



FAO: Josh Paterson
Torpoint Ltd

Date: 5th May 2022

Site Investigation S220220

FURTHER SITE INVESTIGATION AT PLANE STREET, HUDDERSFIELD

Dear Josh,

The site investigation described in this letter report was carried out by Solmek, to the instructions of Mandale, on a plot of land at Plane Street, Huddersfield (Figure 1). It is proposed to construct new residential houses within a currently disused plot of land.

Sources of information, including previous work undertaken at the site, are detailed below:

- *Solmek Phase 1 Desk Study Report (S190939, November 2019)*
- *Solmek Phase 2 Site Investigation Report (S190939/SI, April 2020)*
- *Solmek Ground Gas Risk Assessment Report (S190939, September 2020)*

Reference should be made to the above reports for details of the site's history and underlying geological conditions.

Further environmental and geotechnical investigation was requested. The fieldwork and testing were generally carried out according to the recommendations of BS5930: 2015 "Code of Practice for Ground Investigations" and all stratum descriptions are as recommended in that publication. The information provided in this report is based on the investigation fieldwork and is subject to the comments and approval of the various regulatory authorities.

There may be other conditions prevailing on the site which have not been disclosed by this investigation and which have not been taken into account by this report. Solmek reserve the right to alter conclusions and recommendations should further information be available or provided. Any schematic representation or opinion of the possible configuration of ground conditions between exploratory holes is conjectural and given for guidance only and confirmation of intermediate ground conditions should be considered if deemed necessary.

Fieldwork

The additional fieldwork was carried out by Solmek on 25th February and 28th-29th April 2022. The extent of the investigation was:

- 3no rotary openhole boreholes (BH01 to BH03 inclusive) to a maximum depth of 40.00 below ground level (bgl).
 - The boreholes were drilled to investigate the presence of shallow historic mine workings.
- 6no machine excavated trial pits (TPA-TPF) to a maximum depth of 3.00mbgl.
 - The trial pit locations were spaced to complement the existing BH/TP locations and to provide further samples for chemical analysis.
- Insitu testing in the exploratory positions as Hand Shear Vanes.
- Retrieval of samples for environmental testing.

The trial pits and boreholes were respectively backfilled with clean arisings and bentonite/installations upon completion. Selected plates of the trial pits are presented in Appendix A.

Descriptions of the strata encountered in the boreholes and trial pits together with details of sampling and groundwater are presented in Appendix B of this report. A plan showing the location of the boreholes and trial pits (including historic positions) can be found in Appendix A (Figure 2).

GROUND CONDITIONS

Made Ground

Made ground was variable across the site and was encountered to depths of between 0.30mbgl in TPA & TPF and 1.20mbgl in TPE, although made ground was not fully penetrated within TPC which terminated at 0.60mbgl. The made ground consisted of a variable surface covering of concrete, topsoil or granular/cohesive made ground, with the gravel component variably comprising brick, ash, sandstone and concrete.

Within TPC, relic foundations were encountered at 0.60mbgl, resulting in the termination of the pit.

Natural Deposits

Proven to underlie the made ground deposits across the site, natural ground generally comprised firm to stiff consistency slightly sandy locally slightly gravelly medium to high strength clay, which was encountered to a maximum depth of 3.00mbgl in TPB.

Underlying this, rockhead of grey weathered sandstone was encountered, between 2.80 and 3.20mbgl.

Solid Geology

Rockhead, generally comprising mudstone, was encountered across the site between 1.10mbgl in TPF and 2.30mbgl in TPD, although TPB extended to 3.00mbgl with no rockhead encountered.

The Preliminary Investigation (Solmek Report Ref. S190939) indicated that the site was underlain by workings within the Soft Bed coal seam at a depth of around 35m bgl. Based on the depth to these known workings and the geological plans of the area the shallower Hard Bed and Middle bed seams may underlie the site at depths of around 10m and 20m, respectively. It is not recorded that these seams have been worked however, if worked may pose a risk to the development. As such three rotary boreholes were drilled on the site.

Within the three rotary boreholes (BH01-BH03) which were drilled to a maximum depth of 40.00mbgl, the encountered geology generally comprised mudstone, locally interbedded with sandstone.

With respect to coal seams and workings, Table 1 below summarises the coal seams that were encountered within the three rotary boreholes.

TABLE 1: COAL SEAM SUMMARY

Location	Depth to rockhead mbgl	Void/coal seam depth mbgl	Thickness of void/coal seam m	Flush Returns	Comments
BH01	1.60	-	-	100%	No coal or voids encountered.
BH02	1.70	12.20	0.90	0%	Void
BH03	2.30	14.10	0.70	100%	Coal seam

It is considered possible that the coal seam/void encountered in BH2 and 3 represents the Hard bead seam which appears to have been worked.

The findings of this mining investigation are discussed further below.

Groundwater

Groundwater was encountered within TPA at 1.20mbgl and TPE at 1.60mbgl.

It should be noted the rapid rate of advancement of the exploratory holes may mask minor seepages and it should be borne in mind that water levels fluctuate with a number of influences including season, rainfall,

dewatering and pumping activities. Therefore, water levels significantly higher than those found during this investigation may be encountered.

CONTAMINATION TESTING RESULTS

The proposed development of the site is to involve the construction of residential homes. The chemical samples were generally retrieved in line with BS ISO 18400-105:2017 "Soil Quality. Sampling". The chemical results are appended to this report.

Site Characterisation

Within the Solmek Phase 1 Desk Study, a preliminary conceptual model was formed based on the information obtained. The initial risk was based on the site history which recorded to have a school located on-site until 2019.

An overall low to moderate risk was provided for various receptors:

- Human Health – Moderate/Low
- Controlled Water – Low
- Current Site Users (on-site workers/visitors) – Moderate/Low
- Vegetation – Moderate/Low
- Construction Materials – Moderate/Low

The 2019 Phase 2 Site Investigation report tested five samples from across the site, with exceedances recorded within three of the five samples, as summarised below:

- TP2 0.40mbgl recorded elevated arsenic, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene and total PAH
- TP4 0.20mbgl recorded elevated arsenic, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene, naphthalene and total PAH
- BH3 0.60mbgl recorded elevated aromatic C16-C21, aromatic C21-35, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, fluoranthene, naphthalene and total PAH

Contamination Testing and Rationale

To provide further information upon the possibility of ground contamination, two samples of made ground were selected for shallow contamination testing. Given the commercial end use, two samples are considered appropriate for testing. The samples selected are detailed below:

- TPA – 0.20-0.30m (Made ground – cohesive)
- TPB – 0.20-0.30m (Made ground – topsoil)
- TPC – 0.20-0.30m (Made ground – granular)
- TPD – 0.20-0.30m (Made ground – cohesive)
- TPE – 0.20-0.30m (Made ground – cohesive)
- TPF – 0.20-0.30m (Made ground – granular)

The samples selected are considered to provide coverage of the made ground strata from across the site that would be most likely to be exposed during future site works. The samples were tested for the following contaminant suites:

- 6no Metals, semi-metals, non-metals, inorganic determinants
- 6no Asbestos identification screenings
- 6no Speciated Polyaromatic Hydrocarbons (PAHs)
- 6no Total Petroleum Hydrocarbon Criteria Working Group fractions (TPHCWG)

Test Results

Based on the proposed development at the site, the test results have been compared to a series of Land Quality Management (LQM) Suitable for Use Levels (S4UL) based on a Residential land use. These are the most up to date thresholds published in December 2014.

The value for lead has been compared with the Category 4 Screening Level (March 2014) developed by Contaminated Land: Applications In Real Environments (CL:AIRE).

The test results are appended to this report, and a summary is provided below in Tables 2 and 3.

TABLE 2: SUMMARY OF INORGANIC CONTAMINATION TESTING RESULTS

Determinand	Units	Number of Samples above Level of Detection	Minimum Recorded Level	Maximum Recorded Level	Residential with HGP Threshold Value	Number of Results Exceeding Threshold Value
Metals						
Cadmium	mg/kg	6	0.13	0.32	11	0
Chromium	mg/kg	6	10	21	910	0
Copper	mg/kg	6	15	93	2400	0
Lead	mg/kg	6	28	120	200*	0
Mercury	mg/kg	6	0.15	0.85	40	0
Nickel	mg/kg	6	11	44	180	0
Zinc	mg/kg	6	69	220	3700	0
Semi metals and non metals						
Arsenic	mg/kg	6	4.6	51	37**	2
Boron	mg/kg	5	<0.4	0.98	290	0
Selenium	mg/kg	4	<0.2	0.36	250	0
Inorganic chemicals						
Cyanide (Total)	mg/kg	1	<0.5	1	1.49**	0
Sulphate (2:1 Water Soluble)	mg/l	6	20	360	2000^	0
Other						
pH	pH	-	8.0	8.9	5.5^	0
* Category 4 Screening Levels, March 2014 ** CLEA Software Version 1.06 (pH7 and 1%SOM) ^ EA Threshold Values HGP Home Grown Produce						

Metals, Semi Metals and Non Metals

From the six samples tested, exceedances were noted within two samples, as summarised below:

- TPC – 0.20-0.30m (Made ground – granular) recorded elevated arsenic
- TPF – 0.20-0.30m (Made ground – granular) recorded elevated arsenic

Inorganic Chemicals

Soluble sulphates (potentially aggressive to foundation concrete) were recorded between 20 and 360mg/l. Neither of the samples were elevated above levels affecting human health or the BRE Special Digest 1 500mg/l limit for the sulphate classification of concrete.

The results of the pH testing were between 8.0 and 8.9, indicating alkaline conditions.

Organic Chemicals

The organic thresholds vary depending on the levels of soil organic matter (SOM).

The average SOM recorded across the site was 14.62% therefore a SOM of 6% has been used to determine the S4UL thresholds. Table 3, below, summarises the results.

TABLE 3: SUMMARY OF ORGANIC CONTAMINATION TESTING RESULTS

Determinand	Units	Number of Samples above Level of Detection	Minimum Recorded Level	Maximum Recorded Level	Residential with HGP Threshold Value at 6% SOM	Number of Results Exceeding Threshold Value
TPH Aliphatic Fractions						
Aliphatic (C5-C6)	mg/kg	1	<1	25	160	0
Aliphatic (C6-C8)	mg/kg	0	<1	-	530	0
Aliphatic (C8-C10)	mg/kg	0	<1	-	150	0
Aliphatic (C10-C12)	mg/kg	4	<1	24	760	0
Aliphatic (C12-C16)	mg/kg	4	<1	110	4300	0
Aliphatic (C16-C21)	mg/kg	3	<1	190	110000	0
Aliphatic (C21-C35)	mg/kg	5	<1	1100	110000	0
Aliphatic (C35-C44)	mg/kg	2	<1	390	110000	0
TPH Aromatic Fractions						
Aromatic (C5-C7)	mg/kg	0	<1	-	300	0
Aromatic (C7-C8)	mg/kg	1	<1	9.1	660	0
Aromatic (C8-C10)	mg/kg	1	<1	61	190	0
Aromatic (C10-C12)	mg/kg	2	<1	240	380	0
Aromatic (C12-C16)	mg/kg	5	<1	2300	660	1
Aromatic (C16-C21)	mg/kg	6	95	12000	930	1
Aromatic (C21-C35)	mg/kg	6	250	38000	1700	4
Aromatic (C35-C44)	mg/kg	4	<1	4500	1700	1
Speciated PAH						
Naphthalene	mg/kg	6	2.5	9.5	13	0
Acenaphthylene	mg/kg	6	0.82	56	920	0
Acenaphthene	mg/kg	6	0.66	4.5	1100	0
Fluorene	mg/kg	6	1.3	25	860	0
Phenanthrene	mg/kg	6	13	280	440	0
Anthracene	mg/kg	6	3.4	95	11000	0
Fluoranthene	mg/kg	6	16	500	890	0
Pyrene	mg/kg	6	15	430	2000	0
Benzo[a]anthracene	mg/kg	6	7.6	250	13	3
Chrysene	mg/kg	6	8.9	180	27	3
Benzo[b]fluoranthene	mg/kg	6	8.4	240	3.7	6
Benzo[k]fluoranthene	mg/kg	6	2.9	100	100	0
Benzo[a]pyrene	mg/kg	6	6.6	200	3	6
Benzo[g,h,i]perylene	mg/kg	6	5.3	75	41	2
Dibenz(a,h)Anthracene	mg/kg	6	1.8	33	0.3	6
Indeno(1,2,3-c,d)Pyrene	mg/kg	6	4.6	98	350	0
Total PAH	mg/kg	6	120	2600	50*	6
Total Phenol	mg/kg	1	<0.3	0.42	1100	0
* EA Threshold Values						

From the six samples tested, exceedances were noted within all six samples, as summarised below:

- TPA – 0.20-0.30m (Made ground – cohesive) recorded elevated aromatic C21-C35, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPB – 0.20-0.30m (Made ground – topsoil) recorded elevated benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPC – 0.20-0.30m (Made ground – granular) recorded elevated benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene and total PAH
- TPD – 0.20-0.30m (Made ground – cohesive) recorded elevated aromatic C21-C35, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPE – 0.20-0.30m (Made ground – cohesive) recorded elevated aromatic C21-C35, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPF – 0.20-0.30m (Made ground – granular) recorded elevated aromatic C12-C16, C16-21, C21-C35, C35-C44, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, benzo(a)pyrene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene and total PAH

Asbestos

From the six samples subject to asbestos screening, no asbestos fibres were recorded.

