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St Leonards on Sea
East Sussex
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THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 19-26031

Issue: 1

Date of Issue: 06/12/2019

Contact: Richard Blaney

Customer Details: Forge Environmental Management Ltd
The Forge
Lower Vagg
Yeovil
SomersetBA21 3PY

Quotation No:

Order No:

Customer Reference:

Date Received: 03/12/2019

Date Approved: 06/12/2019

Details: Walbarton Lane, Walbarton

Approved by:

Mike Varley, Technical Manager

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Sample Summary

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Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
191106	WS1 0.10	29/11/2019	03/12/2019	Silty loam	
191107	WS1 0.50	29/11/2019	03/12/2019		
191108	WS2 0.10	29/11/2019	03/12/2019		
191109	WS2 0.50	29/11/2019	03/12/2019	Silty loam	
191110	WS3 0.10	29/11/2019	03/12/2019	Silty loam	
191111	WS3 0.50	29/11/2019	03/12/2019		
191112	WS4 0.10	28/11/2019	03/12/2019		
191113	WS4 0.50	28/11/2019	03/12/2019	Silty clayey loam	
191114	WS5 0.05	28/11/2019	03/12/2019	Silty loam	
191115	WS5 0.60	28/11/2019	03/12/2019		
191116	WS6 0.10	29/11/2019	03/12/2019		
191117	WS6 0.50	29/11/2019	03/12/2019	Silty loam	



Results Summary

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ELAB Reference	191106	191109	191110	191113
Customer Reference				
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	WS1	WS2	WS3	WS4
Sample Depth (m)	0.10	0.50	0.10	0.50
Sampling Date	29/11/2019	29/11/2019	29/11/2019	28/11/2019

Determinand	Codes	Units	LOD				
Soil sample preparation parameters							
Material removed	N	%	0.1	28.0	< 0.1	< 0.1	26.7
Description of Inert material removed	N		0	Stones	None	None	Stones
Metals							
Arsenic	M	mg/kg	1	5.7	10.8	10.2	13.1
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	0.6	0.6
Chromium	M	mg/kg	5	24.3	36.9	36.4	37.5
Copper	M	mg/kg	5	12.9	16.8	40.0	14.9
Lead	M	mg/kg	5	38.0	16.6	81.5	22.5
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	14.3	23.2	19.2	36.1
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	72.6	61.6	580	91.0
Anions							
Water Soluble Sulphate	M	g/l	0.02	0.89	0.06	0.06	0.11
Inorganics							
Elemental Sulphur	M	mg/kg	20	< 20	< 20	< 20	36
Free Cyanide	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Sulphide	N	mg/kg	2	< 2	< 2	< 2	< 2
Total Cyanide	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Water Soluble Boron	N	mg/kg	0.5	1.0	0.6	1.4	< 0.5
Miscellaneous							
pH	M	pH units	0.1	6.2	5.4	6.2	7.0
Soil Organic Matter	U	%	0.1	4.5	0.6	4.6	0.2
Phenols							
Phenol	M	mg/kg	1	< 1	< 1	< 1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1	< 1	< 1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1	< 1	< 1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1	< 1	< 1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5	< 5	< 5
Polyaromatic hydrocarbons							
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1	0.3	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.2	< 0.1	0.8	< 0.1
Pyrene	M	mg/kg	0.1	0.2	< 0.1	0.8	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	0.6	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1	0.6	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	0.4	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1	0.7	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	0.4	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1	0.3	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	M	mg/kg	0.1	< 0.1	< 0.1	0.3	< 0.1
Total PAH(16)	M	mg/kg	0.4	1.0	< 0.4	5.3	< 0.4

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Results Summary

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ELAB Reference			191106	191109	191110	191113
Customer Reference						
Sample ID						
Sample Type			SOIL	SOIL	SOIL	SOIL
Sample Location			WS1	WS2	WS3	WS4
Sample Depth (m)			0.10	0.50	0.10	0.50
Sampling Date			29/11/2019	29/11/2019	29/11/2019	28/11/2019
s	Units	LOD				
	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0

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Results Summary

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ELAB Reference	191114	191117
Customer Reference		
Sample ID		
Sample Type	SOIL	SOIL
Sample Location	WS5	WS6
Sample Depth (m)	0.05	0.50
Sampling Date	28/11/2019	29/11/2019

Determinand	Codes	Units	LOD		
Soil sample preparation parameters					
Material removed	N	%	0.1	13.9	< 0.1
Description of Inert material removed	N		0	Stones, Twigs	None
Metals					
Arsenic	M	mg/kg	1	4.0	6.4
Cadmium	M	mg/kg	0.5	0.6	< 0.5
Chromium	M	mg/kg	5	20.3	25.6
Copper	M	mg/kg	5	17.3	15.2
Lead	M	mg/kg	5	33.5	14.9
Mercury	M	mg/kg	0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	14.5	15.0
Selenium	M	mg/kg	1	< 1.0	< 1.0
Zinc	M	mg/kg	5	63.8	52.6
Anions					
Water Soluble Sulphate	M	g/l	0.02	0.08	< 0.02
Inorganics					
Elemental Sulphur	M	mg/kg	20	< 20	< 20
Free Cyanide	N	mg/kg	1	< 1.0	< 1.0
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8
Total Sulphide	N	mg/kg	2	< 2	< 2
Total Cyanide	M	mg/kg	1	1.3	< 1.0
Water Soluble Boron	N	mg/kg	0.5	1.8	0.5
Miscellaneous					
pH	M	pH units	0.1	5.5	5.6
Soil Organic Matter	U	%	0.1	12	2.6
Phenols					
Phenol	M	mg/kg	1	< 1	< 1
3,4-Dimethylphenol	N	mg/kg	1	< 1	< 1
2,3-Dimethylphenol	M	mg/kg	1	< 1	< 1
2,3,5-trimethylphenol	M	mg/kg	1	< 1	< 1
Total Monohydric Phenols	N	mg/kg	5	< 5	< 5
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.1	< 0.1
Pyrene	M	mg/kg	0.1	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	M	mg/kg	0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4	< 0.4

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Results Summary

2683

Report No.: 19-26031, issue number 1

ELAB Reference	191114	191117
Customer Reference		
Sample ID		
Sample Type	SOIL	SOIL
Sample Location	WS5	WS6
Sample Depth (m)	0.05	0.50
Sampling Date	28/11/2019	29/11/2019

Determinand	Codes	Units	LOD		
BTEX					
Benzene	N	ug/kg	10	< 10.0	< 10.0
Toluene	N	ug/kg	10	< 10.0	< 10.0
Ethylbenzene	N	ug/kg	10	< 10.0	< 10.0
Xylenes	N	ug/kg	10	< 10.0	< 10.0
MTBE	N	ug/kg	10	< 10.0	< 10.0
TPH CWG					
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aliphatic	M	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aliphatic	M	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aliphatic	M	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aliphatic	M	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aliphatic	M	mg/kg	1	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aromatic	M	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aromatic	M	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aromatic	M	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aromatic	M	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aromatic	M	mg/kg	1	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	< 1.0
Total petroleum hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	< 1.0

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Method Summary

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Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Free cyanide	N	As submitted sample	04/12/2019	107	Colorimetry
Sulphide	N	As submitted sample	04/12/2019	109	Colorimetry
Hexavalent chromium	N	As submitted sample	04/12/2019	110	Colorimetry
pH	M	Air dried sample	04/12/2019	113	Electromeric
Aqua regia extractable metals	M	Air dried sample	04/12/2019	118	ICPMS
Phenols in solids	M	As submitted sample	04/12/2019	121	HPLC
Elemental Sulphur	M	Air dried sample	04/12/2019	122	HPLC
PAH (GC-FID)	M	As submitted sample	04/12/2019	133	GC-FID
Water soluble anions	M	Air dried sample	04/12/2019	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	04/12/2019	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	04/12/2019	181	GC-MS
BTEX in solids	N	As submitted sample	04/12/2019	181A	GC-MS
Water soluble boron	N	Air dried sample	04/12/2019	202	Colorimetry
Total cyanide	M	As submitted sample	04/12/2019	204	Colorimetry
TPH CWG soil by gc-gc	M	As submitted sample	04/12/2019	214	
Soil organic matter	U	Air dried sample	04/12/2019	BS1377:P3	Titrimetry

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Report Information

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Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

-
- | | |
|---|--|
| a | No date of sampling supplied |
| b | No time of sampling supplied (Waters Only) |
| c | Sample not received in appropriate containers |
| d | Sample not received in cooled condition |
| e | The container has been incorrectly filled |
| f | Sample age exceeds stability time (sampling to receipt) |
| g | Sample age exceeds stability time (sampling to analysis) |

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage