
SUPPLEMENTARY INVESTIGATION
FOR PROPOSED EXTENSIONS
AT
WESSEX GALVANIZERS LTD
TOWER INDUSTRIAL ESTATE
EASTLEIGH
HAMPSHIRE

CLIENT: WEDGE GROUP GALVANIZING
ENGINEER: CHMIEL OVERTON LTD

DATE: OCTOBER 2022 **REPORT NO:** 2370 B

**GROUND INVESTIGATION
SPECIALISTS LIMITED**

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REPORT NO: 2370 B

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1.0 INTRODUCTION

Ground Investigation Specialists Ltd (GIS) have previously undertaken a desk study and intrusive ground investigation on behalf of Wedge Group Galvanizing Ltd, for proposed extensions to an existing industrial building at Wessex Galvanizers Ltd (GIS Report No. 2370, May 2022 and GIS Report No. 2370 A, July 2022), which is located at Tower Industrial Estate, Tower Lane, Eastleigh, Hampshire, SO50 6NZ.

The previous GIS investigation revealed localised low levels of soil contamination within the made ground, specifically an elevated concentration of lead within the sample recovered from borehole WS3 at a depth of 0.3 m.

Following comments received from the Senior Pollution Control Officer at Eastleigh Borough Council in October 2022 GIS were instructed by Wedge Group Galvanizing Ltd to carry out a supplementary investigation to delineate the extent of the lead contamination and carry out

additional testing for Poly Chlorinated Biphenyls (PCBs) and acids (pH) for the proposed industrial extensions.

On 10th October 2022 a ground engineer visited the site to recover samples of made ground (HS1 – HS6) for laboratory testing at the positions shown on the site plan in section 7.0.

This report presents a factual account of the supplementary work undertaken and gives a geoenvironmental appraisal of the soil conditions in respect of soil contamination for the proposed industrial development. This report should be read in conjunction with the previous GIS Report Nos. 2370 and 2370 A.

This report is for the sole use of Wedge Group Galvanizing Ltd and their advisors in support of the extensions at Wessex Galvanizers Ltd. No liability can be accepted for its use by other parties or for other developments proposals.

2.0 SOIL CONTAMINATION ASSESSMENT

2.1 Previous Testing

During the previous investigation 3no. samples of made ground and 1no. sample of the shallow natural soil were tested for a general screen of likely contaminants, including arsenic, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, asbestos, pH, speciated Polycyclic Aromatic Hydrocarbons (PAH) and Total Petroleum Hydrocarbons by Criteria Working Group (TPH CWG).

When compared to the relevant commercial screening values, one exceedance was detected with respect to lead in a sample of made ground recovered from borehole WS3 at a depth of 0.3 m bgl (detected concentration of 2926 mg/kg, compared with a DEFRA C4SL screening value of 2330 mg/kg) indicating the presence of a potential lead ‘hotspot’.

2.2 Additional Testing for Lead

On 10th October 2022 a further 3no. samples of the made ground were recovered from around the lead hotspot (samples HS1, HS2 and HS3) along with 3no. samples of made ground recovered from the general made ground elsewhere on the site (HS4, HS5 and HS6). The results from the 6 No samples are presented in table 1 (below).

Table 1. Summary of Additional Lead Contamination Results

<u>Determinand</u>	<u>Units</u>	MADE GROUND						<u>Screen</u>	<u>Source</u>
		HS1 GL - 0.10m	HS2 GL - 0.05m	HS3 GL - 0.10m	HS4 0.15m	HS5 GL - 0.10m	HS6 0.10m		
Lead	mg/kg	429	626	23138	1398	429	526	2330	C4SL

Of the additional samples tested, all were below the commercial screening value with the exception of HS3 which had significant lead contamination (23138 mg/kg compared with a commercial screening value of 2330 mg/kg).

When combined with the testing carried out during the previous investigation by GIS, there were a total of 2no. samples of made ground with elevated concentrations of lead that exceed the commercial screening value (WS3 and HS3), located in close proximity to each other and indicating a 'hotspot'.

However, the lead contamination identified in the made ground should not give significant cause for concern and present a risk to the health of end users given that these materials, which are only 0.1 – 0.35 m thick, are to be removed as part of the site strip. Such that concrete floor slabs will then be constructed on the underlying natural soils. Consequently, the source of the lead contamination will be removed from beneath the area of the new extensions.

Groundworkers involved in the construction works should be made aware of the lead contamination identified and take appropriate measures to minimise exposure, such as wearing Personal Protective Equipment (i.e. gloves, overalls, boots, helmets etc) and maintaining a good standard of personal hygiene, including the regular washing of hands, particularly before food is consumed.

2.3 Additional Testing for PCBs and pH

The desk study report carried out by GIS (Report No. 2370 A, July 2022) highlighted the previous use of the site for railway sidings from the late 19th Century until the 1970s/80s and the potential for contamination of the near surface soils with PCBs as a result of historic processes associated with rail infrastructure. Acids were also highlighted as a potential contaminant due to the ongoing galvanizing processes on site.

The 6no. samples of made ground were tested for the presence of PCBs (7 congeners) and none was detected (all results were below detection level) and all samples had a pH value in the neutral range of 7.3 – 7.4.

Based on the results of the additional testing, along with those from the previous investigation (GIS Report No. 2370, May 2022), no further assessment is considered necessary in respect of potential contamination of the near surface soils and risks to human health.

3.0 CLASSIFICATION OF SOIL FOR OFF-SITE DISPOSAL

In light of the additional testing undertaken on the made ground, the waste classification reported in GIS Report No. 2370 has been reviewed and updated, as below.

In respect of determining the suitability of the made ground present on site for disposal to landfill, waste classification software has been used to identify whether the material can be classified as hazardous or non-hazardous, as defined in the EWC (European Waste Catalogue 2002).

Each determinand was compared with the appropriate/ most likely chemical compounds as detailed in EWC Chapter 17 - Construction and demolition wastes. Full details of the classification are provided on the appended data sheets included in section 6.0.

If the made ground removed from the hotspot of lead contamination is kept separate, based on an assessment of the solid test results the general made ground from the rest of the site would be classified at this stage as “**Non-Hazardous Waste**”, whereas made ground removed from the hotspot of lead contamination (seen in WS3 and HS3) would be “**Hazardous Waste**”.

Provided they are kept separate, the results of the WAC testing carried out in GIS Report No. 2370 show the general “Non-Hazardous” made ground would not qualify as Inert Waste due to the elevated level of Antimony and will need to be taken to a Non-Hazardous Waste landfill site. The hotspot of “Hazardous Waste” with its elevated lead would require treatment for its high Total Organic Carbon (TOC) content before it is acceptable at a Hazardous Waste landfill site.

If the made ground including the hotspot of lead contamination is mixed during excavation, then the classification for the entire made ground would be “**Hazardous Waste**”, based on a mean assessment of the solid test results.

If the soils are mixed and therefore classified as “Hazardous”, the results from the WAC testing carried out in GIS Report No. 2370 show that it should be acceptable at a Hazardous Waste landfill site in its current state.

Final agreement, costs and treatment options should be discussed with the Landfill Operators.

4.0 GROUND GAS RISK ASSESSMENT

The risks on the site from harmful ground gases have been assessed in accordance with CL:AIRE Research Bulletin 17 (November 2012) ‘A Pragmatic Approach to Ground Gas Risk Assessment’.

The site investigation carried out by GIS in July 2022 identified only a thin layer of made ground beneath the proposed extensions, with a maximum thickness of 0.3 m (encountered in borehole WS6). No other potential sources of ground gas, such as nearby landfill sites, have been identified from the desk study or subsequent intrusive investigation.

In accordance with CL:AIRE RB 17, gas monitoring is not required and gas protection measures are not necessary where the made ground is < 1 m thick. The site can be considered to have a Characteristic Situation of CS1, as detailed in BS 8485:2015 ‘Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings’. Furthermore, the made ground is to be removed from below the building footprint during the site strip phase of construction.

C.S. Noakes, MSci., MSc., FGS.
Ground Engineer

H.S. Lister, BSc., C. Geol., C Sci., FGS.
Director

Ground Investigation Specialists Ltd

5.0 LABOATORY TEST RESULTS



ANALYTICAL TEST REPORT

Contract no: 114560(1)

Contract name: Wessex Galvanisers

Client reference: J.2370

Clients name: Ground Investigation Specialists

Clients address: 43 Bell Place
Dudley Road
Wolverhampton
WV2 4LY

Samples received: 12 October 2022

Analysis started: 12 October 2022

Analysis completed: 20 October 2022

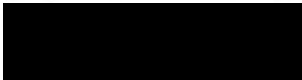
Report issued: 20 October 2022

This is a supplementary report to report number 114560 issued 17 October 2022.

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing

Approved by:


Abbie Neasham-Bourn
Senior Reporting Administrator

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
114560-1	HS1	0.10	Sandy Clay with Gravel	-	-	18.3
114560-2	HS2	0.05	Sandy Clay with Gravel	-	-	18.1
114560-3	HS3	0.10	Sandy Clay with Gravel	-	-	16.7
114560-4	HS4	0.15	Sandy Clay with Gravel	-	-	16.2
114560-5	HS5	0.10	Sandy Clay with Gravel	-	-	12.6
114560-6	HS6	0.10	Sandy Clay with Gravel	-	-	16.0

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SOILS

Lab number			114560-1	114560-2	114560-3	114560-4	114560-5	114560-6
Sample id			HS1	HS2	HS3	HS4	HS5	HS6
Depth (m)			0.10	0.05	0.10	0.15	0.10	0.10
Date sampled			10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022	10/10/2022
Test	Method	Units						
Lead (total)	CE127 ^M	mg/kg Pb	429	626	23138	1398	429	526
pH	CE004 ^M	units	7.4	7.3	7.3	7.3	7.3	7.3
Subcontracting Analysis - PCB								
PCB Congener 28	\$	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PCB Congener 52	\$	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PCB Congener 101	\$	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PCB Congener 118	\$	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PCB Congener 138	\$	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PCB Congener 153	\$	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PCB Congener 180	\$	mg/kg	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PCB (total of ICES 7)	\$	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE127	Lead (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Pb
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
\$	PCB Congener 28	Solvent extraction, GC-MS	As received	M	0.01	mg/kg
\$	PCB Congener 52	Solvent extraction, GC-MS	As received	M	0.01	mg/kg
\$	PCB Congener 101	Solvent extraction, GC-MS	As received	M	0.01	mg/kg
\$	PCB Congener 118	Solvent extraction, GC-MS	As received	M	0.01	mg/kg
\$	PCB Congener 138	Solvent extraction, GC-MS	As received	M	0.01	mg/kg
\$	PCB Congener 153	Solvent extraction, GC-MS	As received	M	0.01	mg/kg
\$	PCB Congener 180	Solvent extraction, GC-MS	As received	M	0.01	mg/kg
\$	PCB (total of ICES 7)	Solvent extraction, GC-MS	As received	M	0.03	mg/kg

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DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
114560-1	HS1	0.10	N	
114560-2	HS2	0.05	N	
114560-3	HS3	0.10	N	
114560-4	HS4	0.15	N	
114560-5	HS5	0.10	N	
114560-6	HS6	0.10	N	

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ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 4 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

For soils and solids, analytical results are inclusive of stones, where applicable.

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TEST REPORT REVISIONS

The table below identifies amendments that have been made to this test report for each revision.

Test Report Reference	Details of amendments to test report	Issue Date
114560	Original report issued	17 October 2022
114560(1)	PCB ICES 7 added to all samples	21 October 2022



ANALYTICAL TEST REPORT

Contract no: 108201

Contract name: Wessex Galvanising

Client reference: J.2370

Clients name: Ground Investigation Specialists

Clients address: 43 Bell Place
Dudley Road
Wolverhampton
WV2 4LY

Samples received: 14 April 2022

Analysis started: 14 April 2022

Analysis completed: 04 May 2022

Report issued: 04 May 2022

Key

U	UKAS accredited test
M	MCERTS & UKAS accredited test
\$	Test carried out by an approved subcontractor
I/S	Insufficient sample to carry out test
N/S	Sample not suitable for testing
NAD	No Asbestos Detected

Approved by:

Rachael Burton
Reporting Team Lead

Chemtech Environmental Limited

SAMPLE INFORMATION

MCERTS (Soils):

Soil descriptions are only intended to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions. MCERTS accreditation applies for sand, clay and loam/topsoil, or combinations of these whether these are derived from naturally occurring soils or from made ground, as long as these materials constitute the major part of the sample. Other materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Lab ref	Sample id	Depth (m)	Sample description	Material removed	% Removed	% Moisture
108201-1	WS1	0.40	Sandy Loamy Clay	-	-	14.8
108201-2	WS3	0.30	Sandy Loamy Clay with Gravel	-	-	26.3
108201-3	WS5	0.25	Sandy Loamy Clay with Gravel	-	-	18.7
108201-4	WS6	0.40	Sandy Loamy Clay with Gravel	-	-	19.7

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SOILS

Lab number			108201-1	108201-2	108201-3	108201-4
Sample id			WS1	WS3	WS5	WS6
Depth (m)			0.40	0.30	0.25	0.40
Date sampled			07/04/2022	07/04/2022	07/04/2022	07/04/2022
Test	Method	Units				
Antimony (total)	CE127 ^U	mg/kg Sb	-	11	-	-
Arsenic (total)	CE127 ^M	mg/kg As	3.6	19	3.7	7.9
Barium (total)	CE127 ^M	mg/kg Ba	-	2072	-	-
Cadmium (total)	CE127 ^M	mg/kg Cd	0.2	0.4	0.3	0.3
Chromium (total)	CE127 ^M	mg/kg Cr	45	69	25	33
Copper (total)	CE127 ^M	mg/kg Cu	16	570	20	29
Lead (total)	CE127 ^M	mg/kg Pb	20	2926	67	101
Mercury (total)	CE127 ^M	mg/kg Hg	<0.5	0.7	<0.5	<0.5
Molybdenum (total)	CE127 ^M	mg/kg Mo	-	8.5	-	-
Nickel (total)	CE127 ^M	mg/kg Ni	18	70	12	18
Selenium (total)	CE127 ^M	mg/kg Se	1.3	2.7	0.9	1.0
Zinc (total)	CE127 ^M	mg/kg Zn	48	989	52	59
pH	CE004 ^M	units	8.2	8.7	8.3	8.1
Sulphate (2:1 water soluble)	CE061 ^U	mg/l SO ₄	78	-	-	142
Total Organic Carbon (TOC)	CE197	% w/w C	1.0	14.5	1.1	2.4
Estimate of OMC (calculated from TOC)	CE197	% w/w	1.7	25.0	1.8	4.1
PAH						
Naphthalene	CE087 ^M	mg/kg	<0.02	<0.02	<0.02	0.06
Acenaphthylene	CE087 ^M	mg/kg	<0.02	0.04	<0.02	0.08
Acenaphthene	CE087 ^M	mg/kg	<0.02	<0.02	<0.02	0.03
Fluorene	CE087 ^U	mg/kg	<0.02	<0.02	<0.02	0.03
Phenanthrene	CE087 ^M	mg/kg	<0.02	0.23	<0.02	0.45
Anthracene	CE087 ^U	mg/kg	<0.02	0.39	<0.02	0.78
Fluoranthene	CE087 ^M	mg/kg	<0.02	0.46	<0.02	1.08
Pyrene	CE087 ^M	mg/kg	<0.02	0.42	<0.02	1.21
Benzo(a)anthracene	CE087 ^U	mg/kg	<0.02	0.20	<0.02	0.63
Chrysene	CE087 ^M	mg/kg	<0.03	0.27	<0.03	0.66
Benzo(b)fluoranthene	CE087 ^M	mg/kg	0.03	0.28	0.02	1.01
Benzo(k)fluoranthene	CE087 ^M	mg/kg	<0.03	0.10	<0.03	0.34
Benzo(a)pyrene	CE087 ^U	mg/kg	<0.02	0.18	<0.02	0.70
Indeno(123cd)pyrene	CE087 ^M	mg/kg	<0.02	0.12	<0.02	0.62
Dibenz(ah)anthracene	CE087 ^M	mg/kg	<0.02	<0.02	<0.02	0.10
Benzo(ghi)perylene	CE087 ^M	mg/kg	<0.02	0.12	<0.02	0.58
PAH (total of USEPA 16)	CE087	mg/kg	<0.34	2.82	<0.34	8.37
TPH						
VPH Aromatic (>EC5-EC7)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC7-EC8)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01
VPH Aromatic (>EC8-EC10)	CE067	mg/kg	<0.01	<0.01	<0.01	<0.01
EPH Aromatic (>EC10-EC12)	CE250	mg/kg	<1	<1	<1	<1
EPH Aromatic (>EC12-EC16)	CE250	mg/kg	<1	<1	<1	1
EPH Aromatic (>EC16-EC21)	CE250	mg/kg	<1	2	<1	2

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SOILS

Lab number			108201-1	108201-2	108201-3	108201-4
Sample id			WS1	WS3	WS5	WS6
Depth (m)			0.40	0.30	0.25	0.40
Date sampled			07/04/2022	07/04/2022	07/04/2022	07/04/2022
Test	Method	Units				
EPH Aromatic (>EC21-EC35)	CE250	mg/kg	<1	10	<1	27
EPH Aromatic (>EC35-EC44)	CE250	mg/kg	<1	2	<1	5
VPH Aliphatic (>C5-C6)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C6-C8)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1
VPH Aliphatic (>C8-C10)	CE067	mg/kg	<0.1	<0.1	<0.1	<0.1
EPH Aliphatic (>C10-C12)	CE250	mg/kg	<6	<6	<6	<6
EPH Aliphatic (>C12-C16)	CE250	mg/kg	<6	<6	<6	<6
EPH Aliphatic (>C16-C35)	CE250	mg/kg	<15	<15	<15	<15
EPH Aliphatic (>C35-C44)	CE250	mg/kg	<10	<10	<10	<10
Subcontracted analysis						
Asbestos (qualitative)	\$	-	NAD	NAD	NAD	NAD

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METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE127	Antimony (total)	Aqua regia digest, ICP-MS	Dry	U	0.2	mg/kg Sb
CE127	Arsenic (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg As
CE127	Barium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ba
CE127	Cadmium (total)	Aqua regia digest, ICP-MS	Dry	M	0.2	mg/kg Cd
CE127	Chromium (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cr
CE127	Copper (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Cu
CE127	Lead (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Pb
CE127	Mercury (total)	Aqua regia digest, ICP-MS	Dry	M	0.5	mg/kg Hg
CE127	Molybdenum (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Mo
CE127	Nickel (total)	Aqua regia digest, ICP-MS	Dry	M	1	mg/kg Ni
CE127	Selenium (total)	Aqua regia digest, ICP-MS	Dry	M	0.3	mg/kg Se
CE127	Zinc (total)	Aqua regia digest, ICP-MS	Dry	M	5	mg/kg Zn
CE004	pH	Based on BS 1377, pH Meter	As received	M	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄
CE197	Total Organic Carbon (TOC)	Carbon Analyser	Dry		0.1	% w/w C
CE197	Estimate of OMC (calculated from TOC)	Calculation from Total Organic Carbon	Dry		0.1	% w/w
CE087	Naphthalene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Acenaphthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Fluorene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Phenanthrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(a)anthracene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Chrysene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(b)fluoranthene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(k)fluoranthene	Solvent extraction, GC-MS	As received	M	0.03	mg/kg
CE087	Benzo(a)pyrene	Solvent extraction, GC-MS	As received	U	0.02	mg/kg
CE087	Indeno(123cd)pyrene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Dibenz(ah)anthracene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	Benzo(ghi)perylene	Solvent extraction, GC-MS	As received	M	0.02	mg/kg
CE087	PAH (total of USEPA 16)	Solvent extraction, GC-MS	As received		0.34	mg/kg
CE067	VPH Aromatic (>EC5-EC7)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC7-EC8)	Headspace GC-FID	As received		0.01	mg/kg
CE067	VPH Aromatic (>EC8-EC10)	Headspace GC-FID	As received		0.01	mg/kg
CE250	EPH Aromatic (>EC10-EC12)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC12-EC16)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC16-EC21)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC21-EC35)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE250	EPH Aromatic (>EC35-EC44)	Solvent extraction, GCxGC-FID	As received		1	mg/kg
CE067	VPH Aliphatic (>C5-C6)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C6-C8)	Headspace GC-FID	As received		0.1	mg/kg
CE067	VPH Aliphatic (>C8-C10)	Headspace GC-FID	As received		0.1	mg/kg

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE250	EPH Aliphatic (>C10-C12)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C12-C16)	Solvent extraction, GCxGC-FID	As received		6	mg/kg
CE250	EPH Aliphatic (>C16-C35)	Solvent extraction, GCxGC-FID	As received		15	mg/kg
CE250	EPH Aliphatic (>C35-C44)	Solvent extraction, GCxGC-FID	As received		10	mg/kg
\$	Asbestos (qualitative)	HSG 248, Microscopy	Dry	U	-	-

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
108201-1	WS1	0.40	N	
108201-2	WS3	0.30	N	
108201-3	WS5	0.25	N	
108201-4	WS6	0.40	N	

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

Opinions and interpretations expressed herein are outside the UKAS accreditation scope.

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

For soils and solids, analytical results are inclusive of stones, where applicable.

Waste Acceptance Criteria Testing BS EN 12457-Part 3, 2 Stage Process



Sample Details

Contract Name Wessex Galvanising
Lab Number 108201-2
Sample ID WS3 0.30m
Date Sampled 7 April 2022
Date Received 14 April 2022
Particle Size (<4mm) -
Method of size reduction N/A
Non-crushable matter N/A

Test Values

Mass of Raw Test Portion (MW) kg 0.238
Mass of Dried Test Portion (MD) kg 0.175
Moisture Content Ratio (MC) % 35.74
Dry Matter Content Ratio (DR) % 73.67
Leachant Volume (1) (L2) Litre 0.287
Leachant Volume (2) (L8) Litre 1.400
Eluate Volume (1) (VE1) Litre 0.170
Eluate Volume (2) (VE2) Litre 1.120

Eluate Analysis	Conc in Eluate	
Liquid : Waste Ratio	2:1	8:1
pH (units)	8.3	8.3
Temperature (°C)	20	20
Conductivity (µS/cm)	177	137
Antimony (µg/l Sb)	9.38	7.48
Arsenic (µg/l As)	2.72	20.09
Barium (µg/l Ba)	34.6	56.1
Cadmium (µg/l Cd)	<0.07	<0.07
Chromium (µg/l Cr)	4.9	47.9
Copper (µg/l Cu)	11.3	5.0
Lead (µg/l Pb)	12.2	12.5
Mercury (µg/l Hg)	0.064	0.011
Molybdenum (µg/l Mo)	31.7	16.2
Nickel (µg/l Ni)	9.1	0.9
Selenium (µg/l Se)	2.09	1.68
Zinc (µg/l Zn)	11	1
Chloride (mg/l Cl)	24	2.0
Fluoride (mg/l F)	0.3	0.2
Sulphate (mg/l SO ₄)	56	10
Total Dissolved Solids (mg/l TDS)	105	80
Phenol Index (µg/l PhOH)	<10	<10
Dissolved Organic Carbon (mg/l C)	20	12

Amount Leached		BS EN 12457-3 Limit Values mg/kg at L:S 10:1		
2:1	10:1	Inert Waste	Non-reactive Hazardous Waste	Hazardous Waste
mg/kg	mg/kg			
0.019	0.077	0.06	0.7	5
0.005	0.184	0.5	2	25
0.069	0.540	20	100	300
<0.0002	<0.0007	0.04	1	5
0.010	0.437	0.5	10	70
0.023	0.056	2	50	100
0.024	0.124	0.5	10	50
0.00013	0.00016	0.01	0.2	2
0.063	0.177	0.5	10	30
0.018	0.017	0.4	10	40
0.004	0.017	0.1	0.5	7
0.022	0.022	4	50	200
48	41	800	15000	25000
0.6	1.9	10	150	500
111	144	1000	20000	50000
210	824	4000	60000	100000
<0.02	<0.1	1		
40	124	500	800	1000

Waste Analysis	Units	Result			
Total Organic Carbon	% w/w	14.5	3%	5%	6%
Loss on Ignition	% w/w	9.1			10%
BTEX	mg/kg	<0.06	6		
PCBs (7 congeners)	mg/kg	<0.045	1		
TPH (C10 - C40)	mg/kg	286	500		
PAH (total)	mg/kg	2.82	100		
pH	pH units	8.7		>6	
Acid Neutralisation Capacity (pH4)	mol/kg	1.74		To be evaluated	
Acid Neutralisation Capacity (pH7)	mol/kg	0.08		To be evaluated	

Disclaimer : The Landfill Waste Acceptance Criteria limits in this report are provided for guidance only.
Chemtech Environmental Ltd does not take responsibility for any errors or omissions. Data is correct as of 01/09/2005.
Samples will be disposed of 6 weeks from initial receipt unless written instructions are received and further storage is agreed.
Waste Acceptance Criteria testing is outside the scope of the laboratory's UKAS accreditation.

Comments

Authorised by:

Report date:

4 May 2022

Name:

Position:

Rachael Burton

Reporting Team Lead

Unit 6 Parkhead, Greencroft Industrial Park, Stanley, County Durham, DH9 7YB
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Vat Reg No. 772 5703 18 Registered in England number 4284013

6.0 WASTE CLASSIFICATION REPORT



Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



B9U9M-5T5XQ-0RL7Y

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

Job name

Wessex Galvanising

Description/Comments

Project

J 2370

Site

Classified by

Name: **Tom McLaren**
Date: **31 Oct 2022 11:26 GMT**
Telephone: **01902 717653**

Company: **Ground Investigation Specialists Limited**
GIS

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:

Course
Hazardous Waste Classification

Date

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	MG Exc Hotspot		Non Hazardous		2
2	MG Inc Hotspot		Hazardous	HP 7, HP 10, HP 14	4
3	Made Ground Mixed		Hazardous	HP 14	7

Related documents

#	Name	Description
1	General Soil Default Waste Stream	waste stream template used to create this Job

Report

Created by: Tom McLaren

Created date: 31 Oct 2022 11:26 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	9
Appendix B: Rationale for selection of metal species	10
Appendix C: Version	11



Classification of sample: MG Exc Hotspot

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

Sample details

Sample name: **MG Exc Hotspot** LoW Code: Chapter: **17: Construction and Demolition Wastes (including excavated soil from contaminated sites)**
Entry: **17 05 04 (Soil and stones other than those mentioned in 17 05 03)**

Hazard properties

None identified

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic compounds, with the exception of those specified elsewhere in this Annex } 033-002-00-5			1	8.6	mg/kg		8.6	mg/kg	0.00086 %	✓	
2	cadmium { cadmium sulfide } 048-010-00-4	215-147-8	1306-23-6	1	0.3	mg/kg	1.285	0.386	mg/kg	0.00003 %	✓	
3	chromium(III) oxide (worst case) 215-160-9		1308-38-9		43	mg/kg		43	mg/kg	0.0043 %	✓	
4	copper { dicopper oxide; copper (I) oxide } 029-002-00-X	215-270-7	1317-39-1		159	mg/kg	1.126	179.016	mg/kg	0.0179 %	✓	
5	lead { lead compounds with the exception of those specified elsewhere in this Annex } 082-001-00-6			1	511	mg/kg		511	mg/kg	0.0511 %	✓	
6	mercury { compounds of mercury (with the exception of mercuric sulfide and those listed separately in this Annex) } 080-002-00-6			1	0.55	mg/kg	1.39	0.765	mg/kg	0.000055 %	✓	
7	nickel { nickel dihydroxide } 028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		30	mg/kg	1.579	47.385	mg/kg	0.00474 %	✓	
8	selenium { selenium compounds with the exception of cadmium sulposelenide and those specified elsewhere in this Annex } 034-002-00-8				1.5	mg/kg	1.405	2.108	mg/kg	0.000211 %	✓	
9	zinc { zinc oxide } 030-013-00-7	215-222-5	1314-13-2		287	mg/kg	1.245	357.233	mg/kg	0.0357 %	✓	
10	pH		PH		7.7	pH		7.7	pH	7.7 pH		
11	TPH (C6 to C40) petroleum group		TPH		53	mg/kg		53	mg/kg	0.0053 %	✓	
12	naphthalene 601-052-00-2	202-049-5	91-20-3		0.03	mg/kg		0.03	mg/kg	0.000003 %	✓	
13	acenaphthylene 205-917-1		208-96-8		0.04	mg/kg		0.04	mg/kg	0.000004 %	✓	
14	acenaphthene 201-469-6		83-32-9		0.02	mg/kg		0.02	mg/kg	0.000002 %	✓	
15	fluorene 201-695-5		86-73-7		0.02	mg/kg		0.02	mg/kg	0.000002 %	✓	



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		0.18 mg/kg		0.18 mg/kg	0.000018 %	✓	
17	anthracene	204-371-1	120-12-7		0.3 mg/kg		0.3 mg/kg	0.00003 %	✓	
18	fluoranthene	205-912-4	206-44-0		0.4 mg/kg		0.4 mg/kg	0.00004 %	✓	
19	pyrene	204-927-3	129-00-0		0.42 mg/kg		0.42 mg/kg	0.000042 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.22 mg/kg		0.22 mg/kg	0.000022 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.25 mg/kg		0.25 mg/kg	0.000025 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.34 mg/kg		0.34 mg/kg	0.000034 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.13 mg/kg		0.13 mg/kg	0.000013 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.23 mg/kg		0.23 mg/kg	0.000023 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.04 mg/kg		0.04 mg/kg	0.000004 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		0.19 mg/kg		0.19 mg/kg	0.000019 %	✓	
28	polychlorobiphenyls; PCB	602-039-00-4	215-648-1		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
Total:								0.121 %		

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
	This determinand is defined in the EU CLP Table 3
<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 not liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0053%)



Classification of sample: MG Inc Hotspot

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

Sample details

Sample name:	LoW Code:
MG Inc Hotspot	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
	Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

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

Hazard Statements hit:

Carc. 2; H351 "Suspected of causing cancer [state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard]."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex: (Note 1 conc.: 1.303%)

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

Hazard Statements hit:

Repr. 1A; H360Df "May damage the unborn child. Suspected of damaging fertility."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex: (Note 1 conc.: 1.303%)

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

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex: (Note 1 conc.: 1.303%)

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic compounds, with the exception of those specified elsewhere in this Annex }			1	8.6 mg/kg		8.6 mg/kg	0.00086 %	✓	
	033-002-00-5									
2	cadmium { cadmium sulfide }			1	0.3 mg/kg	1.285	0.386 mg/kg	0.00003 %	✓	
	048-010-00-4	215-147-8	1306-23-6							
3	chromium(III) oxide (worst case)				43 mg/kg		43 mg/kg	0.0043 %	✓	
		215-160-9	1308-38-9							
4	copper { dicopper oxide; copper (I) oxide }				159 mg/kg	1.126	179.016 mg/kg	0.0179 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	13032 mg/kg		13032 mg/kg	1.303 %	✓	
	082-001-00-6									
6	mercury { compounds of mercury (with the exception of mercuric sulfide and those listed separately in this Annex) }			1	0.55 mg/kg	1.39	0.765 mg/kg	0.000055 %	✓	
	080-002-00-6									



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
7	nickel { nickel dihydroxide }				30 mg/kg	1.579	47.385 mg/kg	0.00474 %	✓		
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.5 mg/kg	1.405	2.108 mg/kg	0.000211 %	✓		
	034-002-00-8										
9	zinc { zinc oxide }				287 mg/kg	1.245	357.233 mg/kg	0.0357 %	✓		
	030-013-00-7	215-222-5	1314-13-2								
10	pH				7.7 pH		7.7 pH	7.7 pH			
			PH								
11	TPH (C6 to C40) petroleum group				53 mg/kg		53 mg/kg	0.0053 %	✓		
			TPH								
12	naphthalene				0.03 mg/kg		0.03 mg/kg	0.000003 %	✓		
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				0.04 mg/kg		0.04 mg/kg	0.000004 %	✓		
		205-917-1	208-96-8								
14	acenaphthene				0.02 mg/kg		0.02 mg/kg	0.000002 %	✓		
		201-469-6	83-32-9								
15	fluorene				0.02 mg/kg		0.02 mg/kg	0.000002 %	✓		
		201-695-5	86-73-7								
16	phenanthrene				0.18 mg/kg		0.18 mg/kg	0.000018 %	✓		
		201-581-5	85-01-8								
17	anthracene				0.3 mg/kg		0.3 mg/kg	0.00003 %	✓		
		204-371-1	120-12-7								
18	fluoranthene				0.4 mg/kg		0.4 mg/kg	0.00004 %	✓		
		205-912-4	206-44-0								
19	pyrene				0.42 mg/kg		0.42 mg/kg	0.000042 %	✓		
		204-927-3	129-00-0								
20	benzo[a]anthracene				0.22 mg/kg		0.22 mg/kg	0.000022 %	✓		
	601-033-00-9	200-280-6	56-55-3								
21	chrysene				0.25 mg/kg		0.25 mg/kg	0.000025 %	✓		
	601-048-00-0	205-923-4	218-01-9								
22	benzo[b]fluoranthene				0.34 mg/kg		0.34 mg/kg	0.000034 %	✓		
	601-034-00-4	205-911-9	205-99-2								
23	benzo[k]fluoranthene				0.13 mg/kg		0.13 mg/kg	0.000013 %	✓		
	601-036-00-5	205-916-6	207-08-9								
24	benzo[a]pyrene; benzo[def]chrysene				0.23 mg/kg		0.23 mg/kg	0.000023 %	✓		
	601-032-00-3	200-028-5	50-32-8								
25	indeno[123-cd]pyrene				0.2 mg/kg		0.2 mg/kg	0.00002 %	✓		
		205-893-2	193-39-5								
26	dibenz[a,h]anthracene				0.04 mg/kg		0.04 mg/kg	0.000004 %	✓		
	601-041-00-2	200-181-8	53-70-3								
27	benzo[ghi]perylene				0.19 mg/kg		0.19 mg/kg	0.000019 %	✓		
		205-883-8	191-24-2								
28	polychlorobiphenyls; PCB				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	602-039-00-4	215-648-1	1336-36-3								
Total:									1.373 %		

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
	This determinand is defined in the EU CLP Table 3
<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 not liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0053%)



Classification of sample: Made Ground Mixed

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

Sample details

Sample name:	LoW Code:
Made Ground Mixed	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
	Entry: 17 05 03 * (Soil and stones containing hazardous substances)

Hazard properties

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

Hazard Statements hit:

Aquatic Chronic 1; H410 "Very toxic to aquatic life with long lasting effects."

Because of determinand:

lead compounds with the exception of those specified elsewhere in this Annex: (Note 1 conc.: 0.297%)