Environmental Protection Act 1990: Part 2A Revised Statutory Guidance (April 2012)

This revised document explains how the Local Authority should decide if land, based on a legal interpretation, is contaminated. The document replaces the previous guidance given in Annex 3 of DEFRA Circular 01/2006, issued in accordance with section 78YA of the 1990 Environmental Protection Act.

The main objectives of the Part 2A regime are to "identify and remove unacceptable risks to human health and the environment" and to "seek to ensure that contaminated land is made suitable for its current use". Part 2A uses a risk based approach to defining contaminated land whereby the "risk" is interpreted as "the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land" and by "the scale and seriousness of such harm or pollution if it did occur".

For a relevant risk to exist a contaminant, pathway and receptor linkage must be present before the land can be considered to be contaminated. The document explains that "for a risk to exist there must be contaminants present in, on or under the land in a form and quantity that poses a hazard, and one or more pathways by which they might significantly harm people, the environment, or property; or significantly pollute controlled waters."

A conceptual model is used to develop and communicate the risks associated with a particular site.

To determine if land is contaminated the local authority use various categories from 1 to 4. Categories 1 and 2 include "land which is capable of being determined as contaminated land on grounds of significant possibility of significant harm to human health." Categories 3 and 4 "encompass land which is not capable of being determined on such grounds".

See the Appendices for additional notes on contamination guidelines.

CONTAMINATION ANALYSIS

A full contamination assessment was provided in the original Phase 2 Site Investigation, which should be read in conjunction with this report.

Users of the Site Once Development is Complete

The users of the site, particularly construction workers, are likely to be exposed to contaminants present in the soils beneath the site during redevelopment work. **Potential** exposure pathways include dermal absorption after contact with contaminated ground, inhalation of soil or dust, inhalation of volatised compounds, and inadvertent soil ingestion. Moreover, a risk to ground/surface water receptors exists through leaching of contaminants.

To establish if the levels of contaminants present on site may pose a risk to the health of the future users of the site the results of the contamination testing have been compared to a series of LQM S4UL thresholds based on residential with home grown produce end use (see Tables 1 and 2).

Across the two phases of investigation, exceedances were noted within nine of the eleven samples tested, as summarised below:

- TP2 0.40mbgl recorded elevated arsenic, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene and total PAH
- TP4 0.20mbgl recorded elevated arsenic, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene, naphthalene and total PAH
- BH3 0.60mbgl recorded elevated aromatic C16-C21, aromatic C21-35, benzo(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenzo(a,h)anthracene, fluoranthene, naphthalene and total PAH
- TPA – 0.20-0.30m (Made ground – cohesive) recorded elevated aromatic C21-C35, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPB – 0.20-0.30m (Made ground – topsoil) recorded elevated benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPC – 0.20-0.30m (Made ground – granular) recorded elevated arsenic, benzo(a)anthracene,

chrysene, benzo(b)fluoranthene, benzo(a)pyrene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene and total PAH

- TPD – 0.20-0.30m (Made ground – cohesive) recorded elevated aromatic C21-C35, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPE – 0.20-0.30m (Made ground – cohesive) recorded elevated aromatic C21-C35, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene and total PAH
- TPF – 0.20-0.30m (Made ground – granular) recorded elevated arsenic, aromatic C12-C16, C16-21, C21-C35, C35-C44, benzo(a)anthracene, benzo(b)fluoranthene, chrysene, benzo(a)pyrene, benzo(g,h,i)perylene, dibenzo(a,h)anthracene and total PAH

The new development is expected to comprise new residential properties with associated gardens/access roads. Based on the shallow soil contamination testing, it is considered that the levels of contamination may pose a risk to future users of the site, as soft landscaping is proposed in the final development. This pollutant linkage however will be severed as long as all contaminated areas are covered either by buildings, hardstanding, or a clean cover system.

Construction Workers and Users of Surrounding Sites

Short term human exposure to contaminants present in soils can occur via several pathways during the construction and ground works phase of the development. These include dermal absorption after contact with contaminated ground, inhalation of soil or dust (including windblown dust), inhalation of volatilised compounds, inadvertent soil ingestion and contact with contaminated groundwater.

It is considered that the encountered levels of contamination may pose a risk to construction workers and users of surrounding sites. As good practice, full PPE must be employed in accordance with Health and Safety Executive: Protection of Workers and the General Public During the Development of Contaminated Land and safeguards should be taken to limit dust during ground works, and access to the public should be restricted. Construction workers should use gloves as a precaution when handling any fill materials. Provision of suitable hygiene facilities are needed for site workers.

Although asbestos was not detected from the soil samples subjected to testing within this investigation, the possibility still exists that asbestos containing materials may still be present on site and currently lie undetected. It is therefore advised that a 'watching brief' is undertaken during the initial site strip and any excavation works and advice sought if asbestos is found or suspected.

During dry weather, any excavations may require clean water to be sprinkled at shallow depth to prevent excess dust escaping to off-site receptors. Monitoring of dust concentrations during construction should be given careful consideration to ensure occupational exposure levels are not exceeded. Works should be undertaken in line with BRE: The Control of Dust and Emissions from Construction and Demolition, Best Practice Guidance.

Unexpected Contamination

If during the initial site strip or subsequent ongoing construction activities, any zones of odorous, brightly coloured or suspected contaminated ground are encountered, then the following procedure should be followed:

- Stop work in the affected area
- Contact Solmek and provide pictures of the affected area
- Solmek can visit site to investigate the material and provide guidance
- If required – Solmek can sample and test the material
- Once test results are returned, this will determine whether or not remediation will be required

Waste Classification and WAC Testing

During the site strip and construction activities, material may be required to be removed from site. Any such material would require classification, in line with Environment Agency Technical Guidance *Waste Classification: Guidance on the classification and assessment of waste* (2015). This would classify the material as either Non-Hazardous or Hazardous Waste.

Once the material has been classified, determining the suitable landfill for disposal is governed by landfill directive Waste Acceptance Criteria (WAC) testing, with landfills categorized as Inert Waste, Stable Non-Reactive Hazardous Waste and Hazardous Waste.

If waste classification and/or WAC testing are not undertaken, material taken off site may be subject to WAC testing by the appropriate waste disposal company. The decision on whether or not to accept waste, or whether further testing is required, is at the discretion of the waste disposal company.

Waste Classification was requested by the client. For completeness, Waste Classification has been undertaken on all 11no samples, from both phases of the investigation, using HazwasteOnline. The findings of the Waste Classification are provided below in Table 4.

TABLE 4: SUMMARY OF WASTE CLASSIFICATION

Sample Location	Sample Depth (m)	Classification	Hazardous Determinand	Hazard Properties
TP1	0.30	Non Hazardous	-	-
TP2	0.40	Non Hazardous	-	-
BH3	0.60	Hazardous	TPH	HP7, HP11
TP4	0.20	Non Hazardous	-	-
TP5	0.20	Non Hazardous	-	-
TPA	0.20-0.30	Hazardous	TPH	HP7, HP11
TPB	0.20-0.30	Non Hazardous	-	-
TPC	0.20-0.30	Non Hazardous	-	-
TPD	0.20-0.30	Hazardous	TPH	HP7, HP11
TPE	0.20-0.30	Hazardous	TPH	HP7, HP11
TPF	0.20-0.30	Hazardous	TPH	HP7, HP10, HP11, HP14

The decision on whether or not to accept waste, or whether further testing is required, is at the discretion of the waste disposal company.

Mining Assessment

It is considered likely that the coal seam/ void encountered in two of the boreholes represents the Hard Bed Seam. This seam is reported in the area to be up to 0.90m thick.

The ten times seam thickness rule states that where competent rock exceeds ten times the extracted seam thickness then no major crown holing should occur at the surface (Structural Foundations Manual; M. F. Atkinson, *Spon Press* 2003). If the competent rock cover is less than ten times the extracted seam thickness, then recommendations suggest the workings must be grouted using a mixture of pulverised fuel ash (PFA) and cement placed into the area under pressure. Should the overlying rock be weak and/or faulting, a ratio in excess of 10x may be required, whilst weak basement rock underlying the works could cause a separate collapse mechanism via pillars sinking. For certain developments, a ratio of less than 10x may be addressed via using rafts, however this would be dependent on approval from the regulatory authorities. This may not be appropriate for steeply dipping seams and where strong flowing water is encountered.

The ratios within the rotary borehole where possible collapsed workings were encountered are given in Table 5. In order to represent the conservative possibility that the intact coal encountered elsewhere represents pillars, ratios have been provided for each of these seams, as well as the related foundation solution required by such a ratio.

TABLE 5: ENCOUNTERED COAL & VOIDS

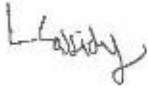
Borehole Reference	Depth (mbgl)	Remarks	Flush Returns (%)	Overlying Solid Geology Thickness	Extracted Seam Thickness (m)	Ratio based on an extracted seam thickness of 0.90m
BH02	12.20 - 13.10	Workings	0%	10.50	0.90	11.66
BH03	14.10 - 14.80	Coal – Intact	100%	11.80	0.70	13.11

Three boreholes were drilled, with workings encountered within one borehole and an inferred pillar encountered within another borehole. In both instances, the calculated ratios are >10 .

Based on the borehole records it is likely that grouting is not required over much of the site area as the calculated ratios are >10 however, the seam is shown to outcrop to the west of the site and dip below the site and therefore, depending on the final layout, additional rotary boreholes may be required in the northwest of the site to confirm the depth to the coal seam (where it would be at its shallowest) and the risk posed by workings.

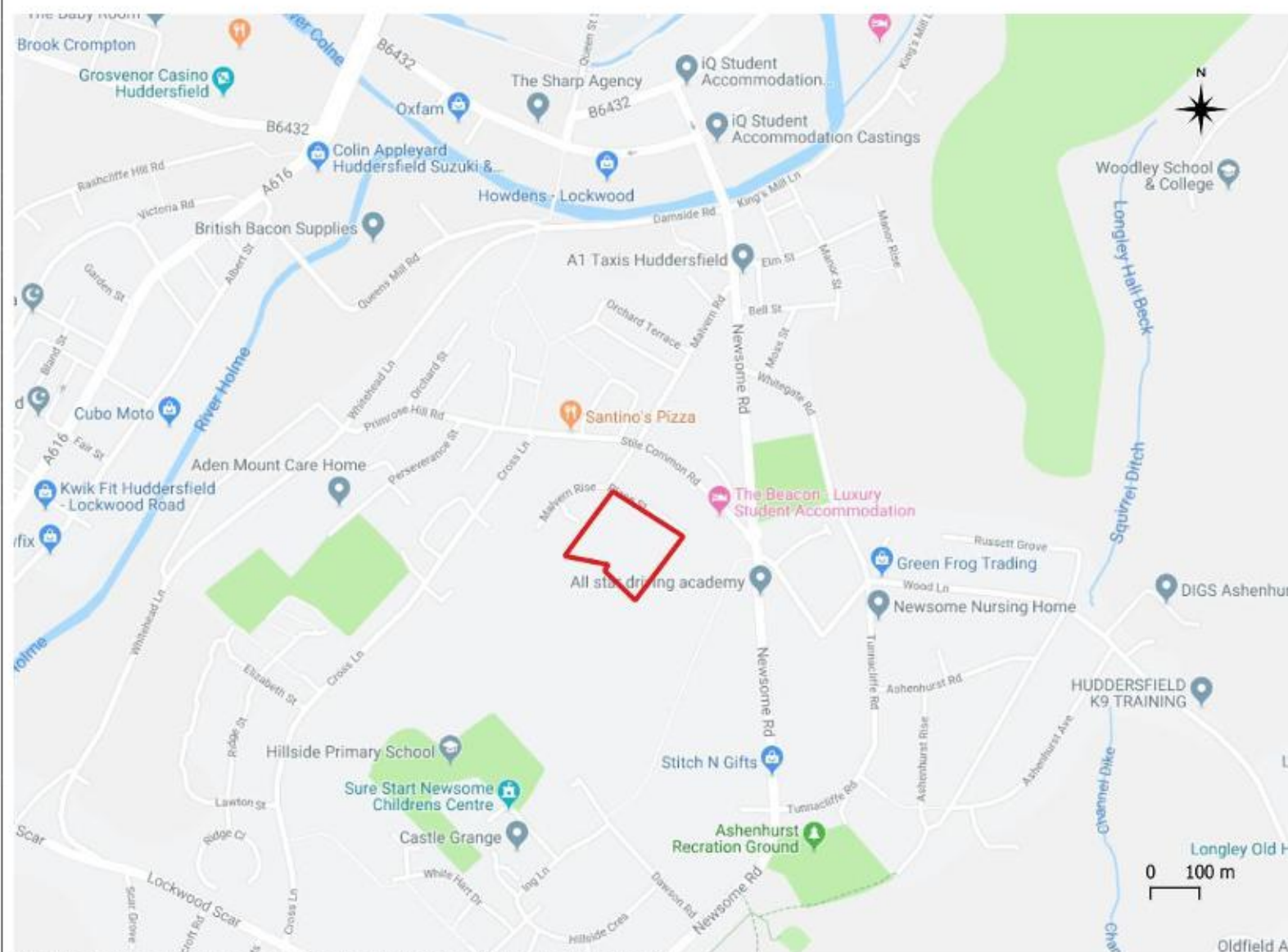
We would like to take this opportunity to thank you for using Solmek.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Leo Cassidy', with a stylized flourish at the end.

Leo Cassidy
On behalf of Solmek Ltd

APPENDIX A: Figures & Drawings



Contains public sector information licensed under the Open Government Licence v3.0
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Title	Site Location Map
Project	Plane Street, Huddersfield
Client	Torpoint
Date	May 2022
Fig No.	Figure 1
Scale	Scale on map
Key	 Site Boundary  N
Solmek Ltd. 12 Yarm Road Stockton-on-Tees TS18 3NA Tel: +44 (0) 1642 607083 Fax: +44 (0) 1642 612355 e-mail: south@solmek.com www.solmek.com  SOLMEK	



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Title
 Approximate Borehole and Trial Pit Location Plan

Project
 Plane Street, Huddersfield

Client
 Torpoint

Date
 May 2022

Fig No.
 Figure 2

Scale
 Scale on map

Key

-  Site Boundary
 -  Trial Pit
 -  Small Percussive Borehole
(G) Gas monitoring pipe installed
 -  Rotary Borehole
- ↑
N

Solmek Ltd.
 12 Yarm Road
 Stockton-on-Tees
 TS18 3NA

Tel: +44 (0) 1642 607083
 Fax: +44 (0) 1642 612355
 e-mail: south@solmek.com
www.solmek.com





Figure 3: TPA.



Figure 4: TPA Spoil.

Title	Date
Figures 3 & 4	May 2022
Project	
Plane Street, Huddersfield	
Client	
Torpoint	

Solmek Ltd.
12 Yarm Road
Stockton-on-Tees
TS18 3NA

Tel: +44 (0) 1642 607083
Fax: +44 (0) 1642 612355
e-mail: south@solmek.com
www.solmek.com





Figure 5: TPB.



Figure 6: TPB Spoil.

Title	Date
Figures 5 & 6	May 2022
Project	
Plane Street, Huddersfield	
Client	
Torpoint	

Solmek Ltd.
12 Yarm Road
Stockton-on-Tees
TS18 3NA

Tel: +44 (0) 1642 607083
Fax: +44 (0) 1642 612355
e-mail: south@solmek.com
www.solmek.com





Figure 7: TPC.



Figure 8: TPC Spoil.

Title	Date
Figures 7 & 8	May 2022
Project	
Plane Street, Huddersfield	
Client	
Torpoint	

Solmek Ltd.
12 Yarm Road
Stockton-on-Tees
TS18 3NA

Tel: +44 (0) 1642 607083
Fax: +44 (0) 1642 612355
e-mail: south@solmek.com
www.solmek.com





Figure 9: TPD.



Figure 10: TPD Spoil

Title	Date
Figures 9 & 10	May 2022
Project	
Plane Street, Huddersfield	
Client	
Torpoint	

Solmek Ltd.
12 Yarm Road
Stockton-on-Tees
TS18 3NA

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Fax: +44 (0) 1642 612355
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www.solmek.com





Figure 11: TPE.



Figure 12: TPE Spoil.

Title	Date
Figures 11 & 12	May 2022
Project	
Plane Street, Huddersfield	
Client	
Torpoint	

Solmek Ltd.
12 Yarm Road
Stockton-on-Tees
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e-mail: south@solmek.com
www.solmek.com





Figure 13: TPF.



Figure 14: TPF Spoil.

Title	Date
Figures 13 & 14	May 2022
Project	
Plane Street, Huddersfield	
Client	
Torpoint	

Solmek Ltd.
12 Yarm Road
Stockton-on-Tees
TS18 3NA

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APPENDIX B: Borehole & Trial Pit Logs

 SOLMEK Solmek Ltd 12-16 Yarm Road Stockton on Tees TS18 3NA Tel: 01642 607083 Email: info@solmek.com				Trial Pit Log				TrialPit No TPA Sheet 1 of 1	
Project Name: Plane Street, Huddersfield				Project No. S220220		Co-ords: E - N Level:		Date 25/02/2022	
Plant Used: JCB 3CX				Dimensions (m):		Scale 1:26		Logged HR	
Client: Torpoint Ltd				Depth 3.00					
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.20 - 0.30	ES	62kPa	0.30			MADE GROUND: Dark brown gravelly clay (reworked). Gravel is to coarse angular to subangular of brick.		
	0.50 - 0.60 0.50	B+ES HV				Stiff consistency light brown/grey slightly sandy medium strength CLAY.			
	1.00 - 1.10 1.00	B+ES HV	79kPa	0.90			Stiff consistency grey/orange slightly sandy slightly gravelly high strength CLAY. Gravel is fine to coarse angular to subangular of mudstone.		
	2.00 - 2.10	B+ES		1.80			Grey weathered MUDSTONE. Recovered as slightly clayey gravel.		
				3.00			End of Pit at 3.000m		
Remarks: Groundwater encountered at 1.20m.									
Stability: Pit walls stable.									

 SOLMEK Solmek Ltd 12-16 Yarm Road Stockton on Tees TS18 3NA Tel: 01642 607083 Email: info@solmek.com				Trial Pit Log				TrialPit No TPB Sheet 1 of 1	
Project Name: Plane Street, Huddersfield				Project No. S220220		Co-ords: E - N Level:		Date 25/02/2022	
Plant Used: JCB 3CX				Dimensions (m):		Scale 1:26		Logged HR	
Client: Torpoint Ltd				Depth 3.00					
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20 - 0.30	ES	71kPa	1.10			MADE GROUND: Dark brown gravelly topsoil. Gravel is fine to coarse angular of brick, concrete, sandstone and relic tarmac.		
	0.50 - 0.60	B+ES							
	1.20 - 1.30 1.20	B+ES HV							
	2.30 - 2.40	B							
				2.20			Firm to stiff consistency grey/yellow slightly sandy medium strength CLAY.		
				3.00			Stiff consistency black slightly sandy slightly gravelly CLAY. Gravel is fine to coarse angular to subangular of mudstone.		
							End of Pit at 3.000m		
Remarks:									
Stability: Pit walls stable.									



TrialPit No
TPC
Sheet 1 of 1

Date
26/02/2022

Scale
1:26

Logged
HR

1
2
3
4
5

Stability: Pit walls stable.

 SOLMEK Solmek Ltd 12-16 Yarm Road Stockton on Tees TS18 3NA Tel: 01642 607083 Email: info@solmek.com				Trial Pit Log				TrialPit No TPD Sheet 1 of 1	
Project Name: Plane Street, Huddersfield				Project No. S220220		Co-ords: E - N Level:		Date 25/02/2022	
Plant Used: JCB 3CX				Dimensions (m):		Scale 1:26		Logged HR	
Client: Torpoint Ltd				Depth 3.00					
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20 - 0.30	ES	72kPa	0.40			MADE GROUND: Soft consistency black slightly sandy gravelly clay. Gravel is fine to coarse angular of brick and ash.		
	0.50 - 0.60 0.50	B+ES HV					Firm to stiff consistency orange/grey slightly sandy slightly gravelly medium strength CLAY.		
	1.00 - 1.10	B+ES							
	2.00 - 2.10	B		1.80			Grey weathered MUDSTONE. Recovered as slightly clayey gravel.		
				3.00			End of Pit at 3.000m		
Remarks:									
Stability: Pit walls stable.									

 SOLMEK Solmek Ltd 12-16 Yarm Road Stockton on Tees TS18 3NA Tel: 01642 607083 Email: info@solmek.com				Trial Pit Log				TrialPit No TPE Sheet 1 of 1	
Project Name: Plane Street, Huddersfield				Project No. S220220		Co-ords: E - N Level:		Date 25/02/2022	
Plant Used: JCB 3CX				Dimensions (m):		Scale 1:26		Logged HR	
Client: Torpoint Ltd				Depth 3.00					
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
▼	0.20 - 0.30	ES					MADE GROUND: Soft to firm consistency dark brown sandy gravelly clay. Gravel is fine to coarse angular of brick.		1
	0.50 - 0.60	B+ES							
	1.00	B+ES							
	1.20								
	1.40								
	1.50 - 1.60	B+ES					Firm consistency black slightly sandy slightly gravelly CLAY. Gravel is fine to medium rounded to subangular of mudstone.		2
	2.50 - 2.60	B					Grey weathered MUDSTONE. Recovered as grey clayey gravel.		3
				3.00			End of Pit at 3.000m		4
									5

Remarks: Groundwater encountered at 1.60m.

Stability: Pit walls stable.

 SOLMEK Solmek Ltd 12-16 Yarm Road Stockton on Tees TS18 3NA Tel: 01642 607083 Email: info@solmek.com				Trial Pit Log				TrialPit No TPF Sheet 1 of 1	
Project Name: Plane Street, Huddersfield				Project No. S220220		Co-ords: E - N Level:		Date 25/02/2022	
Plant Used: JCB 3CX				Dimensions (m):		Scale 1:26			
Client: Torpoint Ltd				Depth 3.00		Logged HR			
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
	Depth	Type	Results						
	0.20 - 0.30	ES	67kPa	0.10			MADE GROUND: Tarmac hardstanding.		
	0.50 - 0.60 0.50	B+ES HV		0.30			MADE GROUND: Black/grey sandy gravel. Gravel is fine to coarse angular of brick and ash.		
	1.20 - 1.30	B+ES		1.10			Firm to stiff consistency orange/grey slightly sandy medium strength CLAY.		
	2.00 - 2.10	B		3.00			Grey weathered MUDSTONE. Recovered as angular coarse gravel.		
							End of Pit at 3.000m		
Remarks:									
Stability: Pit walls stable.									

 12-16 Yarm Road Stockton on Tees TS18 3NA 01642 607083 info@solmek.com				Borehole Log						Scale 1:150 Sheet 2 of 2 BH03				
Contract no: S220220		Site: Plane Street, Huddersfield				Driller: ID Drilling Ltd. Plant used: Massenza M13 Started: 29/04/2022 Ended: 29/04/2022 Backfilled: 29/04/2022		GL (AOD): Easting: Northing: Logged: HR Status: FINAL						
Client: Torpoint Ltd														
Method: Rotary openhole														
Backfill / Installation	Legend	Depth (m)	Level (m AOD)	Stratum Description	Samples and Insitu Testing									
					Depth (m)	Type	Results							
		40.00		MUDSTONE/SANDSTONE bands.										
				End of Borehole at 40.000m										
Hole Diameter				Casing Depths		General Remarks			Chiselling			Ground Water		
Depth Base (m)	Diameter (mm)	Depth Base (m)	Diameter (mm)	1.2m hand excavated inspection pit dug. No groundwater encountered.			From (m)	To (m)	Time (hr)	Depth Strike (m)	Depth Casing (m)	Depth Sealed (m)	Time Elapsed (min)	Water Level (m)

APPENDIX C:

Contamination Laboratory Results



Final Report

Report No.: 22-10954-1
Initial Date of Issue: 31-Mar-2022
Client Solmek Ltd
Client Address: 12 Yarm Road
Stockton-on-Tees
TS18 3NA
Contact(s): Lab
Leo Cassidy
Office
Project S220220 Plane Street, Huddersfield
Quotation No.:
Order No.: SOL-5978
No. of Samples: 6
Turnaround (Wkdays): 5
Date Approved: 31-Mar-2022

Date Received: 23-Mar-2022

Date Instructed: 23-Mar-2022

Results Due: 29-Mar-2022

Approved By:

Details: Stuart Henderson, Technical Manager

Results - Soil

Project: S220220 Plane Street, Huddersfield

Client: Solmek Ltd	Chemtest Job No.:				22-10954	22-10954	22-10954	22-10954	22-10954	22-10954
Quotation No.:	Chemtest Sample ID.:				1397051	1397052	1397053	1397054	1397055	1397056
	Sample Location:				TPA	TPB	TPC	TPD	TPE	TPF
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.20	0.20	0.20	0.20	0.20	0.20
	Bottom Depth (m):				0.30	0.30	0.30	0.30	0.30	0.30
	Date Sampled:				25-Feb-2022	25-Feb-2022	25-Feb-2022	25-Feb-2022	25-Feb-2022	25-Feb-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD						
ACM Type	U	2192		N/A	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Moisture	N	2030	%	0.020	13	17	17	20	20	8.9
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Black
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.0	8.3	8.3	8.4	8.0	8.9
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	0.85	0.58	0.58	0.66	0.98	< 0.40
Sulphate (2:1 Water Soluble) as SO4	M	2120	mg/l	10	360	50	110	89	190	20
Cyanide (Total)	M	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1
Arsenic	M	2450	mg/kg	1.0	17	4.6	51	13	15	50
Cadmium	M	2450	mg/kg	0.10	0.15	0.17	0.32	0.19	0.13	0.30
Chromium	M	2450	mg/kg	1.0	15	11	21	15	15	10
Copper	M	2450	mg/kg	0.50	31	15	93	33	44	61
Mercury	M	2450	mg/kg	0.10	0.41	0.15	0.28	0.85	0.34	0.20
Nickel	M	2450	mg/kg	0.50	17	11	44	16	17	20
Lead	M	2450	mg/kg	0.50	62	45	120	69	60	28
Selenium	M	2450	mg/kg	0.20	0.23	< 0.20	0.36	< 0.20	0.23	0.28
Zinc	M	2450	mg/kg	0.50	220	100	100	110	74	69
Organic Matter	M	2625	%	0.40	10	14	13	8.1	8.6	34
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	25	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	7.7	7.4	24	23
Aliphatic TPH >C12-C16	M	2680	mg/kg	1.0	< 1.0	< 1.0	6.7	86	83	110
Aliphatic TPH >C16-C21	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	120	76	190
Aliphatic TPH >C21-C35	M	2680	mg/kg	1.0	33	< 1.0	41	300	280	1100
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	< 1.0	44	< 1.0	< 1.0	390
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	33	< 5.0	100	510	490	1800
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.1
Aromatic TPH >C8-C10	M	2680	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	61
Aromatic TPH >C10-C12	M	2680	mg/kg	1.0	< 1.0	< 1.0	9.9	< 1.0	< 1.0	240
Aromatic TPH >C12-C16	M	2680	mg/kg	1.0	12	< 1.0	6.9	120	120	2300
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	690	120	95	320	240	12000
Aromatic TPH >C21-C35	M	2680	mg/kg	1.0	5200	560	250	2400	2000	38000
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	590	< 1.0	< 1.0	92	55	4500
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	6500	680	360	3000	2500	57000
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	6500	680	460	3500	2900	59000
Naphthalene	M	2700	mg/kg	0.10	8.3	4.1	4.3	4.8	2.5	9.5

Results - Soil

Project: S220220 Plane Street, Huddersfield

Client: Solmek Ltd	Chemtest Job No.:				22-10954	22-10954	22-10954	22-10954	22-10954	22-10954
Quotation No.:	Chemtest Sample ID.:				1397051	1397052	1397053	1397054	1397055	1397056
	Sample Location:				TPA	TPB	TPC	TPD	TPE	TPF
	Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):				0.20	0.20	0.20	0.20	0.20	0.20
	Bottom Depth (m):				0.30	0.30	0.30	0.30	0.30	0.30
	Date Sampled:				25-Feb-2022	25-Feb-2022	25-Feb-2022	25-Feb-2022	25-Feb-2022	25-Feb-2022
	Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	Accred.	SOP	Units	LOD						
Acenaphthylene	M	2700	mg/kg	0.10	1.1	20	10	0.82	1.1	56
Acenaphthene	M	2700	mg/kg	0.10	3.3	4.4	1.2	2.1	0.66	4.5
Fluorene	M	2700	mg/kg	0.10	3.5	23	4.6	1.8	1.3	25
Phenanthrene	M	2700	mg/kg	0.10	20	180	44	14	13	280
Anthracene	M	2700	mg/kg	0.10	6.5	50	27	3.9	3.4	95
Fluoranthene	M	2700	mg/kg	0.10	19	220	250	19	16	500
Pyrene	M	2700	mg/kg	0.10	19	190	240	19	15	430
Benzo[a]anthracene	M	2700	mg/kg	0.10	7.9	99	170	10	7.6	250
Chrysene	M	2700	mg/kg	0.10	8.9	94	110	12	9.1	180
Benzo[b]fluoranthene	M	2700	mg/kg	0.10	8.4	83	160	12	9.5	240
Benzo[k]fluoranthene	M	2700	mg/kg	0.10	2.9	36	65	5.3	3.6	100
Benzo[a]pyrene	M	2700	mg/kg	0.10	6.6	74	150	10	7.2	200
Indeno(1,2,3-c,d)Pyrene	M	2700	mg/kg	0.10	4.6	45	79	8.4	9.0	98
Dibenz(a,h)Anthracene	M	2700	mg/kg	0.10	1.8	15	28	5.4	4.9	33
Benzo[g,h,i]perylene	M	2700	mg/kg	0.10	5.3	36	65	9.3	11	75
Total Of 16 PAH's	M	2700	mg/kg	2.0	130	1200	1400	140	120	2600
Total Phenols	M	2920	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.42

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenzo[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

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

Charges may apply to extended sample storage

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

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)



M716B-QK4DD-4IF91

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

Job name

HWOL_20-08680-20220404 094940

Description/Comments

Project

S220220

Site

Plane Street, Huddersfield

Classified by

Name:

Leo Cassidy

Date:

04 Apr 2022 09:48 GMT

Telephone:

01642 607083

Company:

Solmek

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

22 Apr 2021

Next 3 year Refresher due by Apr 2024

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	TP1-16/03/2020-0.30	0.30	Non Hazardous		2
2	TP2-16/03/2020-0.40	0.40	Non Hazardous		4
3	BH3-16/03/2020-0.60	0.60	Hazardous	HP 7, HP 11	6
4	TP4-16/03/2020-0.20	0.20	Non Hazardous		9
5	TP5-16/03/2020-0.20	0.20	Non Hazardous		11
6	TPA-25/02/2022-0.20	0.20-0.30	Hazardous	HP 7, HP 11	13
7	TPB-25/02/2022-0.20	0.20-0.30	Non Hazardous		16
8	TPC-25/02/2022-0.20	0.20-0.30	Non Hazardous		18
9	TPD-25/02/2022-0.20	0.20-0.30	Hazardous	HP 7, HP 11	20
10	TPE-25/02/2022-0.20	0.20-0.30	Hazardous	HP 7, HP 11	23
11	TPF-25/02/2022-0.20	0.20-0.30	Hazardous	HP 7, HP 10, HP 11, HP 14	26

Related documents

#	Name	Description
1	HWOL_20-08680-20220404 094940.hwol	.hwol file used to create the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

Report

Created by: Leo Cassidy

Created date: 04 Apr 2022 09:48 GMT

Appendices

	Page
Appendix A: Classifier defined and non GB MCL determinands	29
Appendix B: Rationale for selection of metal species	30
Appendix C: Version	31

Classification of sample: TP1-16/03/2020-0.30

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

Sample details

Sample name:	LoW Code:	
TP1-16/03/2020-0.30	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.30 m		
Moisture content:		
8.4%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 8.4% Wet 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 }				32	mg/kg	1.32	38.701	mg/kg	0.00387 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.4	mg/kg	3.22	1.18	mg/kg	0.000118 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.59	mg/kg	1.142	0.617	mg/kg	0.0000617 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				51	mg/kg	1.126	52.597	mg/kg	0.00526 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	61	mg/kg	1.56	87.156	mg/kg	0.00559 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.13	mg/kg	1.353	0.161	mg/kg	0.0000161 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				19	mg/kg	2.976	51.799	mg/kg	0.00518 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				0.21	mg/kg	2.554	0.491	mg/kg	0.0000491 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				84	mg/kg	2.774	213.454	mg/kg	0.0213 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
10	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
11	pH				8.5	pH		8.5	pH	8.5 pH		
			PH									
12	naphthalene				0.66	mg/kg		0.605	mg/kg	0.0000605 %	✓	
	601-052-00-2	202-049-5	91-20-3									
13	acenaphthylene				1	mg/kg		0.916	mg/kg	0.0000916 %	✓	
		205-917-1	208-96-8									
14	acenaphthene				1.1	mg/kg		1.008	mg/kg	0.000101 %	✓	
		201-469-6	83-32-9									
15	fluorene				1.5	mg/kg		1.374	mg/kg	0.000137 %	✓	
		201-695-5	86-73-7									
16	phenanthrene				8.9	mg/kg		8.152	mg/kg	0.000815 %	✓	
		201-581-5	85-01-8									

#		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	■	anthracene	204-371-1	120-12-7		3.3 mg/kg		3.023 mg/kg	0.000302 %	✓		
18	■	fluoranthene	205-912-4	206-44-0		12 mg/kg		10.992 mg/kg	0.0011 %	✓		
19	■	pyrene	204-927-3	129-00-0		11 mg/kg		10.076 mg/kg	0.00101 %	✓		
20		benzo[a]anthracene	601-033-00-9	200-280-6		4.8 mg/kg		4.397 mg/kg	0.00044 %	✓		
21		chrysene	601-048-00-0	205-923-4		5.3 mg/kg		4.855 mg/kg	0.000485 %	✓		
22		benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
23		benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
24		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
25	■	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
26		dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
27	■	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
28	🚫	chromium (■ chromium(III) oxide (worst case))	215-160-9	1308-38-9		16 mg/kg	1.462	21.421 mg/kg	0.00214 %	✓		
29	■	monohydric phenols		P1186		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
Total:									0.0483 %			

Key

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

Classification of sample: TP2-16/03/2020-0.40

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

Sample details

Sample name:	LoW Code:	
TP2-16/03/2020-0.40	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)
0.40 m		
Moisture content:		
12%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				52	mg/kg	1.32	60.418	mg/kg	0.00604 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.42	mg/kg	3.22	1.19	mg/kg	0.000119 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				<0.1	mg/kg	1.142	<0.114	mg/kg	<0.0000114 %		<LOD
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				42	mg/kg	1.126	41.613	mg/kg	0.00416 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	20	mg/kg	1.56	27.453	mg/kg	0.00176 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	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									
7	nickel { nickel chromate }				14	mg/kg	2.976	36.668	mg/kg	0.00367 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				1.5	mg/kg	2.554	3.371	mg/kg	0.000337 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				22	mg/kg	2.774	53.707	mg/kg	0.00537 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
10	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
11	pH				8.5	pH		8.5	pH	8.5 pH		
			PH									
12	naphthalene				3	mg/kg		2.64	mg/kg	0.000264 %	✓	
	601-052-00-2	202-049-5	91-20-3									
13	acenaphthylene				4.9	mg/kg		4.312	mg/kg	0.000431 %	✓	
		205-917-1	208-96-8									
14	acenaphthene				2.8	mg/kg		2.464	mg/kg	0.000246 %	✓	
		201-469-6	83-32-9									
15	fluorene				5.9	mg/kg		5.192	mg/kg	0.000519 %	✓	
		201-695-5	86-73-7									
16	phenanthrene				39	mg/kg		34.32	mg/kg	0.00343 %	✓	
		201-581-5	85-01-8									

#	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	anthracene	204-371-1	120-12-7		14 mg/kg		12.32	mg/kg	0.00123 %	✓	
18	fluoranthene	205-912-4	206-44-0		63 mg/kg		55.44	mg/kg	0.00554 %	✓	
19	pyrene	204-927-3	129-00-0		55 mg/kg		48.4	mg/kg	0.00484 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		31 mg/kg		27.28	mg/kg	0.00273 %	✓	
21	chrysene	601-048-00-0	205-923-4		31 mg/kg		27.28	mg/kg	0.00273 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		35 mg/kg		30.8	mg/kg	0.00308 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		15 mg/kg		13.2	mg/kg	0.00132 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		26 mg/kg		22.88	mg/kg	0.00229 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		16 mg/kg		14.08	mg/kg	0.00141 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		7.9 mg/kg		6.952	mg/kg	0.000695 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		14 mg/kg		12.32	mg/kg	0.00123 %	✓	
28	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		25 mg/kg	1.462	32.154	mg/kg	0.00322 %	✓	
29	monohydric phenols		P1186		<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
Total:									0.0568 %		

Key

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

Classification of sample: BH3-16/03/2020-0.60

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

Sample details

Sample name:	LoW Code:
BH3-16/03/2020-0.60	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing hazardous substances)
0.60 m	
Moisture content:	
11%	
(wet weight correction)	

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.294%)

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.: 0.294%)

Determinands

Moisture content: 11% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				12	mg/kg	1.32	14.101	mg/kg	0.00141 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				1.3	mg/kg	3.22	3.725	mg/kg	0.000373 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.17	mg/kg	1.142	0.173	mg/kg	0.0000173 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				20	mg/kg	1.126	20.041	mg/kg	0.002 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	47	mg/kg	1.56	65.247	mg/kg	0.00418 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.1	mg/kg	1.353	0.12	mg/kg	0.000012 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				19	mg/kg	2.976	50.329	mg/kg	0.00503 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				0.2	mg/kg	2.554	0.455	mg/kg	0.0000455 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				170	mg/kg	2.774	419.728	mg/kg	0.042 %	✓	
	024-007-00-3	236-878-9	13530-65-9									

