



CCG-C-22-13421

PHASE IV VALIDATION REPORT

**FORMER NORTHERN MOOR CLINIC,
MOORCROFT ROAD, WYTHENSHAW**

OCTOBER 2022



Prepared by:

CC GEOTECHNICAL LIMITED

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Prepared for:

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DOCUMENT CONTROL FORM

Client:	Branley Homes Ltd
Project Title:	Validation Report For; Former Northern Moor Clinic, Moorcroft Road, Wythenshawe
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Signature	
For and behalf of CC GEOTECHNICAL LTD	
Date:	October 2022
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1.0 INTRODUCTION

CC GEOTECHNICAL LIMITED (CCG) is providing consultancy services to **BRANLEY HOMES LTD** in connection with the redevelopment of a vacant parcel of land at Former Northern Moor Clinic, Moorcroft Road, Wythenshawe.

The redevelopment comprises of the construction of 8nr terraced residential properties with associated gardens and parking bays. A site plan is presented in Appendix A.

The site is located within the jurisdiction of **MANCHESTER CITY COUNCIL**.

This report was prepared as part of the hierarchy of documentation required to demonstrate that the development was constructed in accordance with the post investigation conceptual model and conclusions and recommendations of the “Phase II Report for Northern Moor Clinic, Wythenshawe” reference CCG-C-19-11086.

The conclusions and recommendations recommended the following principal measures be incorporated in the development:

No remediation required under areas of hardstanding and building cover. All garden areas within the area delineated on CCG Drawing ‘11086/4’ to be reduced to 600mm below finished garden level and reconstructed by the placement of a 600mm composite subsoil / topsoil layer with a minimum thickness of 200mm of topsoil within the cover. The remaining garden areas should receive a minimum cover of 200mm clean imported topsoil.

2.0 VALIDATION RECORDS

The primary objective of a validation report is to compile records which demonstrate compliance with the recommendations provided in the relevant Remediation Strategy, in relation to discharge of the planning conditions.

2.1 Imported Garden Cover

CCG attended site to independently to sample soils - 4nr of imported topsoil and 4nr of imported subsoils. The samples were despatched by courier the same day to a UKAS / MCERTs chemical laboratory.

Evidence of the capping protective measures:

- Verification showing 600mm (or greater) cover at each plot (250mm of topsoil and 350mm of subsoil) at Plots 1, 4 & 5 – Appendix B.
- Verification showing 200mm (or greater) cover at each plot (250mm of topsoil) at Plot 7 – Appendix B.
- Independent validation analysis records for imported soils (contamination test certificates) sampled on site – Appendix C.
- Independent validation analysis records for imported soils (contamination assessment worksheets) – Appendix D.

3.0 CONCLUSIONS

The evidence of the inspections/sampling/analyses is that the requisite garden cover construction is compliant in terms of the specified thickness and chemical composition.



APPENDIX A

SITE DRAWINGS

Development Layout

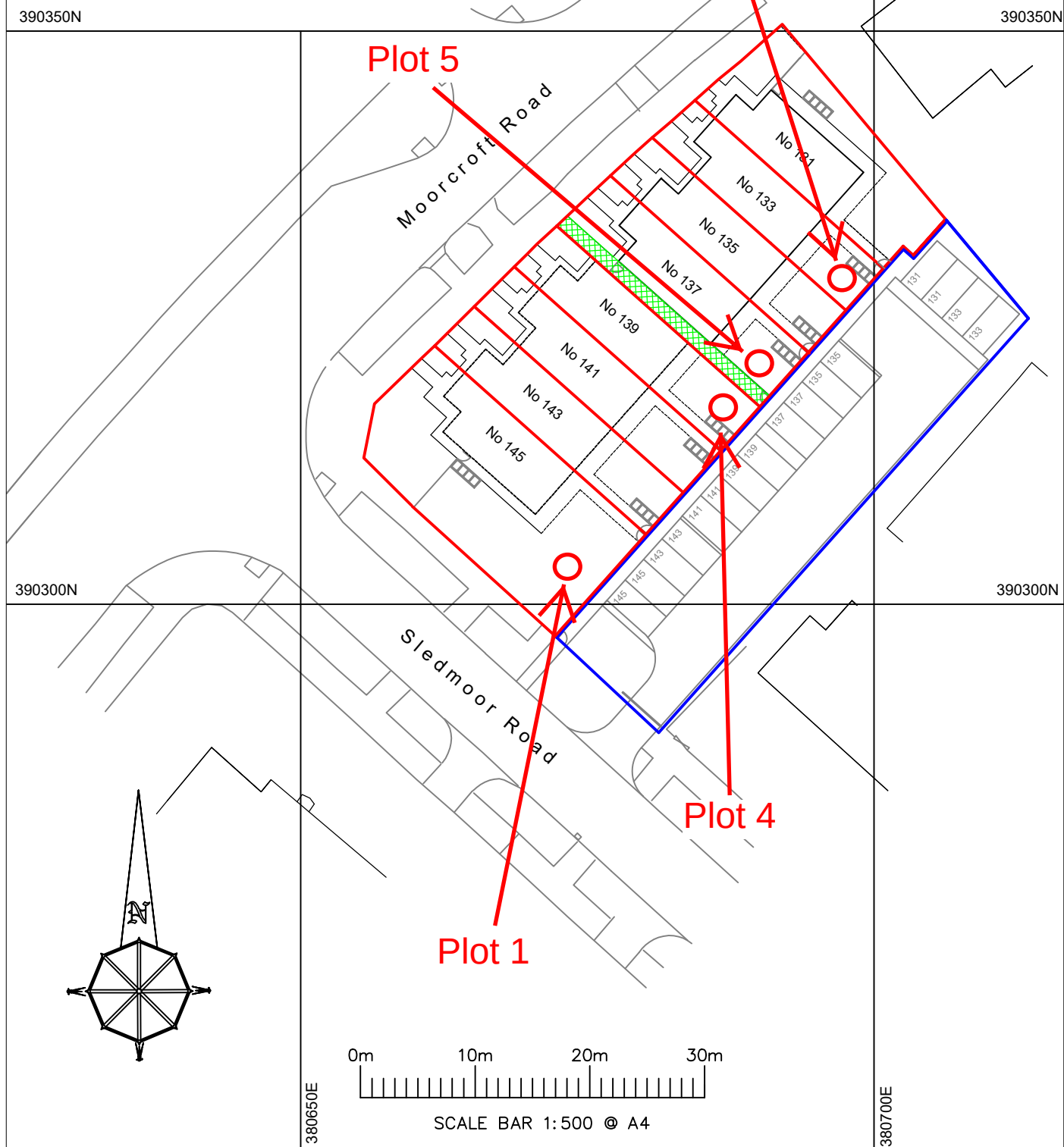
Nos 131- 145 MOORCROFT ROAD
NORTHERN MOOR, MANCHESTER, M23 0AF

Scale 1:500 Date AUGUST 2022

KEY

— COMMUNAL AREA

■ SHARED ACCESS





APPENDIX B

GARDEN CONSTRUCTION PHOTOGRAPHS AND IMPORTED SOIL DELIVERY NOTES



Site	Former Northern Moor Clinic
Job No.	CCG-C-22-13421
Photograph location	PLOT 1



Site	Former Northern Moor Clinic
Job No.	CCG-C-22-13421
Photograph location	PLOT 4



Site	Former Northern Moor Clinic
Job No.	CCG-C-22-13421
Photograph location	PLOT 5



Site	Former Northern Moor Clinic
Job No.	CCG-C-22-13421
Photograph location	PLOT 7

2/HOOS

BRANLEY HOMES

Site Address:

Sledmoor Road,
Off - Moorcroft Road
Wythenshawe
M23 0AF



MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX
Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 21-7-2022

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

Material Description

Sub Soil

(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross	Tonnes Tare	Tonnes Nett
--------------	-------------	-------------

1 X 8	wheeler	load
-------	---------	------

Time On Site	Time Off Site	Waiting Time Agreed
--------------	---------------	---------------------

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed.....

Haulier	Place of Loading
---------	------------------

I-HOOLEY	Shirehill Quarry
----------	------------------

Registration No.	Weighbridge Ticket No.
------------------	------------------------

BX65 FBV.	
-----------	--

Load Accepted on Behalf of Customer:

Print.....

Signed.....

Driver	Marchington Ticket No.
--------	------------------------

leon	515982 Office Copy
------	-----------------------

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CE Mark & Declaration of Performance available by contacting sales@marchington.net

Z/HOOS



MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX
Tel: 01663 765000 Fax: 01663 763777

Site Address:

BRANLEN HOMES
SLEDMOOR ROAD
OFF MOORCROFT ROAD
WYTHENSHAM
M23 OAF.

Delivery Date:

21/7/2022

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Material Description

SUB SOIL

(WRAP Recycled Aggs Protocol Compliant)

Print

Signed

Tonnes Gross

Tonnes Tare

Tonnes Nett

1x 8 wheeler.

Time On Site

Time Off Site

Waiting Time Agreed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed

Haulier

I. Hoolen.

Place of Loading

SHQ

Registration No.

BX65 FBV

Weighbridge Ticket No.

Load Accepted on Behalf of Customer:

Print

M. Lee

Signed

M. Lee

Driver

Leon.

Marchington Ticket No.

515985

Office Copy

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194615. 2/NAUS

Address:

Winley Homes
Sledmoot Road,
off, Mootcroft Road,
WYTHENSHAW,
M230AF



MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX

Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 23-6-2022

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

Material Description

Sub Soil

(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross

Tonnes Tare

Tonnes Nett

1 x load - 8 wheeler -

Time On Site

Time Off Site

Waiting Time Agreed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed.....

Haulier

NAUGHTON

Place of Loading

Shirehill Quarry

Registration No.

Y9 TNL

Weighbridge Ticket No.

Driver

Greg

Marchington Ticket No.

515933

Office Copy

Load Accepted on Behalf of Customer:

Print.....

Signed.....

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Z/NAU S

Stanley Homes
Address: Sledmoor Road,
Off, Moorcroft Road,
Wythenshawe,
M230AF


MARCHINGTONSTONE
Buxton Road, High Lane, Stockport SK6 8DX
Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 30-6-2022

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

Material Description
Subsoil
(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross	Tonnes Tare	Tonnes Nett
1 X	8-wheeler-load	

Time On Site	Time Off Site	Waiting Time Agreed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.
Customer Agreed ☐ Signed.....

Haulier	Place of Loading
Naughton	Shirehill Quarry

Load Accepted on Behalf of Customer:
Print S. Curran
Signed [Signature]

Registration No.	Weighbridge Ticket No.
PN68 BFX	

Driver	Marchington Ticket No.
Craig	515938

Office Copy

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Stanley Homes
 Sledmoor Road,
 Off, Moorcroft Road,
 Wythenshaw,
 M23 0AF



MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX
 Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 18 - 8 - 2022

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

Material Description

Subsoil

(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross

Tonnes Tare

Tonnes Nett

1 X 8 Wheeler load

Time On Site

Time Off Site

Waiting Time Agreed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed.....

Haulier

I Marsden

Place of Loading

Shirehill Quarry

Registration No.

GC 14 YDF

Weighbridge Ticket No.

Driver

IAN

Marchington Ticket No.

509503

Office Copy

Load Accepted on Behalf of Customer:

Print.....

Signed.....

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Greg Homes
Off, Sledmoor Road,
Moorcroft Road,
Wythenshaw
M23 0AF

Material Description

Subsoil
(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross	Tonnes Tare	Tonnes Nett
1 X 8		Wheeler load

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed.....

Load Accepted on Behalf of Customer:

Print..... CURTIN
Signed.....

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2/J9 WS.

MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX
Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 18-8-2022

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

Time On Site

Time Off Site

Waiting Time Agreed

Haulier

JGW

Place of Loading

Shirehill Quarry

Registration No.

T26 JGW

Weighbridge Ticket No.

Driver

BEN

Marchington Ticket No.

509504

Office Copy

CE Mark & Declaration of Performance available
by contacting sales@marchington.net

Z/HOBS

Off, Sled Moor Road,
Moorcroft Road,
Wythenshaw,
M23 0AF



MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX
Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 18-8-2022

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.
Waiting Time Agreed By:

Material Description
Subsoil
(WRAP Recycled Aggs Protocol Compliant)

Print
Signed

Tonnes Gross	Tonnes Tare	Tonnes Nett
1 x 8	wheeler	load

Time On Site	Time Off Site	Waiting Time Agreed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.
Customer Agreed ☐ Signed.....

Haulier	Place of Loading
HOBSONS	Shirehill Quarry

Load Accepted on Behalf of Customer:
Print.....
Signed.....

Registration No.	Weighbridge Ticket No.
MT21TBC	

Driver	Marchington Ticket No.
DAVE	509505 Office Copy

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CE Mark & Declaration of Performance available by contacting sales@marchington.net

Customer:

Brankley Home

Site Address:

moorcroft Dr
wythenshawe**MARCHINGTONSTONE**

Buxton Road, High Lane, Stockport SK6 8DX

Tel: 01663 765000 Fax: 01663 763777

Delivery Date:

10.8.27

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

Material Description

Soil T. (see)

(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross

Tonnes Tare

Tonnes Nett

Time On Site

Time Off Site

Waiting Time Agreed

19.6T

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed

Haulier

Wigtip

Place of Loading

Whitham

Registration No.

DH18 H5X

Weighbridge Ticket No.

Load Accepted on Behalf of Customer:

Print

Maitin

Driver

L. GALN

Marchington Ticket No.

465668

Signed

POD Copy

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CE Mark & Declaration of Performance available by contacting sales@marchington.net

2/CJS

STANLEY HOMES LTD
Site Address:
SLEDMOOR ROAD
WITHERNSHAW
M23 0AF



MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX
Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 28-7-22

Order No: SLEDMOOR

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Material Description

GRADE 1 SOIL

(WRAP Recycled Aggs Protocol Compliant)

Print

Signed

Tonnes Gross	Tonnes Tare	Tonnes Nett
31,980	11,880	20,100

Time On Site	Time Off Site	Waiting Time Agreed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed.....

Haulier	Place of Loading
C+J LOG	SEDX

Registration No.	Weighbridge Ticket No.
MU71 XXS	BH070468

Load Accepted on Behalf of Customer:

Print S. SHAW

Signed [Signature]

Driver	Marchington Ticket No.
ll	-551244

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CE Mark & Declaration of Performance available by contacting sales@marchington.net

Office Copy

STANLEY HOMES

SLEDMOOR ROAD

WYTHENSHAW

MANCHESTER

M23 OFF



MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 8DX

Tel: 01663 765000 Fax: 01663 763777

Delivery Date: 21/7/22

Order No:

Cash Sales: VAT Reg No. 157 6860 29

Goods

VAT

Total

Material Description

TOPSOIL

(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross

Tonnes Tare

Tonnes Nett

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed.....

Time On Site

Time Off Site

Waiting Time Agreed

Load Accepted on Behalf of Customer:

Print..... M. COOPER

Signed..... M. Cooper

Haulier

W/T

Place of Loading

PRESTON

Registration No.

DN15HSU

Weighbridge Ticket No.

Driver

MSTT

Marchington Ticket No.

293188

Office Copy

Subject to the Conditions of Sale of Marchington Stone Limited applicable to goods of this kind. Available on request.

198390

Customer: **BLANLEY HOMES**

Site Address:

SLEDMOOR RD,
OFF MOORCROFT ROAD,
WYTHENSHAW
M23 OAF.


MARCHINGTONSTONE

Buxton Road, High Lane, Stockport SK6 1JL
Tel: 01663 765000 Fax: 01663 763777

Delivery Date: **28/7/22**

Order No:

In accordance with our Terms & Conditions a charge for excessive waiting time may be made.

Waiting Time Agreed By:

Print

Signed

Material Description

SUB SOIL

(WRAP Recycled Aggs Protocol Compliant)

Tonnes Gross

Tonnes Tare

Tonnes Nett

1x 8 Wheeler Load.

Time On Site

Time Off Site

Waiting Time Agreed

This vehicle may leave the road on your instruction and at the drivers discretion, providing you accept responsibility for damage to your own or third party property.

Customer Agreed ☐ Signed

Haulier

HOBSON

Place of Loading

SHQ

Registration No.

MT 21 TBC

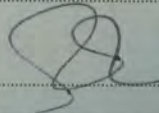
Weighbridge Ticket No.

Load Accepted on Behalf of Customer:

Print

S. Hacey

Signed



Driver

DAVE

Marchington Ticket No.

515993

Office Copy

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by contacting sales@marchington.net

APPENDIX C

SUBSOIL & TOPSOIL CHEMICAL ANALYSES



2683



THE ENVIRONMENT AGENCY'S
MONITORING CERTIFICATION SCHEME

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number: 22-43662

Issue: 1

Date of Issue: 10/10/2022

Contact: Daniel Kerfoot

Customer Details: CC Geotechnical Ltd
Unit 1 & 2 Deltic Place
Deltic Way
Liverpool
Merseyside L33 7BA

Quotation No: Q22-02618

Order No: CCG_C-22-13421

Customer Reference: CCG_C-22-13421

Date Received: 03/10/2022

Date Approved: 10/10/2022

Details: Former Northern Moor Clinic

Approved by:

Tim Reeve, Quality Officer

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683)

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Sample Summary

Report No.: 22-43662, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
295981	Plot 1	30/09/2022	03/10/2022	Sandy silty loam	
295982	Plot 1	30/09/2022	03/10/2022		
295983	Plot 4	30/09/2022	03/10/2022		
295984	Plot 4	30/09/2022	03/10/2022	Sandy silty loam	
295985	Plot 5	30/09/2022	03/10/2022	Sandy loam	
295986	Plot 5	30/09/2022	03/10/2022	Silty loam	
295987	Plot 7	30/09/2022	03/10/2022		
295988	Plot 7	30/09/2022	03/10/2022		

Results Summary

Report No.: 22-43662, issue number 1

				ELAB Reference	295981	295984	295985	295986
				Customer Reference				
				Sample ID				
				Sample Type	SOIL	SOIL	SOIL	SOIL
				Sample Location	Plot 1	Plot 4	Plot 5	Plot 5
				Sample Depth (m)	0.2	0.5	0.1	0.4
				Sampling Date	30/09/2022	30/09/2022	30/09/2022	30/09/2022
Determinand	Codes	Units	LOD					
Soil sample preparation parameters								
Moisture Content	N	%	0.1	9.4	9.7	17.9	8.9	
Material removed	N	%	0.1	21.3	17.9	21.7	< 0.1	
Description of Inert material removed	N		0	Wood/Stones	Stones	Wood/Stones	None	
Metals								
Antimony	N	mg/kg	2.5	< 2.5	< 2.5	< 2.5	< 2.5	
Arsenic	M	mg/kg	1	7.3	5.0	7.2	3.6	
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Chromium	M	mg/kg	5	17.5	30.4	16.4	27.6	
Copper	M	mg/kg	5	34.5	22.5	31.7	21.2	
Lead	M	mg/kg	5	64.1	28.5	65.0	18.4	
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Molybdenum	N	mg/kg	0.5	1.2	0.7	1.1	< 0.5	
Nickel	M	mg/kg	5	14.3	28.7	13.9	24.8	
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	
Zinc	M	mg/kg	5	101	88.7	90.4	76.9	
Anions								
Water Soluble Sulphate	M	g/l	0.02	0.11	0.09	0.07	0.04	
Inorganics								
Free Cyanide	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0	
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	< 0.8	< 0.8	< 0.8	
Total Sulphide	N	mg/kg	2	< 2	< 2	< 2	< 2	
Acid Soluble Sulphate (SO4)	U	%	0.02	0.04	0.04	0.03	< 0.02	
Water Soluble Boron	N	mg/kg	0.5	1.9	0.7	1.9	0.6	
Miscellaneous								
pH	M	pH units	0.1	9.0	8.6	8.4	8.3	
Soil Organic Matter	U	%	0.1	5.4	1.1	5.5	1.3	
Polyaromatic hydrocarbons								
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	0.2	< 0.1	
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	0.2	< 0.1	
Phenanthrene	M	mg/kg	0.1	0.2	0.2	1.1	< 0.1	
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1	0.3	< 0.1	
Fluoranthene	M	mg/kg	0.1	1.1	0.5	2.7	< 0.1	
Pyrene	M	mg/kg	0.1	0.5	0.4	1.9	< 0.1	
Benzo(a)anthracene	M	mg/kg	0.1	0.4	0.2	1.1	< 0.1	
Chrysene	M	mg/kg	0.1	0.4	0.2	1.3	< 0.1	
Benzo(b)fluoranthene	M	mg/kg	0.1	0.4	0.2	1.3	< 0.1	
Benzo(k)fluoranthene	M	mg/kg	0.1	0.4	0.3	1.5	< 0.1	
Benzo(a)pyrene	M	mg/kg	0.1	0.4	0.3	1.6	< 0.1	
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.5	0.2	1.1	< 0.1	
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	0.2	< 0.1	
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.4	0.1	1.0	< 0.1	
Total PAH(16)	M	mg/kg	0.4	5.1	2.8	15.7	< 0.4	

Results Summary

Report No.: 22-43662, issue number 1

ELAB Reference	295981	295984	295985	295986
Customer Reference				
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	Plot 1	Plot 4	Plot 5	Plot 5
Sample Depth (m)	0.2	0.5	0.1	0.4
Sampling Date	30/09/2022	30/09/2022	30/09/2022	30/09/2022

Determinand	Codes	Units	LOD				
BTEX							
Benzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Toluene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Ethylbenzene	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
Xylenes	M	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
MTBE	U	ug/kg	10	< 10.0	< 10.0	< 10.0	< 10.0
TPH CWG							
>C5-C6 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic (EH_2D_AL)	M	mg/kg	1	1.3	< 1.0	< 1.0	< 1.0
>C35-C40 Aliphatic (EH_2D_AL)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
Total aliphatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AL)	N	mg/kg	1	1.5	< 1.0	< 1.0	< 1.0
>C5-C7 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic (HS_1D_MS)	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic (EH_2D_AR)	M	mg/kg	1	< 1.0	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic (EH_2D_AR)	M	mg/kg	1	1.5	< 1.0	1.5	< 1.0
>C21-C35 Aromatic (EH_2D_AR)	M	mg/kg	1	5.4	2.4	8.5	1.2
>C35-C40 Aromatic (EH_2D_AR)	M	mg/kg	1	6.3	< 1.0	< 1.0	< 1.0
Total aromatic hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_AR)	N	mg/kg	1	13.9	3.4	10.6	1.2
Total petroleum hydrocarbons (>C5 - C40) (HS_1D_MS+EH_2D_Total)	N	mg/kg	1	15.4	3.4	11.4	1.2



2683

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Results Summary

Report No.: 22-43662, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
295981	0.2	Plot 1	Brown Sandy Soil, Stones, Organic, Brick	No asbestos detected	n/t	n/t	n/t	n/t
295984	0.4	Plot 4	Brown Sandy Soil, Stones	No asbestos detected	n/t	n/t	n/t	n/t
295985	0.1	Plot 5	Brown Sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t
295986	0.3	Plot 5	Brown Sandy Soil, Stones, Brick	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 22-43662, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Free cyanide	N	As submitted sample	04/10/2022	107	Colorimetry
Sulphide	N	As submitted sample	04/10/2022	109	Colorimetry
Hexavalent chromium	N	As submitted sample	04/10/2022	110	Colorimetry
pH	M	Air dried sample	04/10/2022	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	07/10/2022	115	Ion Chromatography
Aqua regia extractable metals	M	Air dried sample	04/10/2022	118	ICPMS
PAH (GC-FID)	M	As submitted sample	04/10/2022	133	GC-FID
Water soluble anions	M	Air dried sample	04/10/2022	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	05/10/2022	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	05/10/2022	181	GC-MS
BTEX in solids	M	As submitted sample	05/10/2022	181A	GC-MS
Water soluble boron	N	Air dried sample	04/10/2022	202	Colorimetry
TPH CWG soil by gc-gc	M	As submitted sample	04/10/2022	271	
Asbestos identification	U	Air dried sample	10/10/2022	280	Microscopy
Soil organic matter	U	Air dried sample	04/10/2022	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited

Report Information

Report No.: 22-43662, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination. Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed. ELAB are unable to provide an interpretation or opinion on the content of this report. The results relate only to the sample received. PCB congener results may include any coeluting PCBs Uncertainty of measurement for the determinands tested are available upon request Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month
 All water samples will be retained for 7 days following the date of the test report
 Charges may apply to extended sample storage

TPH Classification - HWOL Acronym System

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 & Aromatics
AL	Aliphatics only
AR	Aromatics only
2D	GC-GC - Double coil gas chromatography
#1	EH_Total but with humics mathematically subtracted
#2	EH_Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total
MS	Mass Spectrometry

APPENDIX D

CHEMICAL ASSESSMENT TABLES



Threshold exceeded

 = Below Limit of detection

n/t = Not tested

n/t = Not tested

n/t = Not tested

n/t = Not tested

			Metals								
Contaminants			Cadmium	Chromium III	Chromium VI	Copper	Lead	Mercury (elemental)	Nickel	Zinc	
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
			Limit of Detection	0.5	5.0	0.8	5.0	5.0	0.5	5.0	5.0
			Human Health Risk Assessment (GAC)	11	910	6	2400	200	1.2	180	3700
			Sample Location	Sample Depth (m)	Sample type						
Plot 1	0.2	SOIL	< 0.5	17.5	< 0.8	34.5	64.1	< 0.5	14.3	101	
Plot 4	0.5	SOIL	< 0.5	30.4	< 0.8	22.5	28.5	< 0.5	28.7	88.7	
Plot 5	0.1	SOIL	< 0.5	16.4	< 0.8	31.7	65	< 0.5	13.9	90.4	
Plot 5	0.4	SOIL	< 0.5	27.6	< 0.8	21.2	18.4	< 0.5	24.8	76.9	
Human Health Risk Assessment (GAC)			11	910	6	2400	200	1.2	180	3700	



Threshold exceeded

= Below Limit of detection

n/t = Not tested

n/t = Not tested

n/t = Not tested

n/t = Not tested

			Semi/non-metals		Inorganics			Other			
Contaminants			Arsenic	Boron	Selenium	Cyanide (free)	Sulphate (water soluble)	Sulphate (water soluble)	pH (units)	Soil Organic Matter %	
			mg/kg	mg/kg	mg/kg	mg/kg	g/l	mg/l	units	units	
			Limit of Detection	1.0	0.5	1.0	1.0	0.02	20.0	0.1	0.1
			Human Health Risk Assessment (GAC)	37	290	350	22	NA	NA	NA	NA
			Sample Location	Sample Depth (m)	Sample type						
Plot 1	0.2	SOIL	7.3	1.9	< 1.0	< 1.0	0.11	n/t	9	5.4	
Plot 4	0.5	SOIL	5	0.7	< 1.0	< 1.0	0.09	n/t	8.6	1.1	
Plot 5	0.1	SOIL	7.2	1.9	< 1.0	< 1.0	0.07	n/t	8.4	5.5	
Plot 5	0.4	SOIL	3.6	0.6	< 1.0	< 1.0	0.04	n/t	8.3	1.3	
Human Health Risk Assessment (GAC)			37	290	350	22	NA	NA	NA	NA	



n/t = Not tested

			PAH's																	
Contaminants			Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[ghi]perylene	Benzo[k]fluoranthene	Chrysene	Dibenzo[ah]anthracene	Fluoranthene	Fluorene	Indeno[123-cd]pyrene	Napthalene	Phenanthrene	Pyrene	Total PAH's	
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit of Detection			0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.4
Human Health Risk Assessment (GAC)			510	420	5400	11	2.7	3.3	340	93	22	0.28	560	400	36	5.6	220	1200	NA	
Sample Location	Sample Depth (m)	Sample type																		
Plot 1	0.2	SOIL	< 0.1	< 0.1	< 0.1	0.4	0.4	0.4	0.4	0.4	0.4	< 0.1	1.1	< 0.1	0.5	< 0.1	0.2	0.5	5.1	
Plot 4	0.5	SOIL	< 0.1	< 0.1	< 0.1	0.2	0.3	0.2	0.1	0.3	0.2	< 0.1	0.5	< 0.1	0.2	< 0.1	0.2	0.4	2.8	
Plot 5	0.1	SOIL	0.2	< 0.1	0.3	1.1	1.6	1.3	1	1.5	1.3	0.2	2.7	0.2	1.1	< 0.1	1.1	1.9	15.7	
Plot 5	0.4	SOIL	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.4	



Threshold exceeded

 = Below Limit of detection

n/t = Not tested

SOM % used: 2.5

[illegible]



Threshold exceeded

= Below Limit of detection

n/t = **Not tested**

Proposed land use: Residential with plant uptake

SOM % used: 2.5

			BTEx			
Contaminants			Benzene	Toluene	Ethylbenzene	Total Xylenes
Units			µg/kg	µg/kg	µg/kg	µg/kg
Limit of Detection			10	10	10	10
Human Health Risk Assessment (GAC)			0.33	610	350	NA
Sample Location	Sample Depth (m)	Sample type				
Plot 1	0.2	SOIL	< 10.0	< 10.0	< 10.0	< 10.0
Plot 4	0.5	SOIL	< 10.0	< 10.0	< 10.0	< 10.0
Plot 5	0.1	SOIL	< 10.0	< 10.0	< 10.0	< 10.0
Plot 5	0.4	SOIL	< 10.0	< 10.0	< 10.0	< 10.0
Human Health Risk Assessment (GAC)			0.33	610	350	NA