



WM3 PRELIMINARY WASTE ASSESSMENT AND CLASSIFICATION REPORT

RSK REPORT REFERENCE: 11505-R002

INTRODUCTION

On behalf of Envirolab, RSK was requested to undertake waste assessment and classification on five soil samples collected by a third party from an unknown site on 8 and 9 March 2020.

Information relating to historical operations at the site was not reviewed as part of RSK's assessment. In addition, RSK was not present during the collection of the samples nor had any input on the chemical testing suite. Therefore, the waste assessment and classification detailed in this report are based solely on the laboratory chemical data that were provided to RSK by Envirolab and were completed without prejudice for our client, Envirolab.

CHEMICAL TESTING

The samples were analysed for a broad chemical testing suite including; total petroleum hydrocarbons (TPH) with ID, speciated TPH with ID, pH, heavy metals including hexavalent chromium, water soluble boron, sulphide, total cyanide, total phenols, elemental sulphur, asbestos in soil, asbestos quantification and moisture content. Copies of the certificates of chemical analysis are provided in Appendix B.

WASTE ASSESSMENT AND CLASSIFICATION

The following assessments assume the samples of the material tested is classified subsequently as waste. Envirolab, an RSK company, has developed a waste soils characterisation assessment tool (HASWASTE), which follows the guidance within Technical Guidance WM3. The analytical results have been assessed using this tool to determine if the samples contain hazardous properties.

The results of the assessment are summarised below. A copy of the HASWASTE assessment spreadsheet is provided in Appendix C.

Sample Reference / depth (m)	Waste classification of sample	Hazardous property code(s)	Hazardous chemical component(s) and concentration(s)
TP205 / 0.3-0.8	Non-Hazardous	Not applicable	Not applicable
TP204 / 0.5-0.9	Non-Hazardous	Not applicable	Not applicable
TP203 / 0.5-1.0	Non-Hazardous	Not applicable	Not applicable
TP210 / 1.5-2.0	Non-Hazardous	Not applicable	Not applicable
BH201 / 0.8-1.0	Non-Hazardous	Not applicable	Not applicable

CONCLUSIONS

Waste assessment and classification were completed by RSK solely on the basis of chemical data provided by Envirolab. Using the data available for assessment all samples may be classified as **non-hazardous waste**. We are not aware of the source of the material that the samples were taken from therefore we cannot definitively assign the appropriate List of Waste (LoW) code (formerly the European Waste Catalogue (EWC)). However, if the samples were taken from material that is CONSTRUCTION AND DEMOLITION WASTE (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES) it may be possible for the waste producer to assign the non-hazardous waste LoW code '17 05 04 soil and stones'.

However, it is noted that one sample TP204 (0.5-0.9m) was recorded reported to contain chrysotile asbestos fibres at 0.002% albeit below the hazardous waste threshold of 0.1% the receiving facility must be informed of this to ensure that they are able to accept and handle this waste.

Furthermore, an elevated TPH concentration of 1,280mg/kg (corrected to wet weight) was recorded in the sample from TP203 (0.5-1.0m) though this was subsequently determined to be non-hazardous based on the benzo(a)pyrene concentration comprising less than 0.01% of the overall concentration which in accordance with WM3 is indicative of the source of the oil not being carcinogenic or mutagenic. On this basis this assessment should be considered indicative and may not necessarily be representative of the waste stream requiring disposal. Therefore, further testing and assessment may be required to robustly characterise the waste and satisfy the requirements of the waste receiving facility. Furthermore, specific waste receiving sites that are identified as potential disposal routes may have additional analytical requirements (e.g. WAC testing) before they are either able or willing to accept the waste; therefore, it is advised that potential disposal sites are contacted at the earliest possible convenience so any further specific requirements to support disposal can be established.

