

Kiwa CMT
WM3 EWC Report

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CJS Construction Ltd
The Sidings
Duffield Road Industrial Estate
Little Eaton
Derbyshire
DE21 5EG



Report Number 70857-A (342458)

Site:

Barwell Medical Centre
High Street
Leicester
LE9 8DS

Date: 6th October 2023

**Partner
for
Progress**

Client Information

CSJ Construction Ltd

The Sidings

Duffield Road Industrial Estate

Little Eaton

Derbyshire

DE21 5EG

Date:	06.10.2023	Originator:	Ricky Croshaw
Order Ref:	1285	Our Ref:	70857

Site Location Information:

Barwell Medical Centre, High Street, Leicester, LE9 8DS.

Document Control

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Issue Number and Date	2	06.10.2023

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1.0 Client

1.1 The Client is CSJ Construction Ltd.

2.0 Scope of Works

2.1 To sample material on site from stockpiles and trial pitting material as directed by the client.

2.2 To analyse samples of soil-type material for a range of analytical parameters.

2.3 Waste assessment to WM3 (EA, 2021).

3.0 Site Work

3.1 Site work was carried out on the 28th September 2023 by Kiwa CMT.

3.2 3No. composite samples of soil-type material were sampled on site by Kiwa CMT.

3.3 Photographs pertaining to the site are presented in Appendix 5.

4.0 Samples

4.1 The samples obtained from the site on the 28th September 2023 are:

Kiwa CMT Reference	Client Reference/Location/Other Information
70857/1	Stockpile 1
70857/2	Stockpile 2
70857/3	Trial Pit Sample

Kiwa CMT Reference	Sample Description
70857/1	Mixed red-brown, grey and black sandy slightly cobbly slightly gravelly CLAY. Cobbles of brick. Gravels of brick, organic matter, plastic and rootlets. Odour of Hydrocarbons noted.
70857/2	Red-brown and grey slightly gravelly sandy CLAY. Gravels of brick.
70857/3	Red-brown and grey slightly gravelly sandy CLAY. Gravels of brick.

4.2 Photographs of subsamples of the materials are presented in Appendix 3.

4.3 The samples had **NO** identifiable pieces of asbestos containing materials (ACMs).

4.4 Sample 70857/1 exhibited visible oil contamination, olfactory evidence of hydrocarbon contamination, visible discolouration and visible physical contaminants (e.g., brick and plastic).

4.5 Samples 70857/2 and 70857/3 exhibited some visible discolouration and visible physical contaminants (e.g., brick).

4.6 Samples were refrigerated and delivered to the lab in suitable pots and amber glass jars.

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4.7 The scheduled analysis for each sample is:

Kiwa CMT Reference	Analysis Schedule
70857/1	Characterisation of Solid; Full Waste Acceptance Criteria
70857/2	Characterisation of Solid; Full Waste Acceptance Criteria
70857/3	Characterisation of Solid; Full Waste Acceptance Criteria

5.0 Analysis

5.1 The samples submitted have been analysed for the following components:

Characterisation Analysis

Metals/Metalloids	Antimony, Arsenic, Cadmium, Chromium, Chromium (VI), Copper, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc
Inorganics/Physical	Asbestos Screen, pH, Cyanide, Moisture Content, Loss on Ignition, Total Sulfate
Organics	Petroleum Hydrocarbons, Phenols
Polyaromatic Hydrocarbons	Acenaphthene, Acenaphthylene, Anthracene, Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo(ghi)perylene, Chrysene, Dibenzo[a,h]anthracene, Fluoranthene, Fluorene, Indeno[123-cd]pyrene, Naphthalene, Phenanthrene, Pyrene

Waste Acceptance Criteria CEN 10:1 Full Solid and Leachate Analysis PrEN 12457-2

Metals/Metalloids	Antimony, Arsenic, Barium, Boron, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, Vanadium, Zinc
Inorganics/Physical	Sulfate, pH, Moisture Content, Loss on Ignition, Chloride, Fluoride
Organics	Total Dissolved Solids, Dissolved Organic Carbon, Petroleum Hydrocarbons, PCBs, BTEX
Polyaromatic Hydrocarbons	Acenaphthene, Acenaphthylene, Anthracene, Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo(ghi)perylene, Chrysene, Dibenzo[a,h]anthracene, Fluoranthene, Fluorene, Indeno[123-cd]pyrene, Naphthalene, Phenanthrene, Pyrene

6.0 Results

6.1 The results are presented in Appendix 3.

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7.0 EWC Assessment

- 7.1 Waste Materials require classification, as per the EU Directive 2008/98/EC, excluding those wastes noted in Article 2 of that document. The Directive lays down measures to protect the environment and human health by preventing or reducing the adverse impacts of the generation and management of waste and by reducing overall impacts of resource use and improving the efficiency of such use.

List of Waste and Waste Code Selection Information

- 7.2 Assessment of the soil based material is carried out in line with the European Waste Catalogue Code relating to Chapter 17, Sub-chapter 05 for Excavated Soils and Stones (both anthropogenic and natural) to determine the hazardous nature of the material and to classify the material as either one of the mirror entries: "Soil and Stones containing Hazardous Substances" (Hazardous Mirror Entry: 17 05 03*) or "Soil and Stones other than those mentioned in 17 05 03*" (Non-Hazardous Mirror Entry 17 05 04).
- 7.3 Due to the nature of the material a Waste Assessment and Classification is required as per the Environment Agency Document "Waste Classification: Guidance on the Classification and Assessment of Waste (v1.2.GB 2021) – Technical Guidance WM3".
- 7.4 The Assessment code and chapters have been selected from the List of Wastes as presented in WM3 v1.2.GB. General Chemical Criteria has been selected, as per section 5.0, as a baseline information for the material. POPs have not been included in this baseline analysis.
- 7.5 The Assessment procedure has been carried out using an assessment tool: HazWaste Online™ produced by One Touch Data. The information can be found in Appendix 4.
- 7.6 **Hazardous/Non-Hazardous EWC Classification (Basic Characterisation)**
- 7.7 The samples have been assessed using the tool and the assessment is presented in the appendices. The summary of the assessment is presented below:

Reference	Client Reference/Location/ Other Information	EWC Code	Classification	Hazard properties
70857/1	Stockpile 1	17 05 03*	Hazardous	HP 7 HP 11
70857/2	Stockpile 2	17 05 03*	Hazardous	HP 7 HP 11
70857/3	Trial Pit Sample	17 05 04	Non-Hazardous	-

Table 1 Non-Hazardous/Hazardous Classification to EWC

- 7.8 Samples 70857/1 and 70857/2 have been assessed as hazardous with raised levels of TPH (C6 to C40) Petroleum Group.
- 7.9 The decision of the disposal facility is final.

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7.10 Landfill Classification – WAC Testing Results with reference to EN 12457-2

7.11 With regard to the WAC Testing the Landfill Classification has been assessed in accordance with EU Council Decision 2003/33/EC:

Reference	Client Reference/Location/ Other Information	Pass/Fail
70857/1	Stockpile 1	Classify as <u>Stable Non-Reactive Hazardous</u>
70857/2	Stockpile 2	Classify as <u>Stable Non-Reactive Hazardous</u>
70857/3	Trial Pitting Material	Fail Inert Classification Classify as <u>Non-Hazardous</u> , see Table 1 Above.

Table 2 Landfill Classification

7.12 Sample 70857/3 fails the inert threshold for Mineral Oil and Antimony. Classify as Non-Hazardous only.

7.13 The decision of the disposal facility is final.

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8.0 Limitations

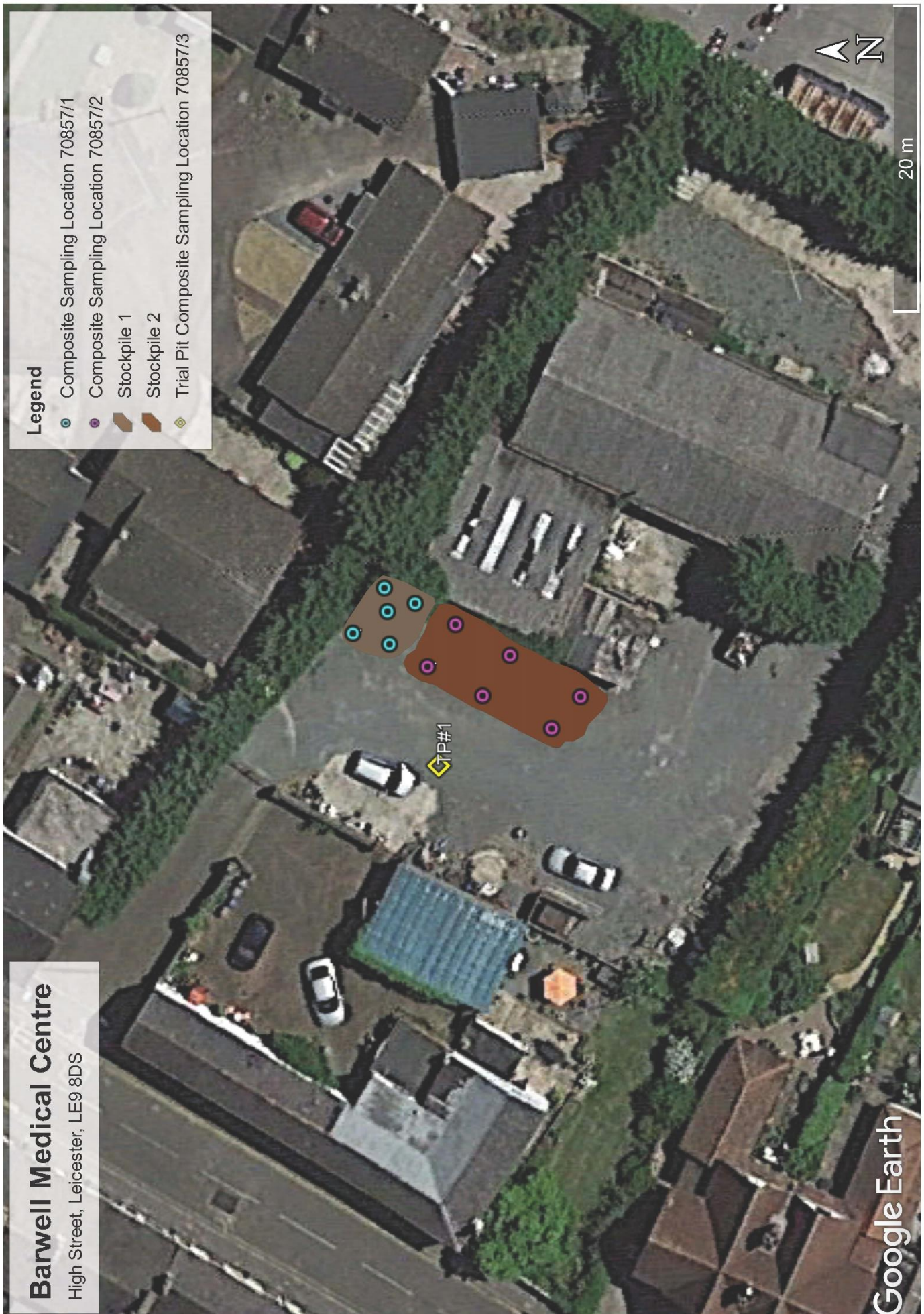
- 8.1 This report is prepared on behalf of the client and should only be used by the client and its contractors/subcontractors.
- 8.2 The use or assignment of this report, either in its entirety or in any part, is expressly prohibited unless payment is received by Kiwa CMT within the agreed credit period.
- 8.3 The report is produced solely for the benefit of the Client and their professional advisors, no liability is accepted for any reliance placed upon it by any other party unless expressly agreed in writing with Kiwa CMT.
- 8.4 The copyright of this report and relating documents prepared by Kiwa CMT are owned by them. No such report plan or document may be produced, published or altered without the written permission of Kiwa CMT.
- 8.5 The report and opinions have been prepared for the specific purpose stated within the document. The recommendations should not be extrapolated for other uses on or adjacent to the site or for other schemes without reference and agreement in writing with Kiwa CMT. Opinions and interpretations are not covered by Kiwa CMT scope of UKAS accreditation.
- 8.6 The report will be based on observations, environmental conditions and information (such as physical conditions within boreholes, monitoring results and chemical analyses) that are by their nature interpretative and interpolated. Variations are likely to be present appertaining to the site which may not be revealed by documentation and/or investigation and which, subsequently, may not be taken into account.
- 8.7 Whilst the report may express an opinion on the nature of environmental conditions provided by GIS databases and written, anecdotal, published and pictorial (cartographic, photographic, etc.) there can be no liability for accuracy accepted by Kiwa CMT.
- 8.8 Kiwa CMT have employed the HazWaste Online™ Tool to provide a level of assessment of the results, Kiwa CMT cannot take any liability for the validity of the third party assessment tool and assume that all information provided by OneTouch Data is correct.
- 8.9 If sampled by Kiwa CMT, then the sampling will be carried out with the relevant care and diligence in order to obtain a representative sample of the material.
- 8.10 If the sample is supplied, then Kiwa CMT have had little to no control over the sampling and it is assumed that the client has provided Kiwa CMT with a representative sample of the bulk material. Kiwa CMT cannot be held accountable for third party sampling and always recommend independent sampling. Where Kiwa CMT have recommended particular investigative techniques, to be supplied by the client/3rd party, and these have not been adhered to, Kiwa CMT do not take responsibility for misrepresentation of the materials.
- 8.11 Samples are stored in suitable containers for the various requirements of testing.
- 8.12 Unless otherwise directed Kiwa CMT will assume a normal scenario for the composition of the material and no consideration is given to specialist contamination unless we are aware (e.g., via provided documentation, desk study, other intrusive works, etc.) that due consideration is required for deviation from the normal expected mineralogical content of soil.
- 8.13 The assessment is carried out on the analytical results that are presented in the appendices. It is assumed that the results are representative, or as representative as possible, of the material analysed. Results may not be representative where the material may be significantly heterogeneous in nature.

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- 8.14 Assessment is not solely based on chemical criteria and further assessment of the material is likely to occur at the point of use, including visual observation and possibly the employment of validation testing.
- 8.15 All analysis is carried out in a UKAS and MCERTS accredited laboratory 4225 that comply to ISO 17025. All records are retained in our system and are available upon request.
- 8.16 Ground/stockpile conditions are highly variable and although Kiwa CMT make best efforts to obtain representative samples there is always a possibility of uncovering contamination previously unidentified. If this is the case then further testing is likely to be required on any previously undiscovered materials, e.g., such as asbestos, oil contamination, liquids, etc. This report does not include, or account for, such unidentified contamination and any additional materials will require characterising and assessing and are not covered by this report.
- 8.17 Where asbestos type minerals have been identified as free and dispersed fibres within the matrix of the soils the waste is not considered to be mixed, it is considered to be a single stream of waste with no separable components.
- 8.18 Where asbestos is in the form of ACMs (e.g., lagging, board, tile, etc.) the waste stream is considered to be a mixed waste stream and the concentration of asbestos in each ACM is considered to be >0.1%.

Appendix 1

Site Plan and Sampling Locations



Appendix 2

Client Sampling Certificates



Kiwa CMT

None Provided

Appendix 3

Certificates of Analysis

Element Materials Technology

Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell
EMT Job No: 23/16079

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	5-8	9-12							Please see attached notes for all abbreviations and acronyms		
Sample ID	70857/1	70857/2	70857/3									
Depth												
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	28/09/2023	28/09/2023	28/09/2023									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	29/09/2023	29/09/2023	29/09/2023							LOD/LOR	Units	Method No.
Antimony	2	2	2							<1	mg/kg	TM30/PM15
Arsenic #	5.1	5.6	5.8							<0.5	mg/kg	TM30/PM15
Cadmium #	0.3	<0.1	0.2							<0.1	mg/kg	TM30/PM15
Chromium #	75.8	89.9	77.8							<0.5	mg/kg	TM30/PM15
Copper #	34	37	24							<1	mg/kg	TM30/PM15
Lead #	37	28	22							<5	mg/kg	TM30/PM15
Mercury #	<0.1	<0.1	<0.1							<0.1	mg/kg	TM30/PM15
Nickel #	12.8	16.6	24.0							<0.7	mg/kg	TM30/PM15
Selenium #	<1	<1	<1							<1	mg/kg	TM30/PM15
Total Sulphate as SO ₄ #	465	255	433							<50	mg/kg	TM50/PM29
Vanadium	25	28	30							<1	mg/kg	TM30/PM15
Water Soluble Boron #	1.2	2.2	2.1							<0.1	mg/kg	TM74/PM32
Zinc #	77	77	78							<5	mg/kg	TM30/PM15
PAH MS												
Naphthalene #	<0.04	0.08	0.08							<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03							<0.03	mg/kg	TM4/PM8
Acenaphthene #	0.07	<0.05	<0.05							<0.05	mg/kg	TM4/PM8
Fluorene #	0.21	0.06	0.13							<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.52	0.08	0.28							<0.03	mg/kg	TM4/PM8
Anthracene #	0.05	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.27	0.10	0.14							<0.03	mg/kg	TM4/PM8
Pyrene #	0.29	0.14	0.17							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.13	0.08	0.09							<0.06	mg/kg	TM4/PM8
Chrysene #	0.13	0.07	0.08							<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.21	0.16	0.14							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.12	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	<0.04	0.07	0.05							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.06	0.07	0.06							<0.04	mg/kg	TM4/PM8
Coronene	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.1	0.9	1.2							<0.6	mg/kg	TM4/PM8
PAH 17 Total	2.06	0.91	1.22							<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.15	0.12	0.10							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.06	0.04	0.04							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	92	96	92							<0	%	TM4/PM8
Mineral Oil (C10-C40) (EH_CU_1D_AL)	1397	812	699							<30	mg/kg	TM5/PM8/PM16



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Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell
EMT Job No: 23/16079

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-4	5-8	9-12								Please see attached notes for all abbreviations and acronyms		
Sample ID	70857/1	70857/2	70857/3										
Depth													
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	28/09/2023	28/09/2023	28/09/2023										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	29/09/2023	29/09/2023	29/09/2023								LOD/LOR	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 (HS_1D_AL) #	<0.1	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>C6-C8 (HS_1D_AL) #	0.6	3.1	0.6								<0.1	mg/kg	TM36/PM12
>C8-C10 (HS_1D_AL)	8.6	34.9	8.4								<0.1	mg/kg	TM36/PM12
>C10-C12 (EH_CU_1D_AL) #	50.1	152.9	66.7								<0.2	mg/kg	TM5/PM8/PM16
>C12-C16 (EH_CU_1D_AL) #	366	297	216								<4	mg/kg	TM5/PM8/PM16
>C16-C21 (EH_CU_1D_AL) #	719	297	332								<7	mg/kg	TM5/PM8/PM16
>C21-C35 (EH_CU_1D_AL) #	262	65	84								<7	mg/kg	TM5/PM8/PM16
>C35-C44 (EH_CU_1D_AL)	<7	<7	<7								<7	mg/kg	TM5/PM8/PM16
Total aliphatics C5-44 (EH+HS_CU_1D_AL)	1406	850	708								<26	mg/kg	TM5/PM8/PM16/PM12
Aromatics													
>C5-EC7 (HS_1D_AR) #	<0.1	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>EC7-EC8 (HS_1D_AR) #	<0.1	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>EC8-EC10 (HS_1D_AR) #	0.2	4.1	0.8								<0.1	mg/kg	TM36/PM12
>EC10-EC12 (EH_CU_1D_AR) #	14.4	30.8	7.5								<0.2	mg/kg	TM5/PM8/PM16
>EC12-EC16 (EH_CU_1D_AR) #	180	120	75								<4	mg/kg	TM5/PM8/PM16
>EC16-EC21 (EH_CU_1D_AR) #	520	216	210								<7	mg/kg	TM5/PM8/PM16
>EC21-EC35 (EH_CU_1D_AR) #	253	60	<7								<7	mg/kg	TM5/PM8/PM16
>EC35-EC44 (EH_CU_1D_AR)	18	<7	<7								<7	mg/kg	TM5/PM8/PM16
Total aromatics C5-44 (EH+HS_CU_1D_AR)	986	431	293								<26	mg/kg	TM5/PM8/PM16/PM12
Total aliphatics and aromatics(C5-44) (EH+HS_CU_1D_Total)	2392	1281	1001								<52	mg/kg	TM5/PM8/PM16/PM12
MTBE #													
MTBE #	<5	10	<5								<5	ug/kg	TM36/PM12
Benzene #	<5	<5	<5								<5	ug/kg	TM36/PM12
Toluene #	<5	<5	<5								<5	ug/kg	TM36/PM12
Ethylbenzene #	61	548	103								<5	ug/kg	TM36/PM12
m/p-Xylene #	85	3091	539								<5	ug/kg	TM36/PM12
o-Xylene #	132	401	73								<5	ug/kg	TM36/PM12
PCB 28 #													
PCB 28 #	<5	<5	<5								<5	ug/kg	TM17/PM8
PCB 52 #	<5	<5	<5								<5	ug/kg	TM17/PM8
PCB 101 #	<5	<5	<5								<5	ug/kg	TM17/PM8
PCB 118 #	<5	<5	<5								<5	ug/kg	TM17/PM8
PCB 138 #	<5	<5	<5								<5	ug/kg	TM17/PM8
PCB 153 #	<5	<5	<5								<5	ug/kg	TM17/PM8
PCB 180 #	<5	<5	<5								<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35	<35	<35								<35	ug/kg	TM17/PM8
Phenol #													
Phenol #	0.04	<0.01	<0.01								<0.01	mg/kg	TM26/PM21B
Natural Moisture Content													
Natural Moisture Content	17.7	16.1	28.6								<0.1	%	PM4/PM0
Hexavalent Chromium #													
Hexavalent Chromium #	<0.3	<0.3	<0.3								<0.3	mg/kg	TM38/PM20

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Location: Barwell Medical Centre
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EMT Job No: 23/16079

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

Client Name: Kiwa CMT
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Please see attached notes for all abbreviations and acronyms

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Mass of sample taken (kg)	0.122	Moisture Content Ratio (%) =	35.8		
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	73.6		
Particle Size <4mm =	>95%				
EMT Job No	23/16079		Landfill Waste Acceptance Criteria Limits		
Sample No	3				
Client Sample No	70857/1				
Depth/Other					
Sample Date	28/09/2023				
Batch No	1				
Solid Waste Analysis			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
Total Organic Carbon (%)	1.11				
Loss on Ignition (%)	3.1				
Sum of BTEX (mg/kg)	0.278				
Sum of 7 PCBs (mg/kg)	<0.035				
Mineral Oil (mg/kg) (EH_CU_1D_AL)	1397				
PAH Sum of 17(mg/kg)	2.06				
pH (pH Units)	7.44				
ANC to pH 7 (mol/kg)	<0.03				
ANC to pH 4 (mol/kg)	0.54				
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
	C ₁₀	A ₁₀			
	mg/l	mg/kg			
Arsenic	0.0047	0.047	0.5	2	25
Barium	0.021	0.21	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.023	0.23	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	0.026	0.26	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.006	0.06	4	50	200
Chloride	21.7	217	800	15000	25000
Fluoride	0.3	3	10	150	500
Sulphate as SO4	64.5	645	1000	20000	50000
Total Dissolved Solids	233	2331	4000	60000	100000
Phenol	0.21	2.1	1	-	-
Dissolved Organic Carbon	10	100	500	800	1000

