

**Appendix C**  
**Chemical Laboratory Analysis**



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## **QTS Environmental Report No: 14-27138**

**Site Reference:** 77-79 Charlotte Street

**Project / Job Ref:** 14653

**Order No:** None Supplied

**Sample Receipt Date:** 08/12/2014

**Sample Scheduled Date:** 08/12/2014

**Report Issue Number:** 1

**Reporting Date:** 15/12/2014

**Authorised by:**

Russell Jarvis  
Director

**On behalf of QTS Environmental Ltd**

**Authorised by:**

Kevin Old  
Director

**On behalf of QTS Environmental Ltd**



**QTS Environmental Ltd**  
**Unit 1, Rose Lane Industrial Estate**  
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**Lenham Heath**  
**Maidstone**  
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# Soil Analysis Certificate

<b>QTS Environmental Report No: 14-27138</b>	<b>Date Sampled</b>	26/11/14	26/11/14	26/11/14	26/11/14	26/11/14
<b>Soils Ltd</b>	<b>Time Sampled</b>	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
<b>Site Reference: 77-79 Charlotte Street</b>	<b>TP / BH No</b>	Sample A	Sample B	WS1	TP1	WS2
<b>Project / Job Ref: 14653</b>	<b>Additional Refs</b>	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
<b>Order No: None Supplied</b>	<b>Depth (m)</b>	0.30 - 2.00	2.00 - 6.10	5.20	0.30	2.50
<b>Reporting Date: 15/12/2014</b>	<b>QTSE Sample No</b>	128515	128516	128517	128518	128519

Determinand	Unit	RL	Accreditation					
Asbestos Screen	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.9	7.7	7.8	8.4	7.9
Total Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
W/S Sulphate as SO4 (2:1)	g/l	< 0.01	MCERTS	1.46	0.99	0.39	0.24	0.45
Sulphide	mg/kg	< 5	NONE	< 5	18	19	< 5	65
Organic Matter	%	< 0.1	MCERTS	3	1.9	2.1	2.6	2.8
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	1.7	1.1	1.2	1.5	1.6
Arsenic (As)	mg/kg	< 2	MCERTS	35	12	15	27	12
Beryllium (Be)	mg/kg	< 0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	1.6
Cadmium (Cd)	mg/kg	< 0.5	MCERTS	0.6	< 0.5	< 0.5	0.6	< 0.5
Chromium (Cr)	mg/kg	< 2	MCERTS	24	20	22	20	22
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	1060	108	511	166	87
Lead (Pb)	mg/kg	< 3	MCERTS	2040	422	733	917	387
Mercury (Hg)	mg/kg	< 1	NONE	159	8.3	332	16.3	4.7
Nickel (Ni)	mg/kg	< 3	MCERTS	28	18	21	18	24
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Vanadium (V)	mg/kg	< 2	NONE	59	36	43	44	50
Zinc (Zn)	mg/kg	< 3	MCERTS	404	88	123	232	82
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C

Analysis carried out on the dried sample is corrected for the stone content

The samples have been examined to identify the presence of asbestiform minerals by polarising light microscopy and dispersion staining technique to In-House Procedures QTSE600 Determination of Asbestos in Bulk Materials; Asbestos in Soils/Sediments (fibre screening and identification)

This report refers to samples as received, and QTS Environmental Ltd, takes no responsibility for the accuracy or competence of sampling by others.

The material description shall be regarded as tentative and is not included in our scope of UKAS Accreditation.

Opinions and interpretations expressed herein are outside the scope of UKAS Accreditation.

Asbestos Analyst: Piotr Lipski

RL: Reporting Limit

Pinch Test: Where pinch test is positive it is reported "Loose Fibres - PT" with type(s).

Subcontracted analysis <sup>(5)</sup>



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# Soil Analysis Certificate

<b>QTS Environmental Report No: 14-27138</b>	<b>Date Sampled</b>	26/11/14			
<b>Soils Ltd</b>	<b>Time Sampled</b>	None Supplied			
<b>Site Reference: 77-79 Charlotte Street</b>	<b>TP / BH No</b>	TP2			
<b>Project / Job Ref: 14653</b>	<b>Additional Refs</b>	None Supplied			
<b>Order No: None Supplied</b>	<b>Depth (m)</b>	0.80			
<b>Reporting Date: 15/12/2014</b>	<b>QTSE Sample No</b>	128520			

Determinand	Unit	RL	Accreditation				
Asbestos Screen	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	8.0			
Total Cyanide	mg/kg	< 2	NONE	< 2			
W/S Sulphate as SO4 (2:1)	g/l	< 0.01	MCERTS	0.07			
Sulphide	mg/kg	< 5	NONE	< 5			
Organic Matter	%	< 0.1	MCERTS	2.8			
Total Organic Carbon (TOC)	%	< 0.1	MCERTS	1.6			
Arsenic (As)	mg/kg	< 2	MCERTS	11			
Beryllium (Be)	mg/kg	< 0.5	NONE	< 0.5			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.5	MCERTS	< 0.5			
Chromium (Cr)	mg/kg	< 2	MCERTS	13			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	61			
Lead (Pb)	mg/kg	< 3	MCERTS	248			
Mercury (Hg)	mg/kg	< 1	NONE	4.3			
Nickel (Ni)	mg/kg	< 3	MCERTS	14			
Selenium (Se)	mg/kg	< 3	NONE	< 3			
Vanadium (V)	mg/kg	< 2	NONE	33			
Zinc (Zn)	mg/kg	< 3	MCERTS	76			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C.

Analysis carried out on the dried sample is corrected for the stone content.

The samples have been examined to identify the presence of asbestiform minerals by polarising light microscopy and dispersion staining technique to In-House Procedures QTSE600 Determination of Asbestos in Bulk Materials; Asbestos in Soils/Sediments (fibre screening and identification).

This report refers to samples as received, and QTS Environmental Ltd, takes no responsibility for the accuracy or competence of sampling by others.

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Asbestos Analyst: Piotr Lipski

RL: Reporting Limit

Pinch Test: Where pinch test is positive it is reported "Loose Fibres - PT" with type(s).

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# **Soil Analysis Certificate - Speciated PAHs**

<b>QTS Environmental Report No: 14-27138</b>	<b>Date Sampled</b>	26/11/14	26/11/14	26/11/14	26/11/14	26/11/14
<b>Soils Ltd</b>	<b>Time Sampled</b>	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
<b>Site Reference: 77-79 Charlotte Street</b>	<b>TP / BH No</b>	Sample A	Sample B	WS1	TP1	WS2
<b>Project / Job Ref: 14653</b>	<b>Additional Refs</b>	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
<b>Order No: None Supplied</b>	<b>Depth (m)</b>	0.30 - 2.00	2.00 - 6.10	5.20	0.30	2.50
<b>Reporting Date: 15/12/2014</b>	<b>QTSE Sample No</b>	128515	128516	128517	128518	128519

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	0.20	< 0.1	< 0.1	0.11	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.28	< 0.1	< 0.1	0.17	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	0.23	< 0.1	< 0.1	0.14	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.13	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C





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Soil Analysis Certificate - Speciated PAHs					
QTS Environmental Report No: 14-27138	Date Sampled	26/11/14			
Soils Ltd	Time Sampled	None Supplied			
Site Reference: 77-79 Charlotte Street	TP / BH No	TP2			
Project / Job Ref: 14653	Additional Refs	None Supplied			
Order No: None Supplied	Depth (m)	0.80			
Reporting Date: 15/12/2014	QTSE Sample No	128520			

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	< 0.1			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Chrysene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6			

Analytical results are expressed on a dry weight basis where samples are dried at less than 30°C



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# Waste Acceptance Criteria Analytical Certificate - BS EN 12457/3

<b>QTS Environmental Report No: 14-27138</b>		<b>Date Sampled</b>	26/11/14			<b>Landfill Waste Acceptance Criteria Limits</b>  <table border="1"> <thead> <tr> <th>Inert Waste Landfill</th> <th>Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill</th> <th>Hazardous Waste Landfill</th> </tr> </thead> <tbody> <tr> <td>3%</td> <td>5%</td> <td>6%</td> </tr> <tr> <td>--</td> <td>--</td> <td>10%</td> </tr> <tr> <td>6</td> <td>--</td> <td>--</td> </tr> <tr> <td>1</td> <td>--</td> <td>--</td> </tr> <tr> <td>500</td> <td>--</td> <td>--</td> </tr> <tr> <td>100</td> <td>--</td> <td>--</td> </tr> <tr> <td>--</td> <td>&gt;6</td> <td>--</td> </tr> <tr> <td>--</td> <td>To be evaluated</td> <td>To be evaluated</td> </tr> </tbody> </table>			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	3%	5%	6%	--	--	10%	6	--	--	1	--	--	500	--	--	100	--	--	--	>6	--	--	To be evaluated	To be evaluated
Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill																																	
3%	5%	6%																																	
--	--	10%																																	
6	--	--																																	
1	--	--																																	
500	--	--																																	
100	--	--																																	
--	>6	--																																	
--	To be evaluated	To be evaluated																																	
<b>Soils Ltd</b>		<b>Time Sampled</b>	None Supplied																																
<b>Site Reference: 77-79 Charlotte Street</b>		<b>TP / BH No</b>	Sample A																																
<b>Project / Job Ref: 14653</b>		<b>Additional Refs</b>	None Supplied																																
<b>Order No: None Supplied</b>		<b>Depth (m)</b>	0.30 - 2.00																																
<b>Reporting Date: 15/12/2014</b>		<b>QTSE Sample No</b>	128515																																
<b>Determinand</b>	<b>Unit</b>	<b>MDL</b>																																	
TOC <sup>MU</sup>	%	< 0.1	1.7																																
Loss on Ignition	%	< 0.01	6.40																																
BTEX <sup>MU</sup>	mg/kg	< 0.05	< 0.05																																
Sum of PCBs	mg/kg	< 0.7	< 0.7																																
Mineral Oil <sup>MU</sup>	mg/kg	< 10	< 10																																
Total PAH <sup>MU</sup>	mg/kg	< 1.7	< 1.7																																
pH <sup>MU</sup>	pH Units	N/a	7.9																																
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	1.2																																
<b>Eluate Analysis</b>			<b>2:1 mg/l</b>	<b>8:1 mg/l</b>		<b>Cumulative 10:1 mg/kg</b>	<b>Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)</b>																												
Arsenic		< 0.01	< 0.01		< 0.2	0.5	2	25																											
Barium		0.12	0.05		0.6	20	100	300																											
Cadmium		< 0.0005	< 0.0005		< 0.02	0.04	1	5																											
Chromium		0.008	< 0.005		< 0.20	0.5	10	70																											
Copper		< 0.01	< 0.01		< 0.5	2	50	100																											
Mercury		< 0.005	< 0.005		< 0.01	0.01	0.2	2																											
Molybdenum		0.025	0.010		0.1	0.5	10	30																											
Nickel		< 0.007	< 0.007		< 0.2	0.4	10	40																											
Lead		< 0.005	< 0.005		< 0.2	0.5	10	50																											
Antimony		0.011	0.006		0.07	0.06	0.7	5																											
Selenium		< 0.005	< 0.005		< 0.1	0.1	0.5	7																											
Zinc		< 0.005	< 0.005		< 0.2	4	50	200																											
Chloride <sup>U</sup>		13	2		31	800	15000	25000																											
Fluoride <sup>U</sup>		< 0.5	< 0.5		< 1	10	150	500																											
Sulphate <sup>U</sup>		1391	177		3331	1000	20000	50000																											
TDS		1090	240		3491	4000	60000	100000																											
Phenol Index		< 0.01	< 0.01		< 0.5	1	-	-																											
DOC		15.4	14.2		143	500	800	1000																											
<b>Leach Test Information</b>																																			
Sample Mass (kg)			0.21																																
Dry Matter (%)			84.3																																
Moisture (%)			18.6																																
<b>Stage 1</b>																																			
Volume Eluate L2 (litres)			0.32																																
Filtered Eluate VE1 (litres)			0.23																																

Results are expressed on a dry weight basis, after correction for moisture content where applicable  
Stated limits are for guidance only and QTS Environmental cannot be held responsible for any discrepancies with current legislation  
M Denotes MCERTS accredited test  
U Denotes ISO17025 accredited test



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<b>Soils Ltd</b>		<b>Time Sampled</b>	None Supplied			<table border="1"> <tr> <th>Inert Waste Landfill</th> <th>Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill</th> <th>Hazardous Waste Landfill</th> </tr> <tr> <td>3%</td> <td>5%</td> <td>6%</td> </tr> <tr> <td>--</td> <td>--</td> <td>10%</td> </tr> <tr> <td>6</td> <td>--</td> <td>--</td> </tr> <tr> <td>1</td> <td>--</td> <td>--</td> </tr> <tr> <td>500</td> <td>--</td> <td>--</td> </tr> <tr> <td>100</td> <td>--</td> <td>--</td> </tr> <tr> <td>--</td> <td>&gt;6</td> <td>--</td> </tr> <tr> <td>--</td> <td>To be evaluated</td> <td>To be evaluated</td> </tr> </table>	Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	3%	5%	6%	--	--	10%	6	--	--	1	--	--	500	--	--	100	--	--	--	>6	--	--	To be evaluated	To be evaluated
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<b>Site Reference: 77-79 Charlotte Street</b>		<b>TP / BH No</b>	Sample B																														
<b>Project / Job Ref: 14653</b>		<b>Additional Refs</b>	None Supplied																														
<b>Order No: None Supplied</b>		<b>Depth (m)</b>	2.00 - 6.10																														
<b>Reporting Date: 15/12/2014</b>		<b>QTSE Sample No</b>	128516																														
<b>Determinand</b>	<b>Unit</b>	<b>MDL</b>																															
TOC <sup>MU</sup>	%	< 0.1	1.1																														
Loss on Ignition	%	< 0.01	3.90																														
BTEX <sup>MU</sup>	mg/kg	< 0.05	< 0.05																														
Sum of PCBs	mg/kg	< 0.7	< 0.7																														
Mineral Oil <sup>MU</sup>	mg/kg	< 10	< 10																														
Total PAH <sup>MU</sup>	mg/kg	< 1.7	< 1.7																														
pH <sup>MU</sup>	pH Units	N/a	7.7																														
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	1.3																														
<b>Eluate Analysis</b>			<b>2:1 mg/l</b>	<b>8:1 mg/l</b>	<b>Cumulative 10:1 mg/kg</b>	<b>Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)</b>																											
Arsenic		< 0.01	< 0.01		< 0.2	0.5	2	25																									
Barium		0.15	0.05		0.5	20	100	300																									
Cadmium		< 0.0005	< 0.0005		< 0.02	0.04	1	5																									
Chromium		< 0.005	< 0.005		< 0.20	0.5	10	70																									
Copper		< 0.01	< 0.01		< 0.5	2	50	100																									
Mercury		< 0.005	< 0.005		< 0.01	0.01	0.2	2																									
Molybdenum		0.041	0.013		0.2	0.5	10	30																									
Nickel		< 0.007	< 0.007		< 0.2	0.4	10	40																									
Lead		< 0.005	< 0.005		< 0.2	0.5	10	50																									
Antimony		0.011	0.007		0.07	0.06	0.7	5																									
Selenium		< 0.005	< 0.005		< 0.1	0.1	0.5	7																									
Zinc		< 0.005	< 0.005		< 0.2	4	50	200																									
Chloride <sup>U</sup>		6	2		21	800	15000	25000																									
Fluoride <sup>U</sup>		< 0.5	< 0.5		< 1	10	150	500																									
Sulphate <sup>U</sup>		578	106		1449	1000	20000	50000																									
TDS		589	188		2212	4000	60000	100000																									
Phenol Index		< 0.01	< 0.01		< 0.5	1	-	-																									
DOC		28.4	24		243	500	800	1000																									
<b>Leach Test Information</b>																																	
Sample Mass (kg)			0.20																														
Dry Matter (%)			85.7																														
Moisture (%)			16.6																														
<b>Stage 1</b>																																	
Volume Eluate L2 (litres)			0.32																														
Filtered Eluate VE1 (litres)			0.15																														