#	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									
10	TPH (C6 to C40) petroleum group				3300	mg/kg		2937	mg/kg	0.294 %	✓	
			TPH									
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
12	pH				8.3	pH		8.3	pH	8.3 pH		
			PH									
13	naphthalene				3.1	mg/kg		2.759	mg/kg	0.000276 %	✓	
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				40	mg/kg		35.6	mg/kg	0.00356 %	✓	
		205-917-1	208-96-8									
15	acenaphthene				2.2	mg/kg		1.958	mg/kg	0.000196 %	✓	
		201-469-6	83-32-9									
16	fluorene				4.9	mg/kg		4.361	mg/kg	0.000436 %	✓	
		201-695-5	86-73-7									
17	phenanthrene				43	mg/kg		38.27	mg/kg	0.00383 %	✓	
		201-581-5	85-01-8									
18	anthracene				27	mg/kg		24.03	mg/kg	0.0024 %	✓	
		204-371-1	120-12-7									
19	fluoranthene				500	mg/kg		445	mg/kg	0.0445 %	✓	
		205-912-4	206-44-0									
20	pyrene				590	mg/kg		525.1	mg/kg	0.0525 %	✓	
		204-927-3	129-00-0									
21	benzo[a]anthracene				260	mg/kg		231.4	mg/kg	0.0231 %	✓	
	601-033-00-9	200-280-6	56-55-3									
22	chrysene				250	mg/kg		222.5	mg/kg	0.0222 %	✓	
	601-048-00-0	205-923-4	218-01-9									
23	benzo[b]fluoranthene				410	mg/kg		364.9	mg/kg	0.0365 %	✓	
	601-034-00-4	205-911-9	205-99-2									
24	benzo[k]fluoranthene				200	mg/kg		178	mg/kg	0.0178 %	✓	
	601-036-00-5	205-916-6	207-08-9									
25	benzo[a]pyrene; benzo[def]chrysene				430	mg/kg		382.7	mg/kg	0.0383 %	✓	
	601-032-00-3	200-028-5	50-32-8									
26	indeno[123-cd]pyrene				280	mg/kg		249.2	mg/kg	0.0249 %	✓	
		205-893-2	193-39-5									
27	dibenz[a,h]anthracene				37	mg/kg		32.93	mg/kg	0.00329 %	✓	
	601-041-00-2	200-181-8	53-70-3									
28	benzo[ghi]perylene				280	mg/kg		249.2	mg/kg	0.0249 %	✓	
		205-883-8	191-24-2									
29	chromium { chromium(III) oxide (worst case) }				22	mg/kg	1.462	28.617	mg/kg	0.00286 %	✓	
		215-160-9	1308-38-9									
30	monohydric phenols				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			P1186									
Total:										0.651 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because No liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.294%)

Classification of sample: TP4-16/03/2020-0.20

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

Sample details

Sample name:	LoW Code:	
TP4-16/03/2020-0.20	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)
0.20 m		
Moisture content:		
4.6%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 4.6% Wet 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 }				13 mg/kg	1.32	16.375 mg/kg	0.00164 %		✓	
	033-003-00-0	215-481-4	1327-53-3								
2	boron { diboron trioxide; boric oxide }				<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %			<LOD
	005-008-00-8	215-125-8	1303-86-2								
3	cadmium { cadmium oxide }				0.48 mg/kg	1.142	0.523 mg/kg	0.0000523 %		✓	
	048-002-00-0	215-146-2	1306-19-0								
4	copper { dicopper oxide; copper (I) oxide }				13 mg/kg	1.126	13.963 mg/kg	0.0014 %		✓	
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	19 mg/kg	1.56	28.273 mg/kg	0.00181 %		✓	
	082-004-00-2	231-846-0	7758-97-6								
6	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								
7	nickel { nickel chromate }				6.1 mg/kg	2.976	17.32 mg/kg	0.00173 %		✓	
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { nickel selenate }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %			<LOD
	028-031-00-5	239-125-2	15060-62-5								
9	zinc { zinc chromate }				40 mg/kg	2.774	105.861 mg/kg	0.0106 %		✓	
	024-007-00-3	236-878-9	13530-65-9								
10	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5 mg/kg	1.884	<0.942 mg/kg	<0.0000942 %			<LOD
	006-007-00-5										
11	pH				9 pH		9 pH	9pH			
			PH								
12	naphthalene				0.48 mg/kg		0.458 mg/kg	0.0000458 %		✓	
	001-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				1.3 mg/kg		1.24 mg/kg	0.000124 %		✓	
		205-917-1	208-96-8								
14	acenaphthene				0.25 mg/kg		0.239 mg/kg	0.0000239 %		✓	
		201-469-6	83-32-9								
15	fluorene				0.51 mg/kg		0.487 mg/kg	0.0000487 %		✓	
		201-695-5	86-73-7								
16	phenanthrene				6.7 mg/kg		6.392 mg/kg	0.000639 %		✓	
		201-581-5	85-01-8								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	M/C Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
17	anthracene	204-371-1	120-12-7		3.4 mg/kg		3.244 mg/kg	0.000324 %	✓	
18	fluoranthene	205-912-4	206-44-0		18 mg/kg		17.172 mg/kg	0.00172 %	✓	
19	pyrene	204-927-3	129-00-0		18 mg/kg		17.172 mg/kg	0.00172 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		9.7 mg/kg		9.254 mg/kg	0.000925 %	✓	
21	chrysene	601-048-00-0	205-923-4		8.7 mg/kg		8.3 mg/kg	0.00083 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		13 mg/kg		12.402 mg/kg	0.00124 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		6 mg/kg		5.724 mg/kg	0.000572 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		12 mg/kg		11.448 mg/kg	0.00114 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		6.4 mg/kg		6.106 mg/kg	0.000611 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		2.7 mg/kg		2.576 mg/kg	0.000258 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		9 mg/kg		8.586 mg/kg	0.000859 %	✓	
28	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		4.5 mg/kg	1.462	6.274 mg/kg	0.000627 %	✓	
29	monohydric phenols		P1186		0.37 mg/kg		0.353 mg/kg	0.0000353 %	✓	
Total:								0.0292 %		

Key

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

Classification of sample: TP5-16/03/2020-0.20

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

Sample details

Sample name:	LoW Code:	
TP5-16/03/2020-0.20	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)
0.20 m		
Moisture content:		
8.4%		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 8.4% Wet 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 }				15	mg/kg	1.32	18.141	mg/kg	0.00181 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				<0.4	mg/kg	3.22	<1.288	mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.3	mg/kg	1.142	0.314	mg/kg	0.0000314 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				29	mg/kg	1.126	29.908	mg/kg	0.00299 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	31	mg/kg	1.56	44.293	mg/kg	0.00284 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.15	mg/kg	1.353	0.186	mg/kg	0.0000186 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				23	mg/kg	2.976	62.704	mg/kg	0.00627 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				0.26	mg/kg	2.554	0.608	mg/kg	0.0000608 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				54	mg/kg	2.774	137.22	mg/kg	0.0137 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
10	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
11	pH				8.3	pH		8.3	pH	8.3 pH		
			PH									
12	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	001-052-00-2	202-049-5	91-20-3									
13	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
14	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9									
15	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7									
16	phenanthrene				1.1	mg/kg		1.008	mg/kg	0.000101 %	✓	
		201-581-5	85-01-8									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	M/C Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
17	anthracene	204-371-1	120-12-7		0.1 mg/kg		0.0916 mg/kg	0.00000916 %	✓	
18	fluoranthene	205-912-4	206-44-0		1.7 mg/kg		1.557 mg/kg	0.000156 %	✓	
19	pyrene	204-927-3	129-00-0		1.8 mg/kg		1.649 mg/kg	0.000165 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.72 mg/kg		0.66 mg/kg	0.000066 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.77 mg/kg		0.705 mg/kg	0.0000705 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		15 mg/kg	1.462	20.082 mg/kg	0.00201 %	✓	
29	monohydric phenols		P1186		0.31 mg/kg		0.284 mg/kg	0.0000284 %	✓	
Total:								0.0307 %		

Key

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

Classification of sample: TPA-25/02/2022-0.20

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

Sample details

Sample name:	LoW Code:	
TPA-25/02/2022-0.20	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
0.20-0.30 m		
Moisture content:		
13%		
(wet weight correction)		

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.566%)

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.: 0.566%)

Determinands

Moisture content: 13% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				17	mg/kg	1.32	19.528	mg/kg	0.00195 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.85	mg/kg	3.22	2.381	mg/kg	0.000238 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.15	mg/kg	1.142	0.149	mg/kg	0.0000149 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				31	mg/kg	1.126	30.365	mg/kg	0.00304 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	62	mg/kg	1.56	84.136	mg/kg	0.00539 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.41	mg/kg	1.353	0.483	mg/kg	0.0000483 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				17	mg/kg	2.976	44.019	mg/kg	0.0044 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				0.23	mg/kg	2.554	0.511	mg/kg	0.0000511 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				220	mg/kg	2.774	530.972	mg/kg	0.0531 %	✓	
	024-007-00-3	236-878-9	13530-65-9									

#	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									
10	TPH (C6 to C40) petroleum group				6500	mg/kg		5655	mg/kg	0.566 %	✓	
			TPH									
11	cyanides { • salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
12	pH				8	pH		8	pH	8pH		
			PH									
13	naphthalene				8.3	mg/kg		7.221	mg/kg	0.000722 %	✓	
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				1.1	mg/kg		0.957	mg/kg	0.0000957 %	✓	
		205-917-1	208-96-8									
15	acenaphthene				3.3	mg/kg		2.871	mg/kg	0.000287 %	✓	
		201-469-6	83-32-9									
16	fluorene				3.5	mg/kg		3.045	mg/kg	0.000305 %	✓	
		201-695-5	86-73-7									
17	phenanthrene				20	mg/kg		17.4	mg/kg	0.00174 %	✓	
		201-581-5	85-01-8									
18	anthracene				6.5	mg/kg		5.655	mg/kg	0.000566 %	✓	
		204-371-1	120-12-7									
19	fluoranthene				19	mg/kg		16.53	mg/kg	0.00165 %	✓	
		205-912-4	206-44-0									
20	pyrene				19	mg/kg		16.53	mg/kg	0.00165 %	✓	
		204-927-3	129-00-0									
21	benzo[a]anthracene				7.9	mg/kg		6.873	mg/kg	0.000687 %	✓	
	601-033-00-9	200-280-6	56-55-3									
22	chrysene				8.9	mg/kg		7.743	mg/kg	0.000774 %	✓	
	601-048-00-0	205-923-4	218-01-9									
23	benzo[b]fluoranthene				8.4	mg/kg		7.308	mg/kg	0.000731 %	✓	
	601-034-00-4	205-911-9	205-99-2									
24	benzo[k]fluoranthene				2.9	mg/kg		2.523	mg/kg	0.000252 %	✓	
	601-036-00-5	205-916-6	207-08-9									
25	benzo[a]pyrene; benzo[def]chrysene				6.6	mg/kg		5.742	mg/kg	0.000574 %	✓	
	601-032-00-3	200-028-5	50-32-8									
26	indeno[123-cd]pyrene				4.6	mg/kg		4.002	mg/kg	0.0004 %	✓	
		205-893-2	193-39-5									
27	dibenz[a,h]anthracene				1.8	mg/kg		1.566	mg/kg	0.000157 %	✓	
	601-041-00-2	200-181-8	53-70-3									
28	benzo[ghi]perylene				5.3	mg/kg		4.611	mg/kg	0.000461 %	✓	
		205-883-8	191-24-2									
29	chromium { • chromium(III) oxide (worst case) }				15	mg/kg	1.462	19.073	mg/kg	0.00191 %	✓	
		215-160-9	1308-38-9									
30	monohydric phenols				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			P1186									
Total:										0.647 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because No liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.566%)

Classification of sample: TPB-25/02/2022-0.20

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

Sample details

Sample name:	LoW Code:	
TPB-25/02/2022-0.20	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)
0.20-0.30 m		
Moisture content:		
17%		
(wet weight correction)		

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				4.6	mg/kg	1.32	5.041	mg/kg	0.000504 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.58	mg/kg	3.22	1.55	mg/kg	0.000155 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.17	mg/kg	1.142	0.161	mg/kg	0.0000161 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				15	mg/kg	1.126	14.017	mg/kg	0.0014 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	45	mg/kg	1.56	58.259	mg/kg	0.00374 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.15	mg/kg	1.353	0.169	mg/kg	0.0000169 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				11	mg/kg	2.976	27.173	mg/kg	0.00272 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				100	mg/kg	2.774	230.254	mg/kg	0.023 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
10	TPH (C6 to C40) petroleum group				680	mg/kg		564.4	mg/kg	0.0564 %	✓	
			TPH									
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
12	pH				8.3	pH		8.3	pH	8.3 pH		
			PH									
13	naphthalene				4.1	mg/kg		3.403	mg/kg	0.00034 %	✓	
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				20	mg/kg		16.6	mg/kg	0.00166 %	✓	
		205-917-1	208-96-8									
15	acenaphthene				4.4	mg/kg		3.652	mg/kg	0.000365 %	✓	
		201-469-6	83-32-9									
16	fluorene				23	mg/kg		19.09	mg/kg	0.00191 %	✓	
		201-695-5	86-73-7									

#	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	phenanthrene	201-581-5	85-01-8		180 mg/kg		149.4 mg/kg	0.0149 %	✓		
18	anthracene	204-371-1	120-12-7		50 mg/kg		41.5 mg/kg	0.00415 %	✓		
19	fluoranthene	205-912-4	206-44-0		220 mg/kg		182.6 mg/kg	0.0183 %	✓		
20	pyrene	204-927-3	129-00-0		190 mg/kg		157.7 mg/kg	0.0158 %	✓		
21	benzo[a]anthracene	200-280-6	56-55-3		99 mg/kg		82.17 mg/kg	0.00822 %	✓		
22	chrysene	205-923-4	218-01-9		94 mg/kg		78.02 mg/kg	0.0078 %	✓		
23	benzo[b]fluoranthene	205-911-9	205-99-2		83 mg/kg		68.89 mg/kg	0.00689 %	✓		
24	benzo[k]fluoranthene	205-916-6	207-08-9		36 mg/kg		29.88 mg/kg	0.00299 %	✓		
25	benzo[a]pyrene; benzo[def]chrysene	200-028-5	50-32-8		74 mg/kg		61.42 mg/kg	0.00614 %	✓		
26	indeno[123-cd]pyrene	205-893-2	193-39-5		45 mg/kg		37.35 mg/kg	0.00374 %	✓		
27	dibenz[a,h]anthracene	200-181-8	53-70-3		15 mg/kg		12.45 mg/kg	0.00125 %	✓		
28	benzo[ghi]perylene	205-883-8	191-24-2		36 mg/kg		29.88 mg/kg	0.00299 %	✓		
29	chromium { chromium(III) oxide (worst case) }	215-160-9	1308-38-9		11 mg/kg	1.462	13.344 mg/kg	0.00133 %	✓		
30	monohydric phenols		P1186		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
Total:									0.187 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because No liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0564%)

Classification of sample: TPC-25/02/2022-0.20

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

Sample details

Sample name:	LoW Code:	
TPC-25/02/2022-0.20	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)
0.20-0.30 m		
Moisture content:		
17%		
(wet weight correction)		

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				51	mg/kg	1.32	55.889	mg/kg	0.00559 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.58	mg/kg	3.22	1.55	mg/kg	0.000155 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.32	mg/kg	1.142	0.303	mg/kg	0.0000303 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				93	mg/kg	1.126	86.907	mg/kg	0.00869 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	120	mg/kg	1.56	155.358	mg/kg	0.00996 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.28	mg/kg	1.353	0.315	mg/kg	0.0000315 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				44	mg/kg	2.976	108.693	mg/kg	0.0109 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				0.36	mg/kg	2.554	0.763	mg/kg	0.0000763 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				100	mg/kg	2.774	230.254	mg/kg	0.023 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
10	TPH (C6 to C40) petroleum group				460	mg/kg		381.8	mg/kg	0.0382 %	✓	
			TPH									
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
12	pH				8.3	pH		8.3	pH	8.3 pH		
			PH									
13	naphthalene				4.3	mg/kg		3.569	mg/kg	0.000357 %	✓	
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				10	mg/kg		8.3	mg/kg	0.00083 %	✓	
		205-917-1	208-96-8									
15	acenaphthene				1.2	mg/kg		0.996	mg/kg	0.0000996 %	✓	
		201-469-6	83-32-9									
16	fluorene				4.6	mg/kg		3.818	mg/kg	0.000382 %	✓	
		201-695-5	86-73-7									

#		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	■	phenanthrene				44	mg/kg		36.52	mg/kg	0.00365 %	✓	
			201-581-5	85-01-8									
18	■	anthracene				27	mg/kg		22.41	mg/kg	0.00224 %	✓	
			204-371-1	120-12-7									
19	■	fluoranthene				250	mg/kg		207.5	mg/kg	0.0208 %	✓	
			205-912-4	206-44-0									
20	■	pyrene				240	mg/kg		199.2	mg/kg	0.0199 %	✓	
			204-927-3	129-00-0									
21		benzo[a]anthracene				170	mg/kg		141.1	mg/kg	0.0141 %	✓	
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				110	mg/kg		91.3	mg/kg	0.00913 %	✓	
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				160	mg/kg		132.8	mg/kg	0.0133 %	✓	
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				65	mg/kg		53.95	mg/kg	0.0054 %	✓	
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				150	mg/kg		124.5	mg/kg	0.0124 %	✓	
		601-032-00-3	200-028-5	50-32-8									
26	■	indeno[123-cd]pyrene				79	mg/kg		65.57	mg/kg	0.00656 %	✓	
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				28	mg/kg		23.24	mg/kg	0.00232 %	✓	
		601-041-00-2	200-181-8	53-70-3									
28	■	benzo[ghi]perylene				65	mg/kg		53.95	mg/kg	0.0054 %	✓	
			205-883-8	191-24-2									
29	🚫	chromium { ■ chromium(III) oxide (worst case) }				21	mg/kg	1.462	25.475	mg/kg	0.00255 %	✓	
			215-160-9	1308-38-9									
30	■	monohydric phenols				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
				P1186									
									Total:	0.216 %			

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because No liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0382%)

Classification of sample: TPD-25/02/2022-0.20

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

Sample details

Sample name:	LoW Code:
TPD-25/02/2022-0.20	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20-0.30 m	Entry:
Moisture content:	17 05 03 * (Soil and stones containing hazardous substances)
20%	
(wet weight correction)	

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.28%)

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.: 0.28%)

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				13	mg/kg	1.32	13.731	mg/kg	0.00137 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.66	mg/kg	3.22	1.7	mg/kg	0.00017 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.19	mg/kg	1.142	0.174	mg/kg	0.0000174 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				33	mg/kg	1.126	29.723	mg/kg	0.00297 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	69	mg/kg	1.56	86.102	mg/kg	0.00552 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.85	mg/kg	1.353	0.92	mg/kg	0.000092 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				16	mg/kg	2.976	38.096	mg/kg	0.00381 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				110	mg/kg	2.774	244.125	mg/kg	0.0244 %	✓	
	024-007-00-3	236-878-9	13530-65-9									

#	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									
10	TPH (C6 to C40) petroleum group				3500	mg/kg		2800	mg/kg	0.28 %	✓	
			TPH									
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
12	pH				8.4	pH		8.4	pH	8.4 pH		
			PH									
13	naphthalene				4.8	mg/kg		3.84	mg/kg	0.000384 %	✓	
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				0.82	mg/kg		0.656	mg/kg	0.0000656 %	✓	
		205-917-1	208-96-8									
15	acenaphthene				2.1	mg/kg		1.68	mg/kg	0.000168 %	✓	
		201-469-6	83-32-9									
16	fluorene				1.8	mg/kg		1.44	mg/kg	0.000144 %	✓	
		201-695-5	86-73-7									
17	phenanthrene				14	mg/kg		11.2	mg/kg	0.00112 %	✓	
		201-581-5	85-01-8									
18	anthracene				3.9	mg/kg		3.12	mg/kg	0.000312 %	✓	
		204-371-1	120-12-7									
19	fluoranthene				19	mg/kg		15.2	mg/kg	0.00152 %	✓	
		205-912-4	206-44-0									
20	pyrene				19	mg/kg		15.2	mg/kg	0.00152 %	✓	
		204-927-3	129-00-0									
21	benzo[a]anthracene				10	mg/kg		8	mg/kg	0.0008 %	✓	
	601-033-00-9	200-280-6	56-55-3									
22	chrysene				12	mg/kg		9.6	mg/kg	0.00096 %	✓	
	601-048-00-0	205-923-4	218-01-9									
23	benzo[b]fluoranthene				12	mg/kg		9.6	mg/kg	0.00096 %	✓	
	601-034-00-4	205-911-9	205-99-2									
24	benzo[k]fluoranthene				5.3	mg/kg		4.24	mg/kg	0.000424 %	✓	
	601-036-00-5	205-916-6	207-08-9									
25	benzo[a]pyrene; benzo[def]chrysene				10	mg/kg		8	mg/kg	0.0008 %	✓	
	601-032-00-3	200-028-5	50-32-8									
26	indeno[123-cd]pyrene				8.4	mg/kg		6.72	mg/kg	0.000672 %	✓	
		205-893-2	193-39-5									
27	dibenz[a,h]anthracene				5.4	mg/kg		4.32	mg/kg	0.000432 %	✓	
	601-041-00-2	200-181-8	53-70-3									
28	benzo[ghi]perylene				9.3	mg/kg		7.44	mg/kg	0.000744 %	✓	
		205-883-8	191-24-2									
29	chromium { chromium(III) oxide (worst case) }				15	mg/kg	1.462	17.539	mg/kg	0.00175 %	✓	
		215-160-9	1308-38-9									
30	monohydric phenols				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			P1186									
Total:										0.331 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because No liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.28%)

Classification of sample: TPE-25/02/2022-0.20

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

Sample details

Sample name:	LoW Code:	
TPE-25/02/2022-0.20	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
0.20-0.30 m		
Moisture content:		
20%		
(wet weight correction)		

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.232%)

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.: 0.232%)

Determinands

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

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				15	mg/kg	1.32	15.844	mg/kg	0.00158 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.98	mg/kg	3.22	2.524	mg/kg	0.000252 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.13	mg/kg	1.142	0.119	mg/kg	0.0000119 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				44	mg/kg	1.126	39.631	mg/kg	0.00396 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	60	mg/kg	1.56	74.871	mg/kg	0.0048 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.34	mg/kg	1.353	0.368	mg/kg	0.0000368 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				17	mg/kg	2.976	40.477	mg/kg	0.00405 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				0.23	mg/kg	2.554	0.47	mg/kg	0.000047 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				74	mg/kg	2.774	164.229	mg/kg	0.0164 %	✓	
	024-007-00-3	236-878-9	13530-65-9									

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	M/C Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
10	TPH (C6 to C40) petroleum group				2900	mg/kg		2320	mg/kg	0.232 %	✓	
			TPH									
11	cyanides { • salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.5	mg/kg	1.884	<0.942	mg/kg	<0.0000942 %		<LOD
	006-007-00-5											
12	pH				8	pH		8	pH	8pH		
			PH									
13	naphthalene				2.5	mg/kg		2	mg/kg	0.0002 %	✓	
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				1.1	mg/kg		0.88	mg/kg	0.000088 %	✓	
		205-917-1	208-96-8									
15	acenaphthene				0.66	mg/kg		0.528	mg/kg	0.0000528 %	✓	
		201-469-6	83-32-9									
16	fluorene				1.3	mg/kg		1.04	mg/kg	0.000104 %	✓	
		201-695-5	86-73-7									
17	phenanthrene				13	mg/kg		10.4	mg/kg	0.00104 %	✓	
		201-581-5	85-01-8									
18	anthracene				3.4	mg/kg		2.72	mg/kg	0.000272 %	✓	
		204-371-1	120-12-7									
19	fluoranthene				16	mg/kg		12.8	mg/kg	0.00128 %	✓	
		205-912-4	206-44-0									
20	pyrene				15	mg/kg		12	mg/kg	0.0012 %	✓	
		204-927-3	129-00-0									
21	benzo[a]anthracene				7.6	mg/kg		6.08	mg/kg	0.000608 %	✓	
	601-033-00-9	200-280-6	56-55-3									
22	chrysene				9.1	mg/kg		7.28	mg/kg	0.000728 %	✓	
	601-048-00-0	205-923-4	218-01-9									
23	benzo[b]fluoranthene				9.5	mg/kg		7.6	mg/kg	0.00076 %	✓	
	601-034-00-4	205-911-9	205-99-2									
24	benzo[k]fluoranthene				3.6	mg/kg		2.88	mg/kg	0.000288 %	✓	
	601-036-00-5	205-916-6	207-08-9									
25	benzo[a]pyrene; benzo[def]chrysene				7.2	mg/kg		5.76	mg/kg	0.000576 %	✓	
	601-032-00-3	200-028-5	50-32-8									
26	indeno[123-cd]pyrene				9	mg/kg		7.2	mg/kg	0.00072 %	✓	
		205-893-2	193-39-5									
27	dibenz[a,h]anthracene				4.9	mg/kg		3.92	mg/kg	0.000392 %	✓	
	601-041-00-2	200-181-8	53-70-3									
28	benzo[ghi]perylene				11	mg/kg		8.8	mg/kg	0.00088 %	✓	
		205-883-8	191-24-2									
29	chromium { • chromium(III) oxide (worst case) }				15	mg/kg	1.462	17.539	mg/kg	0.00175 %	✓	
		215-160-9	1308-38-9									
30	monohydric phenols				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			P1186									
Total:										0.274 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because No liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.232%)

Classification of sample: TPF-25/02/2022-0.20

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

Sample details

Sample name:	LoW Code:	
TPF-25/02/2022-0.20	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
0.20-0.30 m		
Moisture content:		
8.9%		
(wet weight correction)		

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 5.375%)

HP 10: Toxic for reproduction "waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring"

Hazard Statements hit:

Repr. 2; H361d "Suspected of damaging the unborn child."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 5.375%)

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.: 5.375%)

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 5.375%)

Determinands

Moisture content: 8.9% Wet 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 }				50 mg/kg	1.32	60.141	mg/kg	0.00601 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	boron { diboron trioxide; boric oxide }				<0.4 mg/kg	3.22	<1.288	mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2								

#	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									
3	cadmium { cadmium oxide }				0.3	mg/kg	1.142	0.312	mg/kg	0.0000312 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	copper { dicopper oxide; copper (I) oxide }				61	mg/kg	1.126	62.567	mg/kg	0.00626 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
5	lead { lead chromate }			1	28	mg/kg	1.56	39.788	mg/kg	0.00255 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
6	mercury { mercury dichloride }				0.2	mg/kg	1.353	0.247	mg/kg	0.0000247 %	✓	
	080-010-00-X	231-299-8	7487-94-7									
7	nickel { nickel chromate }				20	mg/kg	2.976	54.228	mg/kg	0.00542 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
8	selenium { nickel selenate }				0.28	mg/kg	2.554	0.651	mg/kg	0.0000651 %	✓	
	028-031-00-5	239-125-2	15060-62-5									
9	zinc { zinc chromate }				69	mg/kg	2.774	174.38	mg/kg	0.0174 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
10	TPH (C6 to C40) petroleum group				59000	mg/kg		53749	mg/kg	5.375 %	✓	
			TPH									
11	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	1.716	mg/kg	0.000172 %	✓	
	006-007-00-5											
12	pH				8.9	pH		8.9	pH	8.9 pH		
			PH									
13	naphthalene				9.5	mg/kg		8.654	mg/kg	0.000865 %	✓	
	601-052-00-2	202-049-5	91-20-3									
14	acenaphthylene				56	mg/kg		51.016	mg/kg	0.0051 %	✓	
		205-917-1	208-96-8									
15	acenaphthene				4.5	mg/kg		4.1	mg/kg	0.00041 %	✓	
		201-469-6	83-32-9									
16	fluorene				25	mg/kg		22.775	mg/kg	0.00228 %	✓	
		201-695-5	86-73-7									
17	phenanthrene				280	mg/kg		255.08	mg/kg	0.0255 %	✓	
		201-581-5	85-01-8									
18	anthracene				95	mg/kg		86.545	mg/kg	0.00865 %	✓	
		204-371-1	120-12-7									
19	fluoranthene				500	mg/kg		455.5	mg/kg	0.0455 %	✓	
		205-912-4	206-44-0									
20	pyrene				430	mg/kg		391.73	mg/kg	0.0392 %	✓	
		204-927-3	129-00-0									
21	benzo[a]anthracene				250	mg/kg		227.75	mg/kg	0.0228 %	✓	
	601-033-00-9	200-280-6	56-55-3									
22	chrysene				180	mg/kg		163.98	mg/kg	0.0164 %	✓	
	601-048-00-0	205-923-4	218-01-9									
23	benzo[b]fluoranthene				240	mg/kg		218.64	mg/kg	0.0219 %	✓	
	601-034-00-4	205-911-9	205-99-2									
24	benzo[k]fluoranthene				100	mg/kg		91.1	mg/kg	0.00911 %	✓	
	601-036-00-5	205-916-6	207-08-9									
25	benzo[a]pyrene; benzo[def]chrysene				200	mg/kg		182.2	mg/kg	0.0182 %	✓	
	601-032-00-3	200-028-5	50-32-8									
26	indeno[123-cd]pyrene				98	mg/kg		89.278	mg/kg	0.00893 %	✓	
		205-893-2	193-39-5									
27	dibenz[a,h]anthracene				33	mg/kg		30.063	mg/kg	0.00301 %	✓	
	601-041-00-2	200-181-8	53-70-3									
28	benzo[ghi]perylene				75	mg/kg		68.325	mg/kg	0.00683 %	✓	
		205-883-8	191-24-2									
29	chromium { chromium(III) oxide (worst case) }				10	mg/kg	1.462	13.315	mg/kg	0.00133 %	✓	
		215-160-9	1308-38-9									
30	monohydric phenols				0.42	mg/kg		0.383	mg/kg	0.0000383 %	✓	
			P1186									

#	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							
Total:								5.649 %		

Key

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

Supplementary Hazardous Property Information

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

Force this Hazardous property to non hazardous because **No liquid phase**

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 5.375%)

Appendix A: Classifier defined and non GB MCL determinands

▪ 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

▪ pH (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

Hazard Statements: 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; 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

• **monohydric phenols** (CAS Number: P1186)

Description/Comments: Combined hazards statements from harmonised entries in CLP for phenol, cresols and xlenols (604-001-00-2, 604-004-00-9, 604-006-00-X)
 Data source: CLP combined data
 Data source date: 26 Mar 2019
 Hazard Statements: Muta. 2; H341, Acute Tox. 3; H331, Acute Tox. 3; H311, Acute Tox. 3; H301, STOT RE 2; H373, Skin Corr. 1B; H314, Skin Corr. 1B; H314 >= 3 %, Skin Irrit. 2; H315 1 E conc. < 3 %, Eye Irrit. 2; H319 1 E conc. < 3 %, Aquatic Chronic 2; H411

• **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 (edit as required)

boron {diboron trioxide; boric oxide}

Reasonable case CLP species based on hazard statements/ molecular weight, physical form and low solubility. Industrial sources include: fluxing agent for glass/enamels; additive for fibre optics, borosilicate glass (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

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

mercury {mercury dichloride}

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

nickel {nickel chromate}

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

selenium {nickel selenate}

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

zinc {zinc chromate}

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

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

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

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

Worst case

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2017.202.300.300 (23 Mar 2022)

HazWasteOnline Database: 2022.81.5064.9565 (22 Mar 2022)

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 D:
Notes on Limitations & Contamination Guidance

UK BACKGROUND

Environmental Protection Act 1990: Part 2A Revised Statutory Guidance (April 2012)

This revised document explains how the Local Authority should decide if land, based on a legal interpretation, is contaminated. The document replaces the previous guidance given in Annex 3 of DEFRA Circular 01/2006, issued in accordance with section 78YA of the 1990 Environmental Protection Act.

The main objectives of the Part 2A regime are to *"identify and remove unacceptable risks to human health and the environment"* and to *"seek to ensure that contaminated land is made suitable for its current use"*.

Part 2A uses a risk based approach to defining contaminated land whereby the "risk" is interpreted as *"the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land"* and by *"the scale and seriousness of such harm or pollution if it did occur"*.

For a relevant risk to exist a contaminant, pathway and receptor linkage must be present before the land can be considered to be contaminated. The document explains that *"for a risk to exist there must be contaminants present in, on or under the land in a form and quantity that poses a hazard, and one or more pathways by which they might significantly harm people, the environment, or property; or significantly pollute controlled waters."*

A conceptual model is used to develop and communicate the risks associated with a particular site.

To determine if land is contaminated the local authority use various categories from 1 to 4. Categories 1 and 2 include *"land which is capable of being determined as contaminated land on grounds of significant possibility of significant harm to human health."*

Categories 3 and 4 *"encompass land which is not capable of being determined on such grounds"*.

PRELIMINARY CONCEPTUAL MODEL

Preliminary Conceptual Models are undertaken in accordance with CIRIA C552. The Preliminary Conceptual Model assesses the consequence and the likelihood of a risk being realised to provide a risk classification, using the tables detailed below.

CONSEQUENCE OF RISK BEING REALISED (Based on C552 CIRIA, 2001)

Classification	Definition	Example
Severe	Short-term (acute) risk to human health, the environment, an element of the development or other aspect with is likely to result in <i>significant harm</i> , damage or both.	High concentrations of cyanide on the surface of an informal recreational area. Major spills of contaminants from site into controlled water. High concentrations of explosive gas in the subsurface environment that have a clear unobstructed pathway into buildings.
Moderate	Chronic damage to human health, a plausible chance that an event will occur, although the timeline is not immediate to be in the short-term.	Appreciable concentration of contamination that over the longer-term will cause significant harm i.e. high lead concentration in topsoil. Shallow mine workings that are potentially unstable but may remain in a satisfactory or stable conditions for a number of years.
Mild	Low level pollution of non-sensitive water, a feasible hazardous scenario although the timeline of such occurring can probably be considered in 10's of years.	The effect of high sulphate concentrations on structural concrete. Pollution of non-classified groundwater.
Minor	Harm, although not necessarily significant to human health, or with respect to other aspects of the development, which are considered implausible in terms of occurrence, or will have little consequential impact.	The presence of contaminants at such low concentrations that protective equipment is required during site works. Any damage to structures is minimal and will not be structural in characteristics.

PROBABILITY OF RISK BEING REALISED (C552 CIRIA, 2001)

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

RISK CLASSIFICATION MATRIX (C552 CIRIA, 2001)

Risk = Probability x Consequence		Consequence			
		Severe	Moderate	Mild	Minor
Probability	High likelihood	Very high risk	High risk	Moderate risk	Moderate/low risk
	Likely	High risk	Moderate risk	Moderate/low risk	Low risk
	Low likelihood	Moderate risk	Moderate/low risk	Low risk	Very low risk
	Unlikely	Moderate/low risk	Low risk	Very low risk	Very low risk

HUMAN RECEPTORS

Human exposure to contaminants present in soils can occur via several pathways. Direct exposure pathways include dermal absorption after contact with contaminated ground, inhalation of soil or dust, inhalation of volatilised compounds, and inadvertent soil ingestion (or deliberate soil ingestion in the case of some children). Other indirect pathways include human ingestion of plants grown in contaminated soil or contaminated ground or surface water. Contaminants associated with wind blown dust can affect humans on surrounding sites.

VEGETATION

Plants can be affected by soil contamination in a number of ways resulting in growth inhibition, nutrient deficiencies and yellowing of leaves. Contaminants are taken up by plants through the roots and through foliage. Contaminants identified as being highly phytotoxic include boron, cadmium, copper, lead, nickel, and zinc.

To establish if the levels of contaminants present on a site may pose a risk to vegetation the results of the contamination testing are compared to a series of threshold values published in 'Code of Good Agricultural Practice for the Protection of Soil'.

GROUNDWATER AND SURFACE WATER RECEPTORS

The principal pathway by which soil contamination may reach the water environment is through a slow seepage or leaching to groundwater or surface water. The potential for contaminants to migrate along such pathways is dependent on the chemical and physical characteristics of the contaminants and the local hydrogeology. Surface watercourses may also accumulate contamination as contaminated sediments are deposited within the water body.

Where the site investigated overlies major/principal aquifers (and in some cases minor/secondary aquifers depending on certain conditions), groundwater Source Protection Zones and areas in close proximity to groundwater abstractions, contamination test results have been compared with the Water Supply (Water Quality) Regulations 1989 and The Water Supply (Water Quality) Regulations 2000.

Should a surface water receptor, such as a fresh water environment (river, canal, stream, lake etc), or marine environment be considered sensitive in relation to a site, then test results are compared with DEFRA & SEPA Environmental Quality Standards (2004). Many of the Environmental Quality Standards are hardness (CaCO_3) depended. Where no hardness values are available, Solmek assume conservative values (of between 0 and 50mg/l).

In the absence of vulnerable ground and surface water environments, Solmek may compare any test results with the Environment Agency Leachate Quality Threshold Values.

DETAILED QUANTITATIVE RISK ASSESSMENT (DQRA)

In line with Environment Agency's guidance document Environment Agency *Land Contamination Risk Management*, which replaced the now-withdrawn *Contaminated Land Report 11 – Model Procedures for the Management of Land Contamination (2004)*, a DQRA for groundwater/human health may be required following a Phase 2 investigation and before the preparation of a Phase 3 Remediation Strategy. For human health DQRA, a site specific assessment criteria is undertaken using CLEA Software Version 1.06. For groundwater DQRA, the Environment Agency Remedial Targets Worksheet Version 3.1 is used.