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Mass of sample taken (kg)	0.1075	Moisture Content Ratio (%) =	19.5		
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	83.7		
Particle Size <4mm =	>95%				
EMT Job No	23/16079		Landfill Waste Acceptance Criteria Limits		
Sample No	7				
Client Sample No	70857/2				
Depth/Other					
Sample Date	28/09/2023				
Batch No	1				
Solid Waste Analysis			Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill	Hazardous Waste Landfill
Total Organic Carbon (%)	0.85				
Loss on Ignition (%)	2.8				
Sum of BTEX (mg/kg)	4.040				
Sum of 7 PCBs (mg/kg)	<0.035				
Mineral Oil (mg/kg) (EH_CU_1D_AL)	812				
PAH Sum of 17(mg/kg)	0.91				
pH (pH Units)	7.92				
ANC to pH 7 (mol/kg)	<0.03				
ANC to pH 4 (mol/kg)	0.06				
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg		
	C ₁₀	A ₁₀			
	mg/l	mg/kg			
Arsenic	0.0036	0.036	0.5	2	25
Barium	0.021	0.21	20	100	300
Cadmium	<0.0005	<0.005	0.04	1	5
Chromium	<0.0015	<0.015	0.5	10	70
Copper	<0.007	<0.07	2	50	100
Mercury	<0.001	<0.01	0.01	0.2	2
Molybdenum	0.009	0.09	0.5	10	30
Nickel	<0.002	<0.02	0.4	10	40
Lead	<0.005	<0.05	0.5	10	50
Antimony	0.008	0.08	0.06	0.7	5
Selenium	<0.003	<0.03	0.1	0.5	7
Zinc	0.004	0.04	4	50	200
Chloride	5.2	52	800	15000	25000
Fluoride	<0.3	<3	10	150	500
Sulphate as SO4	22.6	226	1000	20000	50000
Total Dissolved Solids	131	1309	4000	60000	100000
Phenol	<0.01	<0.1	1	-	-
Dissolved Organic Carbon	7	70	500	800	1000

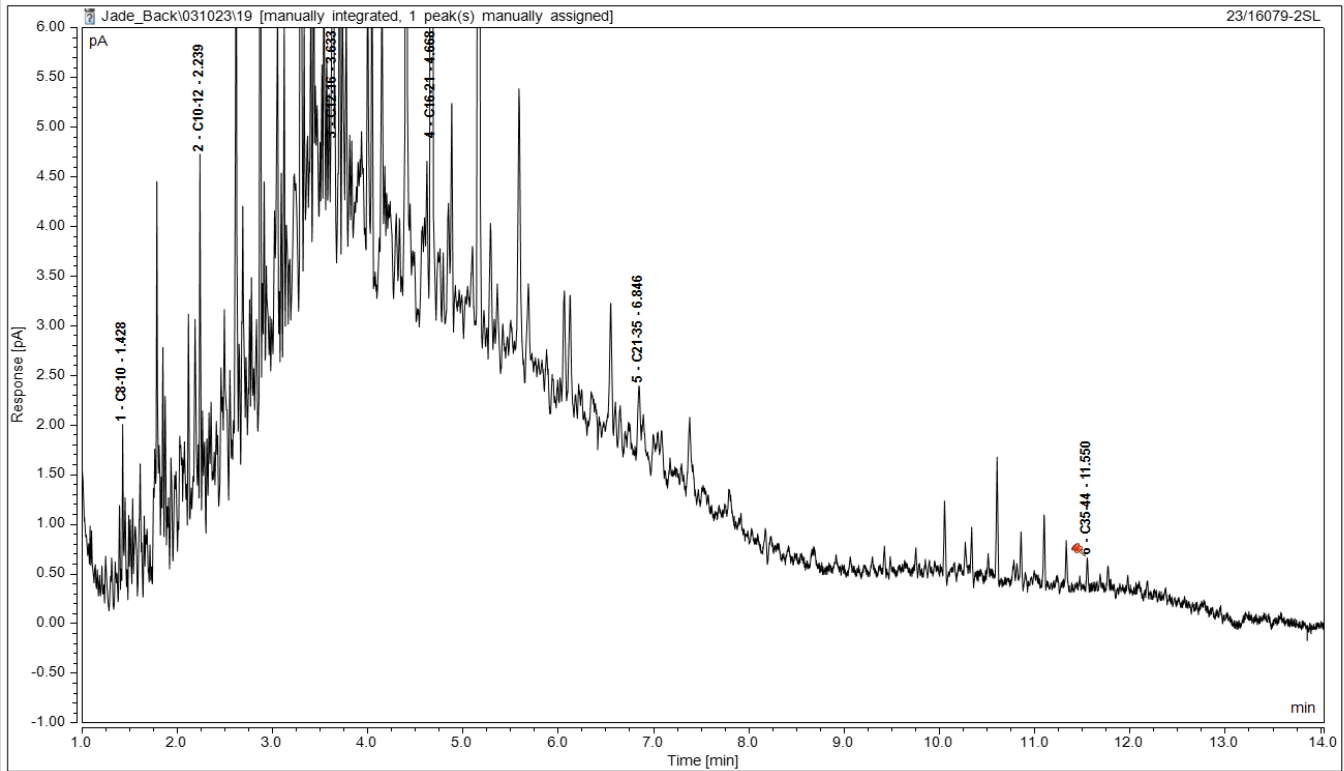
Kiwa CMT

Mass of sample taken (kg)	0.1059	Moisture Content Ratio (%) =	18.3																														
Mass of dry sample (kg) =	0.09	Dry Matter Content Ratio (%) =	84.6																														
Particle Size <4mm =	>95%																																
EMT Job No	23/16079		Landfill Waste Acceptance Criteria Limits																														
Sample No	11																																
Client Sample No	70857/3																																
Depth/Other																																	
Sample Date	28/09/2023																																
Batch No	1																																
Solid Waste Analysis			<table><tr><td>Inert Waste Landfill</td><td>Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill</td><td>Hazardous Waste Landfill</td></tr><tr><td>3</td><td>5</td><td>6</td></tr><tr><td>-</td><td>-</td><td>10</td></tr><tr><td>6</td><td>-</td><td>-</td></tr><tr><td>1</td><td>-</td><td>-</td></tr><tr><td>500</td><td>-</td><td>-</td></tr><tr><td>100</td><td>-</td><td>-</td></tr><tr><td>-</td><td>>6</td><td>-</td></tr><tr><td>-</td><td>to be evaluated</td><td>to be evaluated</td></tr><tr><td>-</td><td>to be evaluated</td><td>to be evaluated</td></tr></table>	Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	3	5	6	-	-	10	6	-	-	1	-	-	500	-	-	100	-	-	-	>6	-	-	to be evaluated	to be evaluated	-	to be evaluated	to be evaluated
Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill																															
3	5	6																															
-	-	10																															
6	-	-																															
1	-	-																															
500	-	-																															
100	-	-																															
-	>6	-																															
-	to be evaluated	to be evaluated																															
-	to be evaluated	to be evaluated																															
Total Organic Carbon (%)	2.07																																
Loss on Ignition (%)	5.0																																
Sum of BTEX (mg/kg)	0.715																																
Sum of 7 PCBs (mg/kg)	<0.035																																
Mineral Oil (mg/kg) (EH_CU_1D_AL)	699																																
PAH Sum of 17(mg/kg)	1.22																																
pH (pH Units)	7.99																																
ANC to pH 7 (mol/kg)	<0.03																																
ANC to pH 4 (mol/kg)	0.06																																
Eluate Analysis	10:1 conc ⁿ leached		Limit values for compliance leaching test using BS EN 12457-2 at L/S 10 l/kg																														
	C ₁₀	A ₁₀																															
	mg/l	mg/kg																															
Arsenic	0.0042	0.042	0.5	2	25																												
Barium	0.015	0.15	20	100	300																												
Cadmium	<0.0005	<0.005	0.04	1	5																												
Chromium	<0.0015	<0.015	0.5	10	70																												
Copper	<0.007	<0.07	2	50	100																												
Mercury	<0.001	<0.01	0.01	0.2	2																												
Molybdenum	0.014	0.14	0.5	10	30																												
Nickel	<0.002	<0.02	0.4	10	40																												
Lead	<0.005	<0.05	0.5	10	50																												
Antimony	0.006	0.06	0.06	0.7	5																												
Selenium	<0.003	<0.03	0.1	0.5	7																												
Zinc	0.004	0.04	4	50	200																												
Chloride	4.5	45	800	15000	25000																												
Fluoride	<0.3	<3	10	150	500																												
Sulphate as SO4	27.2	272	1000	20000	50000																												
Total Dissolved Solids	132	1321	4000	60000	100000																												
Phenol	<0.01	<0.1	1	-	-																												
Dissolved Organic Carbon	8	80	500	800	1000																												

Kiwa CMT

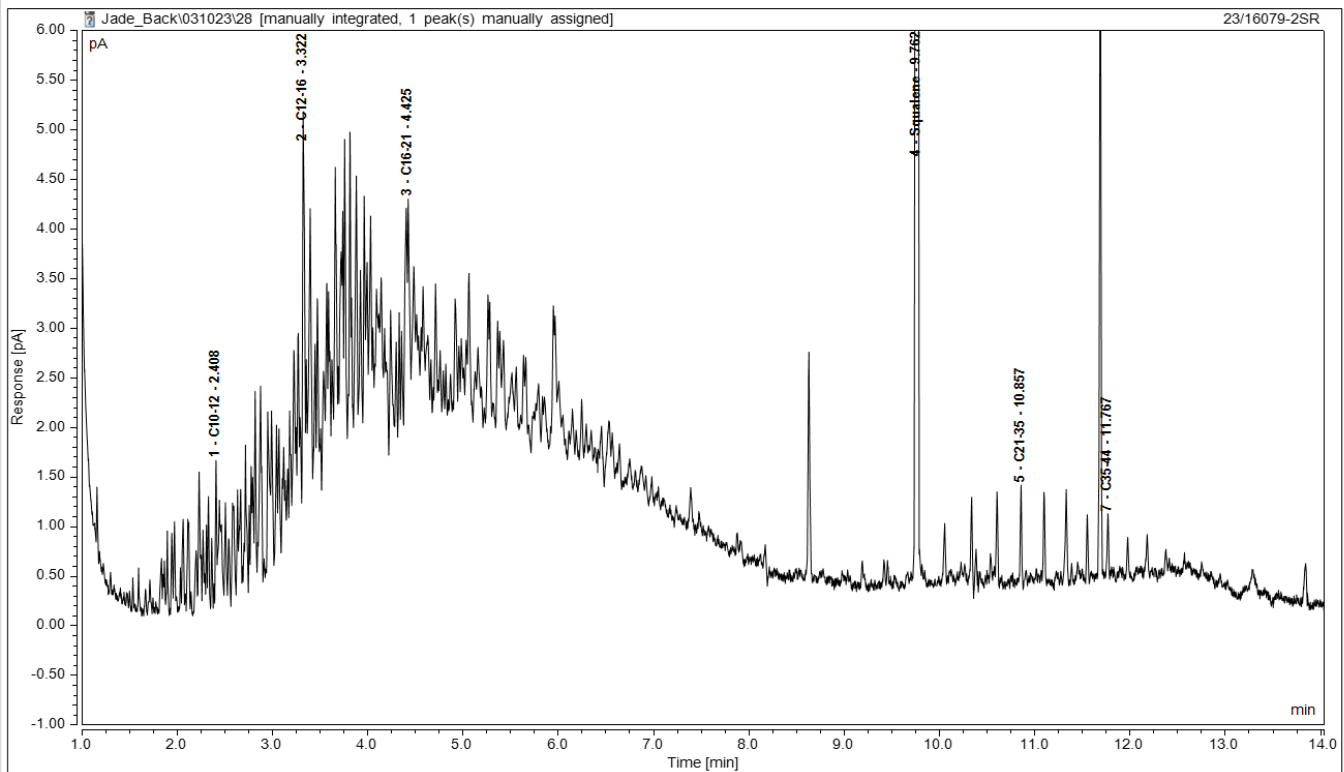
Client Name: Kiwa CMT
 Reference: 70857
 Location: Barwell Medical Centre
 Contact: Alex Fell

EMT Job No.: 23/16079
 EMT Sample No.: 2
 Sample Identity: 70857/1
 Depth:
 Matrix: Solid



Client Name: Kiwa CMT
 Reference: 70857
 Location: Barwell Medical Centre
 Contact: Alex Fell

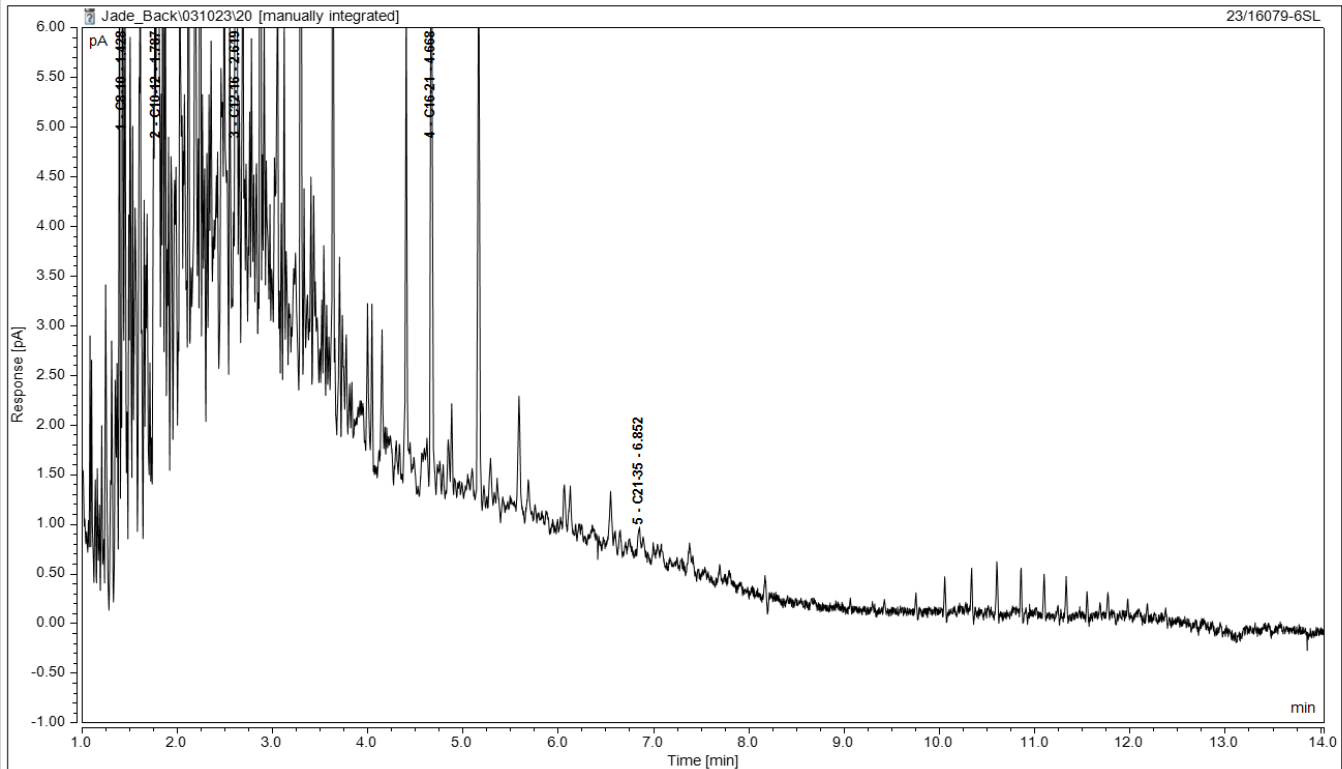
EMT Job No.: 23/16079
 EMT Sample No.: 2
 Sample Identity: 70857/1
 Depth:
 Matrix: Solid



Kiwa CMT

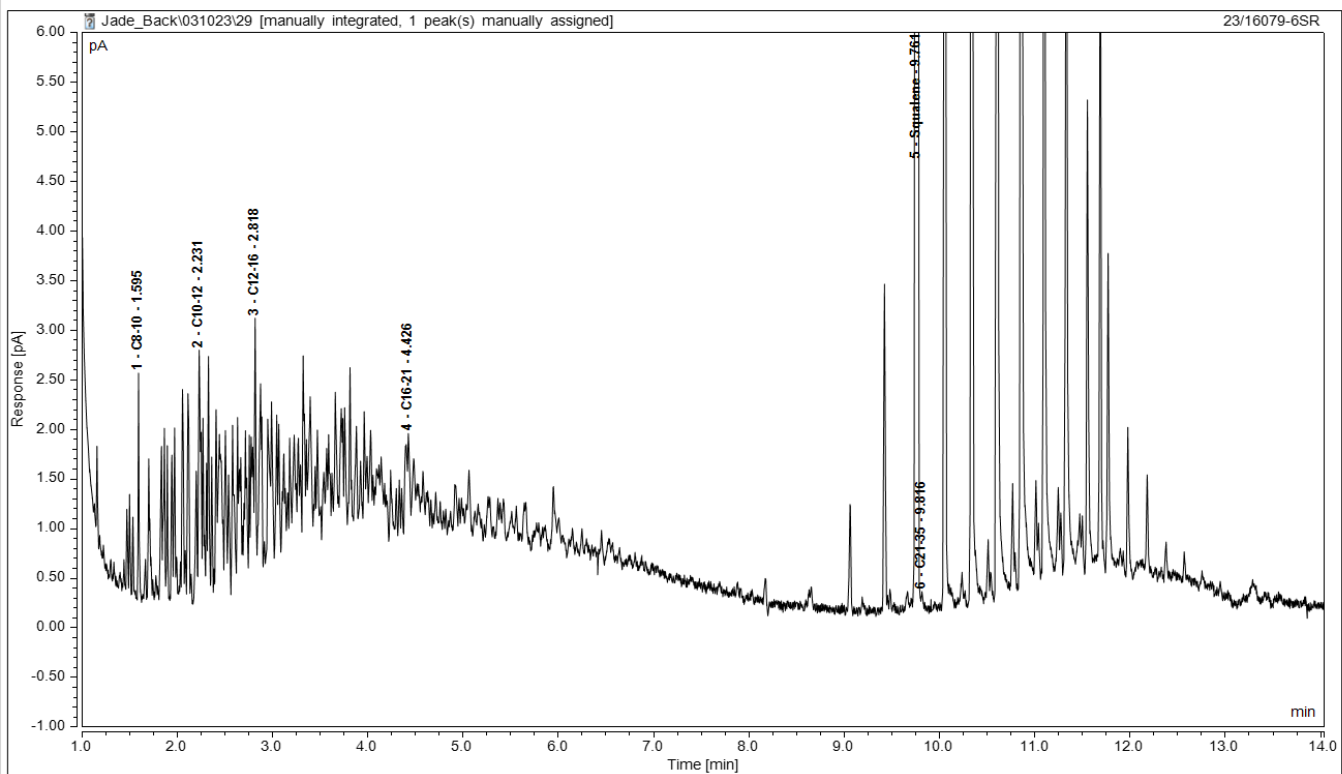
Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell

EMT Job No.: 23/16079
EMT Sample No.: 6
Sample Identity: 70857/2
Depth:
Matrix: Solid



Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell

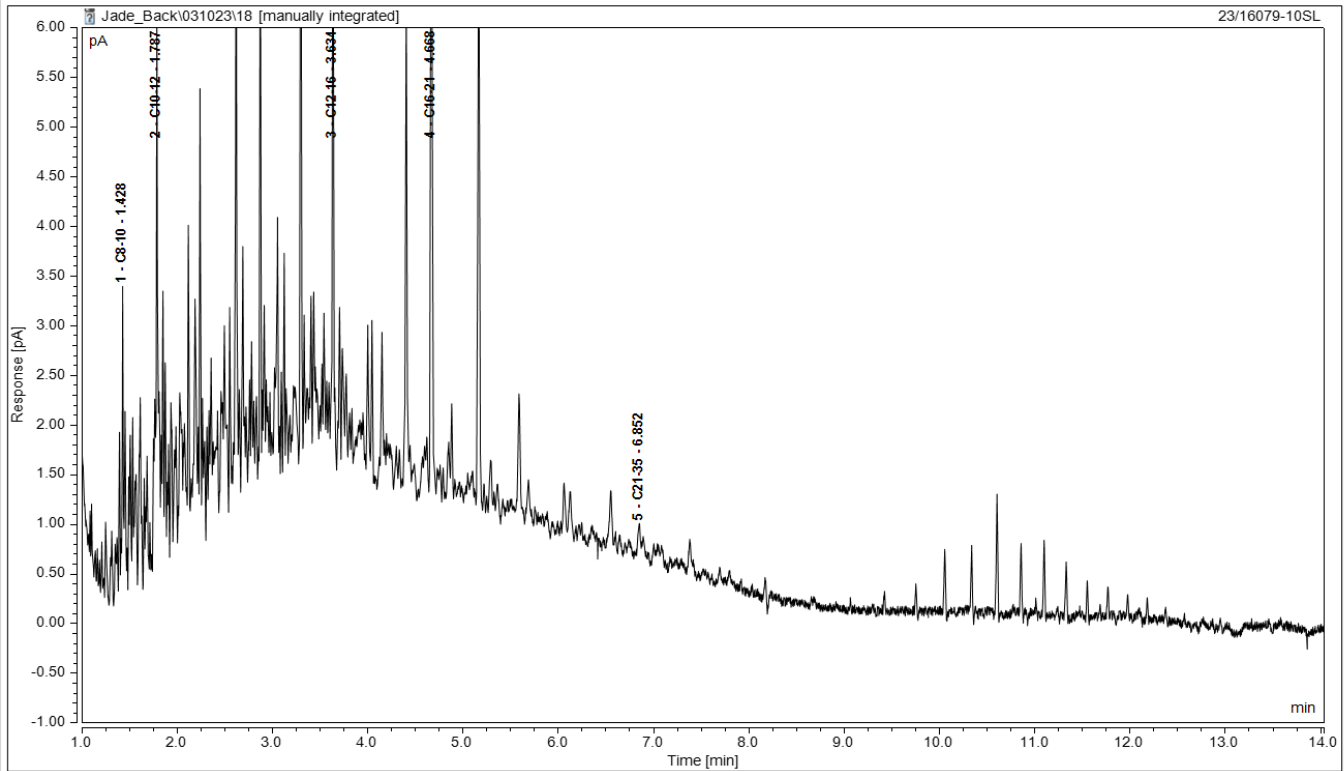
EMT Job No.: 23/16079
EMT Sample No.: 6
Sample Identity: 70857/2
Depth:
Matrix: Solid



Kiwa CMT

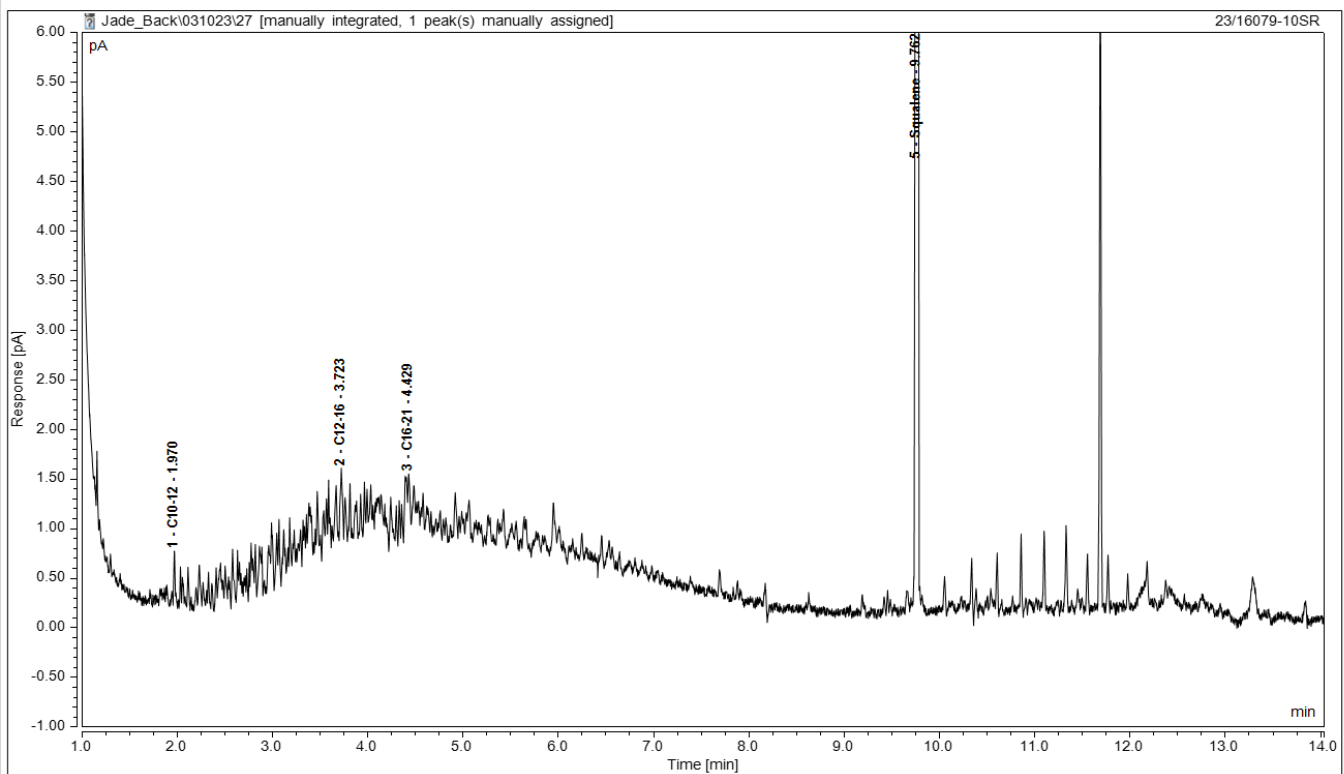
Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell

EMT Job No.: 23/16079
EMT Sample No.: 10
Sample Identity: 70857/3
Depth:
Matrix: Solid



Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell

EMT Job No.: 23/16079
EMT Sample No.: 10
Sample Identity: 70857/3
Depth:
Matrix: Solid



Kiwa CMT

Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
23/16079	1	70857/1		4	Matthew Turner	29/09/2023	General Description (Bulk Analysis)	Brown soil/Stone
					Matthew Turner	29/09/2023	Asbestos Fibres	Fibre Bundles
					Matthew Turner	29/09/2023	Asbestos ACM	NAD
					Remigiusz Blichowski	29/09/2023	Asbestos Type	Chrysotile
23/16079	1	70857/2		8	Matthew Turner	29/09/2023	General Description (Bulk Analysis)	Brown soil/Stone
					Matthew Turner	29/09/2023	Asbestos Fibres	Fibre Bundles
					Matthew Turner	29/09/2023	Asbestos ACM	NAD
					Remigiusz Blichowski	29/09/2023	Asbestos Type	Chrysotile
23/16079	1	70857/3		12	Matthew Turner	29/09/2023	General Description (Bulk Analysis)	Brown soil/Stone
					Matthew Turner	29/09/2023	Asbestos Fibres	Fibre Bundles
					Matthew Turner	29/09/2023	Asbestos ACM	NAD
					Remigiusz Blichowski	29/09/2023	Asbestos Type	Chrysotile

Kiwa CMT

Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
23/16079	1	70857/1		4	Matthew Turner	02/10/2023	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
					Matthew Turner	02/10/2023	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.001 (mass %)
					Matthew Turner	02/10/2023	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Asbestos Gravimetric & PCOM Total	0.001 (mass %)
23/16079	1	70857/2		8	Matthew Turner	02/10/2023	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
23/16079	1	70857/3		12	Matthew Turner	02/10/2023	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
					Matthew Turner	02/10/2023	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.001 (mass %)
					Matthew Turner	02/10/2023	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					Matthew Turner	02/10/2023	Asbestos Gravimetric & PCOM Total	0.001 (mass %)

Client Name: Kiwa CMT
Reference: 70857
Location: Barwell Medical Centre
Contact: Alex Fell

[illegible]

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 23/16079

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

HWOL ACRONYMS AND OPERATORS USED

HS	Headspace Analysis.
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent.
CU	Clean-up - e.g. by florisil, silica gel.
1D	GC - Single coil gas chromatography.
Total	Aliphatics & Aromatics.
AL	Aliphatics only.
AR	Aromatics only.
2D	GC-GC - Double coil gas chromatography.
#1	EH_Total but with humics mathematically subtracted
#2	EU_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +).
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry.

EMT Job No: 23/16079

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GC/FID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GC/FID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8/PM16	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required/Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TMS/TM36	please refer to TMS and TM36 for method details	PM8/PM12/PM16	please refer to PM8/PM16 and PM12 for method details			AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM20	Modified BS 1377-3:1990/USEPA 160.1/3 (TDS/TS: 1971) Gravimetric determination of Total Dissolved Solids/Total Solids	PM0	No preparation is required.			AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.			AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Preparation of Soil and Marine Sediment Samples for Total Organic Carbon.	Yes		AD	Yes

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM22	Modified BS1377-3:1990 Gravimetric determination of Loss on Ignition by temperature controlled Muffle Furnace (35C-440C). On request modified ASTM D2974-00 LOI (105C-440C)	PM0	No preparation is required.	Yes		AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.			AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec. 1996; Modified BS EN ISO 11885:2009. SOILS by Modified USEP 6010B, Rev.2, Dec. 1996; Modified EPA Method 3050B, Rev.2, Dec. 1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec. 1996; Modified BS EN ISO 11885:2009. SOILS by Modified USEP 6010B, Rev.2, Dec. 1996; Modified EPA Method 3050B, Rev.2, Dec. 1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B v2:1996. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID. MTBE by GC/FID co-elutes with 3-methylpentane if present and therefore can give a false positive. Positive MTBE results will be re-run using GC-MS to double check, when requested.	PM12	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), α-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM0	No preparation is required.	Yes		AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), α-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013I	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	A hot hydrochloric acid digest is performed on a dried and ground sample, and the resulting liquor is analysed.	Yes		AD	Yes

EMT Job No: 23/16079

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM60	TC/TOC analysis of Waters by High Temperature Combustion followed by NDIR detection. Based on the following modified standard methods: USEPA 9060A (2002), APHA SM5210B-1999 22nd Edition, ASTM D 7573, and USEPA 415.1.	PM0	No preparation is required.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes		AD	Yes
TM77	Modified DDCEN/TS method 15364:2006. Determination of Acid Neutralization Capacity by Metrohm automated probe analyser.	PM0	No preparation is required.			AR	No
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes
TM170	Determination of Trace Metals by ICP-MS (Inductively Coupled Plasma – Mass Spectrometry): Modified USEPA Method 200.8, Rev. 5.4, 1994; Modified EPA Method 6020A, Rev.1, Feb 2007; Modified BS EN ISO 17294-2:2016	PM14	Preparation of waters and leachates for metals by ICP OES/ICP MS. Samples are filtered for Dissolved metals, and remain unfiltered for Total metals then acidified	Yes		AR	Yes
TM173	Analysis of fluoride by ISE (Ion Selective Electrode) using modified ISE method 9214 - 340.2 (EPA 1998)	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	PM17	Modified method BS EN12457-2:2002 As received solid samples are leached with water in a 10:1 water to soil ratio for 24 hours, the moisture content of the sample is included in the ratio.				
NONE	No Method Code	PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.			AR	

Appendix 4

Waste Assessment Outputs

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)



95083-PQ3TS-SETH

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

Job name

70857

Description/Comments

General Characterisation of Soil

Project

CSJ Construction Ltd.

Site

Barwell Medical Centre

Classified by

Name:

Alex Fell

Date:

05 Oct 2023 15:34 GMT

Telephone:

01332 383333

Company:

Kiwa CMT

Unit 5 Prime Park Way

Derby

DE1 3QB

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

03 Dec 2020

Next 3 year Refresher due by Dec 2023

Purpose of classification

7 - Disposal of Waste

Address of the waste

Barwell Medical Centre, High Street, Leicester

Post Code LE9 8DS

SIC for the process giving rise to the waste

42990 Construction of other civil engineering projects n.e.c.

Description of industry/producer giving rise to the waste

Construction contractor.

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

Waste created in the excavation of soil.

Description of the waste

See main report.



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	70857/1-28/09/2023		Hazardous	HP 7, HP 11	3
2	70857/2-28/09/2023		Hazardous	HP 7, HP 11	6
3	70857/3-28/09/2023		Non Hazardous		9

Related documents

#	Name	Description
1	EMT-23-16079-Batch-1-Sched-A-202310051607.HWOL	Element .hwol file used to populate the Job
2	Contamination Suite	waste stream template used to create this Job

Report

Created by: Alex Fell

Created date: 05 Oct 2023 15:34 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	12
Appendix B: Rationale for selection of metal species	14
Appendix C: Version	15

Classification of sample: 70857/1-28/09/2023

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

Sample details

Sample name:	LoW Code:
70857/1-28/09/2023	Chapter:
Moisture content:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
17.7%	Entry:
(dry weight correction)	17 05 03 * (Soil and stones containing hazardous substances)

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.: 0.203%)

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.: 0.203%)

Determinands

Moisture content: 17.7% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	pH				7.44 pH		7.44 pH	7.44 pH		
2	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									
3	phenol				0.04 mg/kg		0.034 mg/kg	0.0000034 %	✓	
	604-001-00-2	203-632-7	108-95-2							
4	antimony { antimony trioxide }				2 mg/kg	1.197	2.034 mg/kg	0.000203 %	✓	
	051-005-00-X	215-175-0	1309-64-4							
5	arsenic { arsenic trioxide }				5.1 mg/kg	1.32	5.721 mg/kg	0.000572 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
6	cadmium { cadmium oxide }				0.3 mg/kg	1.142	0.291 mg/kg	0.0000291 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				75.8 mg/kg	1.462	94.126 mg/kg	0.00941 %	✓	
		215-160-9	1308-38-9							
8	copper { copper(II) oxide }				34 mg/kg	1.252	36.16 mg/kg	0.00362 %	✓	
	029-016-00-6	215-269-1	1317-38-0							

