



SOCOTEC

Environmental Chemistry
SOCOTEC UK
Ashby Rd, Bretby,
Burton-on-Trent, UK
DE15 0YZ

Certificate of Analysis

Project No: 20060256

Client: Shetland Islands Council

Quote Number: BEC20068904

Project Reference: Shetland Island Council

Site Name: June Residue Analysis 2020

Contact:

Address: Lerwick Energy Recovery Plant
Greenhead Base
Gremista Industrial Estate
Lerwick, Shetland

Post Code: ZE1 0PX

E-Mail: shetland.gov.uk

Phone No: 01595 745166

Number of Samples Received: 4

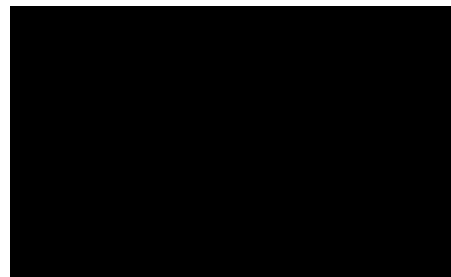
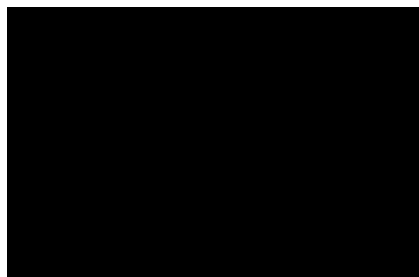
Date Received: 10/06/2020

Analysis Date: 09/07/2020

Date Issued: 09/07/2020

Job Status: Complete

Report Type: Final Version 01





Client: Shetland Islands Council

Project Name: June Residue Analysis 2020

Project No: 20060256

Date Issued: 09/07/2020

Samples Analysed

<u>Sample Reference</u>	<u>Text ID</u>	<u>Sample Date</u>	<u>Sample Type</u>
Bottom Ash	20060256-001	02/06/2020 09:37:29	SOLID
ESP	20060256-002	02/06/2020 09:37:29	SOLID
Bag Filter	20060256-003	02/06/2020 09:37:29	SOLID
Filter Press	20060256-004	02/06/2020 09:37:29	SOLID



Analysis Results



Analysis Results

Analysis		Method Code	MDL	Units	Accred	Project ID 20060256			
Total Organic Carbon		WSLM59	0.02	% m/m	U	003	004		
LOI @ 450°C		LOI(%MM)	0.2	% m/m	N	Bag Filter	Filter Press		
Antimony as Sb		ICPMSW (Dissolved)	0.001	mg/l	U	SOLID	LPL	SOLID	
Arsenic as As		ICPMSW (Dissolved)	0.001	mg/l	U	02/06/2020	02/06/2020	02/06/2020	
Total Chromium as Cr		ICPMSW (Dissolved)	0.001	mg/l	U				
Copper as Cu		ICPMSW (Dissolved)	0.001	mg/l	U				
Lead as Pb		ICPMSW (Dissolved)	0.001	mg/l	U				
Molybdenum as Mo		ICPMSW (Dissolved)	0.001	mg/l	U				
Nickel as Ni		ICPMSW (Dissolved)	0.001	mg/l	U				
Selenium as Se		ICPMSW (Dissolved)	0.001	mg/l	U				
Zinc as Zn		ICPMSW (Dissolved)	0.002	mg/l	U				
Total Moisture at 35°C		GLANDPREP	0.1	%	N	<0.1			
Description of Solid Material		GLANDPREP		-	N	ASH			
Equivalent Weight of Dry Material (kg)		Leachate Preparation CEN 10:1		kg	N	0.090		0.090	
Fraction above 4mm (%)		Leachate Preparation CEN 10:1		%	N	0		0	
Fraction of non-crushable material (%)		Leachate Preparation CEN 10:1		%	N	0		0	
Volume of Water for 10:1 Leach (ltr)		Leachate Preparation CEN 10:1		l	N	0.881		0.871	
Weight of Sample Leached (kg)		Leachate Preparation CEN 10:1		kg	N	0.109		0.119	
Total Moisture at 105°C		SUB022		%	N	25.6			
Free Lime Content		SUB051	0.1	%	N	0.06			

Analysis Report

Report Number: 20/JUN/COA/798986

Supplier: Contaminated Land
PO Box 100
Ashby Road
Burton on Trent
Staffs

Site SOCOTEC BRETBY

Grade: 42128

Our Ref: SHETLAND_LERWICK

Customer Ref: 20060256-002-6 JUNE RESIDUE ANALYSIS 2020

Quote Ref:

Date Sampled: 10 June 2020

Date Received: 29 June 2020

Test Date: 29 June 2020 to 2 July 2020

Date Reported: 2 July 2020

Laboratory References

Sample Matrix SOIL

Sample Number: 798986

6m Bottle:

72m Bottle:

Bio Bottle: 798986

Samples prepared using UKAS accredited methods in accordance with UKAS schedule No.0001

The results relate only to the sample tested

Analysis was undertaken at the following location(s):

SOCOTEC UK Limited, Bretby Business Park, Ashby Road, Burton upon Trent, DE15 0YZ

* Denotes calculated values.

** Non accredited method for this matrix.

*** Sub contracted test, UKAS accredited.

**** Sub contracted test, non-UKAS accredited.

Customer Supplied Result.

I/S Insufficient sample to test.

U/S unsuitable sample to test.

This sample was taken by SOCOTEC UK Limited

Report Authorised By:

For and on behalf of SOCOTEC UK Limited

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Analysis Report

Report Number: 20/JUN/COA/798986

Supplier: Contaminated Land
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Burton on Trent
Staffs

Site SOCOTEC BRETBY

Grade: 42128

Our Ref: SHETLAND_LERWICK

Customer Ref: 20060256-002-6 JUNE RESIDUE ANALYSIS 2020

Laboratory References

Date Sampled: 10 June 2020

Sample Number: 798986

Date Received: 29 June 2020

6m Bottle:

Test Date: 29 June 2020 to 2 July 2020

72m Bottle:

Date Reported: 2 July 2020

Bio Bottle: 798986

			Results Basis			
Test	Method Reference	Units	As Received *	As Analysed	Dry *	Dry Ash Free *
Total Moisture	*	%	25.3	-	-	-

--END OF REPORT--

Analysis Report

Report Number: 20/JUN/COA/798987

Supplier: Contaminated Land
PO Box 100
Ashby Road
Burton on Trent
Staffs

Site SOCOTEC BRETBY

Grade: 42128

Our Ref: SHETLAND_LERWICK

Customer Ref: 20060256-003-6 JUNE RESIDUE ANALYSIS 2020

Quote Ref:

Date Sampled: 10 June 2020

Date Received: 29 June 2020

Test Date: 29 June 2020 to 2 July 2020

Date Reported: 2 July 2020

Laboratory References

Sample Matrix SOIL

Sample Number: 798987

6m Bottle:

72m Bottle:

Bio Bottle: 798987

Samples prepared using UKAS accredited methods in accordance with UKAS schedule No.0001

The results relate only to the sample tested

Analysis was undertaken at the following location(s):

SOCOTEC UK Limited, Bretby Business Park, Ashby Road, Burton upon Trent, DE15 0YZ

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Analysis Report

Report Number: 20/JUN/COA/798987

Supplier: Contaminated Land
PO Box 100
Ashby Road
Burton on Trent
Staffs

Site SOCOTEC BRETBY

Grade: 42128

Our Ref: SHETLAND_LERWICK

Customer Ref: 20060256-003-6 JUNE RESIDUE ANALYSIS 2020

Laboratory References

Date Sampled: 10 June 2020

Sample Number: 798987

Date Received: 29 June 2020

6m Bottle:

Test Date: 29 June 2020 to 2 July 2020

72m Bottle:

Date Reported: 2 July 2020

Bio Bottle: 798987

			Results Basis			
Test	Method Reference	Units	As Received *	As Analysed	Dry *	Dry Ash Free *
Total Moisture	*	%	25.6	-	-	-

--END OF REPORT--

KIRTON CONCRETE SERVICES LTD.

INDEPENDENT TESTING LABORATORY

Manor House, Station Road, Hibaldstow, Brigg, North Lincolnshire, DN20 9EB, England
Telephone: (01652) 656931 Fax: (01652) 651082 E-mail Kirtonlab@aol.com

PFA TEST RESULTS to EN 450 :2012

Client	:-	SOCOTEC
Our reference	:-	SOCOTEC 46
Your reference	:-	20060256-002-7
Order	:-	20060256.0
Date received	:-	08-Jul-20
Purchase Order Number	:-	20060256.0
Date of tests	:-	08-Jul-20 to 09-Jul-20

RESULTS

Free Calcium oxide 0.06 %

Signed

KIRTON CONCRETE SERVICES LTD.

INDEPENDENT TESTING LABORATORY

Manor House, Station Road, Hibaldstow, Brigg, North Lincolnshire, DN20 9EB, England
Telephone: (01652) 656931 Fax: (01652) 651082 E-mail Kirtonlab@aol.com

PFA TEST RESULTS to EN 450 :2012

Client	:-	SOCOTEC
Our reference	:-	SOCOTEC 47
Your reference	:-	20060256-003-7
Order	:-	20060256.0
Date received	:-	08-Jul-20
Purchase Order Number	:-	20060256.0
Date of tests	:-	08-Jul-20 to 09-Jul-20

RESULTS

Free Calcium oxide 0.06 %

Signed.....

Additional Report Notes

Method Code	Sample ID	The following information should be taken into consideration when using the data contained within this report
ICPMSW	20060256-002	Due to matrix interference, the Internal Standard recovery for this Test is below the required QMS specification. All other Laboratory Process Controls meet the requirements of the QMS unless otherwise stated. These circumstances should be taken into consideration when utilising the data.



Client: Shetland Islands Council

Project Name: June Residue Analysis 2020

Project No: 20060256

Date Issued: 09/07/2020

Deviating Sample Report			Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time	Handling Time
Sample Reference	Text ID	Reported Name							

Analysis Method

Analysis

CLANDPREP

ICPMSW (Dissolved)

Leachate Preparation CEN 10:1

LOI(%MM)

WSLM59

Analysis Type

PHYS

METALS

PHYS

INORGANIC

INORGANIC

Analysis Method

As Received

FILTERED

As Received

Air Dried & Ground

Air Dried & Ground



Client: Shetland Islands Council

Project Name: June Residue Analysis 2020

Project No: 20060256

Date Issued: 09/07/2020

Additional Information

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

Results within this report relate only to the samples tested.

In the accreditation column of analysis report the codes are as follows:

U = UKAS accredited analysis

M = MCERT accredited analysis

N = Unaccredited analysis

Any units marked with ^ signify results are reported on a dry weight basis of 105 ° c

All Air Dried and Ground Samples (ADG) are oven dried at less than 35 ° c.

This report shall not be reproduced except in full and with approval from the laboratory.

Opinions and interpretations given are outside the scope of our UKAS accreditation.

Any samples marked with * are not covered by our scope of UKAS accreditation, if applicable further report notes have been added.

Any solid samples where the Major Constituents are not one of the following (Sand, Silt, Clay, Made Ground) are not one of our accredited matrix types.

Any samples marked with ‡ have had MCERTS accreditation removed for this result

Any samples marked with a tick in the deviant table is deviant for the specific reason.

Any samples reported as IS, NA, ND mean the following:

IS = Insufficient Sample to complete analysis

NA = Sample is not amenable for the required analysis

ND = Results cannot be determined

Our deviating sample report does not include deviancy information for Subcontracted analysis. Please see the report from the Subcontracted lab for information regarding any deviancies for this analysis.

End of Certificate of Analysis