

# Appendix V

**TEST REPORT**  
**Determination Of Water Content**  
**ISO 17892-1: 2014**

<b>Project No:</b> D20176 <b>Project Name:</b> Cardiff Airport <b>ATS Sample No:</b> 20580	<b>Client:</b> HSP Consulting <b>Address:</b> Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>Site Ref / Hole ID:</b> WS2 <b>Sample No:</b> <b>Sampling Certificate Received:</b> No <b>Location in Works:</b> Unknown <b>Date Sampled:</b> 11 June 2020 <b>Sampled By:</b> HSP <b>Date Received:</b> 12 June 2020	<b>Depth (m):</b> 1.45 - 1.55 <b>Sample Type:</b> Bulk <b>Material Description:</b> Yellowish brown slightly gravelly CLAY <b>Material Source:</b> N/A <b>Material Supplier:</b> N/A <b>Specification:</b> <b>Date Tested:</b> 15 June 2020

**Test Results**

Moisture Content (%)	19.2
----------------------	------

**Remarks:**

**TEST REPORT**  
**LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX**  
**BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5**

<b>Project No:</b>	D20176	<b>Client:</b>	HSP Consulting
<b>Project Name:</b>	Cardiff Airport	<b>Address</b>	Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>ATS Sample No:</b>	20581		

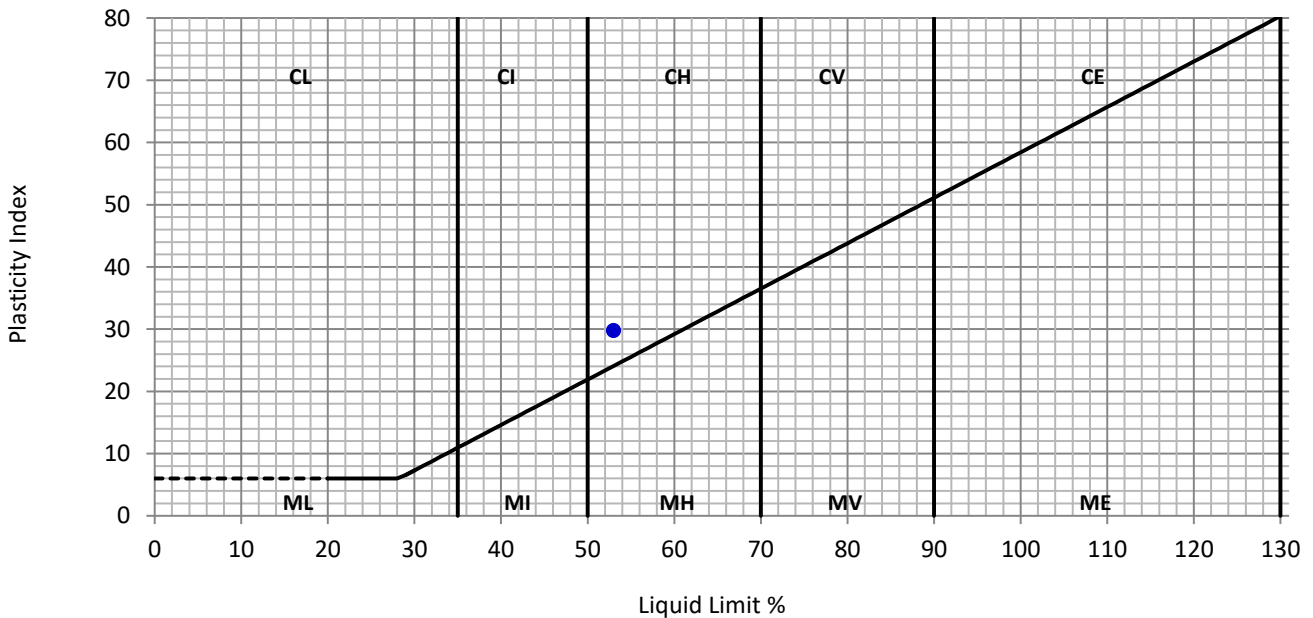
  

<b>Site Ref / Hole ID:</b>	WS5	<b>Depth (m):</b>	1.70
<b>Sample No:</b>		<b>Sample Type:</b>	Bulk
<b>Sampling Certificate Received:</b>	No	<b>Material Description:</b>	Yellowish brown CLAY
<b>Location in Works:</b>	Unknown	<b>Material Source:</b>	N/A
<b>Date Sampled:</b>	11 June 2020	<b>Material Supplier:</b>	N/A
<b>Sampled By:</b>	HSP	<b>Specification:</b>	
<b>Date Received:</b>	12 June 2020	<b>Date Tested:</b>	15 June 2020

**Test Results**

Liquid Limit	53	%
Plastic Limit	23	%
Plasticity Index	30	%

Preparation:	4.2.3 Natural Specimen
Proportion retained on 425µm sieve:	0 %



**Remarks:**

**TEST REPORT**  
**LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX**

**BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5**

<b>Project No:</b>	D20176	<b>Client:</b>	HSP Consulting
<b>Project Name:</b>	Cardiff Airport	<b>Address</b>	Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>ATS Sample No:</b>	20580		

