SOCOTEC
Environmental Chemistry

Certificate of Analysis

Client: Land & Water Services Ltd

Project: 25091021

Quote: BEC240736207 V8.2

Project Ref: Land & Water Services Ltd

Site: Mon & Brec Fields

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No. Samples Received: 7

Date Received: 08/09/2025

Analysis Completed: 29/09/2025

Date Issued: 29/09/2025

Report Type: Version 01

This report supersedes any versions previously issued by the laboratory

Reported by Account Manager
Lucy Bailey

Lucy.Bailey@socotec.co.uk

Project Number: 25091021

Client: Land & Water Services Ltd
Date Issued: 29/09/2025
Project Name: Land & Water Services Ltd - Mon & Brec Fields

Samples Analysed

Text ID	Sample Reference	Sampling Date	Sample Type	Sample Description
25091021-001	IV WG7	04/08/2025 00:00:00	SOLID	Silt Sample
25091021-002	IV WG2	04/08/2025 00:00:00	SOLID	Silt Sample
25091021-003	IV WG3	04/08/2025 00:00:00	SOLID	Silt Sample
25091021-004	JJ	04/08/2025 00:00:00	SOLID	Silt Sample
25091021-005	DM	04/08/2025 00:00:00	SOLID	Silt Sample
25091021-006	CO 1	04/08/2025 00:00:00	SOLID	Silt Sample
25091021-007	CO 2	04/08/2025 00:00:00	SOLID	Silt Sample

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Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID:	25091021-001	25091021-002	25091021-003	25091021-004	25091021-005
				Sampling Date:	04/08/2025 00:00	04/08/2025 00:00	04/08/2025 00:00	04/08/2025 00:00	04/08/2025 00:00
				Customer ID:	IV WG7	IV WG2	IV WG3	JJ	DM
CLANDPREP	Total Moisture at 35°C	0.1 %	N		19.4	18.7	20.7	12.8	17.5
	Major Constituents	-	N		SILT	SILT	SILT	SILT	SILT
	Minor Constituents	-	N		None	None	None	None	None
	Miscellaneous Constituents	-	N		Organic Matter	Organic Matter	Organic Matter	Organic Matter	Organic Matter
	Colour of Material	-	N		Brown	Brown	Brown	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^		7.1	>12.0* ε	4.8	6.6	7.5
TSCONW	Conductivity in 5:1 Water Extract	10 µS/cm	N^		149	42	48	72	83
ANC	Carbonate Content (%CaCO3)	0.2 % m/m	N^		2.4	1.6	3.2	1.6	3.2
LOI(%MM)	LOI @ 550°C	0.2 % m/m	N^		6.4	9.2	7.3	7.5	9.9
WSLM59	Total Organic Carbon	0.02 % m/m	U^		3.23	3.36	2.09	2.31	2.48
WSLM60	Extractable Phosphorus as P	2 mg/l (s)	U		15.8	5.7	26.5	37.0	22.0
ISEFSS	Fluoride as F	0.2 mg/kg	U^		0.2	<0.2	<0.2	<0.2	<0.2
ICPMSS	Arsenic as As	0.3 mg/kg	M^		10.6	9.3	9.9	12.3	11.0
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^		0.3	0.3	0.4	0.3	0.3
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^		23.3	21.7	25.1	21.4	20.2
ICPMSS	Copper as Cu	1.6 mg/kg	M^		12.2	20.4	10.9	11.9	11.0
ICPMSS	Lead as Pb	0.7 mg/kg	M^		32.5	29.9	26.0	34.6	33.5
ICPMSS	Mercury as Hg	0.5 mg/kg	M^		<0.5	<0.5	<0.5	<0.5	<0.5
ICPMSS	Molybdenum as Mo	0.5 mg/kg	M^		0.5	<0.5	<0.5	0.6	0.7
ICPMSS	Nickel as Ni	2 mg/kg	M^		16.5	16.9	16.2	14.1	14.2
ICPMSS	Selenium as Se	0.5 mg/kg	M^		0.6	<0.5	0.6	0.5	0.6
ICPMSS	Zinc as Zn	16 mg/kg	M^		93.8	59.0	67.5	66.6	57.6
ICPBOR	Boron as B	0.5 mg/kg	M^		0.7	0.6	0.6	0.6	0.6
ICPEXCH	Magnesium as Mg (mg/l)	5 mg/l (s)	N		148	88	101	110	96
	Potassium as K (mg/l)	5 mg/l (s)	N		157	115	113	146	153
PICALC	Magnesium Index	-	N		3	2	3	3	2
	Phosphorus Index	-	N		1	0	3	3	2
	Potassium Index	-	N		<0	1	1	<0	<0
SUB022	Total Nitrogen as N	0.08 %	U		0.30*	0.23*	0.21*	0.22*	0.29*
Grid Reference	Eastings	-	N		316382	316977	317140	315922	315854
	Northings	-	N		219508	219516	19549	219812	219597

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Analysis Results

Method Code	Analysis	MDL	Accred.	SOCOTEC Sample ID: 25091021-006 / Sampling Date: 04/08/2025 00:00 / Customer ID: CO 1	SOCOTEC Sample ID: 25091021-007 / Sampling Date: 04/08/2025 00:00 / Customer ID: CO 2
CLANDPREP	Total Moisture at 35°C	0.1 %	N	22.2	18.9
	Major Constituents	-	N	SILT	SILT
	Minor Constituents	-	N	None	None
	Miscellaneous Constituents	-	N	Organic Matter	Organic Matter
	Colour of Material	-	N	Brown	Brown
PHSOIL	pH (2.5:1 extraction)	1 pH units	M^	8.2	8.6
TSCONW	Conductivity in 5:1 Water Extract	10 µS/cm	N^	61	36
ANC	Carbonate Content (%CaCO3)	0.2 % m/m	N^	2.4	4.8
LOI(%MM)	LOI @ 550°C	0.2 % m/m	N^	9.4	9.8
WSLM59	Total Organic Carbon	0.02 % m/m	U^	2.94	2.32
WSLM60	Extractable Phosphorus as P	2 mg/l (s)	U	11.9	7.6
ISEFSS	Fluoride as F	0.2 mg/kg	U^	<0.2	<0.2
ICPMSS	Arsenic as As	0.3 mg/kg	M^	11.9	10.4
ICPMSS	Cadmium as Cd	0.2 mg/kg	M^	0.3	0.3
ICPMSS	Total Chromium as Cr	1.2 mg/kg	M^	26.7	22.3
ICPMSS	Copper as Cu	1.6 mg/kg	M^	12.0	9.2
ICPMSS	Lead as Pb	0.7 mg/kg	M^	40.6	30.1
ICPMSS	Mercury as Hg	0.5 mg/kg	M^	<0.5	<0.5
ICPMSS	Molybdenum as Mo	0.5 mg/kg	M^	0.5	<0.5
ICPMSS	Nickel as Ni	2 mg/kg	M^	15.6	14.4
ICPMSS	Selenium as Se	0.5 mg/kg	M^	0.6	0.5
ICPMSS	Zinc as Zn	16 mg/kg	M^	67.9	68.0
ICPBOR	Boron as B	0.5 mg/kg	M^	0.8	0.6
ICPEXCH	Magnesium as Mg (mg/l)	5 mg/l (s)	N	138	84
	Potassium as K (mg/l)	5 mg/l (s)	N	143	87
PICALC	Magnesium Index	-	N	3	2
	Phosphorus Index	-	N	1	0
	Potassium Index	-	N	<0	1
SUB022	Total Nitrogen as N	0.08 %	U	0.26*	0.30*
Grid Reference	Eastings	-	N	316242	316379
	Northings	-	N	219490	219509

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Deviating Sample Report

Sample Reference	Text ID	Method Code	Incorrect Container	Incorrect Label	Headspace	Incorrect/No Preservative	No Sampling Date	Holding Time
IV WG7	25091021-001	CLANDPREP						✓
IV WG7	25091021-001	ICPBOR						✓
IV WG7	25091021-001	PHSOIL						✓
IV WG7	25091021-001	WSLM59						✓
IV WG2	25091021-002	CLANDPREP						✓
IV WG2	25091021-002	ICPBOR						✓
IV WG2	25091021-002	PHSOIL						✓
IV WG2	25091021-002	WSLM59						✓
IV WG3	25091021-003	CLANDPREP						✓
IV WG3	25091021-003	ICPBOR						✓
IV WG3	25091021-003	PHSOIL						✓
IV WG3	25091021-003	WSLM59						✓
JJ	25091021-004	CLANDPREP						✓
JJ	25091021-004	ICPBOR						✓
JJ	25091021-004	PHSOIL						✓
JJ	25091021-004	WSLM59						✓
DM	25091021-005	CLANDPREP						✓
DM	25091021-005	ICPBOR						✓
DM	25091021-005	PHSOIL						✓
DM	25091021-005	WSLM59						✓
CO 1	25091021-006	CLANDPREP						✓
CO 1	25091021-006	ICPBOR						✓
CO 1	25091021-006	PHSOIL						✓
CO 1	25091021-006	WSLM59						✓
CO 2	25091021-007	CLANDPREP						✓
CO 2	25091021-007	ICPBOR						✓
CO 2	25091021-007	PHSOIL						✓
CO 2	25091021-007	WSLM59						✓

Analysis Method

Method Code	Method Description	Analysis Method
ANC	ANC: Acid Neutralisation Capacity as CaCO3	Air Dried & Ground
CLANDPREP	CLand Prep and Dry Weight Correction to 35°C	As Received
CLANDPREP	Solid Material Description	As Received
Grid Reference	Custom Report- Grid Reference (Eastings-Northings)	

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ICPBOR	Boron (Water Soluble) by ICPOES	Air Dried & Ground
ICPEXCH	Extractable Magnesium by ICPOES (BS3882)	Air Dried & Ground
ICPEXCH	Extractable Potassium by ICPOES (BS3882)	Air Dried & Ground
ICPMSS	Arsenic in Solids by ICPMS	Air Dried & Ground
ICPMSS	Cadmium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Chromium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Copper in Solids by ICPMS	Air Dried & Ground
ICPMSS	Lead in Solids by ICPMS	Air Dried & Ground
ICPMSS	Mercury in Solids by ICPMS	Air Dried & Ground
ICPMSS	Molybdenum in Solids by ICPMS	Air Dried & Ground
ICPMSS	Nickel in Solids by ICPMS	Air Dried & Ground
ICPMSS	Selenium in Solids by ICPMS	Air Dried & Ground
ICPMSS	Zinc in Solids by ICPMS	Air Dried & Ground
ISEFSS	Fluoride (2:1) by ISE	Air Dried & Ground
LOI(%MM)	LOI: Loss on Ignition @ 550°C	Air Dried & Ground
PHSOIL	pH (2.5:1)	As Received
PICALC	DEFRA Index Scale	Air Dried & Ground
SUB022	Nitrogen (Total)	Air Dried & Ground
TSCONW	Electrical Conductivity (5:1)	Air Dried & Ground
WSLM59	TOC: Total Organic Carbon	Air Dried & Ground
WSLM60	Extractable Phosphorus	Air Dried & Ground

Project Report Notes

25091021-002 As part of method development the upper calibration limit for the PHSOIL/PHCONDW method has been reduced from pH 13 to pH 12. A result of 12.05 pH units was obtained for this sample. This is outside the new working range of the method and should therefore be used for guidance purposes only. Any accreditation has been removed where applicable.

Result Report Notes

Letters alongside results signify that the result has associated report notes.
The report notes are as follows:

Letter	Note
A	Due to the matrix of the sample the laboratory has had to deviate from our standard protocols to be able to process the sample and provide a result. Where applicable the accreditation has been removed and this should be taken into consideration when utilising the data.
B	The QC associated with this result has not wholly met the QMS requirements, the accreditation has therefore been removed. However, the Laboratory has confidence in the performance of the method as a whole and that the integrity of the data has not been significantly compromised.
C	Due to matrix interference, the internal standard and/or surrogate has not met the QMS requirements. This should be taken into consideration when utilising the data.
D	A non-standard volume or mass has been used for this test which has resulted in a raised detection limit.
E	Due to the parameter value being beyond our calibration range (and following the maximum size of dilution allowed, where applicable), the result cannot be quantified and as such the result will appear as a greater than symbol (>) with the accreditation removed. This data should be used for indicative purposes only.
F	Based on the sample history, appearance and smell a dilution was applied prior to testing. Unfortunately, the result is either above (>) or below (<) our calibration range. Results above our calibration range have accreditation removed. The data should be used for indicative purposes only.
G	The day 5 oxygen reading was below the capability of the instrument to detect, and therefore the calculated BOD has been reported unaccredited for guidance purposes only.

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HWOL Acronym Key

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e everything extracted by the solvent(s)
CU	Clean up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
+	Operator to indicate cumulative e.g. EH_CU+HS_1D_Total

Additional Information

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

Results within this report relate only to the samples tested.

The accreditation codes are as follows:

U = UKAS accredited analysis
M = MCERT accredited analysis
N = Unaccredited analysis

Any accreditation marked with ^ signify results are reported on a dry weight basis of 35°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, without written approval of the laboratory.

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

Any results 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 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

Items listed with a 'SUB' method code prefix have been carried out by another SOCOTEC department or by an external subcontracted laboratory. Further information is available upon request.

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.

Summaries of analysis methods are available upon request.

End of Certificate of Analysis