#	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								
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	37 mg/kg		31.436	mg/kg	0.00314 %	✓	
	082-001-00-6										
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }			1	<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	080-002-00-6										
11	nickel { nickel(II) carbonate }				12.8 mg/kg	2.022	21.994	mg/kg	0.0022 %	✓	
	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]								
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1 mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
	034-002-00-8										
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				25 mg/kg	1.785	37.918	mg/kg	0.00379 %	✓	
	023-001-00-8	215-239-8	1314-62-1								
14	boron { diboron trioxide; boric oxide }				1.2 mg/kg	3.22	3.283	mg/kg	0.000328 %	✓	
	005-008-00-8	215-125-8	1303-86-2								
15	zinc { zinc oxide }				77 mg/kg	1.245	81.43	mg/kg	0.00814 %	✓	
	030-013-00-7	215-222-5	1314-13-2								
16	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.3 mg/kg	1.923	<0.577	mg/kg	<0.0000577 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
17	TPH (C6 to C40) petroleum group				2392 mg/kg		2032.285	mg/kg	0.203 %	✓	
			TPH								
18	naphthalene				<0.04 mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
19	acenaphthylene				<0.03 mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	208-96-8								
20	acenaphthene				0.07 mg/kg		0.0595	mg/kg	0.00000595 %	✓	
		201-469-6	83-32-9								
21	fluorene				0.21 mg/kg		0.178	mg/kg	0.0000178 %	✓	
		201-695-5	86-73-7								
22	phenanthrene				0.52 mg/kg		0.442	mg/kg	0.0000442 %	✓	
		201-581-5	85-01-8								
23	anthracene				0.05 mg/kg		0.0425	mg/kg	0.00000425 %	✓	
		204-371-1	120-12-7								
24	fluoranthene				0.27 mg/kg		0.229	mg/kg	0.0000229 %	✓	
		205-912-4	206-44-0								
25	pyrene				0.29 mg/kg		0.246	mg/kg	0.0000246 %	✓	
		204-927-3	129-00-0								
26	benzo[a]anthracene				0.13 mg/kg		0.11	mg/kg	0.000011 %	✓	
	601-033-00-9	200-280-6	56-55-3								
27	chrysene				0.13 mg/kg		0.11	mg/kg	0.000011 %	✓	
	601-048-00-0	205-923-4	218-01-9								
28	benzo[bk]fluoranthene				0.21 mg/kg		0.178	mg/kg	0.0000178 %	✓	
		[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9								
29	benzo[a]pyrene; benzo[def]chrysene				0.12 mg/kg		0.102	mg/kg	0.0000102 %	✓	
	601-032-00-3	200-028-5	50-32-8								
30	indeno[123-cd]pyrene				<0.04 mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		205-893-2	193-39-5								
31	dibenz[a,h]anthracene				<0.04 mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
32	benzo[ghi]perylene				0.06 mg/kg		0.051	mg/kg	0.0000051 %	✓	
		205-883-8	191-24-2								

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
33		asbestos				100 mg/kg		84.962 mg/kg	0.0085 %	✓	
	650-013-00-6	-----	12001-28-4								
			132207-32-0								
			12172-73-5								
			77536-66-4								
		77536-68-6									
		77536-67-5									
		12001-29-5									
34		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
35		benzene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
36		toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
37	●	ethylbenzene				0.061 mg/kg		0.0518 mg/kg	0.00000518 %	✓	
	601-023-00-4	202-849-4	100-41-4								
38	●	polychlorobiphenyls; PCB				<0.035 mg/kg		<0.035 mg/kg	<0.0000035 %		<LOD
	602-039-00-4	215-648-1	1336-36-3								
39	●	coronene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
		205-881-7	191-07-1								
40		xylene				0.217 mg/kg		0.184 mg/kg	0.0000184 %	✓	
	601-022-00-9	202-422-2 [1]	95-47-6 [1]								
		203-396-5 [2]	106-42-3 [2]								
		203-576-3 [3]	108-38-3 [3]								
		215-535-7 [4]	1330-20-7 [4]								
Total:									0.244 %		

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
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 It is highly unlikely that soils (generally a refractory matrix) will be classified as flammable at concentrations of 1.00% or less. (AGS, 2019). This property is thus disregarded as potentially flammable.

Hazard Statements hit:

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

Because of determinand:

ethylbenzene: (conc.: 5.18e-06%)

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

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.203%)

xylene: (conc.: 0.00001%)

Classification of sample: 70857/2-28/09/2023

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

Sample details

Sample name:	LoW Code:
70857/2-28/09/2023	Chapter:
Moisture content:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
16.1%	Entry:
(dry weight correction)	17 05 03 * (Soil and stones containing hazardous substances)

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.: 0.11%)

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.: 0.11%)

Determinands

Moisture content: 16.1% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	pH				7.92 pH		7.92	pH	7.92 pH		
2	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										
3	phenol				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	604-001-00-2	203-632-7	108-95-2								
4	antimony { antimony trioxide }				2 mg/kg	1.197	2.062	mg/kg	0.000206 %	✓	
	051-005-00-X	215-175-0	1309-64-4								
5	arsenic { arsenic trioxide }				5.6 mg/kg	1.32	6.368	mg/kg	0.000637 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
6	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								
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				89.9 mg/kg	1.462	113.173	mg/kg	0.0113 %	✓	
		215-160-9	1308-38-9								
8	copper { copper(II) oxide }				37 mg/kg	1.252	39.893	mg/kg	0.00399 %	✓	
	029-016-00-6	215-269-1	1317-38-0								

#	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									
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	28	mg/kg		24.117	mg/kg	0.00241 %	✓	
	082-001-00-6											
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }			1	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	080-002-00-6											
11	nickel { nickel(II) carbonate }				16.6	mg/kg	2.022	28.917	mg/kg	0.00289 %	✓	
	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]									
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
	034-002-00-8											
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				28	mg/kg	1.785	43.054	mg/kg	0.00431 %	✓	
	023-001-00-8	215-239-8	1314-62-1									
14	boron { diboron trioxide; boric oxide }				2.2	mg/kg	3.22	6.101	mg/kg	0.00061 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
15	zinc { zinc oxide }				77	mg/kg	1.245	82.552	mg/kg	0.00826 %	✓	
	030-013-00-7	215-222-5	1314-13-2									
16	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.3	mg/kg	1.923	<0.577	mg/kg	<0.0000577 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
17	TPH (C6 to C40) petroleum group				1281	mg/kg		1103.359	mg/kg	0.11 %	✓	
			TPH									
18	naphthalene				0.08	mg/kg		0.0689	mg/kg	0.00000689 %	✓	
	601-052-00-2	202-049-5	91-20-3									
19	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-917-1	208-96-8									
20	acenaphthene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		201-469-6	83-32-9									
21	fluorene				0.06	mg/kg		0.0517	mg/kg	0.00000517 %	✓	
		201-695-5	86-73-7									
22	phenanthrene				0.08	mg/kg		0.0689	mg/kg	0.00000689 %	✓	
		201-581-5	85-01-8									
23	anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		204-371-1	120-12-7									
24	fluoranthene				0.1	mg/kg		0.0861	mg/kg	0.00000861 %	✓	
		205-912-4	206-44-0									
25	pyrene				0.14	mg/kg		0.121	mg/kg	0.0000121 %	✓	
		204-927-3	129-00-0									
26	benzo[a]anthracene				0.08	mg/kg		0.0689	mg/kg	0.00000689 %	✓	
	601-033-00-9	200-280-6	56-55-3									
27	chrysene				0.07	mg/kg		0.0603	mg/kg	0.00000603 %	✓	
	601-048-00-0	205-923-4	218-01-9									
28	benzo[bk]fluoranthene				0.16	mg/kg		0.138	mg/kg	0.0000138 %	✓	
		[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9									
29	benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-032-00-3	200-028-5	50-32-8									
30	indeno[123-cd]pyrene				0.07	mg/kg		0.0603	mg/kg	0.00000603 %	✓	
		205-893-2	193-39-5									
31	dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
32	benzo[ghi]perylene				0.07	mg/kg		0.0603	mg/kg	0.00000603 %	✓	
		205-883-8	191-24-2									

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
33		asbestos				<100 mg/kg		<100 mg/kg	<0.01 %		<LOD
	650-013-00-6	-----	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5								
34		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				0.01 mg/kg		0.0086 mg/kg	0.000000861 %	✓	
	603-181-00-X	216-653-1	1634-04-4								
35		benzene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
36		toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
37	■	ethylbenzene				0.548 mg/kg		0.472 mg/kg	0.0000472 %	✓	
	601-023-00-4	202-849-4	100-41-4								
38	■	polychlorobiphenyls; PCB				<0.035 mg/kg		<0.035 mg/kg	<0.0000035 %		<LOD
	602-039-00-4	215-648-1	1336-36-3								
39	■	coronene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
		205-881-7	191-07-1								
40		xylene				3.492 mg/kg		3.008 mg/kg	0.000301 %	✓	
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
Total:									0.156 %		

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
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 It is highly unlikely that soils (generally a refractory matrix) will be classified as flammable at concentrations of 1.00% or less. (AGS, 2019). This property is thus disregarded as potentially flammable.

Hazard Statements hit:

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

Because of determinands:

tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane: (conc.: 8.61e-07%)

ethylbenzene: (conc.: 0.00004%)

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

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.11%)

xylene: (conc.: 0.0003%)

Classification of sample: 70857/3-28/09/2023


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

Sample details

Sample name:	LoW Code:
70857/3-28/09/2023	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Moisture content:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
28.6% (dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 28.6% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	pH				7.99	pH		7.99	pH	7.99 pH		
2	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											
3	phenol				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	604-001-00-2	203-632-7	108-95-2									
4	antimony { antimony trioxide }				2	mg/kg	1.197	1.862	mg/kg	0.000186 %	✓	
	051-005-00-X	215-175-0	1309-64-4									
5	arsenic { arsenic trioxide }				5.8	mg/kg	1.32	5.955	mg/kg	0.000595 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
6	cadmium { cadmium oxide }				0.2	mg/kg	1.142	0.178	mg/kg	0.0000178 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
7	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				77.8	mg/kg	1.462	88.421	mg/kg	0.00884 %	✓	
		215-160-9	1308-38-9									
8	copper { copper(II) oxide }				24	mg/kg	1.252	23.361	mg/kg	0.00234 %	✓	
	029-016-00-6	215-269-1	1317-38-0									
9	lead { lead compounds with the exception of those specified elsewhere in this Annex (worst case) }			1	22	mg/kg		17.107	mg/kg	0.00171 %	✓	
	082-001-00-6											
10	mercury { inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex }			1	<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	080-002-00-6											
11	nickel { nickel(II) carbonate }				24	mg/kg	2.022	37.743	mg/kg	0.00377 %	✓	
	028-010-00-0	222-068-2 [1] 240-408-8 [2] 265-748-4 [3] 235-715-9 [4]	3333-67-3 [1] 16337-84-1 [2] 65405-96-1 [3] 12607-70-4 [4]									
12	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
	034-002-00-8											



#		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									
13	 vanadium {  divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		30	mg/kg	1.785	41.645	mg/kg	0.00416 %	✓	
14	 boron { diboron trioxide; boric oxide }	005-008-00-8	215-125-8	1303-86-2		2.1	mg/kg	3.22	5.258	mg/kg	0.000526 %	✓	
15	 zinc { zinc oxide }	030-013-00-7	215-222-5	1314-13-2		78	mg/kg	1.245	75.496	mg/kg	0.00755 %	✓	
16	 chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.3	mg/kg	1.923	<0.577	mg/kg	<0.0000577 %		<LOD
17	 TPH (C6 to C40) petroleum group			TPH		1001	mg/kg		778.383	mg/kg	0.0778 %	✓	
18	 naphthalene	601-052-00-2	202-049-5	91-20-3		0.08	mg/kg		0.0622	mg/kg	0.00000622 %	✓	
19	 acenaphthylene		205-917-1	208-96-8		<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
20	 acenaphthene		201-469-6	83-32-9		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
21	 fluorene		201-695-5	86-73-7		0.13	mg/kg		0.101	mg/kg	0.0000101 %	✓	
22	 phenanthrene		201-581-5	85-01-8		0.28	mg/kg		0.218	mg/kg	0.0000218 %	✓	
23	 anthracene		204-371-1	120-12-7		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
24	 fluoranthene		205-912-4	206-44-0		0.14	mg/kg		0.109	mg/kg	0.0000109 %	✓	
25	 pyrene		204-927-3	129-00-0		0.17	mg/kg		0.132	mg/kg	0.0000132 %	✓	
26	 benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.09	mg/kg		0.07	mg/kg	0.000007 %	✓	
27	 chrysene	601-048-00-0	205-923-4	218-01-9		0.08	mg/kg		0.0622	mg/kg	0.00000622 %	✓	
28	 benzo[bk]fluoranthene	[1] 205-911-9 [2] 205-916-6	[1] 205-99-2 [2] 207-08-9			0.14	mg/kg		0.109	mg/kg	0.0000109 %	✓	
29	 benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
30	 indeno[123-cd]pyrene		205-893-2	193-39-5		0.05	mg/kg		0.0389	mg/kg	0.00000389 %	✓	
31	 dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
32	 benzo[ghi]perylene		205-883-8	191-24-2		0.06	mg/kg		0.0467	mg/kg	0.00000467 %	✓	
33	 asbestos	650-013-00-6	-----	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		100	mg/kg		77.76	mg/kg	0.00778 %	✓	
34	 tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
35	 benzene	601-020-00-8	200-753-7	71-43-2		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
36	 toluene	601-021-00-3	203-625-9	108-88-3		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
37	 ethylbenzene	601-023-00-4	202-849-4	100-41-4		0.103	mg/kg		0.0801	mg/kg	0.00000801 %	✓	

#	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							
38	polychlorobiphenyls; PCB				<0.035 mg/kg		<0.035 mg/kg	<0.0000035 %		<LOD
	602-039-00-4	215-648-1	1336-36-3							
39	coronene				<0.04 mg/kg		<0.04 mg/kg	<0.000004 %		<LOD
		205-881-7	191-07-1							
40	xylene				0.612 mg/kg		0.476 mg/kg	0.0000476 %	✓	
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]							
Total:								0.116 %		

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
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 It is highly unlikely that soils (generally a refractory matrix) will be classified as flammable at concentrations of 1.00% or less. (AGS, 2019). This property is thus disregarded as potentially flammable.

Hazard Statements hit:

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

Because of determinand:

ethylbenzene: (conc.: 8.01e-06%)

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

Because of determinands:

TPH (C6 to C40) petroleum group: (conc.: 0.0778%)

xylene: (conc.: 0.00004%)

Appendix A: Classifier defined and non GB MCL determinands

■ pH (CAS Number: PH)

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

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

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

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

Description/Comments: Data from C&L Inventory Database
 Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>
 Data source date: 17 Jul 2015
 Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

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

GB MCL index number: 082-001-00-6
 Description/Comments: Worst Case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers lead compounds from smelting industries, flue dust and similar to be Carcinogenic category 1A
 Additional Hazard Statement(s): Carc. 1A; H350
 Reason for additional Hazards Statement(s):
 20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html (worst case lead compounds). Review date 29/09/2015

■ divanadium pentaoxide; vanadium pentoxide (EC Number: 215-239-8, CAS Number: 1314-62-1)

GB MCL index number: 023-001-00-8
 Description/Comments: Hazard statements H301, H330, H350 added by HazWasteOnline due to ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be Carc. 1B; H350. The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
 Additional Hazard Statement(s): Carc. 1B; H350 , Acute Tox. 3; H301 , Acute Tox. 2; H330
 Reason for additional Hazards Statement(s):
 20 Sep 2022 - Carc. 1B; H350 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be Carc. 1B; H350. The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
 28 Sep 2022 - Acute Tox. 3; H301 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 3; H301". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
 28 Sep 2022 - Acute Tox. 2; H330 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 2; H330". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.

■ 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

■ 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

▪ **benzo[bk]fluoranthene** (EC Number: [1] 205-911-9 [2] 205-916-6, CAS Number: [1] 205-99-2 [2] 207-08-9)

Description/Comments: Combined data from harmonised entries in CLP for benzo[b] and benzo[k]fluoranthene; C&L Inventory Database

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

Data source date: 02 Mar 2017

Hazard Statements: Carc. 1B; H350 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2; H351

▪ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

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

Data source date: 23 Jul 2015

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

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

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

■ **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4

Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.

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

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

■ **coronene** (EC Number: 205-881-7, CAS Number: 191-07-1)

Description/Comments: Data from C&L Inventory Database; no entries in Registered Substances or Pesticides Properties databases; SDS: Sigma Aldrich, 1907/2006 compliant, dated 2012 - no entries; IARC – Group 3, not carcinogenic.

Data source: <http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=17010&HarmOnly=no?fc=true&lang=en>

Data source date: 16 Jun 2014

Hazard Statements: STOT SE 2; H371

Appendix B: Rationale for selection of metal species

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

Worst case species

antimony {antimony trioxide}

Potentially carcinogenic. Most likely to negatively impact human health. If lots of sulfide is present then consider stoichiometric relativity of that, trisulfide is also a 2B carcinogen. Worst case CLP species based on hazard statements/molecular weight and low solubility. Industrial sources include: flame retardants in electrical apparatus, textiles and coatings.

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.

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. 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.

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

Reasonable case CLP entry based on Hazard Statements.

copper {copper(II) oxide}

Divalent Oxide. Reasonable case CLP entry based on Hazard Statements and low solubility. Oxidised form of Copper most likely to be present. Divalent copper is most likely to be bound to soils and organic matter. Worst case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected.

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

There is an insufficient quantity of Chromium VI available to stoichiometrically form Chromate Compounds, as such the next most likely worst-case species has been selected for assessment. The concentration of Chromium VI is noted to be less than the detection limit of the analytical test.

mercury {inorganic compounds of mercury with the exception of mercuric sulphide and those specified elsewhere in this Annex}

Worst case species based on risk phrases, dichloride too soluble

nickel {nickel(II) carbonate}

Divalent Carbonate. Reasonable case CLP entry based on Hazard Statements and low solubility. Nickel Selenite (if lots of selenium). Nickel Chromate (if lots of Chromium).

selenium {selenium compounds with the exception of cadmium sulposelenide and those specified elsewhere in this Annex}

Worst case species based on risk phrases

vanadium {divanadium pentaoxide; vanadium pentoxide}

Likely species

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.

zinc {zinc oxide}

Most likely species of Zinc in soil is as Zinc Oxide or Silicate. Sulfates and Chlorides are very soluble and unlikely to be present. Sulfides are unlikely to be present in this sample. Silicate is not an option. Zinc Oxide is selected as the most likely species.

chromium in chromium(VI) compounds {chromium(VI) oxide}

most likely species

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2023.271.5764.10641 (28 Sep 2023)

HazWasteOnline Database: 2023.270.5761.10634 (27 Sep 2023)

This classification utilises the following guidance and legislation:

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

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

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

2nd ATP - Regulation 286/2011/EC of 10 March 2011

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

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

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

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

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

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

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

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

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

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

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

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

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

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

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

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

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

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

2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

Appendix 5

Photographs

**Figure 1: Photograph of Stockpile 1****Figure 2: Photograph of Stockpile 1**



Figure 3: Photograph of Stockpile 2



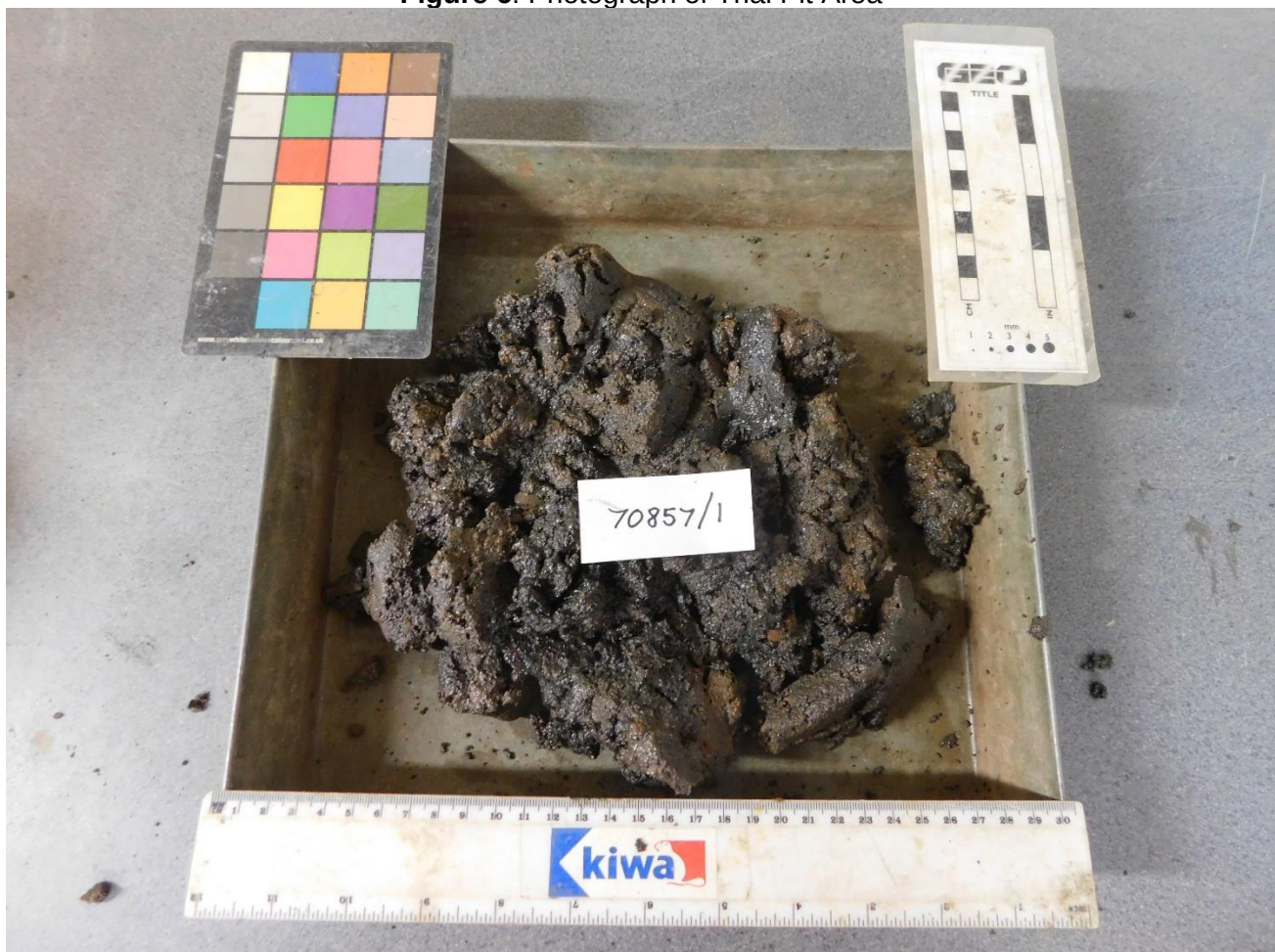
Figure 4: Photograph of Stockpile 2

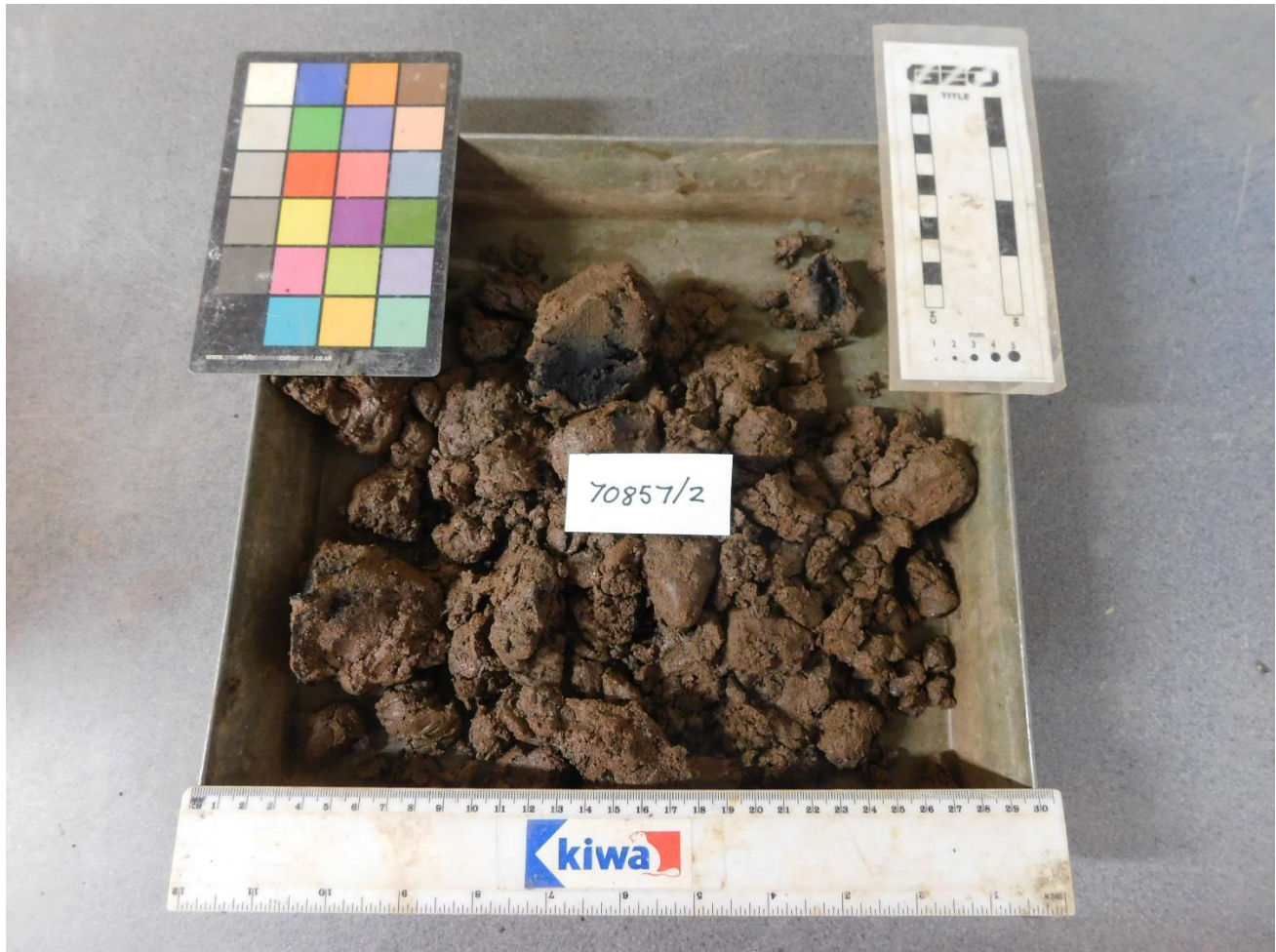
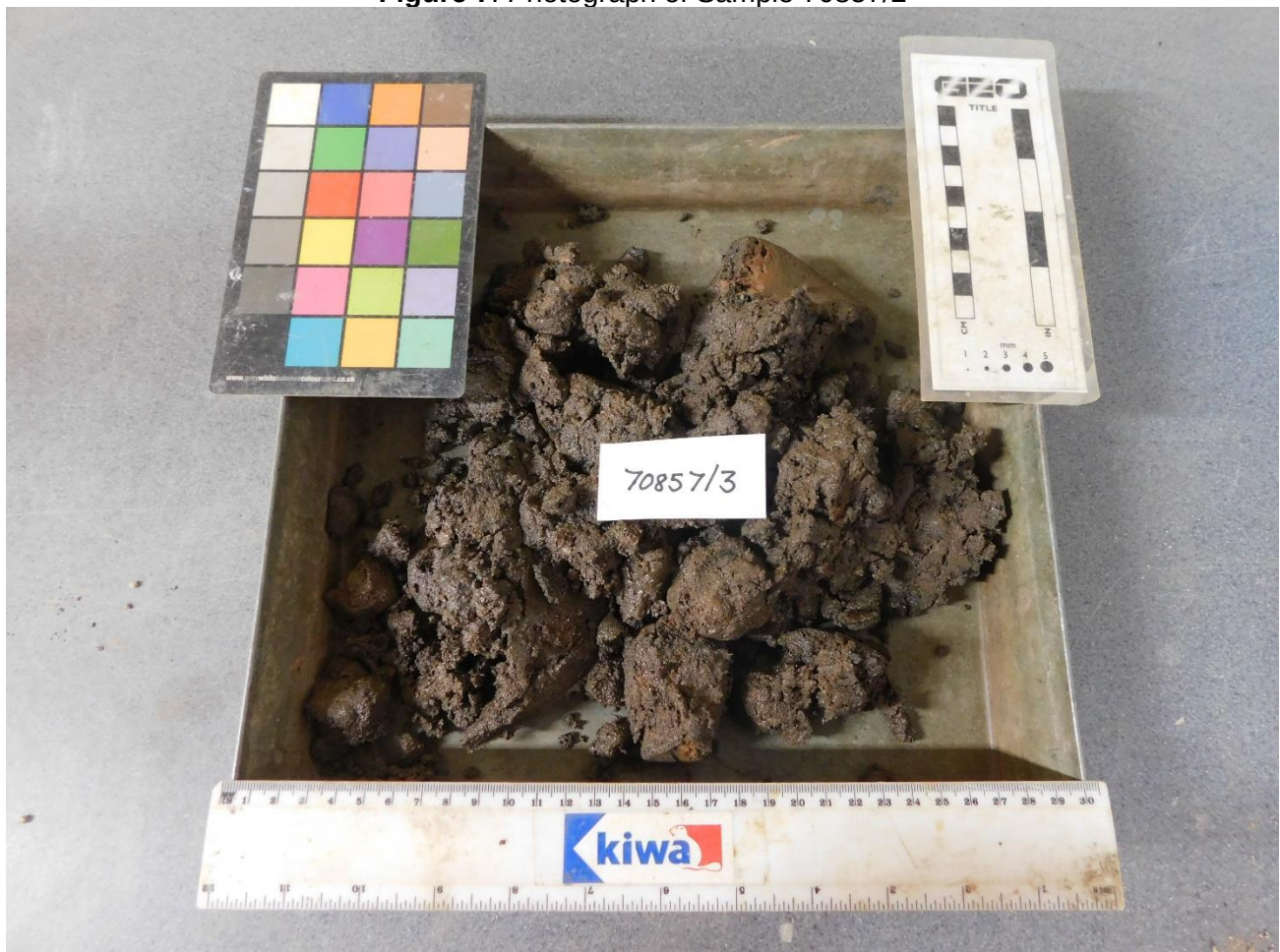


Figure 5: Photograph of Trial Pit Area



Figure 6: Photograph of Trial Pit Area

**Figure 6:** Photograph of Trial Pit Area**Figure 6:** Photograph of Sample 70857/1

**Figure 7: Photograph of Sample 70857/2****Figure 8: Photograph of Sample 70857/3**

Appendix 6

Logs



Kiwa CMT

None Provided

Appendix 7

General References

Kiwa CMT

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Environment Agency (2013) Waste Sampling and Testing for Disposal to Landfill

1st ATP – Regulation 790/2009/EC

2nd ATP – Regulation 286/2011/EC

3rd ATP – Regulation 618/2012/EU

4th ATP Regulation 487/2013/EU

Correction to 1st ATP – 758/2013/EU

5th ATP – Regulation 944/2013/EU

6th ATP – Regulation 605/2014/EU

7th ATP – Regulation 2015/1221/EU

8th ATP – Regulation 2016/918/EU

9th ATP – Regulation 2016/1179/EU

10th ATP – Regulation 2017/776/EU

HP14 Amendment Regulation (EU) 2017/997

13th ATP – Regulation (EU) 2018/1480

14th ATP – Regulation (EU) 2020/217

15th ATP – Regulation (EU) 2020/1182

List of Waste Decision 2002/532/EC

PD CEN/TR 15310:2006 Characterisation of Waste – Sampling of Waste Materials

POPs Regulation 2004 – Regulation 850/2004/EC

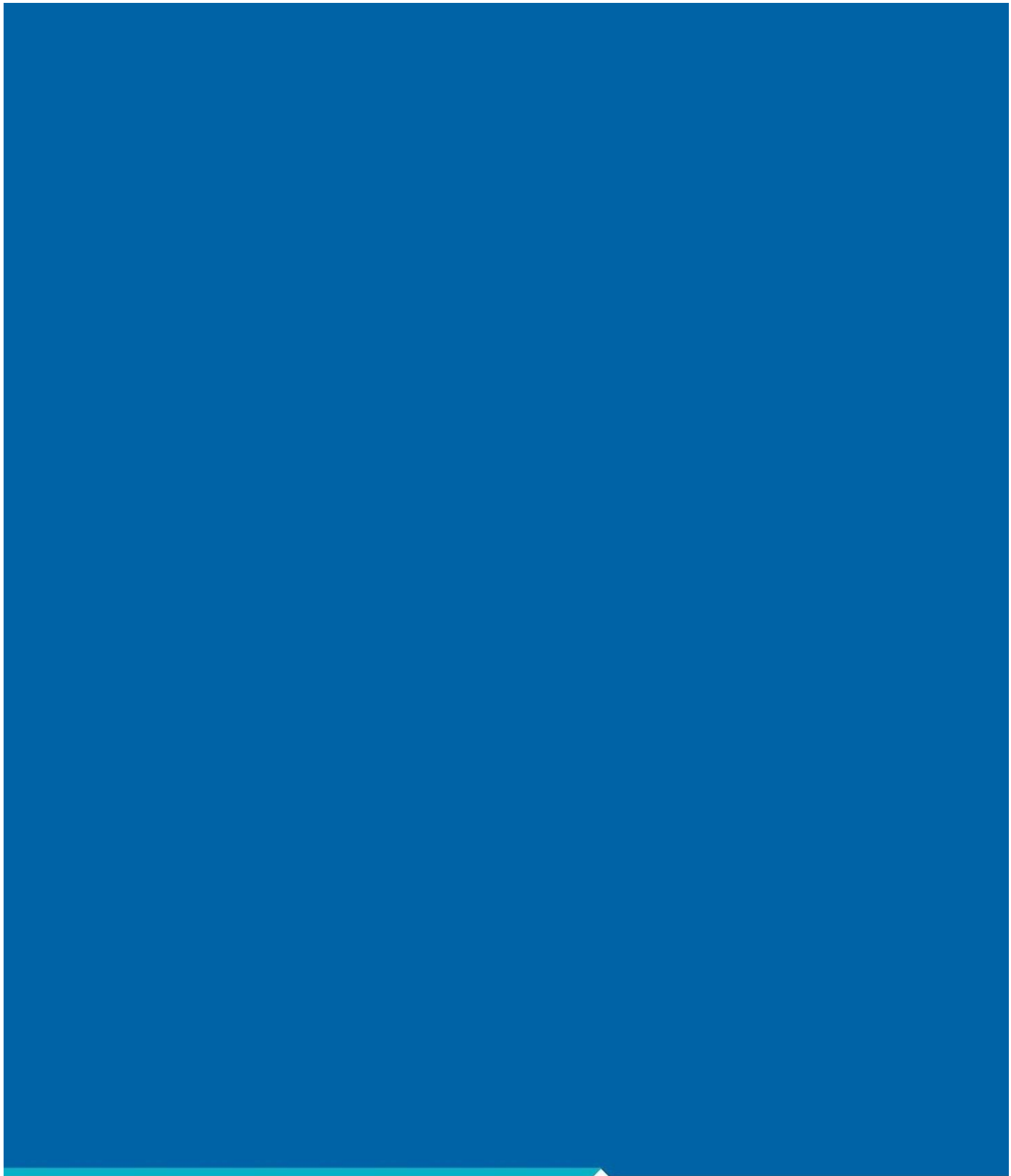
1st ATP to POPs regulation – Regulation 756/2010/EU

2nd ATP to POPs regulation – Regulation 756/2010/EU

Revised List of Wastes 2014 – Decision 2014/955/EU

Waste Framework Directive (WFD) 2008/98/EC

WM3 Environment Agency (2021) Guidance on the classification and assessment of waste (v1.2.GB 2021)



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