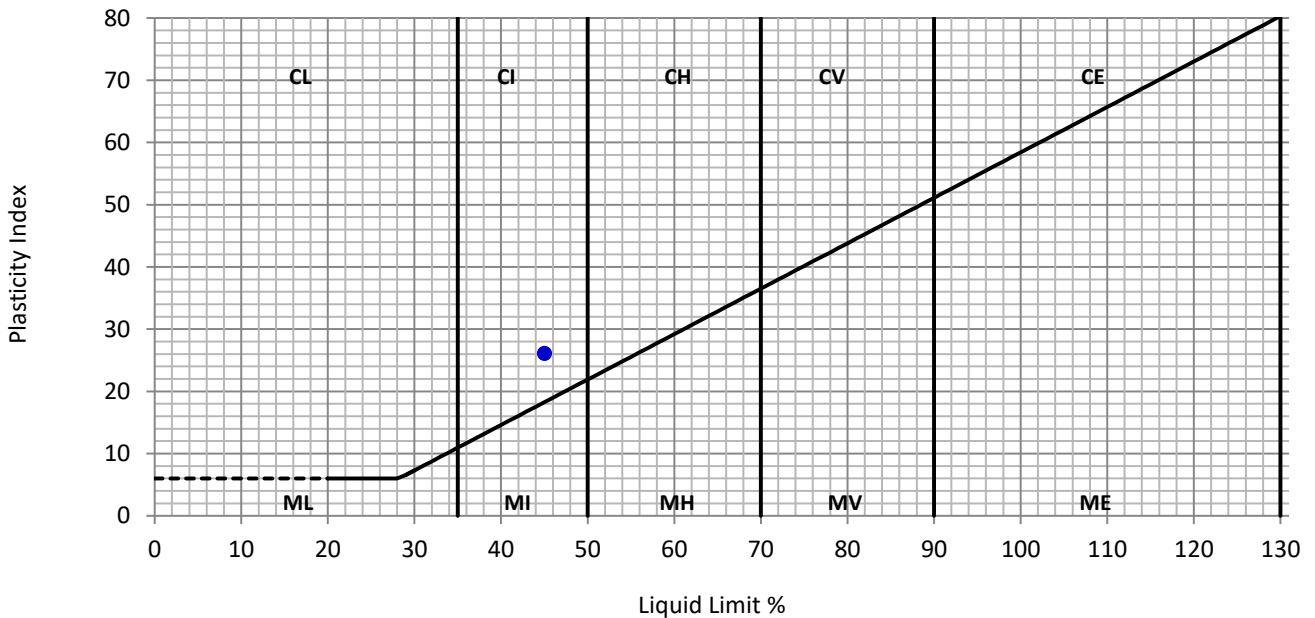
  

<b>Site Ref / Hole ID:</b>	WS2	<b>Depth (m):</b>	1.45 - 1.55
<b>Sample No:</b>		<b>Sample Type:</b>	Bulk
<b>Sampling Certificate Received:</b>	No	<b>Material Description:</b>	Yellowish brown slightly gravelly CLAY
<b>Location in Works:</b>	Unknown	<b>Material Source:</b>	N/A
<b>Date Sampled:</b>	11 June 2020	<b>Material Supplier:</b>	N/A
<b>Sampled By:</b>	HSP	<b>Specification:</b>	
<b>Date Received:</b>	12 June 2020	<b>Date Tested:</b>	17 June 2020

**Test Results**

Liquid Limit	45	%
Plastic Limit	19	%
Plasticity Index	26	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	13 %



**Remarks:**

**TEST REPORT**  
**LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX**  
**BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5**

<b>Project No:</b>	D20176	<b>Client:</b>	HSP Consulting
<b>Project Name:</b>	Cardiff Airport	<b>Address</b>	Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>ATS Sample No:</b>	20582		

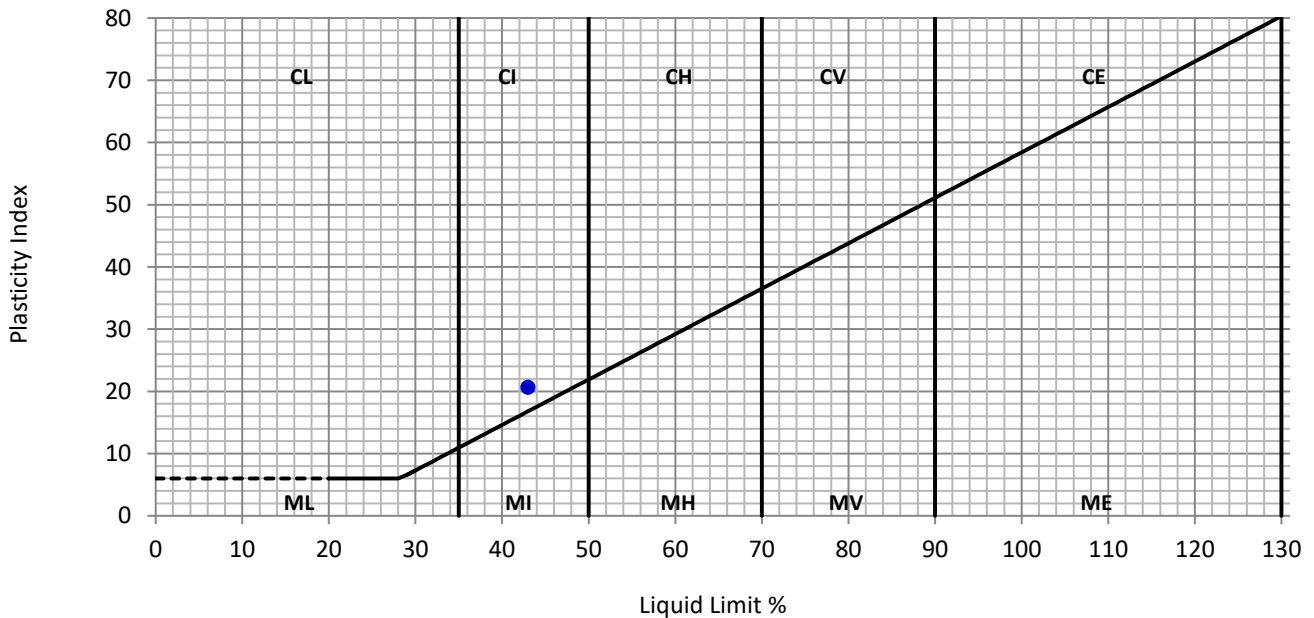
  

<b>Site Ref / Hole ID:</b>	WS7	<b>Depth (m):</b>	1.50
<b>Sample No:</b>		<b>Sample Type:</b>	Bulk
<b>Sampling Certificate Received:</b>	No	<b>Material Description:</b>	Yellowish brown slightly gravelly CLAY
<b>Location in Works:</b>	Unknown	<b>Material Source:</b>	N/A
<b>Date Sampled:</b>	11 June 2020	<b>Material Supplier:</b>	N/A
<b>Sampled By:</b>	HSP	<b>Specification:</b>	
<b>Date Received:</b>	12 June 2020	<b>Date Tested:</b>	17 June 2020

**Test Results**

Liquid Limit	43	%
Plastic Limit	22	%
Plasticity Index	21	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	19 %



**Remarks:**

**TEST REPORT**  
**Determination Of Water Content**  
**ISO 17892-1: 2014**

<b>Project No:</b> D20176	<b>Client:</b> HSP Consulting
<b>Project Name:</b> Cardiff Airport	<b>Address:</b> Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>ATS Sample No:</b> 20581	

<b>Site Ref / Hole ID:</b> WS5	<b>Depth (m):</b> 1.70
<b>Sample No:</b>	<b>Sample Type:</b> Bulk
<b>Sampling Certificate Received:</b> No	<b>Material Description:</b> Yellowish brown CLAY
<b>Location in Works:</b> Unknown	<b>Material Source:</b> N/A
<b>Date Sampled:</b> 11 June 2020	<b>Material Supplier:</b> N/A
<b>Sampled By:</b> HSP	<b>Specification:</b>
<b>Date Received:</b> 12 June 2020	<b>Date Tested:</b> 15 June 2020

