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e: MurrayRix

Analytical Report Number : 19-49903

Project / Site name:	Crewe CW1	Samples received on:	11/07/2019
Your job number:		Samples instructed on:	12/07/2019
Your order number:	19-160	Analysis completed by:	23/07/2019
Report Issue Number:	1	Report issued on:	23/07/2019
Samples Analysed:	1 soil sample		

Signed: 

Jordan Hill
Reporting Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 - 711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are : soils - 4 weeks from reporting
leachates - 2 weeks from reporting waters - 2 weeks from reporting asbestos - 6 months from reporting Excel copies of reports are
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The results included within the report are representative of the samples submitted for analysis.

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Environmental Science

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Certificate of Analysis									
BS 3882:2015 Specification For Topsoil									
	Pass BS 3882							client	
Report No:	19-49903						Murray Rix (Northern Ltd).		
Location	Crewe CW1								
Lab Reference (Sample Number)	1267233								
Sampling Date	11/07/2019								
Sample ID	84286								
Depth (m)	0.00			Compliant with range (Y/N)					
		unit	Result	Multi-P	Acid	Calc	Low-F	Low-F(a)	Low-F(c)
Soil texture	<2mm fraction	%w/w	Sandy loam	Y	Y	Y	Y	Y	Y
Maximum coarse fragment content:	>2mm	%w/w	5.00	Y	Y	Y	Y	Y	Y
	>20mm	%w/w	0.00	Y	Y	Y	Y	Y	Y
	>50mm	%w/w	0.00	Y	Y	Y	Y	Y	Y
Mass loss on ignition		%	3.10						
	Clay 5-20%		Y	Y	Y	Y	Y	Y	Y
	Clay 20-35%		-	-	-	-	-	-	-
Soil pH:		pH	7.00	Y	N	N	Y	N	N
Carbonate:		%w/w	3.80	-	-	Y	-	-	Y
Available plant nutrients	Nitrogen	%w/w	0.19	Y	Y	Y	-	-	-
	Extractable Phosphate (as P)	mg/l	65.00	Y	Y	Y	N	N	N
	Extractable Potassium	mg/l	152.00	Y	Y	Y	-	-	-
	Extractable Magnesium	mg/l	92.00	Y	Y	Y	-	-	-
Carbon: Nitrogen Ratio:		:1	9.50	Y	Y	Y	Y	Y	Y
Conductivity		us/cm	1800.00	Y	-	-	-	-	-
Phytotoxic contaminants:	** Total Zinc	mg/kg	71.00	Y	Y	Y	Y	Y	Y
	** Total Copper	mg/kg	25.00	Y	Y	Y	Y	Y	Y
	** Total Nickel	mg/kg	13.00	Y	Y	Y	Y	Y	Y
Visible contaminants:	>2mm	%w/w	0.00	Y	Y	Y	Y	Y	Y
	Plastics	%w/w	0.00	Y	Y	Y	Y	Y	Y
	Sharps	no. in 1 kg	0.00	Y	Y	Y	Y	Y	Y
Compliance:				Pass	Fail	Fail	Fail	Fail	Fail
Results are expressed on a dry weight basis, after correction for moisture content where applicable Stated limits are for guidance only and I2 cannot be held responsible for any discrepancies with current legislation									

** = MCERTS accredited

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Analytical Report Number : 19-49903
Project / Site name: Crewe CVV1

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1267233	84286	Crewe CW1	None Supplied	Brown loam and sand with gravel and vegetation.



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Analytical Report Number : 19-49903

Project / Site name: Crewe CVV1

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Water (PrW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Carbon to Nitrogen Ratio (Topsoil - BS3882:2015)	Carbon to Nitrogen ratio (:1) calculated using Loss on Ignition.	BS3882:2015	L01TS2015	W	NONE
Carbonate (Topsoil - BS3882)	Determination of Carbonate as per BS 3882:2015.	BS3882:2015	L01TS2015	D	NONE
Coarse Fragment and Contaminant Analysis	Determination of >2mm contaminants	BS3882:2007 & BS8601:2013 & PAS 100:2005	L01TS	D	NONE
Conductivity (BS3882/BS8601)	Determination of the conductivity of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L01TS	D	NONE
Extractable/Available Metals (BS3882/BS8601)	Determination of the extractable metals in soil, in accordance with BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L01TS	D	NONE
Kjeldahl nitrogen in soil	Determination of total nitrogen using the Kjeldahldigestion method and colorimetric determination.	In house method based on BS 77553.7:1995 &	L087-PL	D	NONE
Mass loss on ignition (Topsoil - BS3882)	Determination of Loss on Ignition as per BS 3882:2015.	BS3882:2015	L01TS2015	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically.	In-house method based on BS1377 Part 2, 1990, Chemical and Electrochemical Tests	L019-UK/PL	W	NONE
Nitrogen (TKN)	Determination of total nitrogen by Kjeldahl method.	BS3882:2007	L087-PL	D	NONE
pH (BS3882/BS8601)	Determination of the pH of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L01TS	D	NONE
Phosphorus as PO ₄ (BS3882/BS8601)	Determination of the extractable phosphorus in soil, in accordance with BS3882:2007 methodology.	BS3882:2015 & BS8601:2013	L01TS	D	NONE
Sodium (exchangeable %)	Determination of exchangeable sodium (%) by calculation, in accordance with BS3882:2007 methodology.	BS3882:2007	L087-PL	D	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Textural Classification (BS3882/BS8601)	Determination of the textural classification of soil following BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L01TS	D	NONE
Textural Classification Diagram	Textural classification Diagram	BS3882:2015		D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 300°C.

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