10		selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
11		zinc { zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2] }				43.1 mg/kg	4.398	172.476 mg/kg	0.0172 %	✓		
		030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
12		pH				6.2 pH		6.2 pH	6.2 pH			
				PH								
13		Sulphate (2:1) Water Soluble				45.06 mg/kg		41.001 mg/kg	0.0041 %	✓		
			n/a	n/a								
14		Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD	
			231-722-6	7704-34-9								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
15	Sulphide				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9								
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1	mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8								
17	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 }				<1 mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7								
23	phenanthrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8								
24	anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7								
25	fluoranthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-912-4	206-44-0								
26	pyrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-927-3	129-00-0								
27	benzo[a]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
			TPH							
Total:								0.0542 %		

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)
👤	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

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

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

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

■ **lead compounds with the exception of those specified elsewhere in this Annex (worst case)**

GB MCL index number: 082-001-00-6

Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A

Additional Hazard Statement(s): Carc. 1A; H350

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

Sulphate (2:1) Water Soluble (EC Number: n/a, CAS Number: n/a)

Description/Comments:

Data source: n/a

Data source date: 28 Oct 2020

Hazard Statements: None.

Sulphur (free) (EC Number: 231-722-6, CAS Number: 7704-34-9)

Description/Comments:

Data source: n/a

Data source date: 28 Oct 2020

Hazard Statements: None.

Sulphide (EC Number: 231-722-6, CAS Number: 7704-34-9)

Description/Comments:

Data source: n/a

Data source date: 28 Oct 2020

Hazard Statements: None.

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

GB MCL index number: 006-007-00-5

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

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

Reason for additional Hazards Statement(s):

20 Nov 2021 - 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: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

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

• **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 Acute 1; H400 , Aquatic Chronic 1; H410

• **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: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

• **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: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **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: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **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: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **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 Acute 1; H400 , Aquatic Chronic 1; H410

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

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

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

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

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

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.

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass

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. All <LOD anyhow.

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.

lead {lead compounds with the exception of those specified elsewhere in this Annex (worst case)}

Insufficient chromium to make chromate species. This is next worst case.

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight

nickel {nickel diiodide}

Worst case

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc sulphate (hydrous) (mono-, hexa- and hepta hydrate); [1] zinc sulphate (anhydrous) [2]}

Next worst case since insufficient chromium to create chromate species.

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)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2023.111.5569.10274 (22 Apr 2023)

HazWasteOnline Database: 2023.111.5569.10274 (22 Apr 2023)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

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 Waste 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

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- a) understand the origin of the waste
- b) select the correct List of Waste code(s)
- c) confirm that the list of determinands, results and sampling plan are fit for purpose
- d) select and justify the chosen metal species (Appendix B)
- e) correctly apply moisture correction and other available corrections
- f) add the meta data for their user-defined substances (Appendix A)
- g) check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



7VQLW-EUWSQ-AEHL P

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in **pale yellow**.

 This Waste Classification Report contains  user defined substances. See [Appendix A](#) for details.

Job name

1628 - CON - Millbrook Manor, Knowsley (additional sampling)

Description/Comments

Project

Site

Classified by

Name:
Max Fuller
Date:
09 Aug 2023 08:33 GMT
Telephone:
0800 0209 307

Company:
Soilutions Ltd
26 New Broompark
Edinburgh
EH5 1RS

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

CERTIFIED

Course
Hazardous Waste Classification

Date
06 Oct 2022

Next 3 year Refresher due by Oct 2025

Purpose of classification

2 - Material Characterisation

Address of the waste

1628 - CON - Millbrook Manor, Knowsley

Post Code **L34 0JN**

SIC for the process giving rise to the waste

Description of industry/producer giving rise to the waste

Made ground (and natural strata) beneath former car park

Description of the specific process, sub-process and/or activity that created the waste

Made ground (and natural strata) beneath former car park

Description of the waste

MADE GROUND - Light to dark brown gravelly SAND. Gravels are fine to coarse sub angular, and sub rounded with mixed lithology of cobbles of red bricks

(Natural) Slightly gravelly silty SAND with clay pockets

(Natural) Soft to stiff CLAY with mudstone gravel and cobbles.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	HP1, 0.3m	0.3	Non Hazardous		3
2	HP3, 0.4m	0.4	Non Hazardous		5
3	HP4, 0.5m	0.5	Non Hazardous		7
4	HP5, 0.5m	0.5	Non Hazardous		9
5	TP6, 0.3m	0.3	Non Hazardous		11
6	TP6, 1.3m	1.3	Non Hazardous		14
7	TP8, 0.3m	0.3	Non Hazardous		17
8	TP8, 0.6m	0.6	Non Hazardous		20
9	TP9, 0.3m	0.3	Non Hazardous		23
10	TP9, 1.3m	1.3	Non Hazardous		26
11	TP10, 0.3m	0.3	Non Hazardous	Note that TP10, 0.3m sample has 0.002% w/w Asbestos quantified	29
12	TP10, 1.8m	1.8	Non Hazardous		32

Related documents

#	Name	Description
1	SOILUTIONS STANDARD SUITE CLASSIFICATION	waste stream template used to create this Job

Report

Created by: Max Fuller

Created date: 09 Aug 2023 08:33 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	35
Appendix B: Rationale for selection of metal species	36
Appendix C: Version	37

Classification of sample: HP1, 0.3m

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

Sample details

Sample name:	LoW Code:	
HP1, 0.3m	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)
0.3 m		
Moisture content:		
15.8%		
(dry weight correction)		

Hazard properties

None identified

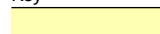
Determinands

Moisture content: 15.8% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
2	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
3	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
4	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7							
5	phenanthrene				0.1 mg/kg		0.0864 mg/kg	0.00000864 %	✓	
		201-581-5	85-01-8							
6	anthracene				0.1 mg/kg		0.0864 mg/kg	0.00000864 %	✓	
		204-371-1	120-12-7							
7	fluoranthene				0.3 mg/kg		0.259 mg/kg	0.0000259 %	✓	
		205-912-4	206-44-0							
8	pyrene				0.3 mg/kg		0.259 mg/kg	0.0000259 %	✓	
		204-927-3	129-00-0							
9	benzo[a]anthracene				0.1 mg/kg		0.0864 mg/kg	0.00000864 %	✓	
	601-033-00-9	200-280-6	56-55-3							
10	chrysene				0.2 mg/kg		0.173 mg/kg	0.0000173 %	✓	
	601-048-00-0	205-923-4	218-01-9							
11	benzo[b]fluoranthene				0.2 mg/kg		0.173 mg/kg	0.0000173 %	✓	
	601-034-00-4	205-911-9	205-99-2							
12	benzo[k]fluoranthene				0.1 mg/kg		0.0864 mg/kg	0.00000864 %	✓	
	601-036-00-5	205-916-6	207-08-9							
13	benzo[a]pyrene; benzo[def]chrysene				0.2 mg/kg		0.173 mg/kg	0.0000173 %	✓	
	601-032-00-3	200-028-5	50-32-8							
14	indeno[123-cd]pyrene				0.1 mg/kg		0.0864 mg/kg	0.00000864 %	✓	
		205-893-2	193-39-5							
15	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
16	benzo[ghi]perylene				0.1 mg/kg		0.0864 mg/kg	0.00000864 %	✓	
		205-883-8	191-24-2							
Total:								0.00016 %		



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

Classification of sample: HP3, 0.4m

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

Sample details

Sample name:	LoW Code:
HP3, 0.4m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.4 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22.1%	
(dry weight correction)	

