



4161



7 - 11 Harding Street
Leicester
LE1 4DH

Cadeby Homes Ltd
Lower Grange Farm
Grange Road
Hugglescote
LE67 2BT

Analytical Test Report: L24/04765/CAD - 24-45651

Your Project Reference:	Soil Test		
Your Order Number:	PRO-FORMA	Samples Received / Instructed:	28/05/2024 / 28/05/2024
Report Issue Number:	1	Sample Tested:	28/05 to 07/06/2024
Samples Analysed:	2 soil samples	Report issued:	07/06/2024

Signed

David Ratcliffe
Operations Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report with the exception of the asbestos test portion which is held for 6 months unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30°C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Asbestos

Please note: Where further analysis is required samples identified as containing asbestos are screened and tested on an as received basis. No correction is made for moisture content and these results are not covered by our accreditation

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

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited, subUKAS - Subcontracted to a laboratory UKAS accredited for this test, subMCERTS - Subcontracted to a laboratory MCERTS accredited for this test

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Date of Issue: 29.05.2024

Issued by: J. Gane

Issue No: 4

Rev No: 10



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Project Reference - Soil Test

Analytical Test Results - Solid

Lab Reference			367863	367864
Client Sample ID			-	-
Client Sample Location			Flot 1	Flot 14
Client Sample Type			-	-
Client Sample Number			-	-
Depth - Top (m)			0.60	0.60
Depth - Bottom (m)			0.60	0.60
Date of Sampling			20/05/2024	20/05/2024
Time of Sampling			-	-
Sample Matrix			Sand	Clay
Determinant	Units	Accreditation		
Arsenic	(mg/kg)	MCERTS	< 10	11
Cadmium	(mg/kg)	MCERTS	0.5	0.9
Chromium (III)	(mg/kg)	u	9.0	19
Chromium (Total)	(mg/kg)	UKAS	10	20
Copper	(mg/kg)	MCERTS	17	47
Lead	(mg/kg)	MCERTS	47	89
Mercury	(mg/kg)	UKAS	< 2.5	< 2.5
Nickel	(mg/kg)	MCERTS	11	24
Selenium	(mg/kg)	u	< 8.0	< 8.0
Zinc	(mg/kg)	MCERTS	61	140
Total Phenols	(mg/kg)	MCERTS	< 1.0	< 1.0
Cyanide (Total)	(mg/kg)	MCERTS	< 1.0	< 1.0
Chromium (Hexavalent)	(mg/kg)	u	< 1.0	< 1.0
pH	pH Units	MCERTS	4.7	8.1
Sulphate (Water soluble as SO ₄)	(mg/l)	u	< 10	52
Sulphide	(mg/kg)	u	< 15	< 15
Sulphur (Total)	(%)	UKAS	0.04	0.04
Acenaphthene	(mg/kg)	MCERTS	< 0.02	< 0.02
Acenaphthylene	(mg/kg)	UKAS	< 0.02	< 0.02
Anthracene	(mg/kg)	UKAS	< 0.02	0.07
Benzo (a) anthracene	(mg/kg)	MCERTS	0.03	0.31
Benzo (a) pyrene	(mg/kg)	MCERTS	0.04	0.40
Benzo (b) fluoranthene	(mg/kg)	MCERTS	0.04	0.55
Benzo (g, h, i) perylene	(mg/kg)	MCERTS	0.03	0.31
Benzo (k) fluoranthene	(mg/kg)	MCERTS	< 0.02	0.19
Chrysene	(mg/kg)	MCERTS	0.04	0.32
Dibenzo (a,h) anthracene	(mg/kg)	MCERTS	< 0.02	0.06
Fluoranthene	(mg/kg)	MCERTS	0.06	0.55
Fluorene	(mg/kg)	MCERTS	< 0.02	< 0.02
Indeno (1, 2, 3,-cd) pyrene	(mg/kg)	MCERTS	0.02	0.29
Naphthalene	(mg/kg)	MCERTS	< 0.02	< 0.02
Phenanthrene	(mg/kg)	MCERTS	< 0.02	0.17
Pyrene	(mg/kg)	MCERTS	0.05	0.53
Total PAH (Sum of USEPA 16)	(mg/kg)	UKAS	0.48	3.8
Gasoline Range Organics (>C ₈ to C ₁₀) [EH_1D_Total]	(mg/kg)	MCERTS	< 5.0	< 5.0
Diesel Range Organics (>C ₁₀ to C ₂₁) [EH_1D_Total]	(mg/kg)	MCERTS	< 10	15
Mineral Range Organics (>C ₂₁ to C ₄₀) [EH_1D_Total]	(mg/kg)	MCERTS	87	170
Total TPH (>C ₈ to C ₄₀) [EH_1D_Total]	(mg/kg)	MCERTS	97	190
Asbestos	-	UKAS	No asbestos detected	No asbestos detected