**Test Results**

Moisture Content (%)	23.3
----------------------	------

**Remarks:**

QA Ref.		<b>Apex Testing Solutions</b> <small>Sturmi Way, Village Farm Industrial Est, Pyle, Bridgend, CF33 6BZ</small> <small>Tel: 01656 746762 Fax: 01656 749096</small>	 <small>7771</small>	Approver <i>L. Davis</i>	Date 18/06/2020	Fig  <b>MC</b>
EN ISO 17892-1:2014 E				L Davis, Quality Manager		

**TEST REPORT**  
**Determination Of Water Content**  
**ISO 17892-1: 2014**

<b>Project No:</b> D20176 <b>Project Name:</b> Cardiff Airport <b>ATS Sample No:</b> 20582	<b>Client:</b> HSP Consulting <b>Address:</b> Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>Site Ref / Hole ID:</b> WS7 <b>Sample No:</b> <b>Sampling Certificate Received:</b> No <b>Location in Works:</b> Unknown <b>Date Sampled:</b> 11 June 2020 <b>Sampled By:</b> HSP <b>Date Received:</b> 12 June 2020	<b>Depth (m):</b> 1.50 <b>Sample Type:</b> Bulk <b>Material Description:</b> Yellowish brown slightly gravelly CLAY <b>Material Source:</b> N/A <b>Material Supplier:</b> N/A <b>Specification:</b> <b>Date Tested:</b> 15 June 2020

**Test Results**

Moisture Content (%)	19.4
----------------------	------

**Remarks:**

**TEST REPORT**  
**Determination Of Water Content**  
**ISO 17892-1: 2014**

<b>Project No:</b> D20176 <b>Project Name:</b> Cardiff Airport <b>ATS Sample No:</b> 20583	<b>Client:</b> HSP Consulting <b>Address:</b> Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>Site Ref / Hole ID:</b> WS8 <b>Sample No:</b> <b>Sampling Certificate Received:</b> No <b>Location in Works:</b> Unknown <b>Date Sampled:</b> 11 June 2020 <b>Sampled By:</b> HSP <b>Date Received:</b> 12 June 2020	<b>Depth (m):</b> 1.00 <b>Sample Type:</b> Bulk <b>Material Description:</b> Brownish grey slightly gravelly CLAY <b>Material Source:</b> N/A <b>Material Supplier:</b> N/A <b>Specification:</b> <b>Date Tested:</b> 15 June 2020

**Test Results**

Moisture Content (%)	18.5
----------------------	------

**Remarks:**

QA Ref.		<b>Apex Testing Solutions</b> <small>Sturmi Way, Village Farm Industrial Est,          Pyle, Bridgend, CF33 6BZ</small> <small>Tel: 01656 746762 Fax: 01656 749096</small>	 <small>7771</small>	Approver <i>L. Davis</i>	Date 18/06/2020	Fig <b>MC</b>
EN ISO 17892-1:2014 E					L Davis, Quality Manager	



**TEST REPORT**  
**LIQUID LIMIT, PLASTIC LIMIT & PLASTICITY INDEX**  
**BS EN ISO 17892-12:2018 Clauses 5.3/5.5/6.5**

<b>Project No:</b> D20176	<b>Client:</b> HSP Consulting
<b>Project Name:</b> Cardiff Airport	<b>Address:</b> Lawrence House, Meadowbank Way, Nottingham, NG16 3SB
<b>ATS Sample No:</b> 20583	

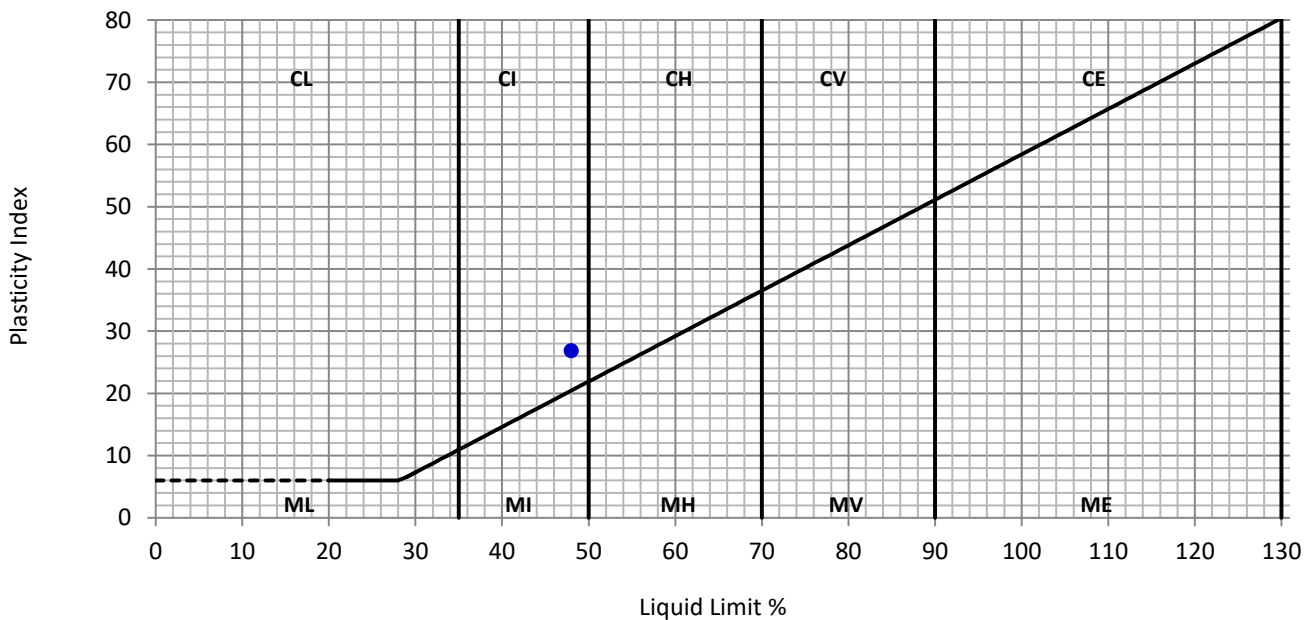
  

<b>Site Ref / Hole ID:</b> WS8	<b>Depth (m):</b> 1.00
<b>Sample No:</b>	<b>Sample Type:</b> Bulk
<b>Sampling Certificate Received:</b> No	<b>Material Description:</b> Brownish grey slightly gravelly CLAY
<b>Location in Works:</b> Unknown	<b>Material Source:</b> N/A
<b>Date Sampled:</b> 11 June 2020	<b>Material Supplier:</b> N/A
<b>Sampled By:</b> HSP	<b>Specification:</b>
<b>Date Received:</b> 12 June 2020	<b>Date Tested:</b> 17 June 2020

**Test Results**

Liquid Limit	48	%
Plastic Limit	21	%
Plasticity Index	27	%

Preparation:	4.2.4 Sieved Specimen
Proportion retained on 425µm sieve:	10 %



**Remarks:**

# Appendix VI



## Final Report

---

**Report No.:** 20-15025-1  
**Initial Date of Issue:** 19-Jun-2020  
**Client:** HSP Consulting Engineers Limited  
**Client Address:** Lawrence House  
Meadowbank Way  
Eastwood  
Nottinghamshire  
NG16 3SB  
**Contact(s):** Linden Baker  
**Project:** C3296 Cardiff Airport Site  
**Quotation No.:** Q14-00343  
**Date Received:** 15-Jun-2020  
**Order No.:** SC13356  
**Date Instructed:** 15-Jun-2020  
**No. of Samples:** 8  
**Turnaround (Wkdays):** 5  
**Results Due:** 19-Jun-2020  
**Date Approved:** 19-Jun-2020  
**Approved By:**



**Details:** Glynn Harvey, Technical Manager

---

**Project: C3296 Cardiff Airport Site**

Client: HSP Consulting Engineers Limited		Chemtest Job No.:		20-15025	20-15025	20-15025	20-15025	20-15025	20-15025	20-15025	20-15025	20-15025
Quotation No.: Q14-00343		Chemtest Sample ID.:		1017127	1017128	1017129	1017130	1017131	1017132	1017133	1017134	
		Sample Location:		WS1	WS2	WS3	WS4	WS6	WS7	WS9	WS11	
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
		Top Depth (m):		0.55	0.50	0.40	0.35	0.25	0.40	0.30	0.35	
		Date Sampled:		11-Jun-2020	11-Jun-2020	11-Jun-2020	11-Jun-2020	11-Jun-2020	11-Jun-2020	11-Jun-2020	11-Jun-2020	
		Asbestos Lab:							DURHAM			
Determinand	Accred.	SOP	Units	LOD								
ACM Type	U	2192		N/A						-		
Asbestos Identification	U	2192	%	0.001						No Asbestos Detected		
ACM Detection Stage	U	2192		N/A						-		
Moisture	N	2030	%	0.020	11	7.8	21	17	15	29	12	0.63
pH	U	2010		4.0	8.3	8.6	8.3	8.1	8.3	8.3	8.2	8.2
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	< 0.40	< 0.40	0.72	0.63	1.1	0.72	0.52	0.96
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Sulphur	U	2175	%	0.010	0.062			0.034	0.046	0.027	0.034	0.054
Sulphur (Elemental)	U	2180	mg/kg	1.0	20	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cyanide (Free)	U	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Cyanide (Total)	U	2300	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	9.0	< 0.50	1.5	< 0.50	1.2	< 0.50	0.84	< 0.50
Sulphate (Acid Soluble)	U	2430	%	0.010	0.075			0.054	0.078	0.042	0.058	0.081
Arsenic	U	2450	mg/kg	1.0	9.7	14	9.7	13	18	21	14	17
Cadmium	U	2450	mg/kg	0.10	0.16	0.18	0.20	0.18	0.50	0.48	0.22	0.60
Chromium	U	2450	mg/kg	1.0	9.3	8.2	26	26	27	29	25	32
Copper	U	2450	mg/kg	0.50	14	10	24	23	23	39	21	26
Mercury	U	2450	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nickel	U	2450	mg/kg	0.50	13	13	33	32	36	46	29	29
Lead	U	2450	mg/kg	0.50	8.0	5.2	12	12	29	19	15	35
Selenium	U	2450	mg/kg	0.20	< 0.20	< 0.20	< 0.20	0.25	0.22	< 0.20	< 0.20	0.52
Zinc	U	2450	mg/kg	0.50	21	12	27	20	46	73	28	66
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	20	< 1.0	< 1.0	< 1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	110	430	< 1.0	< 1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	45	< 1.0	< 1.0	< 1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	[C] < 5.0	< 5.0	< 5.0	170	430	< 5.0	< 5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	6.9	< 1.0	< 1.0	< 1.0

**Project: C3296 Cardiff Airport Site**

Client: HSP Consulting Engineers Limited		Chemtest Job No.: 20-15025															
Quotation No.: Q14-00343		Chemtest Sample ID.: 1017127 1017128 1017129 1017130 1017131 1017132 1017133 1017134															
Sample Location:		WS1		WS2		WS3		WS4		WS6		WS7		WS9		WS11	
Sample Type:		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
Top Depth (m):		0.55		0.50		0.40		0.35		0.25		0.40		0.30		0.35	
Date Sampled:		11-Jun-2020		11-Jun-2020		11-Jun-2020		11-Jun-2020		11-Jun-2020		11-Jun-2020		11-Jun-2020		11-Jun-2020	
Asbestos Lab:		DURHAM															
Determinand	Accred.	SOP	Units	LOD													
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	140	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	1900	170	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0	< 1.0	[C] < 1.0	< 1.0	< 1.0	< 1.0	110	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	< 5.0	[C] < 5.0	< 5.0	< 5.0	< 5.0	2200	170	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	< 10	[C] < 10	< 10	< 10	< 10	2300	600	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.62	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.73	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.43	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.50	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.59	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.42	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.31	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	U	2700	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	U	2700	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.7	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Total Phenols	U	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

### Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

<b>Sample:</b>	<b>Sample Ref:</b>	<b>Sample ID:</b>	<b>Sample Location:</b>	<b>Sampled Date:</b>	<b>Deviation Code(s):</b>	<b>Containers Received:</b>
1017128			WS2	11-Jun-2020	C	Plastic Tub 500g

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2175	Total Sulphur in Soils	Total Sulphur	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2180	Sulphur (Elemental) in Soils by HPLC	Sulphur	Dichloromethane extraction / HPLC with UV detection
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Alkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N-dimethyl-p-phenylenediamine.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2680	TPH A/A Split	Aliphatics: >C5-C6, >C6-C8,>C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35- C44Aromatics: >C5-C7, >C7-C8, >C8- C10, >C10-C12, >C12-C16, >C16- C21, >C21- C35, >C35- C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.

## **Report Information**

### **Key**

---

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

### **Sample Deviation Codes**

---

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

### **Sample Retention and Disposal**

---

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

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

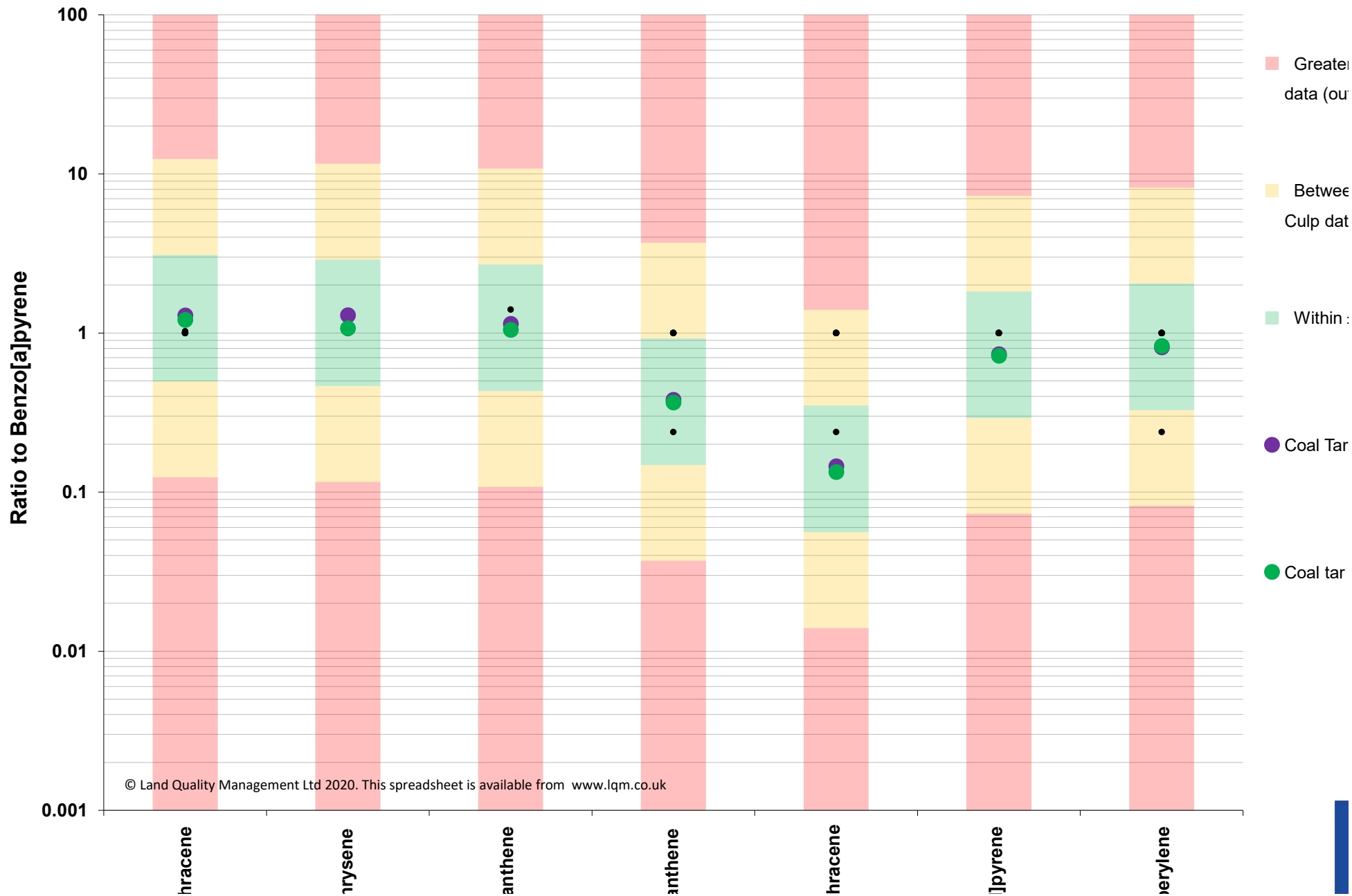
Charges may apply to extended sample storage

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

[customerservices@chemtest.com](mailto:customerservices@chemtest.com)



# Appendix VII



# Appendix VIII

# Waste Classification Report



5EZWV-5FRTL-MMRB8

## Job name

HWOL\_20-15025-20200619 151822[2]

## Description/Comments

Chemical Analysis data from a GI for feasibility - Human Health, geotech risk and prelim waste classification.

## Project

C3296

## Site

Cardiff & Vale College

## Related Documents

#	Name	Description
1	HWOL_20-15025-20200619 151822.hwol	.hwol file used to create the Job

## Waste Stream Template

Example waste stream template for contaminated soils

## Classified by

Name: <b>Johanne Bridgman</b>	Company: <b>HSP Consulting Engineers Limited</b>	HazWasteOnline™ Training Record:	
Date: <b>06 Jul 2020 16:20 GMT</b>		<b>Course</b>	<b>Date</b>
Telephone: <b>01773 535555</b>		Hazardous Waste Classification	11 Feb 2020
		Advanced Hazardous Waste Classification	12 Feb 2020

## Report

Created by: Johanne Bridgman  
Created date: 06 Jul 2020 16:20 GMT

## Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	WS1-11/06/2020-0.55	0.55	Non Hazardous		3
2	WS2-11/06/2020-0.50	0.50	Non Hazardous		5
3	WS3-11/06/2020-0.40	0.40	Non Hazardous		7
4	WS4-11/06/2020-0.35	0.35	Non Hazardous		9
5	WS6-11/06/2020-0.25	0.25	Hazardous	HP 7, HP 11	11
6	WS7-11/06/2020-0.40	0.40	Non Hazardous		14
7	WS9-11/06/2020-0.30	0.30	Non Hazardous		17
8	WS11-11/06/2020-0.35	0.35	Non Hazardous		19

## Appendices

Appendix A: Classifier defined and non CLP determinands	Page 21
Appendix B: Rationale for selection of metal species	Page 22



---

Appendices	Page
Appendix C: Version	23

---

Classification of sample: WS1-11/06/2020-0.55

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

Sample details

Sample Name:	LoW Code:
<b>WS1-11/06/2020-0.55</b>	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
<b>0.55 m</b>	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
<b>11%</b>	
(wet weight correction)	

Hazard properties

None identified


Determinands

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

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				9.7 mg/kg	1.32	11.398 mg/kg	0.00114 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.16 mg/kg	1.142	0.163 mg/kg	0.0000163 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				9.3 mg/kg	1.462	12.097 mg/kg	0.00121 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				14 mg/kg	1.126	14.029 mg/kg	0.0014 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	8 mg/kg	1.56	11.106 mg/kg	0.000712 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				13 mg/kg	2.976	34.435 mg/kg	0.00344 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %		<LOD
	034-002-00-8									
11	zinc { zinc chromate }				21 mg/kg	2.774	51.849 mg/kg	0.00518 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
13	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										
14	pH				8.3 pH		8.3 pH	8.3 pH			
			PH								
15	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
16	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-917-1	208-96-8								
17	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-469-6	83-32-9								
18	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-695-5	86-73-7								
19	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-581-5	85-01-8								
20	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-371-1	120-12-7								
21	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-912-4	206-44-0								
22	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-927-3	129-00-0								
23	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
24	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
25	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
26	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
27	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
28	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-893-2	193-39-5								
29	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
30	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-883-8	191-24-2								
31	sulfur { sulfur }				20 mg/kg		17.8 mg/kg	0.00178 %		✓	
	016-094-00-1	231-722-6	7704-34-9								
Total:									0.0164 %		

Key

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

Classification of sample: WS2-11/06/2020-0.50

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

**Sample details**

Sample Name:	LoW Code:	
<b>WS2-11/06/2020-0.50</b>	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
<b>0.50 m</b>		
Moisture content:		
<b>7.8%</b>		
(wet weight correction)		

**Hazard properties**

None identified

**Determinands**


Moisture content: 7.8% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				14 mg/kg	1.32	17.043 mg/kg	0.0017 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				<0.4 mg/kg	3.22	<1.288 mg/kg	<0.000129 %		<LOD
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.18 mg/kg	1.142	0.19 mg/kg	0.000019 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				8.2 mg/kg	1.462	11.05 mg/kg	0.0011 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				10 mg/kg	1.126	10.381 mg/kg	0.00104 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	5.2 mg/kg	1.56	7.478 mg/kg	0.000479 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				13 mg/kg	2.976	35.674 mg/kg	0.00357 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %		<LOD
	034-002-00-8									
11	zinc { zinc chromate }				12 mg/kg	2.774	30.693 mg/kg	0.00307 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group		TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
13	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										
14	pH				8.6 pH		8.6 pH		8.6 pH		
			PH								
15	naphthalene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3								
16	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		205-917-1	208-96-8								
17	acenaphthene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		201-469-6	83-32-9								
18	fluorene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		201-695-5	86-73-7								
19	phenanthrene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		201-581-5	85-01-8								
20	anthracene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		204-371-1	120-12-7								
21	fluoranthene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		205-912-4	206-44-0								
22	pyrene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		204-927-3	129-00-0								
23	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3								
24	chrysene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9								
25	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2								
26	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9								
27	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8								
28	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		205-893-2	193-39-5								
29	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3								
30	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
		205-883-8	191-24-2								
31	sulfur { sulfur }				1.3 mg/kg		1.199 mg/kg		0.00012 %	✓	
	016-094-00-1	231-722-6	7704-34-9								
Total:									0.0126 %		

Key

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

Classification of sample: WS3-11/06/2020-0.40

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

Sample details

Sample Name:	LoW Code:	
<b>WS3-11/06/2020-0.40</b>	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
<b>0.40 m</b>		
Moisture content:		
<b>21%</b>		
(wet weight correction)		

Hazard properties

None identified

Determinands

Moisture content: 21% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				9.7 mg/kg	1.32	10.118 mg/kg	0.00101 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				0.72 mg/kg	3.22	1.831 mg/kg	0.000183 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.2 mg/kg	1.142	0.18 mg/kg	0.000018 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				26 mg/kg	1.462	30.02 mg/kg	0.003 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				24 mg/kg	1.126	21.347 mg/kg	0.00213 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	12 mg/kg	1.56	14.787 mg/kg	0.000948 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				33 mg/kg	2.976	77.591 mg/kg	0.00776 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %		<LOD
	034-002-00-8									
11	zinc { zinc chromate }				27 mg/kg	2.774	59.173 mg/kg	0.00592 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group		TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
13	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											
14	pH				8.3	pH		8.3	pH	8.3 pH		
			PH									
15	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
16	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
17	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9									
18	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7									
19	phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8									
20	anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7									
21	fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0									
22	pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0									
23	benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3									
24	chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9									
25	benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2									
26	benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9									
27	benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8									
28	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5									
29	dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
30	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2									
31	sulfur { sulfur }				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	016-094-00-1	231-722-6	7704-34-9									
Total:										0.0225 %		

**Key**

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

Classification of sample: WS4-11/06/2020-0.35

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

Sample details

Sample Name:	LoW Code:	
<b>WS4-11/06/2020-0.35</b>	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
<b>0.35 m</b>		
Moisture content:		
<b>17%</b>		
(wet weight correction)		

Hazard properties

None identified


Determinands

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

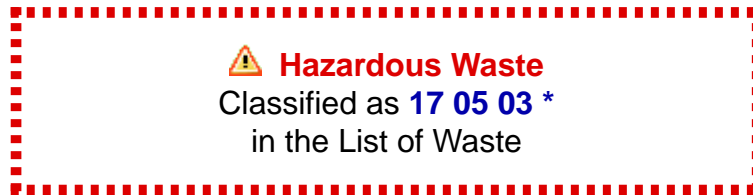
#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				13 mg/kg	1.32	14.246 mg/kg	0.00142 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				0.63 mg/kg	3.22	1.684 mg/kg	0.000168 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.18 mg/kg	1.142	0.171 mg/kg	0.0000171 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				26 mg/kg	1.462	31.54 mg/kg	0.00315 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				23 mg/kg	1.126	21.493 mg/kg	0.00215 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	12 mg/kg	1.56	15.536 mg/kg	0.000996 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				32 mg/kg	2.976	79.05 mg/kg	0.0079 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.25 mg/kg	2.554	0.53 mg/kg	0.000053 %	✓	
	034-002-00-8									
11	zinc { zinc chromate }				20 mg/kg	2.774	46.051 mg/kg	0.00461 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
13	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										
14	pH				8.1 pH		8.1 pH	8.1 pH			
			PH								
15	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
16	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-917-1	208-96-8								
17	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-469-6	83-32-9								
18	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-695-5	86-73-7								
19	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-581-5	85-01-8								
20	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-371-1	120-12-7								
21	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-912-4	206-44-0								
22	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-927-3	129-00-0								
23	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
24	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
25	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
26	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
27	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
28	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-893-2	193-39-5								
29	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
30	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-883-8	191-24-2								
31	sulfur { sulfur }				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	016-094-00-1	231-722-6	7704-34-9								
Total:									0.0219 %		

Key

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

Classification of sample: WS6-11/06/2020-0.25



Sample details

Sample Name:	LoW Code:	
<b>WS6-11/06/2020-0.25</b>	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 03 * (Soil and stones containing hazardous substances)
<b>0.25 m</b>		
Moisture content:		
<b>15%</b>		
(wet weight correction)		

Hazard properties

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

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.196%)

**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.: 0.196%)

Determinands






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

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				18 mg/kg	1.32	20.201 mg/kg	0.00202 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				1.1 mg/kg	3.22	3.011 mg/kg	0.000301 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.5 mg/kg	1.142	0.485 mg/kg	0.0000485 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				27 mg/kg	1.462	33.543 mg/kg	0.00335 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				23 mg/kg	1.126	22.011 mg/kg	0.0022 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	29 mg/kg	1.56	38.449 mg/kg	0.00246 %	✓	
	082-004-00-2	231-846-0	7758-97-6							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				36 mg/kg	2.976	91.074 mg/kg	0.00911 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium selenosulfide and those specified elsewhere in this Annex }				0.22 mg/kg	2.554	0.478 mg/kg	0.0000478 %	✓	
	034-002-00-8									
11	zinc { zinc chromate }				46 mg/kg	2.774	108.469 mg/kg	0.0108 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group				2300 mg/kg		1955 mg/kg	0.196 %	✓	
			TPH							
13	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									
14	pH				8.3 pH		8.3 pH	8.3 pH		
			PH							
15	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
16	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
17	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
18	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
19	phenanthrene				0.1 mg/kg		0.085 mg/kg	0.0000085 %	✓	
		201-581-5	85-01-8							
20	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
21	fluoranthene				0.62 mg/kg		0.527 mg/kg	0.0000527 %	✓	
		205-912-4	206-44-0							
22	pyrene				0.73 mg/kg		0.62 mg/kg	0.000062 %	✓	
		204-927-3	129-00-0							
23	benzo[a]anthracene				0.43 mg/kg		0.366 mg/kg	0.0000366 %	✓	
	601-033-00-9	200-280-6	56-55-3							
24	chrysene				0.5 mg/kg		0.425 mg/kg	0.0000425 %	✓	
	601-048-00-0	205-923-4	218-01-9							
25	benzo[b]fluoranthene				0.59 mg/kg		0.501 mg/kg	0.0000501 %	✓	
	601-034-00-4	205-911-9	205-99-2							
26	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
27	benzo[a]pyrene; benzo[def]chrysene				0.42 mg/kg		0.357 mg/kg	0.0000357 %	✓	
	601-032-00-3	200-028-5	50-32-8							
28	indeno[123-cd]pyrene				0.31 mg/kg		0.264 mg/kg	0.0000264 %	✓	
		205-893-2	193-39-5							
29	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
30	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
31	sulfur { sulfur }				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	016-094-00-1	231-722-6	7704-34-9							
Total:								0.227 %		

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
<b>&lt;LOD</b>	Below limit of detection
<b>ND</b>	Not detected

CLP: Note 1 Only the metal concentration has been used for classification

---

### Supplementary Hazardous Property Information

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

**Force this Hazardous property to non hazardous because** No liquid phase (free product) observed during sampling

Hazard Statements hit:

---

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

Because of determinand:

---

TPH (C6 to C40) petroleum group: (conc.: 0.196%)



Classification of sample: WS7-11/06/2020-0.40

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

Sample details

Sample Name: <b>WS7-11/06/2020-0.40</b>	LoW Code: Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth: <b>0.40 m</b>	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
Moisture content: <b>29%</b> (wet weight correction)		

Hazard properties

None identified


Determinands

Moisture content: 29% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				21	mg/kg	1.32	19.686	mg/kg	0.00197 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	boron { diboron trioxide; boric oxide }				0.72	mg/kg	3.22	1.646	mg/kg	0.000165 %	✓	
	005-008-00-8	215-125-8	1303-86-2									
3	cadmium { cadmium oxide }				0.48	mg/kg	1.142	0.389	mg/kg	0.0000389 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				29	mg/kg	1.462	30.093	mg/kg	0.00301 %	✓	
		215-160-9	1308-38-9									
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5	mg/kg	1.923	<0.962	mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0									
6	copper { dicopper oxide; copper (I) oxide }				39	mg/kg	1.126	31.176	mg/kg	0.00312 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
7	lead { lead chromate }			1	19	mg/kg	1.56	21.042	mg/kg	0.00135 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
8	mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
9	nickel { nickel chromate }				46	mg/kg	2.976	97.205	mg/kg	0.00972 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
10	selenium { selenium compounds with the exception of cadmium selenide and those specified elsewhere in this Annex }				<0.2	mg/kg	2.554	<0.511	mg/kg	<0.0000511 %		<LOD
	034-002-00-8											
11	zinc { zinc chromate }				73	mg/kg	2.774	143.784	mg/kg	0.0144 %	✓	
	024-007-00-3	236-878-9	13530-65-9									
12	TPH (C6 to C40) petroleum group		TPH		600	mg/kg		426	mg/kg	0.0426 %	✓	

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
13	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									
14	pH				8.3 pH		8.3 pH	8.3 pH		
			PH							
15	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
16	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
17	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
18	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
19	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8							
20	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
21	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0							
22	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0							
23	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3							
24	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9							
25	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2							
26	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
27	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8							
28	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
29	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
30	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
31	sulfur { sulfur }				<1 mg/kg		<1 mg/kg	<0.0001 %		<LOD
	016-094-00-1	231-722-6	7704-34-9							
								Total:	0.0769 %	

Key

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

### Supplementary Hazardous Property Information

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

**Force this Hazardous property to non hazardous because** No liquid phase (free product) observed during sampling

---

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0426%)

Classification of sample: WS9-11/06/2020-0.30

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

Sample details

Sample Name:	LoW Code:	
<b>WS9-11/06/2020-0.30</b>	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
<b>0.30 m</b>		
Moisture content:		
<b>12%</b>		
(wet weight correction)		

Hazard properties

None identified

Determinands

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

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				14 mg/kg	1.32	16.266 mg/kg	0.00163 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				0.52 mg/kg	3.22	1.473 mg/kg	0.000147 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.22 mg/kg	1.142	0.221 mg/kg	0.0000221 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				25 mg/kg	1.462	32.154 mg/kg	0.00322 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				21 mg/kg	1.126	20.806 mg/kg	0.00208 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	15 mg/kg	1.56	20.59 mg/kg	0.00132 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				29 mg/kg	2.976	75.954 mg/kg	0.0076 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.2 mg/kg	2.554	<0.511 mg/kg	<0.0000511 %		<LOD
	034-002-00-8									
11	zinc { zinc chromate }				28 mg/kg	2.774	68.355 mg/kg	0.00684 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group		TPH		<10 mg/kg		<10 mg/kg	<0.001 %		<LOD

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
13	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										
14	pH				8.2 pH		8.2 pH	8.2 pH			
			PH								
15	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
16	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-917-1	208-96-8								
17	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-469-6	83-32-9								
18	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-695-5	86-73-7								
19	phenanthrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		201-581-5	85-01-8								
20	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-371-1	120-12-7								
21	fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-912-4	206-44-0								
22	pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		204-927-3	129-00-0								
23	benzo[a]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
24	chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
25	benzo[b]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
26	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
27	benzo[a]pyrene; benzo[def]chrysene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
28	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-893-2	193-39-5								
29	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
30	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
		205-883-8	191-24-2								
31	sulfur { sulfur }				<1 mg/kg		<1 mg/kg	<0.0001 %			<LOD
	016-094-00-1	231-722-6	7704-34-9								
Total:									0.0244 %		

Key

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

Classification of sample: WS11-11/06/2020-0.35

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

**Sample details**

Sample Name:	LoW Code:	
<b>WS11-11/06/2020-0.35</b>	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
<b>0.35 m</b>		
Moisture content:		
<b>0.63%</b>		
(wet weight correction)		

**Hazard properties**

None identified


**Determinands**

Moisture content: 0.63% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				17 mg/kg	1.32	22.304 mg/kg	0.00223 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	boron { diboron trioxide; boric oxide }				0.96 mg/kg	3.22	3.072 mg/kg	0.000307 %	✓	
	005-008-00-8	215-125-8	1303-86-2							
3	cadmium { cadmium oxide }				0.6 mg/kg	1.142	0.681 mg/kg	0.0000681 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
4	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				32 mg/kg	1.462	46.475 mg/kg	0.00465 %	✓	
		215-160-9	1308-38-9							
5	chromium in chromium(VI) compounds { chromium(VI) oxide }				<0.5 mg/kg	1.923	<0.962 mg/kg	<0.0000962 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
6	copper { dicopper oxide; copper (I) oxide }				26 mg/kg	1.126	29.089 mg/kg	0.00291 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
7	lead { lead chromate }			1	35 mg/kg	1.56	54.25 mg/kg	0.00348 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
8	mercury { mercury dichloride }				<0.1 mg/kg	1.353	<0.135 mg/kg	<0.0000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
9	nickel { nickel chromate }				29 mg/kg	2.976	85.768 mg/kg	0.00858 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
10	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.52 mg/kg	2.554	1.32 mg/kg	0.000132 %	✓	
	034-002-00-8									
11	zinc { zinc chromate }				66 mg/kg	2.774	181.94 mg/kg	0.0182 %	✓	
	024-007-00-3	236-878-9	13530-65-9							
12	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number									
13	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											
14	pH				8.2	pH		8.2	pH	8.2 pH		
			PH									
15	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
16	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
17	acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9									
18	fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7									
19	phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-581-5	85-01-8									
20	anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7									
21	fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-912-4	206-44-0									
22	pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		204-927-3	129-00-0									
23	benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-033-00-9	200-280-6	56-55-3									
24	chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-048-00-0	205-923-4	218-01-9									
25	benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-034-00-4	205-911-9	205-99-2									
26	benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9									
27	benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-032-00-3	200-028-5	50-32-8									
28	indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5									
29	dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3									
30	benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2									
31	sulfur { sulfur }				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
	016-094-00-1	231-722-6	7704-34-9									
Total:										0.042 %		

**Key**

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

## Appendix A: Classifier defined and non CLP determinands

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

Conversion factor: 1.462

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

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

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

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

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

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

CLP index number: 006-007-00-5

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

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

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

Reason for additional Hazards Statement(s):

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

### • **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

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

### • **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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



- **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

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

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

- **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

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

Data source date: 21 Aug 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2 H351

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

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

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

Data source date: 23 Jul 2015

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

## Appendix B: Rationale for selection of metal species

### arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

### boron {diboron trioxide; boric oxide}

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

### cadmium {cadmium oxide}

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

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

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

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

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments (edit as required)

### copper {dicopper oxide; copper (I) oxide}

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

### lead {lead chromate}

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

### mercury {mercury dichloride}

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

### nickel {nickel chromate}

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

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

Harmonised group entry used as most reasonable case. Pigment cadmium sulposelenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil. (edit as required)

### zinc {zinc chromate}

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

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

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

**sulfur {sulfur}**

Elemental sulfur most likely to be worst case scenario hazardous

## Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.1, May 2018**

HazWasteOnline Classification Engine Version: 2020.185.4401.8626 (03 Jul 2020)

HazWasteOnline Database: 2020.185.4401.8626 (03 Jul 2020)

This classification utilises the following guidance and legislation:

**WM3 v1.1 - Waste Classification** - 1st Edition v1.1 - May 2018  
**CLP Regulation** - Regulation 1272/2008/EC of 16 December 2008  
**1st ATP** - Regulation 790/2009/EC of 10 August 2009  
**2nd ATP** - Regulation 286/2011/EC of 10 March 2011  
**3rd ATP** - Regulation 618/2012/EU of 10 July 2012  
**4th ATP** - Regulation 487/2013/EU of 8 May 2013  
**Correction to 1st ATP** - Regulation 758/2013/EU of 7 August 2013  
**5th ATP** - Regulation 944/2013/EU of 2 October 2013  
**6th ATP** - Regulation 605/2014/EU of 5 June 2014  
**WFD Annex III replacement** - Regulation 1357/2014/EU of 18 December 2014  
**Revised List of Wastes 2014** - Decision 2014/955/EU of 18 December 2014  
**7th ATP** - Regulation 2015/1221/EU of 24 July 2015  
**8th ATP** - Regulation (EU) 2016/918 of 19 May 2016  
**9th ATP** - Regulation (EU) 2016/1179 of 19 July 2016  
**10th ATP** - Regulation (EU) 2017/776 of 4 May 2017  
**HP14 amendment** - Regulation (EU) 2017/997 of 8 June 2017  
**13th ATP** - Regulation (EU) 2018/1480 of 4 October 2018  
**14th ATP** - Regulation (EU) 2020/217 of 4 October 2019  
**POPs Regulation 2004** - Regulation 850/2004/EC of 29 April 2004  
**1st ATP to POPs Regulation** - Regulation 756/2010/EU of 24 August 2010  
**2nd ATP to POPs Regulation** - Regulation 757/2010/EU of 24 August 2010



CIVIL | STRUCTURAL | GEOTECHNICAL & ENVIRONMENTAL | TRAFFIC AND TRANSPORT  
Lawrence House | 6 Meadowbank Way | Nottingham | NG16 3SB

01773 535555 | [design@hspconsulting.com](mailto:design@hspconsulting.com) | [www.hspconsulting.com](http://www.hspconsulting.com)