Hazard properties

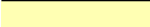
None identified

Determinands

Moisture content: 22.1% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
2	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
3	acenaphthene				0.04 mg/kg		0.0328 mg/kg	0.00000328 %	✓	
		201-469-6	83-32-9							
4	fluorene				0.02 mg/kg		0.0164 mg/kg	0.00000164 %	✓	
		201-695-5	86-73-7							
5	phenanthrene				0.61 mg/kg		0.5 mg/kg	0.00005 %	✓	
		201-581-5	85-01-8							
6	anthracene				0.1 mg/kg		0.0819 mg/kg	0.00000819 %	✓	
		204-371-1	120-12-7							
7	fluoranthene				1.23 mg/kg		1.007 mg/kg	0.000101 %	✓	
		205-912-4	206-44-0							
8	pyrene				1.14 mg/kg		0.934 mg/kg	0.0000934 %	✓	
		204-927-3	129-00-0							
9	benzo[a]anthracene				0.55 mg/kg		0.45 mg/kg	0.000045 %	✓	
	601-033-00-9	200-280-6	56-55-3							
10	chrysene				0.52 mg/kg		0.426 mg/kg	0.0000426 %	✓	
	601-048-00-0	205-923-4	218-01-9							
11	benzo[b]fluoranthene				0.76 mg/kg		0.622 mg/kg	0.0000622 %	✓	
	601-034-00-4	205-911-9	205-99-2							
12	benzo[k]fluoranthene				0.3 mg/kg		0.246 mg/kg	0.0000246 %	✓	
	601-036-00-5	205-916-6	207-08-9							
13	benzo[a]pyrene; benzo[def]chrysene				0.66 mg/kg		0.541 mg/kg	0.0000541 %	✓	
	601-032-00-3	200-028-5	50-32-8							
14	indeno[123-cd]pyrene				0.48 mg/kg		0.393 mg/kg	0.0000393 %	✓	
		205-893-2	193-39-5							
15	dibenz[a,h]anthracene				0.09 mg/kg		0.0737 mg/kg	0.00000737 %	✓	
	601-041-00-2	200-181-8	53-70-3							
16	benzo[ghi]perylene				0.47 mg/kg		0.385 mg/kg	0.0000385 %	✓	
		205-883-8	191-24-2							
Total:								0.00057 %		

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

Classification of sample: HP4, 0.5m

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

Sample details

Sample name:	LoW Code:
HP4, 0.5m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.5 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
19.1%	
(dry weight correction)	

Hazard properties

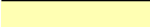
None identified

Determinands

Moisture content: 19.1% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
2	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-917-1	208-96-8								
3	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-469-6	83-32-9								
4	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
5	phenanthrene				0.48 mg/kg		0.403 mg/kg	0.0000403 %	✓		
		201-581-5	85-01-8								
6	anthracene				0.09 mg/kg		0.0756 mg/kg	0.00000756 %	✓		
		204-371-1	120-12-7								
7	fluoranthene				1.03 mg/kg		0.865 mg/kg	0.0000865 %	✓		
		205-912-4	206-44-0								
8	pyrene				0.98 mg/kg		0.823 mg/kg	0.0000823 %	✓		
		204-927-3	129-00-0								
9	benzo[a]anthracene				0.52 mg/kg		0.437 mg/kg	0.0000437 %	✓		
	601-033-00-9	200-280-6	56-55-3								
10	chrysene				0.51 mg/kg		0.428 mg/kg	0.0000428 %	✓		
	601-048-00-0	205-923-4	218-01-9								
11	benzo[b]fluoranthene				0.7 mg/kg		0.588 mg/kg	0.0000588 %	✓		
	601-034-00-4	205-911-9	205-99-2								
12	benzo[k]fluoranthene				0.28 mg/kg		0.235 mg/kg	0.0000235 %	✓		
	601-036-00-5	205-916-6	207-08-9								
13	benzo[a]pyrene; benzo[def]chrysene				0.63 mg/kg		0.529 mg/kg	0.0000529 %	✓		
	601-032-00-3	200-028-5	50-32-8								
14	indeno[123-cd]pyrene				0.45 mg/kg		0.378 mg/kg	0.0000378 %	✓		
		205-893-2	193-39-5								
15	dibenz[a,h]anthracene				0.08 mg/kg		0.0672 mg/kg	0.00000672 %	✓		
	601-041-00-2	200-181-8	53-70-3								
16	benzo[ghi]perylene				0.41 mg/kg		0.344 mg/kg	0.0000344 %	✓		
		205-883-8	191-24-2								
Total:									0.00052 %		

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

Classification of sample: HP5, 0.5m

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

Sample details

Sample name:	LoW Code:
HP5, 0.5m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.5 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15.1%	
(dry weight correction)	

Hazard properties

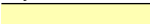
None identified

Determinands

Moisture content: 15.1% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	naphthalene				0.06 mg/kg		0.0521 mg/kg	0.00000521 %	✓	
	601-052-00-2	202-049-5	91-20-3							
2	acenaphthylene				0.39 mg/kg		0.339 mg/kg	0.0000339 %	✓	
		205-917-1	208-96-8							
3	acenaphthene				0.27 mg/kg		0.235 mg/kg	0.0000235 %	✓	
		201-469-6	83-32-9							
4	fluorene				0.41 mg/kg		0.356 mg/kg	0.0000356 %	✓	
		201-695-5	86-73-7							
5	phenanthrene				6.5 mg/kg		5.647 mg/kg	0.000565 %	✓	
		201-581-5	85-01-8							
6	anthracene				1.74 mg/kg		1.512 mg/kg	0.000151 %	✓	
		204-371-1	120-12-7							
7	fluoranthene				7.49 mg/kg		6.507 mg/kg	0.000651 %	✓	
		205-912-4	206-44-0							
8	pyrene				6.51 mg/kg		5.656 mg/kg	0.000566 %	✓	
		204-927-3	129-00-0							
9	benzo[a]anthracene				3.14 mg/kg		2.728 mg/kg	0.000273 %	✓	
	601-033-00-9	200-280-6	56-55-3							
10	chrysene				2.79 mg/kg		2.424 mg/kg	0.000242 %	✓	
	601-048-00-0	205-923-4	218-01-9							
11	benzo[b]fluoranthene				3.18 mg/kg		2.763 mg/kg	0.000276 %	✓	
	601-034-00-4	205-911-9	205-99-2							
12	benzo[k]fluoranthene				1.27 mg/kg		1.103 mg/kg	0.00011 %	✓	
	601-036-00-5	205-916-6	207-08-9							
13	benzo[a]pyrene; benzo[def]chrysene				3.03 mg/kg		2.632 mg/kg	0.000263 %	✓	
	601-032-00-3	200-028-5	50-32-8							
14	indeno[123-cd]pyrene				1.89 mg/kg		1.642 mg/kg	0.000164 %	✓	
		205-893-2	193-39-5							
15	dibenz[a,h]anthracene				0.33 mg/kg		0.287 mg/kg	0.0000287 %	✓	
	601-041-00-2	200-181-8	53-70-3							
16	benzo[ghi]perylene				1.73 mg/kg		1.503 mg/kg	0.00015 %	✓	
		205-883-8	191-24-2							
Total:								0.00354 %		

Key

	User supplied data
	Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: TP6, 0.3m

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

Sample details

Sample name:	LoW Code:
TP6, 0.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
23.2%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 23.2% Dry Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1		arsenic { arsenic trioxide }				1.8 mg/kg	1.32	1.929 mg/kg	0.000193 %	✓	
		033-003-00-0	215-481-4	1327-53-3							
2		boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
		005-008-00-8	215-125-8	1303-86-2							
3		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
		048-002-00-0	215-146-2	1306-19-0							
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				7.1 mg/kg	1.462	8.423 mg/kg	0.000842 %	✓	
			215-160-9	1308-38-9							
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0							
6		copper { dicopper oxide; copper (I) oxide }				9.5 mg/kg	1.126	8.682 mg/kg	0.000868 %	✓	
		029-002-00-X	215-270-7	1317-39-1							
7		lead { lead chromate }			1	15.7 mg/kg	1.56	19.878 mg/kg	0.00127 %	✓	
		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 }				5.1 mg/kg	2.976	12.321 mg/kg	0.00123 %	✓	
		028-035-00-7	238-766-5	14721-18-7							
10		selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
		028-031-00-5	239-125-2	15060-62-5							
11		zinc { zinc chromate }				15.7 mg/kg	2.774	35.352 mg/kg	0.00354 %	✓	
		024-007-00-3	236-878-9	13530-65-9							
12		pH				6.8 pH		6.8 pH	6.8 pH		
				PH							
13		Sulphate (2:1) Water Soluble				27.46 mg/kg		22.289 mg/kg	0.00223 %	✓	
			n/a	n/a							
14		Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			231-722-6	7704-34-9							
15		Sulphide				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			231-722-6	7704-34-9							
16		hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
		006-006-00-X	200-821-6	74-90-8							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
19	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
20	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
21	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
22	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7							
23	phenanthrene				0.11 mg/kg		0.0893 mg/kg	0.00000893 %	✓	
		201-581-5	85-01-8							
24	anthracene				0.03 mg/kg		0.0244 mg/kg	0.00000244 %	✓	
		204-371-1	120-12-7							
25	fluoranthene				0.2 mg/kg		0.162 mg/kg	0.0000162 %	✓	
		205-912-4	206-44-0							
26	pyrene				0.19 mg/kg		0.154 mg/kg	0.0000154 %	✓	
		204-927-3	129-00-0							
27	benzo[a]anthracene				0.09 mg/kg		0.0731 mg/kg	0.00000731 %	✓	
	601-033-00-9	200-280-6	56-55-3							
28	chrysene				0.09 mg/kg		0.0731 mg/kg	0.00000731 %	✓	
	601-048-00-0	205-923-4	218-01-9							
29	benzo[b]fluoranthene				0.12 mg/kg		0.0974 mg/kg	0.00000974 %	✓	
	601-034-00-4	205-911-9	205-99-2							
30	benzo[k]fluoranthene				0.06 mg/kg		0.0487 mg/kg	0.00000487 %	✓	
	601-036-00-5	205-916-6	207-08-9							
31	benzo[a]pyrene; benzo[def]chrysene				0.11 mg/kg		0.0893 mg/kg	0.00000893 %	✓	
	601-032-00-3	200-028-5	50-32-8							
32	indeno[123-cd]pyrene				0.07 mg/kg		0.0568 mg/kg	0.00000568 %	✓	
		205-893-2	193-39-5							
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
34	benzo[ghi]perylene				0.07 mg/kg		0.0568 mg/kg	0.00000568 %	✓	
		205-883-8	191-24-2							
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
36	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
37	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
39	xylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
			TPH							
Total:								0.0152 %		



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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP6, 1.3m

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

Sample details

Sample name:	LoW Code:
TP6, 1.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
14.9%	
(dry weight correction)	

Hazard properties

None identified

Determinands

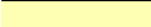
Moisture content: 14.9% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	 arsenic { arsenic trioxide }				2.7 mg/kg	1.32	3.103 mg/kg	0.00031 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	 boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	 cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
4	 chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				11.9 mg/kg	1.462	15.137 mg/kg	0.00151 %	✓	
		215-160-9	1308-38-9							
5	 chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	 copper { dicopper oxide; copper (I) oxide }				8.7 mg/kg	1.126	8.525 mg/kg	0.000853 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	 lead { lead chromate }			1	5.4 mg/kg	1.56	7.331 mg/kg	0.00047 %	✓	
	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 }				14.6 mg/kg	2.976	37.819 mg/kg	0.00378 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	 selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	 zinc { zinc chromate }				21.6 mg/kg	2.774	52.151 mg/kg	0.00522 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	 pH				7.2 pH		7.2 pH	7.2 pH		
			PH							
13	 Sulphate (2:1) Water Soluble				24.67 mg/kg		21.471 mg/kg	0.00215 %	✓	
		n/a	n/a							
14	 Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
15	 Sulphide				37.383 mg/kg		32.535 mg/kg	0.00325 %	✓	
		231-722-6	7704-34-9							
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
23	phenanthrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-581-5	85-01-8								
24	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
25	fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-912-4	206-44-0								
26	pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-927-3	129-00-0								
27	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<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]								
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %			<LOD
			TPH								
Total:									0.0215 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP8, 0.3m

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

Sample details

Sample name:	LoW Code:
TP8, 0.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
22%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	 arsenic { arsenic trioxide }				4.7 mg/kg	1.32	5.086 mg/kg	0.000509 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	 boron { diboron trioxide; boric oxide }				0.51 mg/kg	3.22	1.346 mg/kg	0.000135 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	 cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
4	 chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				8.3 mg/kg	1.462	9.943 mg/kg	0.000994 %	✓	
		215-160-9	1308-38-9							
5	 chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	 copper { dicopper oxide; copper (I) oxide }				32.2 mg/kg	1.126	29.716 mg/kg	0.00297 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	 lead { lead chromate }			1	56.6 mg/kg	1.56	72.365 mg/kg	0.00464 %	✓	
	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 }				7.3 mg/kg	2.976	17.809 mg/kg	0.00178 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	 selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	 zinc { zinc chromate }				18.4 mg/kg	2.774	41.84 mg/kg	0.00418 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	 pH				5.8 pH		5.8 pH	5.8 pH		
			PH							
13	 Sulphate (2:1) Water Soluble				52.81 mg/kg		43.287 mg/kg	0.00433 %	✓	
		n/a	n/a							
14	 Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
15	 Sulphide				11.215 mg/kg		9.193 mg/kg	0.000919 %	✓	
		231-722-6	7704-34-9							
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
19	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
20	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
21	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
22	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7							
23	phenanthrene				0.02 mg/kg		0.0164 mg/kg	0.00000164 %	✓	
		201-581-5	85-01-8							
24	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7							
25	fluoranthene				0.05 mg/kg		0.041 mg/kg	0.0000041 %	✓	
		205-912-4	206-44-0							
26	pyrene				0.05 mg/kg		0.041 mg/kg	0.0000041 %	✓	
		204-927-3	129-00-0							
27	benzo[a]anthracene				0.02 mg/kg		0.0164 mg/kg	0.00000164 %	✓	
	601-033-00-9	200-280-6	56-55-3							
28	chrysene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
29	benzo[b]fluoranthene				0.05 mg/kg		0.041 mg/kg	0.0000041 %	✓	
	601-034-00-4	205-911-9	205-99-2							
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
31	benzo[a]pyrene; benzo[def]chrysene				0.04 mg/kg		0.0328 mg/kg	0.00000328 %	✓	
	601-032-00-3	200-028-5	50-32-8							
32	indeno[123-cd]pyrene				0.03 mg/kg		0.0246 mg/kg	0.00000246 %	✓	
		205-893-2	193-39-5							
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
34	benzo[ghi]perylene				0.03 mg/kg		0.0246 mg/kg	0.00000246 %	✓	
		205-883-8	191-24-2							
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
36	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
37	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
39	xylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
			TPH							
Total:								0.0242 %		



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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP8, 0.6m

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

Sample details

Sample name:	LoW Code:
TP8, 0.6m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.6 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
21.2%	
(dry weight correction)	

Hazard properties

None identified

Determinands

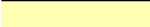
Moisture content: 21.2% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	 arsenic { arsenic trioxide }				1.1 mg/kg	1.32	1.198 mg/kg	0.00012 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	 boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	 cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
4	 chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				6.6 mg/kg	1.462	7.959 mg/kg	0.000796 %	✓	
		215-160-9	1308-38-9							
5	 chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	 copper { dicopper oxide; copper (I) oxide }				5.5 mg/kg	1.126	5.109 mg/kg	0.000511 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	 lead { lead chromate }			1	5.8 mg/kg	1.56	7.464 mg/kg	0.000479 %	✓	
	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 }				5.2 mg/kg	2.976	12.769 mg/kg	0.00128 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	 selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	 zinc { zinc chromate }				13.8 mg/kg	2.774	31.587 mg/kg	0.00316 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	 pH				5 pH		5 pH	5pH		
			PH							
13	 Sulphate (2:1) Water Soluble				53.15 mg/kg		43.853 mg/kg	0.00439 %	✓	
		n/a	n/a							
14	 Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
15	 Sulphide				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
17	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 }				<1 mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5	mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7								
23	phenanthrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		201-581-5	85-01-8								
24	anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7								
25	fluoranthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-912-4	206-44-0								
26	pyrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-927-3	129-00-0								
27	benzo[a]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<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]								
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19	mg/kg	<0.0019 %		<LOD
			TPH								
Total:									0.0157 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP9, 0.3m

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

Sample details

Sample name:	LoW Code:
TP9, 0.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
16%	
(dry weight correction)	

Hazard properties

None identified

Determinands

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

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }				20.2	mg/kg	1.32	22.992	mg/kg	0.0023 %	✓	
		033-003-00-0	215-481-4	1327-53-3									
2		boron { diboron trioxide; boric oxide }				<0.5	mg/kg	3.22	<1.61	mg/kg	<0.000161 %		<LOD
		005-008-00-8	215-125-8	1303-86-2									
3		cadmium { cadmium oxide }				0.3	mg/kg	1.142	0.295	mg/kg	0.0000295 %	✓	
		048-002-00-0	215-146-2	1306-19-0									
4		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				12.8	mg/kg	1.462	16.128	mg/kg	0.00161 %	✓	
			215-160-9	1308-38-9									
5		chromium in chromium(VI) compounds { chromium(VI) oxide }				<1	mg/kg	1.923	<1.923	mg/kg	<0.000192 %		<LOD
		024-001-00-0	215-607-8	1333-82-0									
6		copper { dicopper oxide; copper (I) oxide }				176	mg/kg	1.126	170.824	mg/kg	0.0171 %	✓	
		029-002-00-X	215-270-7	1317-39-1									
7		lead { lead chromate }			1	419	mg/kg	1.56	563.416	mg/kg	0.0361 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
8		mercury { mercury dichloride }				1.8	mg/kg	1.353	2.1	mg/kg	0.00021 %	✓	
		080-010-00-X	231-299-8	7487-94-7									
9		nickel { nickel chromate }				17.6	mg/kg	2.976	45.157	mg/kg	0.00452 %	✓	
		028-035-00-7	238-766-5	14721-18-7									
10		selenium { nickel selenate }				<1	mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
		028-031-00-5	239-125-2	15060-62-5									
11		zinc { zinc chromate }				127	mg/kg	2.774	303.721	mg/kg	0.0304 %	✓	
		024-007-00-3	236-878-9	13530-65-9									
12		pH				7.6	pH		7.6	pH	7.6 pH		
				PH									
13		Sulphate (2:1) Water Soluble				37.08	mg/kg		31.966	mg/kg	0.0032 %	✓	
			n/a	n/a									
14		Sulphur (free)				12.82	mg/kg		11.052	mg/kg	0.00111 %	✓	
			231-722-6	7704-34-9									
15		Sulphide				11.215	mg/kg		9.668	mg/kg	0.000967 %	✓	
			231-722-6	7704-34-9									
16		hydrogen cyanide; hydrocyanic acid				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
		006-006-00-X	200-821-6	74-90-8									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
19	naphthalene				0.04 mg/kg		0.0345 mg/kg	0.00000345 %	✓	
	601-052-00-2	202-049-5	91-20-3							
20	acenaphthylene				0.16 mg/kg		0.138 mg/kg	0.0000138 %	✓	
		205-917-1	208-96-8							
21	acenaphthene				0.04 mg/kg		0.0345 mg/kg	0.00000345 %	✓	
		201-469-6	83-32-9							
22	fluorene				0.05 mg/kg		0.0431 mg/kg	0.00000431 %	✓	
		201-695-5	86-73-7							
23	phenanthrene				1.15 mg/kg		0.991 mg/kg	0.0000991 %	✓	
		201-581-5	85-01-8							
24	anthracene				0.34 mg/kg		0.293 mg/kg	0.0000293 %	✓	
		204-371-1	120-12-7							
25	fluoranthene				3.25 mg/kg		2.802 mg/kg	0.00028 %	✓	
		205-912-4	206-44-0							
26	pyrene				3.21 mg/kg		2.767 mg/kg	0.000277 %	✓	
		204-927-3	129-00-0							
27	benzo[a]anthracene				1.64 mg/kg		1.414 mg/kg	0.000141 %	✓	
	601-033-00-9	200-280-6	56-55-3							
28	chrysene				1.69 mg/kg		1.457 mg/kg	0.000146 %	✓	
	601-048-00-0	205-923-4	218-01-9							
29	benzo[b]fluoranthene				2.12 mg/kg		1.828 mg/kg	0.000183 %	✓	
	601-034-00-4	205-911-9	205-99-2							
30	benzo[k]fluoranthene				0.96 mg/kg		0.828 mg/kg	0.0000828 %	✓	
	601-036-00-5	205-916-6	207-08-9							
31	benzo[a]pyrene; benzo[def]chrysene				2.01 mg/kg		1.733 mg/kg	0.000173 %	✓	
	601-032-00-3	200-028-5	50-32-8							
32	indeno[123-cd]pyrene				1.39 mg/kg		1.198 mg/kg	0.00012 %	✓	
		205-893-2	193-39-5							
33	dibenz[a,h]anthracene				0.32 mg/kg		0.276 mg/kg	0.0000276 %	✓	
	601-041-00-2	200-181-8	53-70-3							
34	benzo[ghi]perylene				1.32 mg/kg		1.138 mg/kg	0.000114 %	✓	
		205-883-8	191-24-2							
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
36	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
37	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
39	xylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
41	TPH (C6 to C40) petroleum group				75.504 mg/kg		65.089 mg/kg	0.00651 %	✓	
			TPH							
Total:								0.107 %		

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)
	Determinand defined by classifier (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
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 No free phase liquid observed during SI. Low concentrations unlikely to be flammable.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00651%)

Classification of sample: TP9, 1.3m

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

Sample details

Sample name:	LoW Code:
TP9, 1.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
16.3%	
(dry weight correction)	

Hazard properties

None identified

Determinands

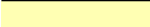
Moisture content: 16.3% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	 arsenic { arsenic trioxide }				6.3 mg/kg	1.32	7.152 mg/kg	0.000715 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	 boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	 cadmium { cadmium oxide }				1.6 mg/kg	1.142	1.572 mg/kg	0.000157 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	 chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				11 mg/kg	1.462	13.824 mg/kg	0.00138 %	✓	
		215-160-9	1308-38-9							
5	 chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	 copper { dicopper oxide; copper (I) oxide }				27.6 mg/kg	1.126	26.719 mg/kg	0.00267 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	 lead { lead chromate }			1	76.6 mg/kg	1.56	102.736 mg/kg	0.00659 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	 mercury { mercury dichloride }				0.3 mg/kg	1.353	0.349 mg/kg	0.0000349 %	✓	
	080-010-00-X	231-299-8	7487-94-7							
9	 nickel { nickel chromate }				16.3 mg/kg	2.976	41.714 mg/kg	0.00417 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	 selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	 zinc { zinc chromate }				163 mg/kg	2.774	388.81 mg/kg	0.0389 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	 pH				8.5 pH		8.5 pH	8.5 pH		
			PH							
13	 Sulphate (2:1) Water Soluble				30.33 mg/kg		26.079 mg/kg	0.00261 %	✓	
		n/a	n/a							
14	 Sulphur (free)				137.37 mg/kg		118.117 mg/kg	0.0118 %	✓	
		231-722-6	7704-34-9							
15	 Sulphide				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		201-695-5	86-73-7								
23	phenanthrene				0.12 mg/kg		0.103 mg/kg	0.0000103 %	✓		
		201-581-5	85-01-8								
24	anthracene				0.03 mg/kg		0.0258 mg/kg	0.00000258 %	✓		
		204-371-1	120-12-7								
25	fluoranthene				0.3 mg/kg		0.258 mg/kg	0.0000258 %	✓		
		205-912-4	206-44-0								
26	pyrene				0.31 mg/kg		0.267 mg/kg	0.0000267 %	✓		
		204-927-3	129-00-0								
27	benzo[a]anthracene				0.14 mg/kg		0.12 mg/kg	0.000012 %	✓		
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				0.12 mg/kg		0.103 mg/kg	0.0000103 %	✓		
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				0.23 mg/kg		0.198 mg/kg	0.0000198 %	✓		
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				0.19 mg/kg		0.163 mg/kg	0.0000163 %	✓		
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				0.12 mg/kg		0.103 mg/kg	0.0000103 %	✓		
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				0.12 mg/kg		0.103 mg/kg	0.0000103 %	✓		
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<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]								
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %			<LOD
			TPH								
Total:									0.073 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP10, 0.3m

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

Note that TP10, 0.3m sample has 0.002% w/w Asbestos quantified

Sample details

Sample name:	LoW Code:
TP10, 0.3m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.3 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
18%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 18% Dry Weight Moisture Correction applied (MC)

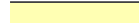
#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				4.5 mg/kg	1.32	5.035 mg/kg	0.000504 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				16.6 mg/kg	1.462	20.561 mg/kg	0.00206 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				17.2 mg/kg	1.126	16.411 mg/kg	0.00164 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	34.6 mg/kg	1.56	45.737 mg/kg	0.00293 %	✓	
	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 }				15.7 mg/kg	2.976	39.599 mg/kg	0.00396 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	zinc { zinc chromate }				50.5 mg/kg	2.774	118.724 mg/kg	0.0119 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	pH				7.9 pH		7.9 pH	7.9 pH		
			PH							
13	Sulphate (2:1) Water Soluble				50.02 mg/kg		42.39 mg/kg	0.00424 %	✓	
		n/a	n/a							
14	Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
15	Sulphide				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
18	phenol				<0.5 mg/kg		<0.5 mg/kg	<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2							
19	naphthalene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
20	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		205-917-1	208-96-8							
21	acenaphthene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-469-6	83-32-9							
22	fluorene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
		201-695-5	86-73-7							
23	phenanthrene				0.15 mg/kg		0.127 mg/kg	0.0000127 %	✓	
		201-581-5	85-01-8							
24	anthracene				0.04 mg/kg		0.0339 mg/kg	0.00000339 %	✓	
		204-371-1	120-12-7							
25	fluoranthene				0.22 mg/kg		0.186 mg/kg	0.0000186 %	✓	
		205-912-4	206-44-0							
26	pyrene				0.21 mg/kg		0.178 mg/kg	0.0000178 %	✓	
		204-927-3	129-00-0							
27	benzo[a]anthracene				0.09 mg/kg		0.0763 mg/kg	0.00000763 %	✓	
	601-033-00-9	200-280-6	56-55-3							
28	chrysene				0.09 mg/kg		0.0763 mg/kg	0.00000763 %	✓	
	601-048-00-0	205-923-4	218-01-9							
29	benzo[b]fluoranthene				0.14 mg/kg		0.119 mg/kg	0.0000119 %	✓	
	601-034-00-4	205-911-9	205-99-2							
30	benzo[k]fluoranthene				0.06 mg/kg		0.0508 mg/kg	0.00000508 %	✓	
	601-036-00-5	205-916-6	207-08-9							
31	benzo[a]pyrene; benzo[def]chrysene				0.12 mg/kg		0.102 mg/kg	0.0000102 %	✓	
	601-032-00-3	200-028-5	50-32-8							
32	indeno[123-cd]pyrene				0.09 mg/kg		0.0763 mg/kg	0.00000763 %	✓	
		205-893-2	193-39-5							
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
34	benzo[ghi]perylene				0.1 mg/kg		0.0847 mg/kg	0.00000847 %	✓	
		205-883-8	191-24-2							
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
36	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
37	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
39	xylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<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]							
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg	<0.0019 %		<LOD
			TPH							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
42	asbestos									
	650-013-00-6	-----	12001-28-4							
			132207-32-0							
			12172-73-5							
			77536-66-4							
			77536-68-6							
			77536-67-5							
Total:								0.0339 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP10, 1.8m

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

Sample details

Sample name:	LoW Code:
TP10, 1.8m	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.8 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
18.9%	
(dry weight correction)	

Hazard properties

None identified

Determinands

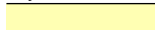
Moisture content: 18.9% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				3.9 mg/kg	1.32	4.331 mg/kg	0.000433 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				<0.5 mg/kg	3.22	<1.61 mg/kg	<0.000161 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				14.9 mg/kg	1.462	18.316 mg/kg	0.00183 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.923	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				10.8 mg/kg	1.126	10.227 mg/kg	0.00102 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	7.9 mg/kg	1.56	10.364 mg/kg	0.000664 %	✓	
	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 }				16.8 mg/kg	2.976	42.053 mg/kg	0.00421 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
11	zinc { zinc chromate }				28.9 mg/kg	2.774	67.429 mg/kg	0.00674 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	pH				6.5 pH		6.5 pH	6.5 pH		
			PH							
13	Sulphate (2:1) Water Soluble				52.57 mg/kg		44.214 mg/kg	0.00442 %	✓	
		n/a	n/a							
14	Sulphur (free)				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
15	Sulphide				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
		231-722-6	7704-34-9							
16	hydrogen cyanide; hydrocyanic acid				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	006-006-00-X	200-821-6	74-90-8							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
17	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 }				<1 mg/kg	1.884	<1.884 mg/kg		<0.000188 %		<LOD
	006-007-00-5										
18	phenol				<0.5 mg/kg		<0.5 mg/kg		<0.00005 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
19	naphthalene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
20	acenaphthylene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		205-917-1	208-96-8								
21	acenaphthene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		201-469-6	83-32-9								
22	fluorene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		201-695-5	86-73-7								
23	phenanthrene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		201-581-5	85-01-8								
24	anthracene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		204-371-1	120-12-7								
25	fluoranthene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		205-912-4	206-44-0								
26	pyrene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		204-927-3	129-00-0								
27	benzo[a]anthracene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
	601-033-00-9	200-280-6	56-55-3								
28	chrysene				<0.03 mg/kg		<0.03 mg/kg		<0.000003 %		<LOD
	601-048-00-0	205-923-4	218-01-9								
29	benzo[b]fluoranthene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
30	benzo[k]fluoranthene				<0.03 mg/kg		<0.03 mg/kg		<0.000003 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
31	benzo[a]pyrene; benzo[def]chrysene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
32	indeno[123-cd]pyrene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		205-893-2	193-39-5								
33	dibenz[a,h]anthracene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
34	benzo[ghi]perylene				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
		205-883-8	191-24-2								
35	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.02 mg/kg		<0.02 mg/kg		<0.000002 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
36	benzene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
37	toluene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
38	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
39	xylene				<0.03 mg/kg		<0.03 mg/kg		<0.000003 %		<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]								
40	o-xylene; [1] p-xylene; [2] m-xylene; [3] xylene [4]				<0.03 mg/kg		<0.03 mg/kg		<0.000003 %		<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]								
41	TPH (C6 to C40) petroleum group				<19 mg/kg		<19 mg/kg		<0.0019 %		<LOD
			TPH								
Total:									0.0242 %		

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)
	Determinand defined by classifier (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
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non GB MCL determinands

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

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

• **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 Acute 1; H400 , Aquatic Chronic 1; H410

• **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: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

• **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: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **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: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **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: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

• **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 Acute 1; H400 , Aquatic Chronic 1; H410

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

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

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

• **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

• **Sulphate (2:1) Water Soluble** (EC Number: n/a, CAS Number: n/a)

Description/Comments:
Data source: n/a
Data source date: 28 Oct 2020
Hazard Statements: None.

• **Sulphur (free)** (EC Number: 231-722-6, CAS Number: 7704-34-9)

Description/Comments:
Data source: n/a
Data source date: 28 Oct 2020
Hazard Statements: None.

• **Sulphide** (EC Number: 231-722-6, CAS Number: 7704-34-9)

Description/Comments:
Data source: n/a
Data source date: 28 Oct 2020
Hazard Statements: None.

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

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

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

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

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

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

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

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.

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass

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

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.

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight

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)

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.2.GB - Oct 2021**

HazWasteOnline Classification Engine Version: 2023.216.5702.10520 (04 Aug 2023)

HazWasteOnline Database: 2023.216.5702.10520 (04 Aug 2023)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

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 Waste 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

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK:

2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021



APPENDIX IV

Images

Site Photographs



Trial Pit TP01 – surficial arisings



TP01 arisings



TP01 arisings



TP01 trial pit profile



Area of TP01 compared to former tank location to rear of frame



APPENDIX V

Exploratory Hole Records



soilutions		Trial Pit Log							TP01			
									Page 1 of 1			
		Project Name: Millbrook Manor, Knowsley Project No: 1628										
		Location: Millbrook Manor, Knowsley Lane, Knowsley Co-ords: 343484.9 - 395985.2 Level:										
		Hole Type: TP Logged By: TW Dates: 17/05/2023 - 17/05/2023										
		Client: Brendan Cain Consultant: Soilutions Ltd										
Plant Used: Length: Width:												
Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m			
		Depth (m)	Type									
		0.3	ES		0.10			TOPSOIL: Grey to dark brown silty gravelly fine to medium SAND. Gravel is fine to medium sub-angular to sub-rounded of mixed lithology. Silt is very soft to soft grey. Frequent fibrous roots and vegetation (grass).	0.5			
		1.0	ES				0.50		MADE GROUND: Loose dark brown to greysilty gravelly fine to coarse SAND. Gravel is fine to coarse sub-angular to sub-rounded of mixed lithologies. Frequent cobbles of sandstone, tarmac red bricks and clinker.			
							1.20			Loose mottled yellow brown and black silty gravelly fine to coarse SAND. Gravel is fine to coarse sub-angular to sub-rounded of mixed lithologies. Frequent cobbles of mudstone and clinker.		
							2.20				Firm dark brown gravelly CLAY. Plastic (field description). Gravel is fine to coarse subangular and subrounded of mixed lithologies.	
3.00			Soft to firm reddish brown CLAY	2.5								
								3.0				
								3.5				
								4.0				
								4.5				

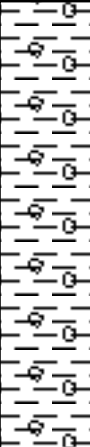
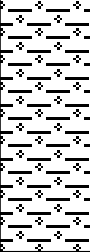
Project Name: Millbrook Manor, Knowsley Project No: 1628

Location: Millbrook Manor, Knowsley Lane, Knowsley Co-ords: 343473.5 - 395990.4 Level:

Hole Type: TP Logged By: TW Dates: 17/05/2023 - 17/05/2023

Client: Brendan Cain Consultant: Soilutions Ltd

Plant Used: Length: Width:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
		0.2	ES		0.05			ASPHALT	
					0.40			MADE GROUND: Loose light to dark brown gravelly fine to coarse SAND. Gravel is fine to coarse sub-angular to sub-rounded of mixed lithoogy. Occasional cobbles of red brick.	0.5
					0.80			Loose reddish brown silty fine to medium SAND	
					2.20			Soft to firm reddish brown gravelly CLAY. Plastic (field description). Gravel is fine to coarse sub-angular to sub-rounded of mudstone. Frequent cobbles of mudstone.	1.0 1.5 2.0
		2.8	ES		3.00			Firm to stiff reddish brown sandy CLAY. Plastic (field description).	2.5 3.0
									3.5 4.0 4.5

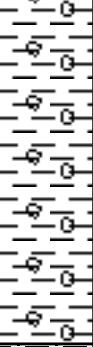
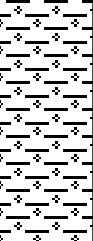
Project Name: Millbrook Manor, Knowsley Project No: 1628

Location: Millbrook Manor, Knowsley Lane, Knowsley Co-ords: 343473.9 - 396009.9 Level:

Hole Type: TP Logged By: TW Dates: 17/05/2023 - 17/05/2023

Client: Brendan Cain Consultant: Soilutions Ltd

Plant Used: Length: Width:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
					0.05			ASPHALT	
		0.3	ES					MADE GROUND: Loose light to dark brown gravelly fine to coarse SAND. Gravel is fine to coarse sub-angular to sub-rounded of mixed lithoogy. Occasional cobbles of red brick.	0.5
					0.60			Loose reddish brown silty fine to medium SAND	
		0.9	ES					Soft to firm reddish brown gravelly CLAY. Plastic (field description). Gravel is fine to coarse sub-angular to sub-rounded of mudstone. Frequent cobbles of mudstone.	1.0
					1.10				1.5
					2.20			Soft to firm reddish brown sandy CLAY. Plastic (field description).	2.0
					3.00				2.5
									3.0
									3.5
									4.0
									4.5

Project Name: Millbrook Manor, Knowsley Project No: 1628

Location: Millbrook Manor, Knowsley Lane, Knowsley Co-ords: 343483.9 - 39017.2 Level:

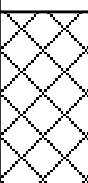
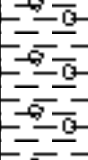
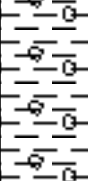
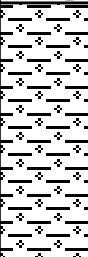
Hole Type: TP Logged By: TW Dates: 17/05/2023 - 17/05/2023

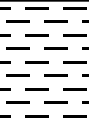
Client: Brendan Cain Consultant: Soilutions Ltd

Plant Used: Length: Width:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
		0.05						ASPHALT	
		0.2	ES		0.30			MADE GROUND: Loose light to dark brown gravelly fine to coarse SAND. Gravel is fine to coarse sub-angular to sub-rounded of mixed lithoogy. Occasional cobbles of red brick.	0.5
		0.8	ES		1.10			Loose reddish brown silty fine to medium SAND	1.0
					2.20			Soft to firm reddish brown gravelly CLAY. Plastic (field description). Gravel is fine to coarse sub-angular to sub-rounded of mudstone. Frequent cobbles of mudstone.	1.5
					3.00			Soft to firm reddish brown sandy CLAY. Plastic (field description).	2.5
									3.0
									3.5
									4.0
									4.5



soilutions		Trial Pit Log							TP05
									Page 1 of 1
		Project Name: Millbrook Manor, Knowsley Project No: 1628							
		Location: Millbrook Manor, Knowsley Lane, Knowsley Co-ords: 343479.5 - 396002.1 Level:							
		Hole Type: TP Logged By: TW Dates: 17/05/2023 - 17/05/2023							
		Client: Brendan Cain Consultant: Soilutions Ltd							
Plant Used: Length: Width:									
Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
		0.3	ES		0.05			ASPHALT	0.5
					0.60			MADE GROUND: Loose light to dark brown gravelly fine to coarse SAND. Gravel is fine to coarse sub-angular to sub-rounded of mixed lithologies. Frequent cobbles of red bricks	
		1.10			Reddish brown silty fine to medium SAND		1.0		
		2.20			Soft to firm reddish brown gravelly CLAY. Plastic (field description). Gravel is fine to coarse sub-angular to sub-rounded of mudstone. Frequent cobbles of mudstone.		1.5		
		3.00			Soft to firm reddish brown sandy CLAY. Plastic (field description).		2.0		
		1.8	ES						2.5
									3.0
									3.5
									4.0
									4.5

		Trial Pit Log							TP06
									Page 1 of 1
		Project Name: Millbrook Manor Project No: 1628							
		Location: Millbrook Manor, Knowsley Co-ords: - Level:							
		Hole Type: TP Logged By: PP Dates: 11/07/2023 - 11/07/2023							
		Client: Bredan Cain Consultant: Soilutions Ltd							
		Plant Used: Length: Width:							
Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
		0.3	ES		0.50			MADE GROUND: Dark brown, silty slightly gravelly SAND. Gravel is fine angular of red brick and sandstone	0.5
		1.3	ES		1.60			Dark to light brown silty slightly gravelly fine to medium SAND. Occasional clay pockets. Gravel is fine angular of mudstone. Water present between 1.5m and 1.6m perched on surface of clays.	1.0
					2.00			Soft to firm brown CLAY. Plastic (filed description)	1.5
									2.5
									3.0
									3.5
									4.0
									4.5

		Trial Pit Log							TP07
									Page 1 of 1
		Project Name: Millbrook Manor Project No: 1628							
		Location: Millbrook Manor, Knowsley Co-ords: - Level:							
		Hole Type: TP Logged By: PP Dates: 11/07/2023 - 11/07/2023							
		Client: Bredan Cain Consultant: Soilutions Ltd							
Plant Used: Length: Width:									
Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth
		Depth (m)	Type						m
								No Data	
									0.5
									1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5

soilutions

TP08

Page 1 of 1

Trial Pit Log

Project Name: Millbrook Manor Project No: 1628

Location: Millbrook Manor, Knowsley Co-ords: - Level:

Hole Type: TP Logged By: PP Dates: 11/07/2023 - 11/07/2023

Client: Bredan Cain Consultant: Soilutions Ltd

Plant Used: Length: Width:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
					0.05			TOPSOIL. Dark brown, grass covered sandy SILT TOPSOIL. With frequent rootlets	0.5
		0.3	ES		0.40			MADE GROUND. Dark brown silty fine to medium SAND.	
		0.6	ES		0.70			Dark to light brown fine to coarse silty slightly gravelly SAND. Occasional clay pockets. Gravel is fine angular of mudstone	
			2.00				Soft to stiff brwn slightly gravelly CLAY. Plastic (field description). Gravel is fine to coarse angular of mudstone. Occasional cobbles of mudstone.		
									1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5

Project Name: Millbrook Manor Project No: 1628

Location: Millbrook Manor, Knowsley Co-ords: - Level:

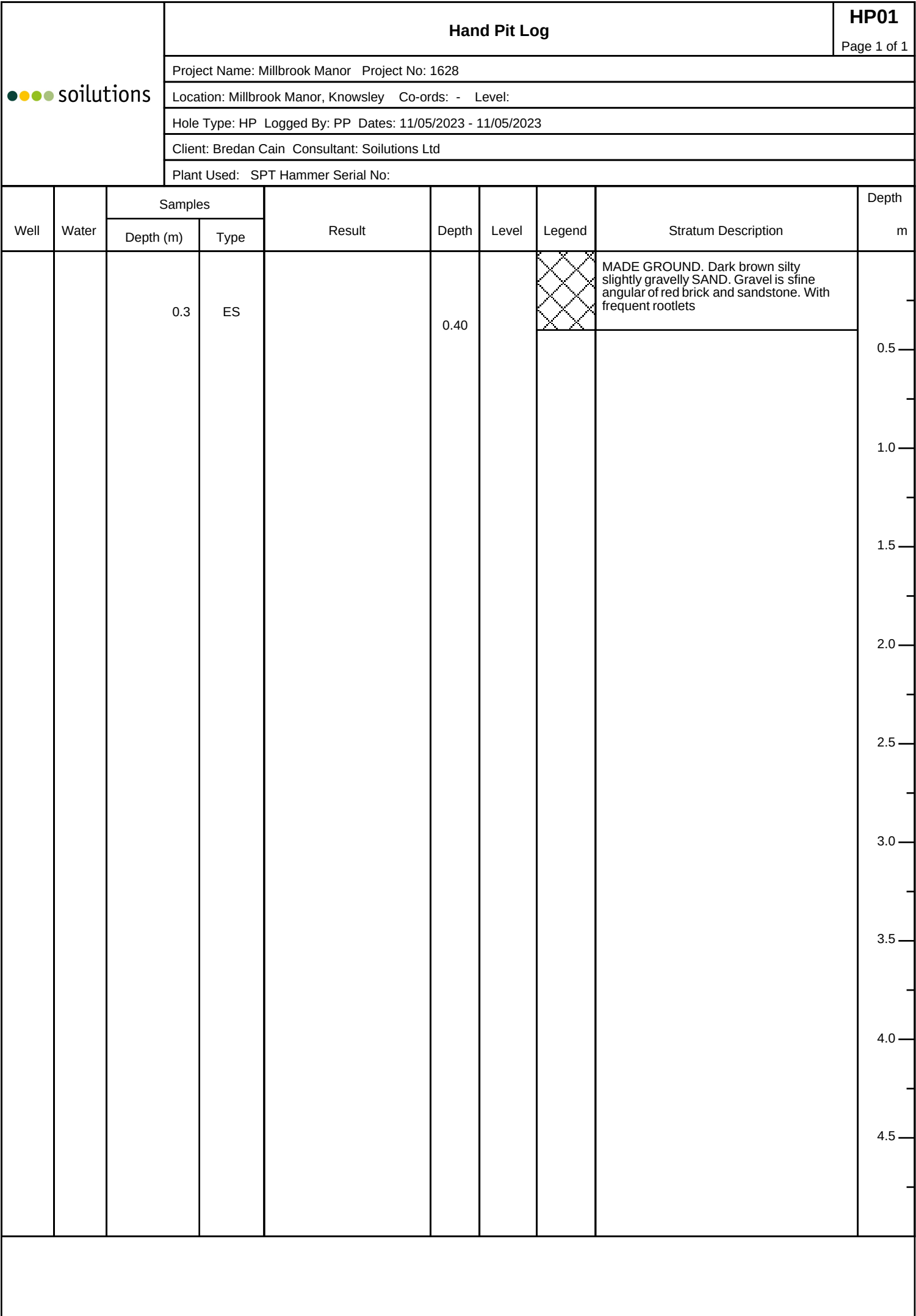
Hole Type: TP Logged By: PP Dates: 11/07/2023 - 11/07/2023

Client: Bredan Cain Consultant: Soilutions Ltd

Plant Used: Length: Width:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
		0.3	ES		0.05			TOPSOIL. Dark brown, grass covered sandy SILT TOPSOIL. With frequent rootlets	
					0.60			MADE GROUND. Dark brown silty slightly gravelly medium SAND. Gravel is fine angular of red brick and sandstone	0.5
					1.20			dark to light brown slightly silty slightly gravelly fine to coarse SAND. Occasional clay pockets. Gravel is fine to coarse angular to subrounded of sandstone and mudstone	1.0
		1.3	ES		1.70			Very gravelly. Gravel is fine angular to sub-rounded of sandstone and mudstone. Wtaer present between 1.6m and 1.7m perched on surface of clays	1.5
					2.00			Stiff brown slightly gravelly CLAY. Plastic (field description). Gravel is fine rounded of mudstone	2.0
									2.5
									3.0
									3.5
									4.0
									4.5

soilutions		Trial Pit Log							TP10	
									Page 1 of 1	
		Project Name: Millbrook Manor Project No: 1628								
		Location: Millbrook Manor, Knowsley Co-ords: - Level:								
		Hole Type: TP Logged By: PP Dates: 11/07/2023 - 11/07/2023								
		Client: Bredan Cain Consultant: Soilutions Ltd								
		Plant Used: Length: Width:								
Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m	
		Depth (m)	Type							
		0.3	ES		0.05			TOPSOIL. Dark brown grass covered sandy SILT. With frequent rootlets	0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5	
					0.40			MADE GROUND. Dark brown silty slightly gravelly medium SAND. Gravel is fine angular of red brick and sandstone.		
		1.8	ES		1.80			Dark to light brown fine to coarsse silty slightly gravelly SAND. Gravel is fine angular of mudstone. Occaisional clay pockets.		
					2.00					Soft to firm brown CLAY. Plastic (filed description)



soilutions

Hand Pit Log

HP03

Page 1 of 1

Project Name: Millbrook Manor Project No: 1628

Location: Millbrook Manor, Knowsley Co-ords: - Level:

Hole Type: HP Logged By: PP Dates: 11/05/2023 - 11/05/2023

Client: Bredan Cain Consultant: Soilutions Ltd

Plant Used: SPT Hammer Serial No:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth
		Depth (m)	Type						m
		0.4	ES		0.50			MADE GROUND. Dark broen silty slightly gravelly SAND. Gravel is fine angular of red brick and sandstone	0.5
									1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5

soilutions

Hand Pit Log

HP04

Page 1 of 1

Project Name: Millbrook Manor Project No: 1628

Location: Millbrook Manor, Knowsley Co-ords: - Level:

Hole Type: HP Logged By: PP Dates: 11/05/2023 - 11/05/2023

Client: Bredan Cain Consultant: Soilutions Ltd

Plant Used: SPT Hammer Serial No:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth m
		Depth (m)	Type						
		0.5	ES		0.50			MADE GROUND. Dark brown silty slightly gravelly SAND. Gravel is sfine angular of red brick and sandstone. With frequent rootlets	0.5
									1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5

soilutions

Hand Pit Log

HP05

Page 1 of 1

Project Name: Millbrook Manor Project No: 1628

Location: Millbrook Manor, Knowsley Co-ords: - Level:

Hole Type: HP Logged By: PP Dates: 11/05/2023 - 11/05/2023

Client: Bredan Cain Consultant: Soilutions Ltd

Plant Used: SPT Hammer Serial No:

Well	Water	Samples		Result	Depth	Level	Legend	Stratum Description	Depth
		Depth (m)	Type						m
		0.5	ES		0.60			MADE GROUND. Dark brown silty slightly gravelly SAND. Gravel is sfine angular of red brick and sandstone. With frequent rootlets	0.5
									1.0
									1.5
									2.0
									2.5
									3.0
									3.5
									4.0
									4.5

1



TrialPit No
TP2-02
Sheet 1 of 1

Date
24/08/2023

Logged
P.Phillips

Remarks: Stopped at 0.5 in CLAY
Stability:

soilutions				Trial Pit Log			TrialPit No TP2-03 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.01			TOPSOIL- Brown, damp, grass covered sandy silty TOPSOIL with frequent rootlets.		
				0.40			MADE GROUND- Dark brown, slightly gravelly SAND. Gravels are small, angular redbrick and sandstone.		
				0.50			SAND- Brown, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone. End of Pit at 0.50m		
									1
									2
									3
									4
									5
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-04 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m):		Scale 1:25	
Client: Brendan Cain						Depth 0.50		Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.10			TOPSOIL- Brown, damp, grass covered sandy silty TOPSOIL with frequent rootlets.		
				MADE GROUND- Grey, slightly gravelly SAND. Gravels are small, angular redbrick and sandstone.					
				0.40			SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone.		
				0.50			End of Pit at 0.50m		
									1
									2
									3
									4
									5
Remarks: Stopped at 0.5 in SAND									
Stability:									



TrialPit No
TP2-05
Sheet 1 of 1

Date
24/08/2023

Logged
P.Phillips

Remarks: Stopped at 0.5 in MADE GROUND
Stability:



TrialPit No
TP2-06
Sheet 1 of 1

Date
24/08/2023

Scale
1:25

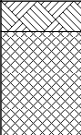
Logged
P.Phillips

Remarks: Stopped at 0.5 in MADE GROUND
Stability:

soilutions				Trial Pit Log			TrialPit No TP2-07 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m):		Scale 1:25	
Client: Brendan Cain						Depth 0.50		Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.30			MADE GROUND- Grey, sandy, GRAVEL of concrete, red brick mudstone and tarmac.		
				0.50			SAND- Brown, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone.		
						End of Pit at 0.50m			
							1		
							2		
							3		
							4		
							5		
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-08 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.10			TOPSOIL- Brown, damp, grass covered sandy silty TOPSOIL with frequent rootlets.		
				0.40			MADE GROUND- Dark brown, slightly gravelly SAND. Gravels are small, angular redbrick and sandstone.		
				0.50			SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone.		
							End of Pit at 0.50m		
							1		
							2		
							3		
							4		
							5		
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-09 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
				0.10			TOPSOIL- Brown, damp, grass covered sandy silty TOPSOIL with frequent rootlets.		
				0.40			MADE GROUND- Dark brown, slightly gravelly SAND. Gravels are small, angular redbrick and sandstone.		
				0.50			SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone.		
							End of Pit at 0.50m		
							1		
							2		
							3		
							4		
							5		
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-10 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.40	PID	PID=0	0.10			TOPSOIL- Brown, damp, grass covered sandy silty TOPSOIL with frequent rootlets. MADE GROUND- Grey, slightly gravelly SAND. Gravels are small, angular redbrick and sandstone.		
				0.45 0.50					
							1		
							2		
							3		
							4		
							5		
Remarks: Stopped at 0.5 in SAND									
Stability:									



TrialPit No
TP2-11
Sheet 1 of 1

Date
24/08/2023

Logged
P.Phillips

Stability:

soilutions				Trial Pit Log			TrialPit No TP2-12 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	PID	PID=0	0.30 0.50			MADE GROUND- Grey sandy gravel mixed from concrete, red brick, mudstone and tarmac.		
							SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone.		
							End of Pit at 0.50m		
									1
									2
									3
									4
									5
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-13 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	PID	PID=0	0.30 0.50			MADE GROUND- Grey, sandy, GRAVEL of concrete, red brick and mudstone.		
							SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets.		
						End of Pit at 0.50m			
							1		
							2		
							3		
							4		
							5		
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-14 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.30	PID	PID=0	0.20			TOPSOIL- Brown, damp, grass covered sandy silty TOPSOIL with frequent rootlets.		
				0.40			MADE GROUND- Dark brown, slightly gravelly SAND. Gravels are small, angular redbrick and sandstone.		
				0.50			SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone.		
						End of Pit at 0.50m			
								1	
								2	
								3	
								4	
								5	
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-15 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m):		Scale 1:25	
Client: Brendan Cain						Depth 0.50		Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	PID	PID=0	0.30 0.50			MADE GROUND- Grey, sandy, GRAVEL of concrete, red brick, mudstone and tarmac.		
							CLAY - Firm to stiff, plastic, brown, sandy CLAY.		
							End of Pit at 0.50m		
									1
									2
									3
									4
									5
Remarks: Stopped at 0.5 in CLAY									
Stability:									



TrialPit No
TP2-16
Sheet 1 of 1

Date
24/08/2023

Logged
P.Phillips

Stability:

				Trial Pit Log			TrialPit No TP2-17 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.30	PID	PID=0	0.30			MADE GROUND- Grey, sandy, GRAVEL of concrete, red brick, mudstone and tarmac.		
				0.50			SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets.		
							End of Pit at 0.50m		
							1		
							2		
							3		
							4		
							5		
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-18 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	PID	PID=0	0.05			TARMAC. MADE GROUND - Grey, sand and gravel fill of concrete, red brick and mudstone.		
				0.30			SAND - Grey, fine to coarse, slightly gravelly silty SAND with occasional clay pockets. Gravels of mudstone.		
				0.50			End of Pit at 0.50m		
1 2 3 4 5									
Remarks: Stopped at 0.5 in SAND									
Stability:									

soilutions				Trial Pit Log			TrialPit No TP2-19 Sheet 1 of 1		
Project Name: Millbrook Manor				Project No. 1398		Co-ords: - Level:		Date 24/08/2023	
Location: Knowsley Lane, Knowsley, L34 0JN						Dimensions (m): Depth 0.50		Scale 1:25	
Client: Brendan Cain								Logged P.Phillips	
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20	PID	PID=0	0.30 0.50			MADE GROUND- Grey, sandy, GRAVEL of concrete, red brick and mudstone.		
							SAND- Grey, fine to coarse, slightly gravelly, silty SAND with occasional clay pockets. Gravels of mudstone.		
						End of Pit at 0.50m			
							1		
							2		
							3		
							4		
							5		
Remarks: Stopped at 0.5 in SAND									
Stability:									



Report Limitations

The comments given in the report and the opinion expressed herein are based on the information sourced by the desk study and other published information. Third party information was therefore used in the preparation of this report and Soilutions Limited cannot guarantee the accuracy or completeness of this information.

The investigation report and the opinion expressed therein are also based on the ground conditions encountered during the site work and on the results of tests made in the field and laboratory. However, there may be special conditions prevailing at the site which have not been disclosed by the investigations and which have not been taken into account in this report.

During site clearance works where previously unidentified contaminated materials are encountered, this must be noted by the contractor and reported to Soilutions in order to determine whether the risk assessment and remediation strategies for the site require amendment.

The conclusions in this report represent our professional opinion, these conclusions have been drawn up with the greatest care to ensure that all apparent issues were addressed properly in accordance with applicable UK guidance and accepted practice.

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