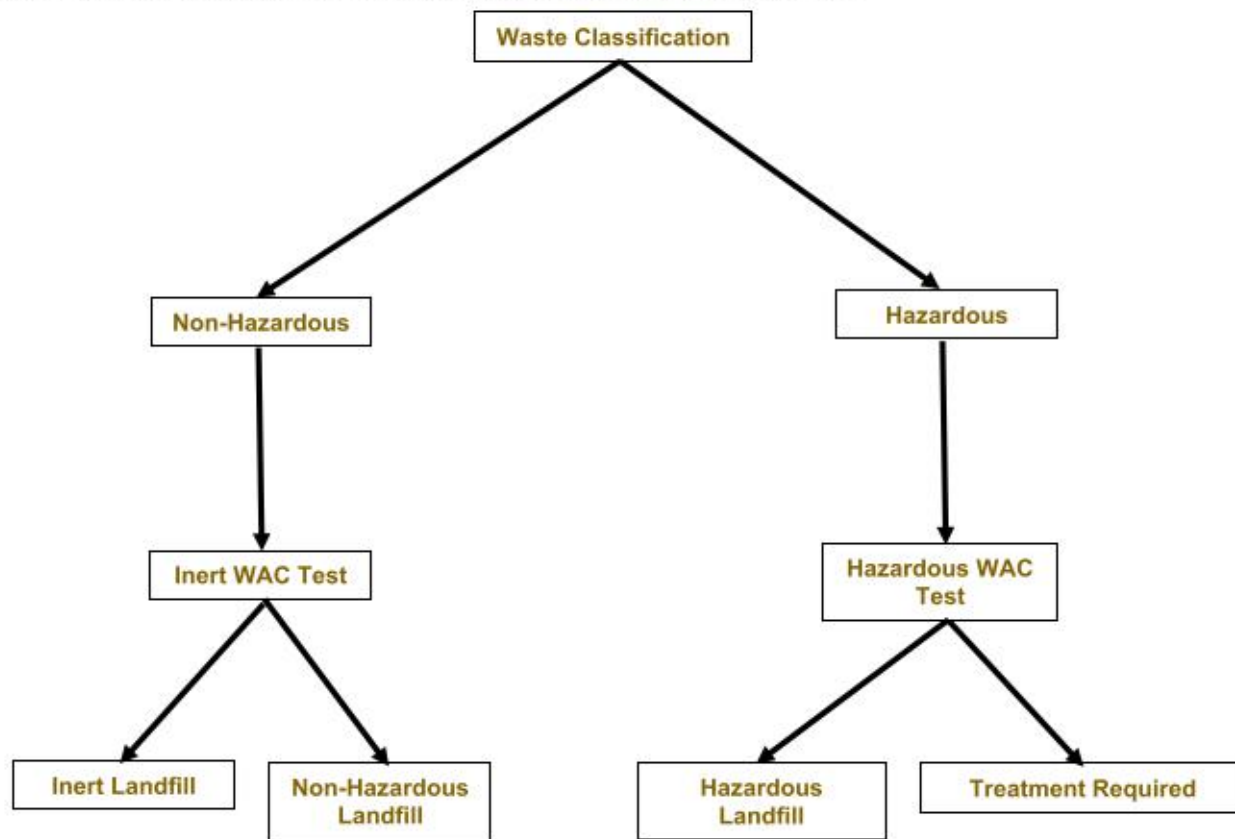
WASTE CLASSIFICATION AND WASTE ACCEPTANCE CRITERIA

During the site strip and construction activities, material may be required to be removed from site. Any such material would require classification, in line with Environment Agency Technical Guidance *Waste Classification: Guidance on the classification and assessment of waste (2015)*. This would classify the material as either Non-Hazardous or Hazardous Waste.

Once the material has been classified, determining the suitable landfill for disposal is governed by landfill directive Waste Acceptance Criteria (WAC) testing, with landfills categorized as Inert Waste, Stable Non-Reactive Hazardous Waste and Hazardous Waste. The WAC testing relates to materials that are to be exported from a site/development to landfill, and do not directly relate to human health specifically. The testing results are generally presented as certificates which can be used by site owners/contractors etc, which should be presented to the accepting waste facility or waste contractor.

If waste classification and/or WAC testing are not undertaken, material taken off site may be subject to WAC testing by the appropriate waste disposal company. The decision on whether or not to accept waste, or whether further testing is required, is at the discretion of the waste disposal company.

The below flow chart provides further information on the waste classification process.



CONSTRUCTION MATERIALS

Materials at risk from possible soil contaminants include inorganic matrices such as cement and concrete and also organic material such as plastics and rubbers. Acid ground conditions and high levels of sulphates can accelerate the corrosion of building materials. Where pH and soluble sulphate analysis has been undertaken, Solmek compare the test results with the guidelines presented within BRE Special Digest 1, 2005 (3rd Edition) 'Concrete in Aggressive Ground'. Plastics and rubbers are generally used for piping and service ducts and are potentially attacked by a range of chemicals, most of which are organic, particularly petroleum based substances. Drinking water supplies can be tainted by substances that can penetrate piping and water companies enforce stringent threshold values.

The levels of potential contaminants should be compared to thresholds supplied in the UK Water Industry Research (UKWIR) publication "Guidance for the selection of Water Supply Pipes to be used in Brownfield Sites" (January 2011). A Brownfield Site is defined in the document as "Land or premises that have not previously been used or developed that may be vacant or derelict". It should be noted that Brownfield sites may not be contaminated. The guidance does not apply to Greenfield Sites however water companies may have their own assessment criteria which should be checked by the developer. The table below outlines the pipe material selection threshold concentrations.

Parameter group	Pipe Material (Threshold concentrations in mg/kg)					
	PE	PVC	Barrier pipe (PE-AL-PE)	Wrapped Steel	Wrapped Ductile Iron	Copper
Extended VOC suite by purge and trap or head space and GC-MS with TIC	0.5	0.125	Pass	Pass	Pass	Pass
+ BTEX + MTBE	0.1	0.03	Pass	Pass	Pass	Pass
SVOCs TIC by purge and trap or head space and GC-MS with TIC (aliphatic and aromatic C5-C10)	2	1.4	Pass	Pass	Pass	Pass
+ Phenols	2	0.4	Pass	Pass	Pass	Pass
+ Cresols and chlorinated phenols	2	0.04	Pass	Pass	Pass	Pass
Mineral oil C11-C20	10	Pass	Pass	Pass	Pass	Pass
Mineral oil C21-C40	500	Pass	Pass	Pass	Pass	Pass
Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	Corrosive if pH <7 and conductivity >400µS/cm	Corrosive if pH <5, Eh not neutral and conductivity >400µS/cm	Corrosive if pH <5 or >8 and Eh positive
Specific suite identified as relevant following site investigation						
Ethers	0.5	1	Pass	Pass	Pass	Pass
Nitrobenzene	0.5	0.4	Pass	Pass	Pass	Pass
Ketones	0.5	0.02	Pass	Pass	Pass	Pass
Aldehydes	0.5	0.02	Pass	Pass	Pass	Pass
Amines	Fail	Pass	Pass	Pass	Pass	Pass

REQUIREMENTS OF PARTIES WITHIN THE DEVELOPMENT PROCESS

Interested parties involved in the development process may use the data in different ways and there may be varying views and interpretation of the factual data. Local Authority staff may have a view on contamination and human health and the wider environment. The Environment Agency are concerned principally with the protection of Controlled waters. Building insurers, funders and purchasers may be primarily concerned with issues of potential commercial blight. Purchasers are also not always fully informed, and perceptions on issues associated with risk can affect the decision to purchase. Developers and construction organisations will focus on financial aspects of dealing with the contamination in the context of the development and construction programme.

RISKS & LIABILITIES FROM CONTAMINATION

In simple terms, risks associated with contamination may be considered in terms of 1) statutory risks and 2) development related risks. If contamination is severe or forms a potential hazard based on its potential to affect groundwater, surface water or human health, a statutory risk may be present, and as such, if the risk is not reduced, criminal proceedings may be instigated by a government body or local authority.

If the contamination is less severe or not considered to be mobile, it may be considered a commercial liability which could, in theory remain untreated, but which may at a later date affect the value of the property, or, with changing legislation, become a statutory risk. Commercial liabilities could give rise to civil proceedings by third parties if there are grounds for action.

These conditions accompany our tender and supercede any previous conditions issued. Solmek will prepare a report solely for the use of the Client (the party invoiced) and its agent(s). No reliance should be placed on the contents of this report, in whole or in part by 3rd parties. The report, its content and format and associated data are copyright, and the property of Solmek. Photocopying of part or all of the contents, transfer or reproduction of any kind is forbidden without written permission from Solmek. A charge may be levied against such approval, the same to be made at the discretion of Solmek.

Solmek cannot be held liable and do not warrant, or otherwise guarantee the validity of information provided by third parties and subsequently used in our reports. Solmek are not responsible for the action negligent of otherwise of subcontractors or third parties.

Site investigation is a process of sampling. The scope and size of an investigation may be considered proportional to levels of confidence regarding the ground and groundwater conditions. The exploratory holes undertaken investigate only a small volume of the ground in relation to the overall size of the site, and can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions as encountered within each of the exploratory holes. There may be different ground conditions elsewhere on the site which have not been identified by this investigation and which therefore have not been taken into account in this report. Reports are generally subject to the comments of the local authority and Environment Agency. The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that mobile contamination, ground gas levels and groundwater levels may vary owing to seasonal, tidal and/or weather related effects. Solmek cannot be held liable for any unrecorded or unforeseen obstructions between exploratory boreholes and trial pits. This includes instances where previous structures on the site (buried man made structures) or the presence of boulder clay (cobbles and/or boulder obstructions) have been anticipated. All types of piling operations should make allowance for obstructions within the construction budget to accommodate this. Unrecorded ancient mining may occur anywhere where seams that have been worked and influence the rock and soil above. Dissolution cavities can occur where gypsum or chalk is present. Rotary drilling is the recommended technique to prove the integrity of the rock.

Where the scope of the investigation is limited via access to information, time constraints, equipment limitations, testing, interpretation or by the client or his agents budgetary constraints, elements not set out in the proposal and excluded from the report are deemed to be omitted from the scope of the investigation.

Desk studies are generally prepared in accordance with RICS guidelines. Environmental site investigations are generally undertaken as 'exploratory investigations' in accordance with the definitions provided in paragraph 5.4 of BS 10175:2011 in order to confirm the conceptual assumptions. You are advised to familiarize yourself with the typical scope of such an investigation. No pumping of water will be undertaken unless a licence or facilities/equipment have been arranged by others.

Where the type, number or/and depth of exploratory hole is specified by others, Solmek cannot and will not be responsible for any subsequent shortfall or inadequacy in data, and any consequent shortfall in interpretation of environmental and geotechnical aspects which may be required at a later date in order to facilitate the design of permanent or temporary works.

All information acquired by Solmek in the course of investigation is the property of Solmek, and, only also becomes the joint property of the Client only on the complete settlement of all invoices relating to the project. Solmek reserve the right to use the information in commercial tendering and marketing, unless the Client expressly wishes otherwise in writing. The quoted rates do not include VAT, and payment terms are 30 days from dispatch of invoice from our offices. Quotes are subject to a site visit.

We have allowed for 1 mobilisation and normal working hours unless otherwise stated. The scope of the investigation may be reviewed following the desk study and/or fieldwork. The presence or otherwise of Japanese Knotweed or other invasive plants can be difficult to identify especially during winter months. If Japanese Knotweed or other invasive species are suspect, it should be confirmed by an ecologist. We have not allowed for acquiring services information, and cannot be responsible for damage to underground services or pipes not shown to us or not clearly shown on plans. Costs incurred will be passed on to you, and in commissioning Solmek you understand and accept that you/your agent have a contractual relationship with Solmek & you accept this. Our rates assume unobstructed, reasonably level and firm access to the exploratory positions and adequate clear working areas and headroom. We have priced on the basis that you or your client have the necessary permissions, wayleaves and approvals to access land. All boreholes and pits are backfilled with arisings except where gas monitoring pipes are installed with stopcock covers. Solmek are not responsible for any uneven surfaces as a result of siteworks and rutting and backfilled excavations may require re-levelling and/or making good by others after fieldwork is complete, and Solmek has not allowed for this. No price has been provided or requested for a return visit to remove pipework and covers. Hourly rates apply to consultancy only and do not include expenses unless otherwise shown. If warranties are required, legal costs incurred will be passed on to you assuming Solmek agree to complete such warranties, modified or otherwise and you understand and agree to pay all costs.

We reserve the right to pursue full payment of the invoice prior to release of any information including reports. We advise you/your client that we may elect to pursue our statutory rights under late payment legislation, and will apply 8% to the base rate for unreasonably late payments. Solmek are exempt from the CIS Scheme. Solmek offer to undertake work only in strict accordance with conditions covered by our current insurances, which are available for inspection. Solmek are not responsible for acts, negligent or otherwise of subcontractors and as a matter of policy cannot indemnify any other parties. Professional indemnity Insurance is limited to ten times the invoice net total except where stated otherwise by Solmek. Solmek give notice that consequential loss as a direct or indirect result of Solmek's activities or omission of the same are excluded.