Results are expressed on a dry weight basis, after correction for moisture content where applicable  
Stated limits are for guidance only and QTS Environmental cannot be held responsible for any discrepancies with current legislation  
M Denotes MCERTS accredited test  
U Denotes ISO17025 accredited test





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#### Soil Analysis Certificate - Sample Descriptions

**QTS Environmental Report No: 14-27138**

**Soils Ltd**

**Site Reference: 77-79 Charlotte Street**

**Project / Job Ref: 14653**

**Order No: None Supplied**

**Reporting Date: 15/12/2014**

QTSE Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
\$ 128515	Sample A	None Supplied	0.30 - 2.00	15.7	Brown gravelly clay with rubble
\$ 128516	Sample B	None Supplied	2.00 - 6.10	14.3	Brown gravelly clay with rubble
\$ 128517	WS1	None Supplied	5.20	16.6	Brown clayey gravel with rubble
\$ 128518	TP1	None Supplied	0.30	14.5	Brown clayey gravel with brick and rubble
\$ 128519	WS2	None Supplied	2.50	18.1	Brown clayey gravel with rubble
\$ 128520	TP2	None Supplied	0.80	17.5	Brown clayey gravel with stones and rubble

*Moisture content is part of procedure E003 & is not an accredited test*

Insufficient Sample <sup>1/5</sup>

Unsuitable Sample <sup>4/5</sup>

*\$ samples exceeded recommended holding times*



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# **Soil Analysis Certificate - Methodology & Miscellaneous Information**

**QTS Environmental Report No: 14-27138**

**Soils Ltd**

**Site Reference: 77-79 Charlotte Street**

**Project / Job Ref: 14653**

**Order No: None Supplied**

**Reporting Date: 15/12/2014**

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	TPH LQM	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6 - C10)	Determination of hydrocarbons C6-C10 by headspace GC-MS	E001

**D Dried**  
**AR As Received**



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## **QTS Environmental Report No: 14-27325**

**Site Reference:** Charlotte Street, London

**Project / Job Ref:** 14653

**Order No:** None Supplied

**Sample Receipt Date:** 12/12/2014

**Sample Scheduled Date:** 12/12/2014

**Report Issue Number:** 1

**Reporting Date:** 18/12/2014

**Authorised by:**

Russell Jarvis  
Director

**On behalf of QTS Environmental Ltd**

**Authorised by:**

Kevin Old  
Director

**On behalf of QTS Environmental Ltd**



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Water Analysis Certificate						
<b>QTS Environmental Report No: 14-27325</b>	<b>Date Sampled</b>	09/12/14				
<b>Soils Ltd</b>	<b>Time Sampled</b>	None Supplied				
<b>Site Reference: Charlotte Street, London</b>	<b>TP / BH No</b>	WS2				
<b>Project / Job Ref: 14653</b>	<b>Additional Refs</b>	None Supplied				
<b>Order No: None Supplied</b>	<b>Depth (m)</b>	1.90				
<b>Reporting Date: 18/12/2014</b>	<b>QTSE Sample No</b>	129232				

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	ISO17025	7.1			
Total Cyanide	ug/l	< 5	NONE	< 5			
Sulphate as SO <sub>4</sub>	mg/l	< 1	ISO17025	971			
Sulphide	mg/l	< 0.1	NONE	< 0.1			
Total Organic Carbon (TOC)	mg/l	< 0.1	NONE	54.1			
Arsenic (dissolved)	ug/l	< 5	ISO17025	< 5			
Beryllium (dissolved)	ug/l	< 3	ISO17025	< 3			
Boron (dissolved)	ug/l	< 5	ISO17025	348			
Cadmium (dissolved)	ug/l	< 0.4	ISO17025	< 0.4			
Chromium (dissolved)	ug/l	< 5	ISO17025	< 5			
Chromium (hexavalent)	ug/l	< 5	NONE	< 5			
Copper (dissolved)	ug/l	< 5	ISO17025	12			
Lead (dissolved)	ug/l	< 5	ISO17025	15			
Mercury (dissolved)	ug/l	< 0.05	ISO17025	< 0.05			
Nickel (dissolved)	ug/l	< 5	ISO17025	< 5			
Selenium (dissolved)	ug/l	< 5	ISO17025	< 5			
Vanadium (dissolved)	ug/l	< 5	ISO17025	6			
Zinc (dissolved)	ug/l	< 2	ISO17025	14			
Total Phenols	ug/l	< 0.5	NONE	< 0.5			

Subcontracted analysis <sup>(5)</sup>

Insufficient sample <sup>(1/5)</sup>

Unsuitable Sample <sup>(1/5)</sup>





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# **Soil Analysis Certificate - Methodology & Miscellaneous Information**

**QTS Environmental Report No: 14-27325**

**Soils Ltd**

**Site Reference: Charlotte Street, London**

**Project / Job Ref: 14653**

**Order No: None Supplied**

**Reporting Date: 18/12/2014**

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	EPH TEXAS	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID	E104
Water	F	TPH LQM	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6 - C10)	Determination of hydrocarbons C6-C10 by headspace GC-MS	E101

Key

**F Filtered**  
**UF Unfiltered**



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## **QTS Environmental Report No: 14-27388**

**Site Reference:** Charlotte Street, London

**Project / Job Ref:** 14653

**Order No:** None Supplied

**Sample Receipt Date:** 16/12/2014

**Sample Scheduled Date:** 16/12/2014

**Report Issue Number:** 1

**Reporting Date:** 22/12/2014

**Authorised by:**

Russell Jarvis  
Director

**On behalf of QTS Environmental Ltd**

A handwritten signature in black ink, appearing to read 'R Jarvis'.

**Authorised by:**

Kevin Old  
Director

**On behalf of QTS Environmental Ltd**

A handwritten signature in black ink, appearing to read 'K Old'.



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Water Analysis Certificate - Speciated PAH						
QTS Environmental Report No: 14-2	Date Sampled	15/12/14				
Soils Ltd	Time Sampled	None Supplied				
Site Reference: Charlotte Street, London	TP / BH No	WS2				
Project / Job Ref: 14653	Additional Refs	None Supplied				
Order No: None Supplied	Depth (m)	1.80				
Reporting Date: 22/12/2014	QTSE Sample No	129629				

Determinand	Unit	RL	Accreditation				
Naphthalene	ug/l	< 0.01	NONE	< 0.01			
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	< 0.01			
Fluorene	ug/l	< 0.01	NONE	< 0.01			
Phenanthrene	ug/l	< 0.01	NONE	< 0.01			
Anthracene	ug/l	< 0.01	NONE	< 0.01			
Fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Pyrene	ug/l	< 0.01	NONE	< 0.01			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.01	NONE	< 0.01			
Total EPA-16 PAHs	ug/l	< 0.01	NONE	< 0.01			





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# **Soil Analysis Certificate - Methodology & Miscellaneous Information**

**QTS Environmental Report No: 14-27388**

**Soils Ltd**

**Site Reference: Charlotte Street, London**

**Project / Job Ref: 14653**

**Order No: None Supplied**

**Reporting Date: 22/12/2014**

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	EPH TEXAS	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID	E104
Water	F	TPH LQM	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6 - C10)	Determination of hydrocarbons C6-C10 by headspace GC-MS	E101

Key

**F Filtered**  
**UF Unfiltered**





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## **QTS Environmental Report No: 15-27973**

**Site Reference:** Charlotte Street

**Project / Job Ref:** 14653

**Order No:** None Supplied

**Sample Receipt Date:** 19/01/2015

**Sample Scheduled Date:** 19/01/2015

**Report Issue Number:** 1

**Reporting Date:** 21/01/2015

**Authorised by:**

Russell Jarvis  
Director

**On behalf of QTS Environmental Ltd**

**Authorised by:**

Kevin Old  
Director

**On behalf of QTS Environmental Ltd**



**QTS Environmental Ltd**  
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Water Analysis Certificate						
QTS Environmental Report No: 15-27973		Date Sampled	16/01/15			
Soils Ltd		Time Sampled	1030			
Site Reference: Charlotte Street		TP / BH No	BH1			
Project / Job Ref: 14653		Additional Refs	None Supplied			
Order No: None Supplied		Depth (m)	3.94			
Reporting Date: 21/01/2015		QTSE Sample No	132215			

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	ISO17025	6.8			
Total Cyanide	ug/l	< 5	NONE	< 5			
Sulphate as SO <sub>4</sub>	mg/l	< 1	ISO17025	60			
Sulphide	mg/l	< 0.1	NONE	< 0.1			
Total Organic Carbon (TOC)	mg/l	< 0.1	NONE	126			
Arsenic (dissolved)	ug/l	< 5	ISO17025	9			
Beryllium (dissolved)	ug/l	< 3	ISO17025	< 3			
Boron (dissolved)	ug/l	< 5	ISO17025	326			
Cadmium (dissolved)	ug/l	< 0.4	ISO17025	< 0.4			
Chromium (dissolved)	ug/l	< 5	ISO17025	< 5			
Chromium (hexavalent)	ug/l	< 5	NONE	< 5			
Copper (dissolved)	ug/l	< 5	ISO17025	< 5			
Lead (dissolved)	ug/l	< 5	ISO17025	< 5			
Mercury (dissolved)	ug/l	< 0.05	ISO17025	< 0.05			
Nickel (dissolved)	ug/l	< 5	ISO17025	< 5			
Selenium (dissolved)	ug/l	< 5	ISO17025	< 5			
Vanadium (dissolved)	ug/l	< 5	ISO17025	< 5			
Zinc (dissolved)	ug/l	< 2	ISO17025	3			
Total Phenols (monohydric)	ug/l	< 0.5	NONE	< 0.5			

Subcontracted analysis <sup>(5)</sup>  
Insufficient sample <sup>1/5</sup>  
Unsuitable Sample <sup>1/5</sup>



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Water Analysis Certificate - Speciated PAH						
QTS Environmental Report No: 15-2	Date Sampled	16/01/15				
Soils Ltd	Time Sampled	1030				
Site Reference: Charlotte Street	TP / BH No	BH1				
Project / Job Ref: 14653	Additional Refs	None Supplied				
Order No: None Supplied	Depth (m)	3.94				
Reporting Date: 21/01/2015	QTSE Sample No	132215				

Determinand	Unit	RL	Accreditation				
Naphthalene	ug/l	< 0.01	NONE	< 0.01			
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	< 0.01			
Fluorene	ug/l	< 0.01	NONE	< 0.01			
Phenanthrene	ug/l	< 0.01	NONE	< 0.01			
Anthracene	ug/l	< 0.01	NONE	< 0.01			
Fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Pyrene	ug/l	< 0.01	NONE	< 0.01			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.01	NONE	< 0.01			
Total EPA-16 PAHs	ug/l	< 0.01	NONE	< 0.01			



**QTS Environmental Ltd**  
**Unit 1, Rose Lane Industrial Estate**  
**Rose Lane**  
**Lenham Heath**  
**Maidstone**  
**Kent ME17 2JN**  
**Tel : 01622 850410**

Water Analysis Certificate - TPH CWG Banded					
QTS Environmental Report No: 15-27973	Date Sampled	16/01/15			
Soils Ltd	Time Sampled	1030			
Site Reference: Charlotte Street	TP / BH No	BH1			
Project / Job Ref: 14653	Additional Refs	None Supplied			
Order No: None Supplied	Depth (m)	3.94			
Reporting Date: 21/01/2015	QTSE Sample No	132215			

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6	ug/l	< 10	NONE	< 10			
Aliphatic >C6 - C8	ug/l	< 10	NONE	< 10			
Aliphatic >C8 - C10	ug/l	< 10	NONE	< 10			
Aliphatic >C10 - C12	ug/l	< 10	NONE	< 10			
Aliphatic >C12 - C16	ug/l	< 10	NONE	< 10			
Aliphatic >C16 - C21	ug/l	< 10	NONE	< 10			
Aliphatic >C21 - C34	ug/l	< 10	NONE	< 10			
Aliphatic (C5 - C34)	ug/l	< 70	NONE	< 70			
Aromatic >C5 - C7	ug/l	< 10	NONE	< 10			
Aromatic >C7 - C8	ug/l	< 10	NONE	< 10			
Aromatic >C8 - C10	ug/l	< 10	NONE	< 10			
Aromatic >C10 - C12	ug/l	< 10	NONE	< 10			
Aromatic >C12 - C16	ug/l	< 10	NONE	< 10			
Aromatic >C16 - C21	ug/l	< 10	NONE	< 10			
Aromatic >C21 - C35	ug/l	< 10	NONE	< 10			
Aromatic (C5 - C35)	ug/l	< 70	NONE	< 70			
Total >C5 - C35	ug/l	< 140	NONE	< 140			





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**Tel : 01622 850410**



Water Analysis Certificate - BTEX / MTBE						
QTS Environmental Report No: 15-27973	Date Sampled	16/01/15				
Soils Ltd	Time Sampled	1030				
Site Reference: Charlotte Street	TP / BH No	BH1				
Project / Job Ref: 14653	Additional Refs	None Supplied				
Order No: None Supplied	Depth (m)	3.94				
Reporting Date: 21/01/2015	QTSE Sample No	132215				

Determinand	Unit	RL	Accreditation				
Benzene	ug/l	< 1	ISO17025	< 1			
Toluene	ug/l	< 5	ISO17025	< 5			
Ethylbenzene	ug/l	< 5	ISO17025	< 5			
p & m-xylene	ug/l	< 10	ISO17025	< 10			
o-xylene	ug/l	< 5	ISO17025	< 5			
MTBE	ug/l	< 10	ISO17025	< 10			



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**Kent ME17 2JN**  
**Tel : 01622 850410**



# **Soil Analysis Certificate - Methodology & Miscellaneous Information**

**QTS Environmental Report No: 15-27973**

**Soils Ltd**

**Site Reference: Charlotte Street**

**Project / Job Ref: 14653**

**Order No: None Supplied**

**Reporting Date: 21/01/2015**

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	EPH TEXAS	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID	E104
Water	F	TPH LQM	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6 - C10)	Determination of hydrocarbons C6-C10 by headspace GC-MS	E101

Key

**F Filtered**  
**UF Unfiltered**

## Waste Classification Report



7XLSF-5486T-7UL46

### Job name

14653 77-79 Charlotte Street, London W1T 4PW

### Waste Stream

Default Contaminated Land

### Comments

### Project

14653

### Site

77-79 Charlotte Street, London W1T 4PW

### Classified by

 Name:  
**Wilkinson, Luke**  
 Date:  
**17/12/2014 14:38**  
 Telephone:  
**01737 814221**

 Company:  
**Soils Ltd**  
**Newton House**  
**Cross Road**  
**KT20 5SR**

### Report

 Created by: Wilkinson, Luke  
 Created date: 17/12/2014 14:38

### Job summary

#	Sample Name	Depth [m]	Classification Result	Hazardous properties	Page
1	Sample A/0.30 - 2.00		Hazardous	H7, H14	2
2	Sample B/2.00 - 6.10		Non Hazardous		5
3	WS1/5.2		Non Hazardous		7
4	TP1/0.3		Non Hazardous		9
5	WS2/2.5		Non Hazardous		11
6	TP2/0.8		Non Hazardous		13

Appendices	Page
Appendix A: User Defined and non CLP Substances	15
Appendix B: Notes	16
Appendix C: Version	17



Classification of sample: Sample A/0.30 - 2.00



**Hazardous Waste**

Classified as **17 05 03 \***

in the European Waste Catalogue 2002

**Sample details**

Sample Name:	EWC 2002 code:
<b>Sample A/0.30 - 2.00</b>	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 03 * (Soil and stones containing dangerous substances)
<b>0 m</b>	
Dry Weight Moisture Content:	
<b>0%</b>	

**Hazard properties**

**H7: Carcinogenic** "substances and preparations which, if they are inhaled or ingested or if they penetrate the skin, may induce cancer or increase its incidence."

Risk phrases hit:

**R45** "May cause cancer"

Because of determinands:

Lead chromate: (Note 1 conc.: 0.204%)

Zinc chromate: (compound conc.: 0.112%)

**H14: Ecotoxic** "waste which presents or may present immediate or delayed risks for one or more sectors of the environment."

Risk phrases hit:

**R50/53** "Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment"

Because of determinands:

Copper (I) oxide: (compound conc.: 0.119%)

Lead chromate: (Note 1 conc.: 0.204%)

Zinc chromate: (compound conc.: 0.112%)

**Additional: Additional Risk Phrases** "This is an additional risk phrase and such a risk phrases alone will not cause a waste to be hazardous."

Risk phrases hit:

**R33** "Danger of cumulative effects"

Because of determinand:

Lead chromate: (compound conc.: 0.318%)

**Determinands** (Dry Weight Moisture Content: 0%)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Arsenic trioxide: (Cation conc. entered: 35 mg/kg, converted to compound conc.: 46.211 mg/kg or 0.00462%)  
 Benzo[a]anthracene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)  
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[b]fluoranthene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)  
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**



beryllium oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<1.388 mg/kg or <0.000139%)  
**IGNORED Because: "<LOD"**

Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: <1 mg/kg, converted to compound conc.:<13.43 mg/kg or <0.00134%) **IGNORED Because: "<LOD"**

Cadmium sulphide: (Cation conc. entered: 0.6 mg/kg, converted to compound conc.:0.771 mg/kg or 0.0000771%, Note 1 conc.: 0.00006%)

Chromium(VI) oxide: (Cation conc. entered: <2 mg/kg, converted to compound conc.:<3.846 mg/kg or <0.000385%)  
**IGNORED Because: "<LOD"**

Chrysene: (Whole conc. entered as: 0.13 mg/kg or 0.000013%)

Copper (I) oxide: (Cation conc. entered: 1060 mg/kg, converted to compound conc.:1193.442 mg/kg or 0.119%)

Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**

Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Fluoranthene: (Whole conc. entered as: 0.28 mg/kg or 0.000028%)

Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Lead chromate: (Cation conc. entered: 2040 mg/kg, converted to compound conc.:3182.023 mg/kg or 0.318%, Note 1 conc.: 0.204%)

Mercury dichloride: (Cation conc. entered: 159 mg/kg, converted to compound conc.:215.204 mg/kg or 0.0215%)

Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Nickel dihydroxide: (Cation conc. entered: 28 mg/kg, converted to compound conc.:44.226 mg/kg or 0.00442%)

pH: (Whole conc. entered as: 7.9 pH, converted to conc.:7.9 pH or 7.9 pH)

Phenanthrene: (Whole conc. entered as: 0.2 mg/kg or 0.00002%)

Phenol: (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**

Pyrene: (Whole conc. entered as: 0.23 mg/kg or 0.000023%)

Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <3 mg/kg, converted to compound conc.:<4.5 mg/kg or <0.00045%) **IGNORED Because: "<LOD"**

Zinc chromate: (Cation conc. entered: 404 mg/kg, converted to compound conc.:1120.755 mg/kg or 0.112%)

## Notes utilised in assessment

### Additional Risk Phrase Comments, used on:

Test: "Additional on R33" for determinand: "Lead chromate"

### C14.3: Step 4, used on:

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[a]anthracene"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Benzo[b]fluoranthene"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Chrysene"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Fluoranthene"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Phenanthrene"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Pyrene"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Cadmium sulphide"

### C14.3: Step 5, Equation 1, used on:

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"

### Note 1, used on:

Test: "H5 on R20, R21, R22, R65" for determinand: "Cadmium sulphide"

Test: "H6 on R23, R24, R25" for determinand: "Cadmium sulphide"

Test: "H7 on R45" for determinand: "Cadmium sulphide"

Test: "H10 on R60, R61" for determinand: "Lead chromate"

Test: "H10 on R62, R63" for determinand: "Cadmium sulphide"

Test: "H11 on R68" for determinand: "Cadmium sulphide"

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Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

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#### Determinand notes

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**Note 1**, used on:

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determinand: "Cadmium sulphide"

determinand: "Lead chromate"

**Note A**, used on:

---

determinand: "Zinc chromate"

**Note E**, used on:

---

determinand: "Arsenic trioxide"

determinand: "Cadmium sulphide"

determinand: "Nickel dihydroxide"

determinand: "Zinc chromate"



Classification of sample: Sample B/2.00 - 6.10



**Non Hazardous Waste**

Classified as **17 05 04**

in the European Waste Catalogue 2002

### Sample details

Sample Name:	EWC 2002 code:
<b>Sample B/2.00 - 6.10</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 m</b>	
Dry Weight Moisture Content:	
<b>0%</b>	

### Hazard properties

None identified

**Additional: Additional Risk Phrases** "This is an additional risk phrase and such a risk phrases alone will not cause a waste to be hazardous."

Risk phrases hit:

**R33** "Danger of cumulative effects"

Because of determinand:

Lead chromate: (compound conc.: 0.0658%)

### Determinands (Dry Weight Moisture Content: 0%)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Arsenic trioxide: (Cation conc. entered: 12 mg/kg, converted to compound conc.:15.844 mg/kg or 0.00158%)

Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

beryllium oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<1.388 mg/kg or <0.000139%) **IGNORED Because: "<LOD"**

Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: <1 mg/kg, converted to compound conc.:<13.43 mg/kg or <0.00134%) **IGNORED Because: "<LOD"**

Cadmium sulphide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.643 mg/kg or <0.0000643%, Note 1 conc.: <0.00005%) **IGNORED Because: "<LOD"**

Chromium(VI) oxide: (Cation conc. entered: <2 mg/kg, converted to compound conc.:<3.846 mg/kg or <0.000385%) **IGNORED Because: "<LOD"**

Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Copper (I) oxide: (Cation conc. entered: 108 mg/kg, converted to compound conc.:121.596 mg/kg or 0.0122%)

Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**

Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**

Lead chromate: (Cation conc. entered: 422 mg/kg, converted to compound conc.:658.242 mg/kg or 0.0658%, Note 1 conc.: 0.0422%)

Mercury dichloride: (Cation conc. entered: 8.3 mg/kg, converted to compound conc.:11.234 mg/kg or 0.00112%)

Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
Nickel dihydroxide: (Cation conc. entered: 18 mg/kg, converted to compound conc.:28.431 mg/kg or 0.00284%)  
pH: (Whole conc. entered as: 7.7 pH, converted to conc.:7.7 pH or 7.7 pH)  
Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
Phenol: (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
Pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <3 mg/kg, converted to compound conc.:<4.5 mg/kg or <0.00045%) **IGNORED Because: "<LOD"**  
Zinc chromate: (Cation conc. entered: 88 mg/kg, converted to compound conc.:244.125 mg/kg or 0.0244%)

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**Notes utilised in assessment**

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**Additional Risk Phrase Comments**, used on:

Test: "Additional on R33" for determinand: "Lead chromate"

**C14.3: Step 4**, used on:

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"  
Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"  
Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"  
Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"  
Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"  
Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"

---

**Determinand notes**

---

**Note 1**, used on:

determinand: "Lead chromate"

**Note A**, used on:

determinand: "Zinc chromate"

**Note E**, used on:

determinand: "Arsenic trioxide"  
determinand: "Nickel dihydroxide"  
determinand: "Zinc chromate"



**Classification of sample: WS1/5.2**

**Non Hazardous Waste**

 Classified as **17 05 04**

in the European Waste Catalogue 2002

**Sample details**

Sample Name:	EWC 2002 code:
<b>WS1/5.2</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 m</b>	
Dry Weight Moisture Content:	
<b>0%</b>	

**Hazard properties**

None identified

**Additional: Additional Risk Phrases** "This is an additional risk phrase and such a risk phrases alone will not cause a waste to be hazardous."

Risk phrases hit:

**R33** "Danger of cumulative effects"

Because of determinand:

Lead chromate: (compound conc.: 0.114%)

**Determinands** (Dry Weight Moisture Content: 0%)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Arsenic trioxide: (Cation conc. entered: 15 mg/kg, converted to compound conc.:19.805 mg/kg or 0.00198%)  
 Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 beryllium oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<1.388 mg/kg or <0.000139%)  
**IGNORED Because: "<LOD"**  
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: <1 mg/kg, converted to compound conc.:<13.43 mg/kg or <0.00134%) **IGNORED Because: "<LOD"**  
 Cadmium sulphide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.643 mg/kg or <0.0000643%, Note 1 conc.: <0.00005%) **IGNORED Because: "<LOD"**  
 Chromium(VI) oxide: (Cation conc. entered: <2 mg/kg, converted to compound conc.:<3.846 mg/kg or <0.000385%)  
**IGNORED Because: "<LOD"**  
 Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Copper (I) oxide: (Cation conc. entered: 511 mg/kg, converted to compound conc.:575.329 mg/kg or 0.0575%)  
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Lead chromate: (Cation conc. entered: 733 mg/kg, converted to compound conc.:1143.345 mg/kg or 0.114%, Note 1 conc.: 0.0733%)  
 Mercury dichloride: (Cation conc. entered: 332 mg/kg, converted to compound conc.:449.358 mg/kg or 0.0449%)



Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Nickel dihydroxide: (Cation conc. entered: 21 mg/kg, converted to compound conc.:33.169 mg/kg or 0.00332%)  
 pH: (Whole conc. entered as: 7.8 pH, converted to conc.:7.8 pH or 7.8 pH)  
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Phenol: (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <3 mg/kg, converted to compound conc.:<4.5 mg/kg or <0.00045%) **IGNORED Because: "<LOD"**  
 Zinc chromate: (Cation conc. entered: 123 mg/kg, converted to compound conc.:341.22 mg/kg or 0.0341%)

## Notes utilised in assessment

### Additional Risk Phrase Comments, used on:

Test: "Additional on R33" for determinand: "Lead chromate"

### C14.3: Step 4, used on:

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"

### Note 1, used on:

Test: "H7 on R45" for determinand: "Lead chromate"  
 Test: "H10 on R60, R61" for determinand: "Lead chromate"  
 Test: "H10 on R62, R63" for determinand: "Lead chromate"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

## Determinand notes

### Note 1, used on:

determinand: "Lead chromate"

### Note A, used on:

determinand: "Zinc chromate"

### Note E, used on:

determinand: "Arsenic trioxide"  
 determinand: "Nickel dihydroxide"  
 determinand: "Zinc chromate"

**Classification of sample: TP1/0.3**

**Non Hazardous Waste**

 Classified as **17 05 04**

in the European Waste Catalogue 2002

**Sample details**

Sample Name:	EWC 2002 code:
<b>TP1/0.3</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 m</b>	
Dry Weight Moisture Content:	
<b>0%</b>	

**Hazard properties**

None identified

**Additional: Additional Risk Phrases** "This is an additional risk phrase and such a risk phrases alone will not cause a waste to be hazardous."

Risk phrases hit:

**R33** "Danger of cumulative effects"

Because of determinand:

Lead chromate: (compound conc.: 0.143%)

**Determinands** (Dry Weight Moisture Content: 0%)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Arsenic trioxide: (Cation conc. entered: 27 mg/kg, converted to compound conc.:35.649 mg/kg or 0.00356%)  
 Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 beryllium oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<1.388 mg/kg or <0.000139%)  
**IGNORED Because: "<LOD"**  
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: <1 mg/kg, converted to compound conc.:<13.43 mg/kg or <0.00134%) **IGNORED Because: "<LOD"**  
 Cadmium sulphide: (Cation conc. entered: 0.6 mg/kg, converted to compound conc.:0.771 mg/kg or 0.0000771%, Note 1 conc.: 0.00006%)  
 Chromium(VI) oxide: (Cation conc. entered: <2 mg/kg, converted to compound conc.:<3.846 mg/kg or <0.000385%)  
**IGNORED Because: "<LOD"**  
 Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Copper (I) oxide: (Cation conc. entered: 166 mg/kg, converted to compound conc.:186.897 mg/kg or 0.0187%)  
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Fluoranthene: (Whole conc. entered as: 0.17 mg/kg or 0.000017%)  
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Lead chromate: (Cation conc. entered: 917 mg/kg, converted to compound conc.:1430.35 mg/kg or 0.143%, Note 1 conc.: 0.0917%)  
 Mercury dichloride: (Cation conc. entered: 16.3 mg/kg, converted to compound conc.:22.062 mg/kg or 0.00221%)



Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Nickel dihydroxide: (Cation conc. entered: 18 mg/kg, converted to compound conc.:28.431 mg/kg or 0.00284%)  
 pH: (Whole conc. entered as: 8.4 pH, converted to conc.:8.4 pH or 8.4 pH)  
 Phenanthrene: (Whole conc. entered as: 0.11 mg/kg or 0.000011%)  
 Phenol: (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Pyrene: (Whole conc. entered as: 0.14 mg/kg or 0.000014%)  
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <3 mg/kg, converted to compound conc.:<4.5 mg/kg or <0.00045%) **IGNORED Because: "<LOD"**  
 Zinc chromate: (Cation conc. entered: 232 mg/kg, converted to compound conc.:643.602 mg/kg or 0.0644%)

## Notes utilised in assessment

### Additional Risk Phrase Comments, used on:

Test: "Additional on R33" for determinand: "Lead chromate"

### C14.3: Step 4, used on:

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Fluoranthene"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Phenanthrene"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Pyrene"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Cadmium sulphide"

### Note 1, used on:

Test: "H5 on R20, R21, R22, R65" for determinand: "Cadmium sulphide"  
 Test: "H6 on R23, R24, R25" for determinand: "Cadmium sulphide"  
 Test: "H11 on R68" for determinand: "Cadmium sulphide"

## Determinand notes

### Note 1, used on:


determinand: "Cadmium sulphide"  
 determinand: "Lead chromate"

### Note A, used on:

determinand: "Zinc chromate"

### Note E, used on:

determinand: "Arsenic trioxide"  
 determinand: "Cadmium sulphide"  
 determinand: "Nickel dihydroxide"  
 determinand: "Zinc chromate"

**Classification of sample: WS2/2.5**
 **Non Hazardous Waste**  
 Classified as **17 05 04**  
 in the European Waste Catalogue 2002

**Sample details**

Sample Name:	EWC 2002 code:
<b>WS2/2.5</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 m</b>	
Dry Weight Moisture Content:	
<b>0%</b>	

**Hazard properties**

None identified

**Additional: Additional Risk Phrases** "This is an additional risk phrase and such a risk phrases alone will not cause a waste to be hazardous."

Risk phrases hit:

**R14** "Reacts violently with water"

Because of determinand:

Boron tribromide/trichloride/trifluoride (combined risk phrases): (compound conc.: 0.00215%)

**R33** "Danger of cumulative effects"

Because of determinand:

Lead chromate: (compound conc.: 0.0604%)

**Determinands** (Dry Weight Moisture Content: 0%)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Arsenic trioxide: (Cation conc. entered: 12 mg/kg, converted to compound conc.:15.844 mg/kg or 0.00158%)  
 Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 beryllium oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<1.388 mg/kg or <0.000139%)  
**IGNORED Because: "<LOD"**  
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: 1.6 mg/kg, converted to compound conc.:21.488 mg/kg or 0.00215%)  
 Cadmium sulphide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.643 mg/kg or <0.0000643%, Note 1 conc.: <0.00005%) **IGNORED Because: "<LOD"**  
 Chromium(VI) oxide: (Cation conc. entered: <2 mg/kg, converted to compound conc.:<3.846 mg/kg or <0.000385%)  
**IGNORED Because: "<LOD"**  
 Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Copper (I) oxide: (Cation conc. entered: 87 mg/kg, converted to compound conc.:97.952 mg/kg or 0.0098%)  
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**



Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Lead chromate: (Cation conc. entered: 387 mg/kg, converted to compound conc.:603.648 mg/kg or 0.0604%, Note 1 conc.: 0.0387%)  
 Mercury dichloride: (Cation conc. entered: 4.7 mg/kg, converted to compound conc.:6.361 mg/kg or 0.000636%)  
 Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Nickel dihydroxide: (Cation conc. entered: 24 mg/kg, converted to compound conc.:37.908 mg/kg or 0.00379%)  
 pH: (Whole conc. entered as: 7.9 pH, converted to conc.:7.9 pH or 7.9 pH)  
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Phenol: (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <3 mg/kg, converted to compound conc.:<4.5 mg/kg or <0.00045%) **IGNORED Because: "<LOD"**  
 Zinc chromate: (Cation conc. entered: 82 mg/kg, converted to compound conc.:227.48 mg/kg or 0.0227%)

## Notes utilised in assessment

### Additional Risk Phrase Comments, used on:

Test: "Additional on R14" for determinand: "Boron tribromide/trichloride/trifluoride (combined risk phrases)"  
 Test: "Additional on R33" for determinand: "Lead chromate"

### C14.3: Step 4, used on:

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"

### Note 1, used on:

Test: "H7 on R45" for determinand: "Lead chromate"  
 Test: "H10 on R60, R61" for determinand: "Lead chromate"  
 Test: "H10 on R62, R63" for determinand: "Lead chromate"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"

## Determinand notes

### Note 1, used on:

determinand: "Lead chromate"

### Note A, used on:

determinand: "Zinc chromate"

### Note E, used on:

determinand: "Arsenic trioxide"  
 determinand: "Nickel dihydroxide"  
 determinand: "Zinc chromate"



**Classification of sample: TP2/0.8**

**Non Hazardous Waste**

 Classified as **17 05 04**

in the European Waste Catalogue 2002

**Sample details**

Sample Name:	EWC 2002 code:
<b>TP2/0.8</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 m</b>	
Dry Weight Moisture Content:	
<b>0%</b>	

**Hazard properties**

None identified

**Additional: Additional Risk Phrases** "This is an additional risk phrase and such a risk phrases alone will not cause a waste to be hazardous."

Risk phrases hit:

**R33** "Danger of cumulative effects"

Because of determinand:

Lead chromate: (compound conc.: 0.0387%)

**Determinands** (Dry Weight Moisture Content: 0%)

Acenaphthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Acenaphthylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Arsenic trioxide: (Cation conc. entered: 11 mg/kg, converted to compound conc.:14.524 mg/kg or 0.00145%)  
 Benzo[a]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[a]pyrene; benzo[def]chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[b]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[ghi]perylene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Benzo[k]fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 beryllium oxide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<1.388 mg/kg or <0.000139%)  
**IGNORED Because: "<LOD"**  
 Boron tribromide/trichloride/trifluoride (combined risk phrases): (Cation conc. entered: <1 mg/kg, converted to compound conc.:<13.43 mg/kg or <0.00134%) **IGNORED Because: "<LOD"**  
 Cadmium sulphide: (Cation conc. entered: <0.5 mg/kg, converted to compound conc.:<0.643 mg/kg or <0.0000643%, Note 1 conc.: <0.00005%) **IGNORED Because: "<LOD"**  
 Chromium(VI) oxide: (Cation conc. entered: <2 mg/kg, converted to compound conc.:<3.846 mg/kg or <0.000385%)  
**IGNORED Because: "<LOD"**  
 Chrysene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Copper (I) oxide: (Cation conc. entered: 61 mg/kg, converted to compound conc.:68.679 mg/kg or 0.00687%)  
 Cyanides (with the exception of complex cyanides): (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Dibenz[a,h]anthracene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Fluoranthene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Fluorene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Indeno[123-cd]pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Lead chromate: (Cation conc. entered: 248 mg/kg, converted to compound conc.:386.834 mg/kg or 0.0387%, Note 1 conc.: 0.0248%)  
 Mercury dichloride: (Cation conc. entered: 4.3 mg/kg, converted to compound conc.:5.82 mg/kg or 0.000582%)

Naphthalene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Nickel dihydroxide: (Cation conc. entered: 14 mg/kg, converted to compound conc.:22.113 mg/kg or 0.00221%)  
 pH: (Whole conc. entered as: 8 pH, converted to conc.:8 pH or 8 pH)  
 Phenanthrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Phenol: (Whole conc. entered as: <2 mg/kg or <0.0002%) **IGNORED Because: "<LOD"**  
 Pyrene: (Whole conc. entered as: <0.1 mg/kg or <0.00001%) **IGNORED Because: "<LOD"**  
 Selenium compounds (with the exception of cadmium sulphoselenide and sodium selenite): (Cation conc. entered: <3 mg/kg, converted to compound conc.:<4.5 mg/kg or <0.00045%) **IGNORED Because: "<LOD"**  
 Zinc chromate: (Cation conc. entered: 76 mg/kg, converted to compound conc.:210.835 mg/kg or 0.0211%)

## Notes utilised in assessment

**Additional Risk Phrase Comments**, used on:

Test: "Additional on R33" for determinand: "Lead chromate"

**C14.3: Step 4**, used on:

Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Arsenic trioxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Copper (I) oxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Lead chromate"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Mercury dichloride"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Nickel dihydroxide"  
 Test: "H14 on R50, R52, R50/53, R51/53, R53, R52/53" for determinand: "Zinc chromate"

## Determinand notes

**Note 1**, used on:

determinand: "Lead chromate"

**Note A**, used on:

determinand: "Zinc chromate"

**Note E**, used on:

determinand: "Arsenic trioxide"  
 determinand: "Nickel dihydroxide"  
 determinand: "Zinc chromate"



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**Appendix A: User Defined and non CLP Substances**

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**Acenaphthene** (CAS Number: 83-32-9)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=133563&HarmOnly=no>

Data source date: 16/07/2012

Classification: N; R50/53, N; R51/53, R36, R37, R38

**Acenaphthylene** (CAS Number: 208-96-8)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=59285&HarmOnly=no>

Data source date: 16/07/2012

Classification: R22, R26, R27, R36, R37, R38

**Anthracene** (CAS Number: 120-12-7)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=101102&HarmOnly=no>

Data source date: 08/03/2013

Classification: N; R50/53, R36, R37, R38, R43

**Benzo[ghi]perylene** (CAS Number: 191-24-2)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=15793&HarmOnly=no>

Data source date: 16/07/2012

Classification: N; R50/53

**Boron tribromide/trichloride/trifluoride (combined risk phrases)**

Comments: Combines the risk phrases and the average of the conversion factors for Boron tribromide, Boron trichloride and Boron trifluoride

Data source: N/A

Data source date: 10/01/2011

Classification: T+; R26/28, C; R34, C; R35, R14

**Fluoranthene** (CAS Number: 206-44-0)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=56375&HarmOnly=no>

Data source date: 16/07/2012

Classification: N; R50/53, R20, R22, R36

**Fluorene** (CAS Number: 86-73-7)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=81845&HarmOnly=no>

Data source date: 16/07/2012

Classification: N; R50/53, R53

**Indeno[123-cd]pyrene** (CAS Number: 193-39-5)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=128806&HarmOnly=no>

Data source date: 08/03/2013

Classification: R40

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**pH**

Comments: Appendix C, C4.5

Data source: WM2 - Interpretation of the definition and classification of hazardous waste (Second Edition, version 2.2), Environment Agency

Data source date: 30/05/2008

Classification: pH; pH

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**Phenanthrene** (CAS Number: 85-01-8)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=109754&HarmOnly=no>

Data source date: 16/07/2012

Classification: N; R50/53, R22, R36, R37, R38, R40, R43

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**Pyrene** (CAS Number: 129-00-0)

Comments: Risk phrase data taken from European Chemicals Agency's Classification & Labelling Inventory

Data source:

<http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=87484&HarmOnly=no>

Data source date: 16/07/2012

Classification: N; R50/53, R23

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**Appendix B: Notes**

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**Additional Risk Phrase Comments**

from section: Table 2.2 in the document: "[WM2 - Hazardous Waste Technical Guidance](#)"

"This is an additional risk phrase and such a risk phrase alone will not cause a waste to be hazardous."

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**C14.3: Step 4**

from section: C14.3 in the document: "[WM2 - Hazardous Waste Technical Guidance](#)"

"identify whether any individual ecotoxic substance is present below a cut-off value shown in Table C14.1"

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**C14.3: Step 5, Equation 1**

from section: C14.3 in the document: "[WM2 - Hazardous Waste Technical Guidance](#)"

"...only for the substances in the waste above the relevant generic cut-off value, use the four equations given in Table C14.2 to decide if the waste is hazardous by H14"

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**Note 1**

from section: 1.1.3.2, Annex VI in the document: "[CLP Regulations](#)"

"The concentration stated or, in the absence of such concentrations, the generic concentrations of this Regulation (Table 3.1) or the generic concentrations of Directive 1999/45/EC (Table 3.2), are the percentages by weight of the metallic element calculated with reference to the total weight of the mixture."

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**Note A**

from section: 1.1.3.1, Annex VI in the document: "[CLP Regulations](#)"

"Without prejudice to Article 17(2), the name of the substance must appear on the label in the form of one of the designations given in Part 3. In Part 3, use is sometimes made of a general description such as '... compounds' or '... salts'. In this case, the supplier is required to state on the label the correct name, due account being taken of section 1.1.1.4."

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**Note E**

from section: 1.1.3.1, Annex VI in the document: "[CLP Regulations](#)"

"Substances with specific effects on human health (see Chapter 4 of Annex VI to Directive 67/548/EEC) that are classified as carcinogenic, mutagenic and/or toxic for reproduction in categories 1 or 2 are ascribed Note E if they are also classified as very toxic (T+), toxic (T) or harmful (Xn). For these substances, the risk phrases R20, R21, R22, R23, R24, R25, R26, R27, R28, R39, R68 (harmful), R48 and R65 and all combinations of these risk phrases shall be preceded by the word 'Also'."



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## Appendix C: Version

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Classification utilises the following:

- **WM2 - Hazardous Waste Technical Guidance - 3rd Edition (Aug 2013)**  
Hazardous Waste: Interpretation of the definition and classification of hazardous waste (3rd Edition 2013)
- **CLP Regulations - Regulation (EC) No 1272/2008 of 16 December 2008**  
REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- **1st ATP - Regulation (EC) No 790/2009 of 10 August 2009**  
COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **2nd ATP - Regulation (EC) No 286/2011 of 10 March 2011**  
COMMISSION REGULATION (EU) No 286/2011 of 10 March 2011 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **3rd ATP - Regulation (EU) No 618/2012 of 10 July 2012**  
COMMISSION REGULATION (EU) No 618/2012 of 10 July 2012 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **4th ATP - Regulation (EU) No 487/2013 of 8 May 2013**  
COMMISSION REGULATION (EU) No 487/2013 of 8 May 2013 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **Correction to 1st ATP - Regulation (EU) No 758/2013 of 7 August 2013**  
COMMISSION REGULATION (EU) No 758/2013 of 7 August 2013 correcting Annex VI to Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **5th ATP - Regulation (EU) No 944/2013 of 2 October 2013**  
COMMISSION REGULATION (EU) No 944/2013 of 2 October 2013 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures
- **6th ATP - Regulation (EU) No 605/2014 of 5 June 2014**  
COMMISSION REGULATION (EU) No 605/2014 of 5 June 2014 amending, for the purposes of introducing hazard and precautionary statements in the Croatian language and its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

HazWasteOnline Engine: WM2 version 3 (Aug 2013)

HazWasteOnline Engine Version: 1.0.2682.5621 (01 Dec 2014)

HazWasteOnline Database: 1.0.2682.5621 (01 Dec 2014)