Determinands

Moisture content: 0% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic compounds, with the exception of those specified elsewhere in this Annex }			1	8.6 mg/kg		8.6 mg/kg	0.00086 %	✓	
	033-002-00-5									
2	cadmium { cadmium sulfide }			1	0.3 mg/kg	1.285	0.386 mg/kg	0.00003 %	✓	
	048-010-00-4	215-147-8	1306-23-6							
3	chromium(III) oxide (worst case)				43 mg/kg		43 mg/kg	0.0043 %	✓	
		215-160-9	1308-38-9							
4	copper { dicopper oxide; copper (I) oxide }				159 mg/kg	1.126	179.016 mg/kg	0.0179 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }			1	2966 mg/kg		2966 mg/kg	0.297 %	✓	
	082-001-00-6									
6	mercury { compounds of mercury (with the exception of mercuric sulfide and those listed separately in this Annex) }			1	0.55 mg/kg	1.39	0.765 mg/kg	0.000055 %	✓	
	080-002-00-6									
7	nickel { nickel dihydroxide }				30 mg/kg	1.579	47.385 mg/kg	0.00474 %	✓	
	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.5 mg/kg	1.405	2.108 mg/kg	0.000211 %	✓	
	034-002-00-8									
9	zinc { zinc oxide }				287 mg/kg	1.245	357.233 mg/kg	0.0357 %	✓	
	030-013-00-7	215-222-5	1314-13-2							
10	pH		PH		7.7 pH		7.7 pH	7.7 pH		
11	TPH (C6 to C40) petroleum group		TPH		53 mg/kg		53 mg/kg	0.0053 %	✓	
12	naphthalene				0.03 mg/kg		0.03 mg/kg	0.000003 %	✓	
	601-052-00-2	202-049-5	91-20-3							



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
13	acenaphthylene	205-917-1	208-96-8		0.04 mg/kg		0.04 mg/kg	0.000004 %	✓	
14	acenaphthene	201-469-6	83-32-9		0.02 mg/kg		0.02 mg/kg	0.000002 %	✓	
15	fluorene	201-695-5	86-73-7		0.02 mg/kg		0.02 mg/kg	0.000002 %	✓	
16	phenanthrene	201-581-5	85-01-8		0.18 mg/kg		0.18 mg/kg	0.000018 %	✓	
17	anthracene	204-371-1	120-12-7		0.3 mg/kg		0.3 mg/kg	0.00003 %	✓	
18	fluoranthene	205-912-4	206-44-0		0.4 mg/kg		0.4 mg/kg	0.00004 %	✓	
19	pyrene	204-927-3	129-00-0		0.42 mg/kg		0.42 mg/kg	0.000042 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.22 mg/kg		0.22 mg/kg	0.000022 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.25 mg/kg		0.25 mg/kg	0.000025 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.34 mg/kg		0.34 mg/kg	0.000034 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.13 mg/kg		0.13 mg/kg	0.000013 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.23 mg/kg		0.23 mg/kg	0.000023 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.04 mg/kg		0.04 mg/kg	0.000004 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		0.19 mg/kg		0.19 mg/kg	0.000019 %	✓	
28	polychlorobiphenyls; PCB	602-039-00-4	215-648-1		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
Total:								0.366 %		

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
	This determinand is defined in the EU CLP Table 3
<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 not liquid phase

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0053%)



Appendix A: Classifier defined and non GB MCL determinands

• **arsenic compounds, with the exception of those specified elsewhere in this Annex**

GB MCL index number: 033-002-00-5

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

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

Reason for additional Hazards Statement(s):

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

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

Description/Comments: Data from C&L Inventory Database

Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>

Data source date: 17 Jul 2015

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

• **lead compounds with the exception of those specified elsewhere in this Annex**

GB MCL index number: 082-001-00-6

Description/Comments: Least-worst case: IARC considers lead compounds Group 2A; Probably carcinogenic to humans; Lead REACH Consortium, following MCL protocols, considers many simple lead compounds to be Carcinogenic category 2

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

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

• **compounds of mercury (with the exception of mercuric sulfide and those listed separately in this Annex)**

EU CLP index number: 080-002-00-6

Description/Comments: Combines the average of the conversion factors for Mercury difulminate and Mercury (II) sulphide.

Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)

Hazard Statements: Acute Tox. 2; H330 , Acute Tox. 1; H310 , Acute Tox. 2; H300 , STOT RE 2; H373 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , STOT RE 2; H373 >= 0.1 %

• **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

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

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

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

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



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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 17 Jul 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 21 Aug 2015

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

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

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

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

Data source date: 21 Aug 2015

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

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

Description/Comments: Data from C&L Inventory Database

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

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2; H351

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

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

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

Data source date: 23 Jul 2015

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

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

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

Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans; POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.

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

Reason for additional Hazards Statement(s):

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

Appendix B: Rationale for selection of metal species

arsenic {arsenic compounds, with the exception of those specified elsewhere in this Annex}

Worst case species based on risk phrases

cadmium {cadmium sulfide}

Worst case species based on risk phrases

copper {dicopper oxide; copper (I) oxide}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Worst case species based on risk phrases

mercury {compounds of mercury (with the exception of mercuric sulfide and those listed separately in this Annex)}

Worst case species based on risk phrases

nickel {nickel dihydroxide}

Worst case species based on risk phrases

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

Worst case species based on risk phrases



zinc {zinc oxide}

Worst case species based on risk phrases

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2022.263.5340.9974 (20 Sep 2022)

HazWasteOnline Database: 2022.273.5362.10003 (03 Oct 2022)

This classification utilises the following guidance and legislation:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

7.0 SITE PLAN

 = Borehole Position (GIS Report No. 2370, May 2022)

 = Additional Sample Position (GIS Report No. 2370 B, October 2022)



NORTH

NO.	DATE	BY	CHKD.
WEDGE GROUP GALVANIZING LTD.			
Wedges Galvanizers Ltd.			
Proposed Extension Wedges Galvanizers Ltd. Bath High			
GROUND FLOOR PLAN (Proposed)			