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Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
367863	-	Flot 1	-	-	Orangish brown slightly gravelly silty sand	11	15	100
367864	-	Flot 14	-	-	Dark brown slightly gravelly slightly sandy silty clay with frequent organic matter rootlets	20	4.5	100



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Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
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367863	-	Flot 1	-	-	
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367864	-	Flot 14	-	-	
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Project Reference - Soil Test

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preparation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
SKALARCNS	MS - CL - Cyanide by Skalar	As received	Passing 10mm test sieve	Determination of cyanide (total / free / complex) in soil using a Skalar segmented flow analyser
SKALARHCS	MS - CL - Hexavalent Chromium by Skalar	As received	Passing 10mm test sieve	Determination of hexavalent chromium in soil using Skalar segmented flow analyser
ICPMETS	MS - CL - ICP Metals	Air dried	Passing 10mm test sieve	Determination of metals in soils via ICP
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
PAHASRDS	MS - CL - PAH (As Received)	As received	Passing 10mm test sieve	Determination of Polyaromatic hydrocarbons in soil via GC-MS
SULPHIDES	MS - CL - Sulphide in Soils	As received	Passing 10mm test sieve	Determination of sulphide in soil via titration
SKALARPHS	MS - CL - Phenols by Skalar	As received	Passing 10mm test sieve	Determination of total phenols in soil using Skalar segmented flow analyser
TPHS	MS - CL - TPH (GC-FID)	As received	Passing 10mm test sieve	Determination of Total Petroleum Hydrocarbons in soil using GC-FID
ASB	MS - AS - Asbestos	-	-	Fibre identification is in accordance with in house documented methods which are based on the procedure documented in the HSE Document HSG 248 "Asbestos: The analysts guide for sampling, analysis and clearance procedures"
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis
1377TS-ELT	BS1377 Total Sulphur Content by HTC	Oven dried	BS1377 : Part 1 : 2016	Total Sulphur Content testing of Soil in accordance with BS 1377 : Part 3 : 2018 + A1 : 2021 Clause 7.10 (using Eltra CS-800 Analyser)



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Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided

C - Received in inappropriate container

H - Contains headspace

T - Temperature on receipt exceeds storage temperature

R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
367863	-	Flot 1	-	-	MS - CL - Cyanide by Skalar	R
367863	-	Flot 1	-	-	MS - CL - pH in Soils	RX
367863	-	Flot 1	-	-	MS - CL - PAH (As Received)	R
367863	-	Flot 1	-	-	MS - CL - Phenols by Skalar	R
367863	-	Flot 1	-	-	MS - CL - TPH (GC-FID)	R
367864	-	Flot 14	-	-	MS - CL - Cyanide by Skalar	R
367864	-	Flot 14	-	-	MS - CL - pH in Soils	RX
367864	-	Flot 14	-	-	MS - CL - PAH (As Received)	R
367864	-	Flot 14	-	-	MS - CL - Phenols by Skalar	R
367864	-	Flot 14	-	-	MS - CL - TPH (GC-FID)	R



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HWOL TPH Acronym Index

Acronym	Description
HS	Headspace Analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
Total	Aliphatics and Aromatics
AL	Aliphatics Only
AR	Aromatics Only
2D	GC-GC - Double Coil Gas Chromatography
#1	EH_Total but with humics mathmatically subtracted
#2	EH_Total but with fatty acids mathmatically subtracted
_	Operator - underscore to separate acronyms (except for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry