

PLOT 31

Project Data	
Developer:	Miller Homes
Site:	Granny Lane, Mirfield
Planning Ref:	2019/91467 (appeal APP/Z4718/W/21/3279040)
Remedial Strategy Ref:	NHBC Engproj: 263139 (NHBC LQ ref. 213346)
Cover Requirements:	Lithos Remediation Statement ref. 2935/2D dated November 2022
Verification Report Ref:	Lithos Verification Report ref. 2935/3 dated November 2023
Removal of the contaminated brick fill / granular made ground material and/or isolation beneath a minimum 600mm clean soil cover where retained beneath gardens or soft landscaped areas. Following previous remediation works (as detailed within report ref. 2935/3) only plot 31 still required inspection and validation.	
Inspection Data	
Inspection Date:	16 July 2024
Thickness Checked By:	Machine-dug inspection pit in rear garden of plot 31
Topsoil Thickness:	300mm
Topsoil Description:	Dark brown slightly sandy clay topsoil.
Subsoil Thickness:	300mm
Subsoil Description:	Light brown slightly silty gravelly sand.
Topsoil Data	
Source:	Site-won
Source Type:	Brownfield
Sampled at:	Source: <input checked="" type="checkbox"/> Stockpile: <input type="checkbox"/> Plot: <input type="checkbox"/> Plot No. 31
Lab Results Ref:	17-18762
Certificate appended?	<input checked="" type="checkbox"/>
Remarks:	Topsoil chemical testing results previously presented and discussed within the Lithos Geoenvironmental Appraisal (report ref. 2935/1A dated May 2019).
Signed on behalf of Lithos Consulting	
Date: 30 July 2024	
We confirm that an adequate thickness of soil cover, in accordance with the approved Remedial Strategy, has been placed in the gardens to these plots, and that the materials are suitable for use	

PLOT 31

PLOT 31 GARDEN



PLOT 31 INSPECTION PIT





DETS

Certificate of Analysis

Certificate Number 24-14885

Issued: 25-Jul-24

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference 24-14885

Client Reference ~ 2935

Order No ~ PO22730

Contract Title ~ MIRFIELD

Description One Soil sample.

Date Received 19-Jul-24

Date Started 19-Jul-24

Date Completed 25-Jul-24

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Kirk Bridgewood
General Manager



2139

Normec DETS Limited

Unit 2, Park Road Industrial Estate South, Consett, Co Durham, DH8 5PY

Symbol key at end of report Tel: 01207 582333 • email: info@dets.co.uk • www.dets.co.uk

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Summary of Chemical Analysis

Soil Samples

Our Ref 24-14885
 Client Ref ~ 2935
 Contract Title ~ MIRFIELD

Lab No	2366243
Sample ID ~	PLOT 31
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	16/07/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Preparation				
Stones >10mm	DETSC 1003*	1	% m/m	61
Moisture Content	DETSC 1004	0.1	%	16
Metals				
Arsenic	DETSC 2301#	0.2	mg/kg	19
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.4
Chromium	DETSC 2301#	0.15	mg/kg	88
Chromium III	DETSC 2301*	0.15	mg/kg	88
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	43
Lead	DETSC 2301#	0.3	mg/kg	110
Mercury	DETSC 2325#	0.05	mg/kg	0.13
Nickel	DETSC 2301#	1	mg/kg	16
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	56
Zinc	DETSC 2301#	1	mg/kg	87
Inorganics				
pH	DETSC 2008#		pH	8.9
Total Organic Carbon	DETSC 2084#	0.5	%	3.6
Petroleum Hydrocarbons				
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	25
EPH (C21-C35)	DETSC 3311	10	mg/kg	180
EPH (C35-C40)	DETSC 3311	10	mg/kg	35
EPH (C10-C40)	DETSC 3311#	10	mg/kg	240
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03

Summary of Chemical Analysis

Soil Samples

Our Ref 24-14885

Client Ref ~ 2935

Contract Title ~ MIRFIELD

Lab No	2366243
Sample ID ~	PLOT 31
Depth ~	
Other ID ~	
Sample Type ~	SOIL
Sampling Date ~	16/07/2024
Sampling Time ~	n/s

Test	Method	LOD	Units	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10

Summary of Asbestos Analysis Soil Samples

Our Ref 24-14885

Client Ref ~ 2935

Contract Title ~ MIRFIELD

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2366243	PLOT 31	SOIL	NAD	none	Ben Rose
<p>Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.</p>					

Information in Support of the Analytical Results

Our Ref 24-14885
 Client Ref ~ 2935
 Contract ~ MIRFIELD

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Hold time exceeded for tests	Inappropriate container for tests
2366243	PLOT 31 SOIL	16/07/24	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
 Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
 The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
 Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

- ~ Sample details are provided by the client and can affect the validity of the results
- * -not accredited.
- # -MCERTS (accreditation only applies if report carries the MCERTS logo).
- \$ -subcontracted.
- n/s -not supplied.
- I/S -insufficient sample.
- U/S -unsuitable sample.
- t/f -to follow.
- nd -not detected.

End of Report