Report author: **Karl Hall**

Technical reviewer: **Tim Holding**




APPENDIX A

RSK SERVICE CONSTRAINTS

1. This report and the site investigation carried out in connection with the report (together the "Services") were compiled and carried out by RSK Environment Limited (RSK) for Envirolab (the "client") in accordance with the terms of the of the agreement between RSK and the "client". The Services were performed by RSK with the skill and care ordinarily exercised by a reasonable environmental consultant at the time the Services were performed. Further, and in particular, the Services were performed by RSK taking into account the limits of the scope of works required by the client, the time scale involved and the resources, including financial and manpower resources, agreed between RSK and the client.
2. Other than that, expressly contained in paragraph 1 above, RSK provides no other representation or warranty whether express or implied, in relation to the Services.
3. Unless otherwise agreed in writing, the Services were performed by RSK exclusively for the purposes of the Client. RSK is not aware of any interest of or reliance by any party other than the Client in or on the Services. Unless expressly provided in writing, RSK does not authorise, consent or condone any party other than the client relying upon the Services. Should this report or any part of this report, or otherwise details of the Services or any part of the Services be made known to any such party, and such party relies thereon that party does so wholly at its own and sole risk and RSK disclaims any liability to such parties. **Any such party would be well advised to seek independent advice from a competent environmental consultant and/or lawyer.**
4. It is RSK's understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was a significant factor in determining the scope and level of the Services. Should the purpose for which the report is used, or the proposed use of the site change, this report may no longer be valid and any further use of or reliance upon the report in those circumstances by the client without RSK 's review and advice shall be at the client's sole and own risk. Should RSK be requested to review the report after the date of this report, RSK shall be entitled to additional payment at the then existing rates or such other terms as agreed between RSK and the client.
5. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of RSK. In the absence of such written advice of RSK, reliance on the report in the future shall be at the Client's own and sole risk. Should RSK be requested to review the report in the future, RSK shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between RSK and the client.
6. The observations and conclusions described in this report are based solely upon the Services which were provided pursuant to the agreement between the Client and RSK. RSK has not performed any observations, investigations, studies or testing not specifically set out or required by the contract between the client and RSK. RSK is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the Services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, RSK did not seek to evaluate the presence on or off the site of asbestos, invasive plants, electromagnetic fields, lead paint, heavy metals, radon gas or other radioactive or hazardous materials, unless specifically identified in the Services.
7. The Services are based upon RSK's observations of existing physical conditions at the Site gained from a visual inspection of the site together with RSK's interpretation of information, including documentation, obtained from third parties and from the Client on the history and usage of the site, unless specifically identified in the Services or accreditation system (such as UKAS ISO 17020:2012 clause 7.1.6):
 - a. The Services were based on information and/or analysis provided by independent testing and information services or laboratories upon which RSK was reasonably entitled to rely.
 - b. The Services were limited by the accuracy of the information, including documentation, reviewed by RSK and the observations possible at the time of the visual inspection.
 - c. The Services did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the Services.

RSK is not liable for any inaccurate information or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to RSK and including the doing of any independent investigation of the information provided to RSK save as otherwise provided in the terms of the contract between the Client and RSK.

8. The intrusive environmental site investigation aspects of the Services are a limited sampling of the site at pre-determined locations based on the known historic / operational configuration of the site. The conclusions given in this report are based on information gathered at the specific test locations and can only be extrapolated to an undefined limited area around those locations. The extent of the limited area depends on the properties of the materials adjacent and local conditions, together with the position of any current structures and underground utilities and facilities, and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters (as stipulated in the scope between the client and RSK, based on an understanding of the available operational and historical information) and it should not be inferred that other chemical species are not present.
9. Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site. Features (intrusive and sample locations etc) annotated

on site plans are not drawn to scale but are centred over the approximate location. Such features should not be used for setting out and should be considered indicative only.

10. The comments given in this report and the opinions expressed are based on the ground conditions encountered during the site work and on the results of tests made in the field and in the laboratory. However, there may be conditions pertaining to the site that have not been disclosed by the investigation and therefore could not be taken into account. In particular, it should be noted that there may be areas of made ground not detected due to the limited nature of the investigation or the thickness and quality of made ground across the site may be variable. In addition, groundwater levels and ground gas concentrations and flows, may vary from those reported due to seasonal, or other, effects and the limitations stated in the data should be recognised.
11. Asbestos is often observed to be present in soils in discrete areas. Whilst asbestos-containing materials may have been locally encountered during the fieldworks or supporting laboratory analysis, the history of brownfield and demolition sites indicates that asbestos fibres may be present more widely in soils and aggregates, which could be encountered during more extensive ground works.
12. Unless stated otherwise, only preliminary geotechnical recommendations are presented in this report and these should be verified in a Geotechnical Design Report, once proposed construction and structural design proposals are confirmed.



APPENDIX B

CERTIFICATES OF CHEMICAL ANALYSIS

Envirolab Job Number: 20/02573

Client:

Client Project Name:

Client Project Ref:

Lab Sample ID				20/02573/2	20/02573/17	20/02573/18
Client Sample No				2	2	2
Client Sample ID				TP205	TP204	TP203
Depth to Top				0.30	0.50	0.50
Depth to Bottom				0.80	0.90	1.00
Date Sampled				10-Mar-20	10-Mar-20	10-Mar-20
Sample Type				Soil - ES	Soil - ES	Soil - ES
Sample Matrix Code	Units	Limit of Detection	Method	6ABE	4ABE	6AE
% Moisture at <40C	% w/w	0.1	A-T-044	21	30.9	31.2
% Stones >10mm	% w/w	0.1	A-T-044	5.9	<0.1	18.1
pH	pH	0.01	A-T-031s	8.1	6.71	7.52
Sulphate (water sol 2:1)	g/l	0.01	A-T-026s	0.06	0.35	0.52
Sulphate (acid soluble)	mg/kg	200	A-T-028s	1300	1700	7100
Cyanide (total)	mg/kg	1	A-T-042sTCN	27	20	2
Phenols - Total by HPLC	mg/kg	0.2	A-T-050s	<0.2	<0.2	<0.2
Sulphide	mg/kg	5	A-T-S2-s	13	<5	350
Sulphur (elemental)	mg/kg	5	A-T-029s	26	12	2100
Organic matter	% w/w	0.1	A-T-032 OM	12	13.1	16.2
Arsenic	mg/kg	1	A-T-024s	62	31	205
Boron (water soluble)	mg/kg	1	A-T-027s	<1.0	1.4	1.9
Cadmium	mg/kg	0.5	A-T-024s	2.2	2.2	3.1
Copper	mg/kg	1	A-T-024s	186	198	387
Chromium	mg/kg	1	A-T-024s	73	96	38
Chromium (hexavalent)	mg/kg	1	A-T-040s	<1	<1	<1
Chromium (trivalent)	mg/kg	1	Calc	73	96	38
Lead	mg/kg	1	A-T-024s	1080	412	672
Mercury	mg/kg	0.17	A-T-024s	1.13	0.87	0.93
Nickel	mg/kg	1	A-T-024s	35	47	62
Selenium	mg/kg	1	A-T-024s	2	2	2
Zinc	mg/kg	5	A-T-024s	1030	407	629
EPH CWG GCxGC ID (for FID characterisations)				Complex mixture of aliphatic & aromatic hydrocarbons C8-C40 plus possible PAHs + Humic substances.	Complex mixture of aliphatic & aromatic hydrocarbons C8-C40 plus possible PAHs + Humic substances.	Complex mixture of aliphatic & aromatic hydrocarbons C8-C40 plus possible PAHs + Humic substances.
Asbestos in Soil (inc. matrix)						
Asbestos in soil			A-T-045	NAD	Chrysotile	NAD
Asbestos Matrix (microscope)			A-T-045	-	Loose Fibres	-
Asbestos ACM - Suitable for Water Absorption Test?			A-T-045	N/A	N/A	N/A
Asbestos in Soil Quantification % (Hand Picking & Weighing)						
Asbestos in soil % composition (hand picking and weighing)	% w/w	0.001	A-T-054		0.002	

Envirolab Job Number: 20/02573

Client:

Client Project Name:

Client Project Ref:

Lab Sample ID				20/02573/2	20/02573/17	20/02573/18
Client Sample No				2	2	2
Client Sample ID				TP205	TP204	TP203
Depth to Top				0.30	0.50	0.50
Depth to Bottom				0.80	0.90	1.00
Date Sampled				10-Mar-20	10-Mar-20	10-Mar-20
Sample Type				Soil - ES	Soil - ES	Soil - ES
Sample Matrix Code	Units	Limit of Detection	Method	6ABE	4ABE	6AE
PAH-16MS						
Acenaphthene	mg/kg	0.01	A-T-019s	0.06	0.03	0.02
Acenaphthylene	mg/kg	0.01	A-T-019s	0.01	<0.01	<0.01
Anthracene	mg/kg	0.02	A-T-019s	0.13	0.07	<0.02
Benzo(a)anthracene	mg/kg	0.04	A-T-019s	0.58	0.52	<0.04
Benzo(a)pyrene	mg/kg	0.04	A-T-019s	0.44	0.45	<0.04
Benzo(b)fluoranthene	mg/kg	0.05	A-T-019s	0.6	0.62	<0.05
Benzo(ghi)perylene	mg/kg	0.05	A-T-019s	0.25	0.32	<0.05
Benzo(k)fluoranthene	mg/kg	0.07	A-T-019s	0.24	0.22	<0.07
Chrysene	mg/kg	0.06	A-T-019s	0.67	0.64	<0.06
Dibenzo(ah)anthracene	mg/kg	0.04	A-T-019s	<0.04	<0.04	<0.04
Fluoranthene	mg/kg	0.08	A-T-019s	1.2	0.87	<0.08
Fluorene	mg/kg	0.01	A-T-019s	0.04	0.01	0.02
Indeno(123-cd)pyrene	mg/kg	0.03	A-T-019s	0.32	0.39	<0.03
Naphthalene	mg/kg	0.03	A-T-019s	<0.03	<0.03	<0.03
Phenanthrene	mg/kg	0.03	A-T-019s	0.66	0.32	0.08
Pyrene	mg/kg	0.07	A-T-019s	1.16	0.84	<0.07
Total PAH-16MS	mg/kg	0.01	A-T-019s	6.36	5.3	0.12
TPH Total with ID + GC Trace						
TPH total (>C6-C40)	mg/kg	10	A-T-007s			
TPH FID Chromatogram			A-T-007s			
TPH ID (for FID characterisations)			A-T-007s			
TPH UKCWG						
Ali >C5-C6	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
Ali >C6-C8	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
Ali >C8-C10	mg/kg	1	A-T-055s	<1	1	10
Ali >C10-C12	mg/kg	1	A-T-055s	<1	3	26
Ali >C12-C16	mg/kg	1	A-T-055s	<1	3	18
Ali >C16-C21	mg/kg	1	A-T-055s	4	10	50
Ali >C21-C35	mg/kg	1	A-T-055s	123	137	788
Ali >C35-C44	mg/kg	1	A-T-055s	19	33	139
Total Aliphatics	mg/kg	1	A-T-055s	145	188	1030
Aro >C5-C7	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
Aro >C7-C8	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
Aro >C8-C10	mg/kg	1	A-T-055s	5	6	18
Aro >C10-C12	mg/kg	1	A-T-055s	2	3	21
Aro >C12-C16	mg/kg	1	A-T-055s	5	4	27
Aro >C16-C21	mg/kg	1	A-T-055s	13	22	124
Aro >C21-C35	mg/kg	1	A-T-055s	95	101	558
Aro >C35-C44	mg/kg	1	A-T-055s	33	38	74
Total Aromatics	mg/kg	1	A-T-055s	151	174	821

Envirolab Job Number: 20/02573

Client:

Client Project Name:

Client Project Ref:

Lab Sample ID				20/02573/2	20/02573/17	20/02573/18
Client Sample No				2	2	2
Client Sample ID				TP205	TP204	TP203
Depth to Top				0.30	0.50	0.50
Depth to Bottom				0.80	0.90	1.00
Date Sampled				10-Mar-20	10-Mar-20	10-Mar-20
Sample Type				Soil - ES	Soil - ES	Soil - ES
Sample Matrix Code	Units	Limit of Detection	Method	6ABE	4ABE	6AE
TPH (Ali & Aro >C5-C44)	mg/kg	1	A-T-055s	297	362	1860
BTEX - Benzene	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
BTEX - Toluene	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
BTEX - Ethyl Benzene	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
BTEX - m & p Xylene	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
BTEX - o Xylene	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01
MTBE	mg/kg	0.01	A-T-022s	<0.01	<0.01	<0.01

Envirolab Job Number: 20/02573

Client:

Client Project Name:

Client Project Ref:

Lab Sample ID			20/02573/22	20/02573/24
Client Sample No			3	2
Client Sample ID			TP210	BH201
Depth to Top			1.50	0.80
Depth to Bottom			2.00	1.00
Date Sampled			10-Mar-20	09-Mar-20
Sample Type			Soil - ES	Soil - ES
Sample Matrix Code	Units	Limit of Detection	6AE	4A
% Moisture at <40C	% w/w	0.1	38	7.5
% Stones >10mm	% w/w	0.1	<0.1	<0.1
pH	pH	0.01	7.45	9.78
Sulphate (water sol 2:1)	g/l	0.01	0.44	
Sulphate (acid soluble)	mg/kg	200	4000	
Cyanide (total)	mg/kg	1	2	
Phenols - Total by HPLC	mg/kg	0.2	<0.2	
Sulphide	mg/kg	5	56	
Sulphur (elemental)	mg/kg	5	1500	
Organic matter	% w/w	0.1	12.4	
Arsenic	mg/kg	1	52	9
Boron (water soluble)	mg/kg	1	2.9	
Cadmium	mg/kg	0.5	3.5	1.2
Copper	mg/kg	1	208	19
Chromium	mg/kg	1	38	16
Chromium (hexavalent)	mg/kg	1	<1	<1
Chromium (trivalent)	mg/kg	1	38	
Lead	mg/kg	1	276	33
Mercury	mg/kg	0.17	0.5	1.05
Nickel	mg/kg	1	46	12
Selenium	mg/kg	1	2	<1
Zinc	mg/kg	5	1290	88
			Complex mixture of aliphatic & aromatic hydrocarbons C8-C40 plus possible PAHs + Humic substances.	
EPH CWG GCxGC ID (for FID characterisations)				
Asbestos in Soil (inc. matrix)				
Asbestos in soil			NAD	
Asbestos Matrix (microscope)			-	
Asbestos ACM - Suitable for Water Absorption Test?			N/A	
Asbestos in Soil Quantification % (Hand Picking & Weighing)				
Asbestos in soil % composition (hand picking and weighing)	% w/w	0.001		

Envirolab Job Number: 20/02573

Client:

Client Project Name:

Client Project Ref:

Lab Sample ID			20/02573/22	20/02573/24
Client Sample No			3	2
Client Sample ID			TP210	BH201
Depth to Top			1.50	0.80
Depth to Bottom			2.00	1.00
Date Sampled			10-Mar-20	09-Mar-20
Sample Type			Soil - ES	Soil - ES
Sample Matrix Code	Units	Limit of Detection	6AE	4A
PAH-16MS				
Acenaphthene	mg/kg	0.01	0.1	<0.01
Acenaphthylene	mg/kg	0.01	<0.01	<0.01
Anthracene	mg/kg	0.02	0.13	<0.02
Benzo(a)anthracene	mg/kg	0.04	0.48	<0.04
Benzo(a)pyrene	mg/kg	0.04	0.31	<0.04
Benzo(b)fluoranthene	mg/kg	0.05	0.47	<0.05
Benzo(ghi)perylene	mg/kg	0.05	0.19	<0.05
Benzo(k)fluoranthene	mg/kg	0.07	0.15	<0.07
Chrysene	mg/kg	0.06	0.63	<0.06
Dibenzo(ah)anthracene	mg/kg	0.04	<0.04	<0.04
Fluoranthene	mg/kg	0.08	1.11	<0.08
Fluorene	mg/kg	0.01	0.06	<0.01
Indeno(123-cd)pyrene	mg/kg	0.03	0.26	<0.03
Naphthalene	mg/kg	0.03	<0.03	<0.03
Phenanthrene	mg/kg	0.03	0.68	<0.03
Pyrene	mg/kg	0.07	1	<0.07
Total PAH-16MS	mg/kg	0.01	5.57	<0.08
TPH Total with ID + GC Trace				
TPH total (>C6-C40)	mg/kg	10		79
TPH FID Chromatogram				Appended
TPH ID (for FID characterisations)				Unknown profile
TPH UKCWG				
Ali >C5-C6	mg/kg	0.01	<0.01	
Ali >C6-C8	mg/kg	0.01	0.02	
Ali >C8-C10	mg/kg	1	<1	
Ali >C10-C12	mg/kg	1	<1	
Ali >C12-C16	mg/kg	1	2	
Ali >C16-C21	mg/kg	1	3	
Ali >C21-C35	mg/kg	1	26	
Ali >C35-C44	mg/kg	1	11	
Total Aliphatics	mg/kg	1	42	
Aro >C5-C7	mg/kg	0.01	<0.01	
Aro >C7-C8	mg/kg	0.01	<0.01	
Aro >C8-C10	mg/kg	1	2	
Aro >C10-C12	mg/kg	1	<1	
Aro >C12-C16	mg/kg	1	3	
Aro >C16-C21	mg/kg	1	13	
Aro >C21-C35	mg/kg	1	37	
Aro >C35-C44	mg/kg	1	6	
Total Aromatics	mg/kg	1	63	

Envirolab Job Number: 20/02573

Client:
Client Project Name:
Client Project Ref:

Lab Sample ID			20/02573/22	20/02573/24
Client Sample No			3	2
Client Sample ID			TP210	BH201
Depth to Top			1.50	0.80
Depth to Bottom			2.00	1.00
Date Sampled			10-Mar-20	09-Mar-20
Sample Type			Soil - ES	Soil - ES
Sample Matrix Code			6AE	4A
TPH (Ali & Aro >C5-C44)	mg/kg	1	105	
BTEX - Benzene	mg/kg	0.01	<0.01	
BTEX - Toluene	mg/kg	0.01	<0.01	
BTEX - Ethyl Benzene	mg/kg	0.01	<0.01	
BTEX - m & p Xylene	mg/kg	0.01	<0.01	
BTEX - o Xylene	mg/kg	0.01	<0.01	
MTBE	mg/kg	0.01	<0.01	



APPENDIX C

'HASWASTE' SPREADSHEET



Haswaste, developed by Dr. Iain Haslock.

Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

11505-R001	
Reference	
depth (m)	
date	

% Moisture	%	21.0	30.9	31.2	38.0	7.5			
pH (soil)		8.10	6.71	7.52	7.45	9.78			
pH (leachate)									
Arsenic	mg/kg	62	31	205	52	9			
Cadmium	mg/kg	2.2	2.2	3.1	3.5	1.2			
Copper	mg/kg	186	198	387	208	19			
CrVI or Chromium	mg/kg	1	1	1	1	1			
Lead	mg/kg	1,080	412	672	276	33			
Mercury	mg/kg	1.13	0.87	0.93	0.50	1.05			
Nickel	mg/kg	35	47	62	46	12			
Selenium	mg/kg	2	2	2	2	1			
Zinc	mg/kg	1,030	407	629	1,290	88			
Barium	mg/kg								
Beryllium	mg/kg								
Vanadium	mg/kg								
Cobalt	mg/kg								
Manganese	mg/kg								
Molybdenum	mg/kg								
Antimony	mg/kg								
Aluminium	mg/kg								
Bismuth	mg/kg								
CrIII	mg/kg	73	96	38	38				
Iron	mg/kg								
Strontium	mg/kg								
Tellurium	mg/kg								
Thallium	mg/kg								
Titanium	mg/kg								
Tungsten	mg/kg								
Ammoniacal N	mg/kg								
ws Boron	mg/kg	1.0	1.4	1.9	2.9				

PAH (Input Total PAH OR individual PAH results)									
Acenaphthene	mg/kg	0.06	0.03	0.02	0.10	0.01			
Acenaphthylene	mg/kg	0.01	0.01	0.01	0.01	0.01			
Anthracene	mg/kg	0.13	0.07	0.02	0.13	0.02			
Benzo(a)anthracene	mg/kg	0.58	0.52	0.04	0.48	0.04			
Benzo(a)pyrene	mg/kg	0.44	0.45	0.04	0.31	0.04			
Benzo(b)fluoranthene	mg/kg	0.60	0.62	0.05	0.47	0.05			
Benzo(ghi)perylene	mg/kg	0.25	0.32	0.05	0.19	0.05			
Benzo(k)fluoranthene	mg/kg	0.24	0.22	0.07	0.15	0.07			
Chrysene	mg/kg	0.67	0.64	0.06	0.63	0.06			
Dibenzo(ah)anthracene	mg/kg	0.04	0.04	0.04	0.04	0.04			
Fluoranthene	mg/kg	1.20	0.87	0.08	1.11	0.08			
Fluorene	mg/kg	0.04	0.01	0.02	0.06	0.01			
Indeno(123cd)pyrene	mg/kg	0.32	0.39	0.03	0.26	0.03			
Naphthalene	mg/kg	0.03	0.03	0.03	0.03	0.03			
Phenanthrene	mg/kg	0.66	0.32	0.08	0.68	0.03			
Pyrene	mg/kg	1.16	0.84	0.07	1.00	0.07			
Coronene	mg/kg								
Total PAHs (16 or 17)	mg/kg								

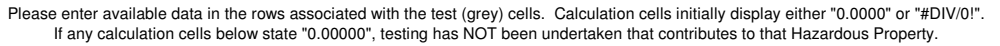
TPH									
Petrol	mg/kg								
Diesel	mg/kg								
Lube Oil	mg/kg								
Crude Oil									
White Spirit / Kerosene	mg/kg								
Creosote	mg/kg								
Unknown TPH with ID	mg/kg	297.0	362.0	1,860.0	105.0	79.0			
Unknown TPHCWG	mg/kg								
Total Sulphide	mg/kg	13	5	350	56				
Complex Cyanide	mg/kg								
Free (or Total) Cyanide	mg/kg	27	20	2	2				
Thiocyanate	mg/kg								
Elemental/Free Sulphur	mg/kg	26	12	2,100	1,500				

Phenols Input Total Phenols HPLC OR individual Phenol results.									
Phenol	mg/kg								
Cresols	mg/kg								
Xylenols	mg/kg								
Resourcinol	mg/kg								
Phenols Total by HPLC	mg/kg	0.2	0.2	0.2	0.2				

BTEX Input Total BTEX OR individual BTEX results.									
Benzene	mg/kg	0.01	0.01	0.01	0.01				
Toluene	mg/kg	0.01	0.01	0.01	0.01				
Ethylbenzene	mg/kg	0.01	0.01	0.01	0.01				
Xylenes	mg/kg	0.01	0.01	0.01	0.01				
Total BTEX	mg/kg								

PCBs (POPs)									
PCBs Total (eg EC7/WHO12)	mg/kg								

PBBs (POPs)									
Hexabromobiphenyl (Total or PBB153; 2,2',4,4',5,5'- if only available)	mg/kg								



11505-R001

TP205	TP204	TP203	TP210	BH201				
0.3-0.8	0.5-0.9	0.5-1.0	1.5-2.0	0.8-1.0				
10-Mar-20	10-Mar-20	10-Mar-20	10-Mar-20	09-Mar-20				

2,3,7,8-TeCDD
1,2,3,7,8-PeCDD
1,2,3,4,7,8-HxCDD
1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD
1,2,3,4,6,7,8-HpCDD
OCDD
2,3,7,8-TeCDF
1,2,3,7,8-PeCDF
2,3,4,7,8-PeCDF
1,2,3,4,7,8-HxCDF
1,2,3,6,7,8-HxCDF
2,3,4,6,7,8-HxCDF
1,2,3,7,8,9-HxCDF
1,2,3,4,6,7,8-HpCDF
1,2,3,4,7,8,9-HpCDF
OCDF
Total Dioxins and Furans

[illegible]

Aldrin
α Hexachlorocyclohexane (alpha-HCH) <i>(leave empty if total HCH results used)</i>
β Hexachlorocyclohexane (beta-HCH) <i>(leave empty if total HCH results used)</i>
α-Cis-Chlordane (alpha) OR Total Chlordane
δ Hexachlorocyclohexane (delta-HCH) <i>(leave empty if total HCH results used)</i>
Dieldrin
Endrin
γ Hexachlorocyclohexane (gamma-HCH) (linane) OR Total HCH
Heptachlor
Hexachlorobenzene
o,p'-DDT <i>(leave empty if total DDT results used)</i>
p,p'-DDT OR Total DDT
γ Trans-Chlordane (gamma) <i>(leave empty if total Chlordane results used)</i>

[illegible][illegible]

mg/kg

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Dibutyltin; DiBT
Tributyltin; TriBT
Triphenyltin; TriPT
Tetrabutyltin; TeBT

mg/kg

mg/kg

mg/kg

mg/kg

Tin excl Organotin

mg/kg

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Haswaste, developed by Dr. Iain Haslock.

11505-R001
Reference
depth (m)
date

Asbestos in Soil	Thresholds
Asbestos detected in Soil (enter Y or N)	Y
Asbestos % Composition in Soil (Matrix Loose Fibres or Microscopic Identifiable Pieces only)	see "Carc HP7 % Asbestos in Soil (Fibres)" below
Carcinogenic HP7 % Asbestos in Soil (fibres or micro pieces)	≥0.1%
<i>Please be advised, if the calculation cell is "0.00000" DOES NOT MEAN asbestos testing has been undertaken and the result is zero.</i>	

Asbestos Identifiable Pieces visible with the naked eye detected in the Soil (enter Y or N)	Y
---	---

Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

TP205	TP204	TP203	TP210	BH201				
0.3-0.8	0.5-0.9	0.5-1.0	1.5-2.0	0.8-1.0				
10-Mar-20	10-Mar-20	10-Mar-20	10-Mar-20	09-Mar-20				

N	Y	N	N					
If Asbestos in Soil above is "Y", the soil is Hazardous Waste HP5 and HP7								
	0.00200							
0.00000	0.00138	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

If Asbestos in Soil above is "Y", but Asbestos % above is "<0.1%", the soil is Non Hazardous Waste. You can only use Asbestos % results where loose fibres or micro pieces are only present. You cannot use Asbestos % results when visual identifiable pieces are present.

N	N	N	N					
---	---	---	---	--	--	--	--	--

If visual identifiable pieces of asbestos are present, you cannot use Asbestos % results and the whole soil sample is Hazardous Waste HP5 and HP7 Construction material containing Asbestos 17 06 05. Therefore, if Asbestos in Soil above is "Y", the Asbestos % above is "<0.1%", but the Asbestos Identifiable Pieces visible with the naked eye is "Y", the soil is Hazardous Waste.

Identifiable Pieces are Cement, Fragments, Board, Rope etc. ie anything ACM that is not Loose Fibres.

All visual asbestos pieces need to be removed leaving only fibres (or micro pieces) with an Asbestos % Composition in Soil result of <0.1% for the soil to become non-hazardous waste.

Hazardous Property	Thresholds	Cut Off Value
Corrosive HP8	≥5%	<1%
Irritant HP4	≥10%	<1%
Irritant HP4	≥20%	<1%
Specific Target Organ Toxicity HP5	≥1%	
Specific Target Organ Toxicity HP5	≥20%	
Specific Target Organ Toxicity HP5	≥1%	
Specific Target Organ Toxicity HP5	≥10%	
Aspiration Toxicity HP5	≥10%	
Acute Toxicity HP6 (Oral)	≥0.1%	<0.1%
Acute Toxicity HP6 (Oral)	≥0.25%	<0.1%
Acute Toxicity HP6 (Oral)	≥5%	<0.1%
Acute Toxicity HP6 (Oral)	≥25%	<1%
Acute Toxicity HP6 (Dermal)	≥0.25%	<0.1%
Acute Toxicity HP6 (Dermal)	≥2.5%	<0.1%
Acute Toxicity HP6 (Dermal)	≥15%	<0.1%
Acute Toxicity HP6 (Dermal)	≥55%	<1%
Acute Toxicity HP6 (Inhal)	≥0.1%	<0.1%
Acute Toxicity HP6 (Inhal)	≥0.5%	<0.1%
Acute Toxicity HP6 (Inhal)	≥3.5%	<0.1%
Acute Toxicity HP6 (Inhal)	≥22.5%	<1%
Carcinogenic HP7	≥0.1%	
Carcinogenic HP7	≥0.1%	
Carcinogenic HP7	≥1%	
Carcinogenic HP7 Unknown TPH with ID	≥1,000mg/kg	
Carcinogenic HP7 b(a)p marker test (Unknown TPH with ID only) Cell only applicable if TPH >1,000mg/kg	≥0.01%	
pH Corrosive HP8 pH (soil or leachate)	H8 ≥11.5	
pH Corrosive HP8 pH (soil or leachate)	H8 ≤2	
Toxic for Reproduction HP10	≥0.3%	
Toxic for Reproduction HP10	≥3%	
Mutagenic HP11	≥0.1%	
Mutagenic HP11 Unknown TPH with ID	≥1,000mg/kg	
Mutagenic HP11 b(a)p marker test (Unknown TPH with ID only) Cell only applicable if TPH >1,000mg/kg	≥0.01%	
Mutagenic HP11	≥1%	
Produces Toxic Gases HP12 Sulphide	≥1,400mg/kg	
Produces Toxic Gases HP12 Cyanide	≥1,200mg/kg	
Produces Toxic Gases HP12 Thiocyanate	≥2,600mg/kg	
HP13 Sensitising	≥10%	

If cells below turn yellow and the text turns red, the samples should be classified as Hazardous Waste.								
0.00914	0.00382	0.07752	0.01286	0.00128	0.00000	0.00000	0.00000	0.00000
0.02559	0.01914	0.10747	0.02731	0.00308	0.00000	0.00000	0.00000	0.00000
0.02442	0.02295	0.18321	0.11347	0.00424	0.00000	0.00000	0.00000	0.00000
0.00401	0.00260	0.00026	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
0.00005	0.00002	0.00001	0.00004	0.00000	0.00000	0.00000	0.00000	0.00000
0.00559	0.00656	0.00862	0.00576	0.00224	0.00000	0.00000	0.00000	0.00000
0.08532	0.02847	0.12797	0.01711	0.00731	0.00000	0.00000	0.00000	0.00000
0.02347	0.02502	0.12797	0.00651	0.00731	0.00000	0.00000	0.00000	0.00000
0.00401	0.00260	0.00026	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
0.00655	0.00289	0.01868	0.00429	0.00120	0.00000	0.00000	0.00000	0.00000
0.00290	0.00118	0.05910	0.00878	0.00031	0.00000	0.00000	0.00000	0.00000
0.10785	0.05074	0.08518	0.03779	0.00741	0.00000	0.00000	0.00000	0.00000
0.00410	0.00266	0.00032	0.00026	0.00010	0.00000	0.00000	0.00000	0.00000
0.00015	0.00013	0.00013	0.00012	0.00018	0.00000	0.00000	0.00000	0.00000
0.00252	0.00086	0.05877	0.00848	0.00000	0.00000	0.00000	0.00000	0.00000
0.00017	0.00015	0.00021	0.00022	0.00011	0.00000	0.00000	0.00000	0.00000
0.00401	0.00260	0.00026	0.00023	0.00000	0.00000	0.00000	0.00000	0.00000
0.00041	0.00034	0.00041	0.00037	0.00039	0.00000	0.00000	0.00000	0.00000
0.00024	0.00021	0.00021	0.00019	0.00013	0.00000	0.00000	0.00000	0.00000
0.10751	0.05049	0.08494	0.03745	0.00728	0.00000	0.00000	0.00000	0.00000
0.08532	0.02847	0.04623	0.01711	0.00305	0.00000	0.00000	0.00000	0.00000
0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000	0.000000000
0.00003	0.00003	0.00000	0.00002	0.00000	0.00000	0.00000	0.00000	0.00000
234.63	250.14	1279.68	65.10	73.08	0.00	0.00	0.00	0.00
0.11704	0.08590	0.00148	0.18305	0.04684	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8.10	6.71	7.52	7.45	9.78	0.00	0.00	0.00	0.00
8.10	6.71	7.52	7.45	9.78	0.00	0.00	0.00	0.00
0.08532	0.02847	0.04623	0.01711	0.00305	0.00000	0.00000	0.00000	0.00000
0.02346	0.02501	0.12797	0.00651	0.00731	0.00000	0.00000	0.00000	0.00000
0.00017	0.00015	0.00021	0.00022	0.00018	0.00000	0.00000	0.00000	0.00000
234.63	250.14	1279.68	65.10	73.08	0.00	0.00	0.00	0.00
0.11704	0.08590	0.00148	0.18305	0.04684	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
0.00559	0.00656	0.00862	0.00576	0.00224	0.00000	0.00000	0.00000	0.00000
10.3	3.5	240.8	34.7	0.0	0.0	0.0	0.0	0.0
21.3	13.8	1.4	1.2	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.00559	0.00656	0.00862	0.00576	0.00224	0.00000	0.00000	0.00000	0.00000



Haswaste, developed by Dr. Iain Haslock.

11505-R001

Reference
depth (m)
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Please enter available data in the rows associated with the test (grey) cells. Calculation cells initially display either "0.0000" or "#DIV/0!".
If any calculation cells below state "0.00000", testing has NOT been undertaken that contributes to that Hazardous Property.

			TP205	TP204	TP203	TP210	BH201				
			0.3-0.8	0.5-0.9	0.5-1.0	1.5-2.0	0.8-1.0				
			10-Mar-20	10-Mar-20	10-Mar-20	10-Mar-20	09-Mar-20				
Ecotoxic HP14 amended v6	≥25%	<0.1%	0.22334	0.09281	0.21733	0.15127	0.01913	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% / 1.0%	0.24430	0.11698	0.28654	0.14931	0.02643	0.00000	0.00000	0.00000	0.00000
Ecotoxic HP14 amended v6	≥25%	<0.1% / 1.0%	22.31648	9.44570	17.13547	14.34370	1.98570	0.00000	0.00000	0.00000	0.00000
Persistent Organic Pollutant (PCB, PBB or POP Pesticides)	>0.005%		0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000
Persistent Organic Pollutant (Total Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000
Persistent Organic Pollutant (Individual Dioxins+Furans)	>0.0000015%		0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000	0.0000000000

If other contaminants need adding to Haswaste, please contact Envirolab.