

Your Ref:
Our Ref: CRM.1265.013.GE.L.006

Date: 18th May 2022
Email: Richard.Reece@enzygo.com

Karim Mahrach,
Pacific House
Imperial Way
Reading
Berkshire
RG2 0TD

By Email: Karim.Mahrach@bellway.co.uk

Dear Karim,

RE: Former Cox & Wyman Site, Cardiff Road, Reading, RG1 8EX, Block A and Block B Topsoil Validation

Introduction

Enzygo Geo Environmental Limited undertook an investigation for a proposed development at the above-named site. The site investigation encountered elevated levels of Lead, TPH and PAH, within the Made Ground. Asbestos was also detected.

As the site is being re-developed for residential apartments with communal garden areas, and houses with private garden areas, remediation to areas of soft landscaping was proposed comprising 400mm clean materials over a Geotextile no-dig barrier within communal garden areas, and 600mm clean materials over a Geotextile no-dig barrier within private garden areas. This was submitted to Reading Borough Council and was approved. During the works, no subsequent site observations indicated any change was required.

Site Inspection

On the 26th April 2022 Enzygo Geo Environmental Limited undertook a site visit to excavate and confirm the presence of 400mm of cover materials, over a Geotextile no-dig barrier. Two inspection pits (HP411 and HP15) were excavated within the area of Public Open Space surrounding apartment Block B.

On the 12th May 2022 Enzygo Geo Environmental Limited undertook a site visit to excavate and confirm the presence of 400mm of cover materials, over a Geotextile no-dig barrier. Two inspection pits (HP12 and HP13) were excavated within the area of Public Open Space surrounding apartment Block A. Photos of Hand Pits are shown in Appendix A. The locations of the hand pits are shown on Drawing CRM.1265.013.GE.D.002.B, which is included in Appendix B.

No further areas of contamination were identified during the construction phase or during the validation inspection, therefore no additional remedial measures were required or undertaken.

Cover Soils

Hand Pits confirmed the presence of 400mm of cover soils over a Geotextile no-dig barrier, meeting the required depth for Public Open Space. Photographs of the hand pits are included in Appendix A.

Samples were recovered from the Hand Pits and submitted to the laboratories of I2 who are UKAS and MCERTS accredited for testing. Soil samples were collected in appropriate containers provided by the analytical laboratory. Samples were stored in cool boxes prior to dispatch to the laboratory for analysis. All samples were collected using appropriate sampling equipment that is cleaned at each sampling location.

Imported soils tickets are shown in Appendix C.

Disposal tickets for muck away materials have been provided in previous validation letters, as large areas of site were stripped before building commenced. Therefore, it is not possible to link individual tickets to individual areas of site. As further areas of the site become stripped and the materials disposed of, tickets will be provided.

Chemical Analysis

Chemical analysis reports have been supplied by the client prior to the materials being imported to site. These certificates meet the GAC values for residential use with plant uptake. No asbestos was detected. These are included in Appendix D.

Soil samples recovered from the Hand Pits were sent to the laboratories of I2 who are UKAS and MCERTS accredited. Samples were tested for the CLEA metal suite, pH, sulphate, cyanide, speciated Polycyclic Aromatic Hydrocarbons (PAH), organic carbon, Speciated Total Petroleum Hydrocarbon, and Asbestos screen.

Results show the materials used within the areas of soft landscaping surrounding Block A and Block B, meet the GAC values for residential use without plant uptake. These are shown in Appendix E.

Conclusion

Based on the site inspection undertaken, information provided and results it is considered that the remediation works are in accordance with the approved remedial methodology within the area of Public Open Space surrounding apartment Block A and Block B.

This verification letter has been prepared following validation works to address requirements of planning condition 18 of Planning Consent 171814 Application ref 18123.

We hope that we have correctly interpreted your requirements.

Yours sincerely,
For and on behalf of Enzygo



Richard Reece
Environmental Consultant

APPENDICES

APPENDIX A – PHOTOGRAPHS

HP11



HP15



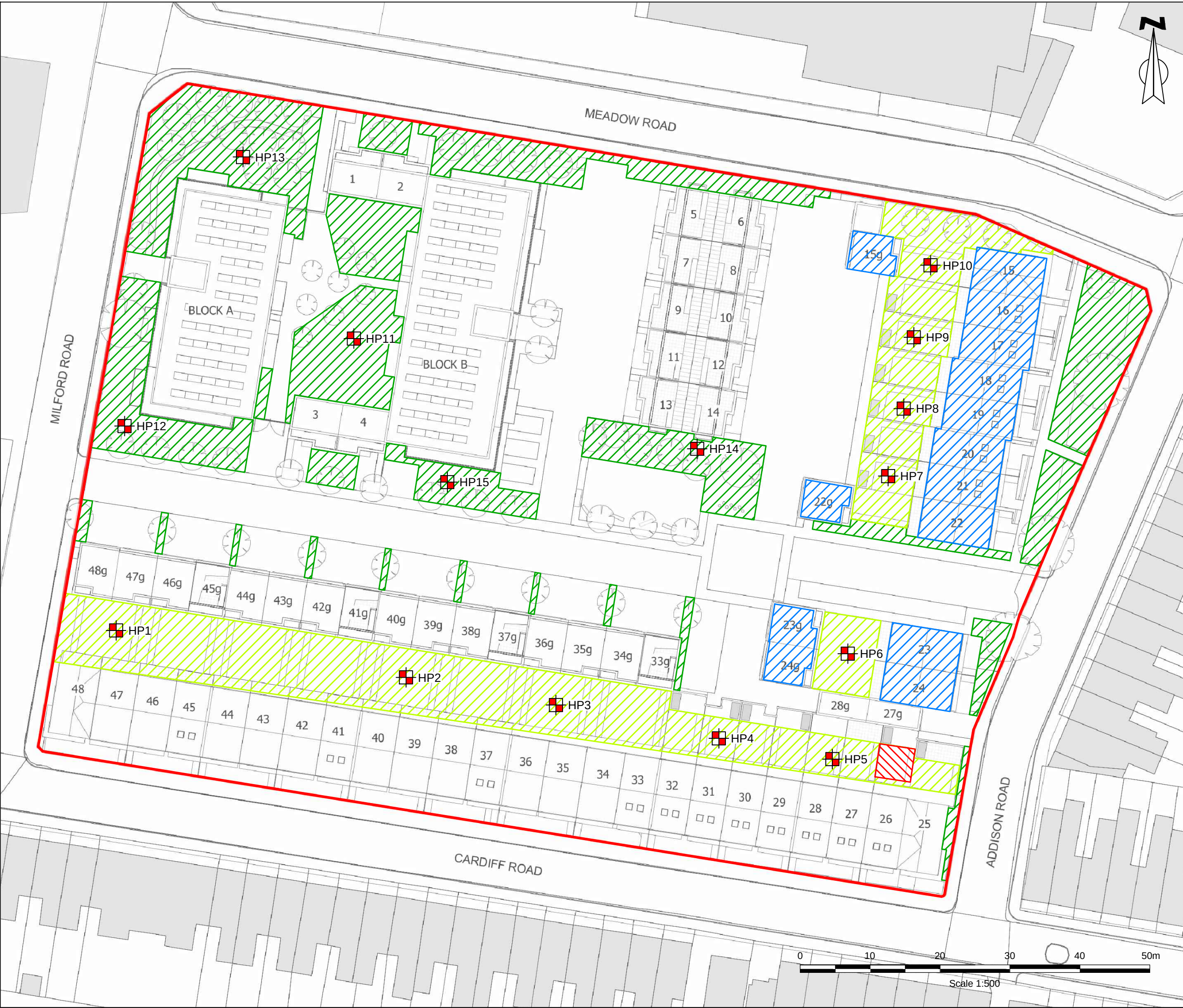
HP12



HP13



APPENDIX B – LOCATION PLAN



Key

- Site Boundary
- Communal Area 400mm
- Garden Area 600mm
- Extent of Gas Membrane Proposed
- Area of Mercury Removed
- Validation Pits (HPA - HPM)

Adding additional Gas Membrane Areas	10/05/19	Rev B
Adding Gas Membrane Area	10/05/19	Rev A

Description	Date	Revision
-------------	------	----------

enzygo
environmental consultants

Samuel House, 5 Fox Valley Way, Stocksbridge, Sheffield, S36 2AA

CLIENT:
Bellway and Thames Properties

SCALE: **1:500@A3**
PROJECT REF: **CRM.1265.013**

DRAWN: **MG**
CHECKED: **SR**
DATE: **May 2019**

PROJECT:
Cardiff Road, Reading

TITLE:
Remediation Plan

FIGURE NO:
CRM.1265.013.GE.D.002.B

APPENDIX C – IMPORTED SOILS DELIVERY CERTIFICATES

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161

Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155995

Vehicle Registration

XL66 JSS

Driver

Sutton

Special Instructions

Delivery Date & Time Required

21/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name _____

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155994

Vehicle Registration

X46 JSS

Driver

SUAWW

Special Instructions

Delivery Date & Time Required

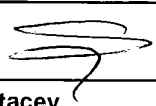
21/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed

Print Name **LOMSE**

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155993

Vehicle Registration

X44 JSS

Driver

SUAUN

Special Instructions

Delivery Date & Time Required

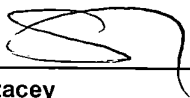
21/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name **IONA** _____

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155447

Vehicle Registration

X44 JSS

Driver

SUAUN

Special Instructions

Delivery Date & Time Required

18/01/2022

QTY Unit Description

15.00 Metre Cu Mt Topsoil - Beenham

Weighbridge Signature

Hauliers Signature

Haulage Company Stacey

Received the above in good order and condition

Signed _____

Print Name _____

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161

Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155448

Vehicle Registration

XL06 OSS

Driver

SLUON

Special Instructions

Delivery Date & Time Required

18/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature

Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name _____

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred



Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No **P0170**

Delivery Ticket No **155449**

Vehicle Registration **X44 JSS**

Driver **SUAW**

Special Instructions

Delivery Date & Time Required

18/01/2022

QTY	Unit	Description
15.00	Metre	Cu Mt Topsoil - Beenham

Weighbridge Signature

Hauliers Signature

Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name _____

**Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred**



234511

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

E mail: enquiries@freelandhorticulture.co.uk

ORDER NOTE**Customer / Delivery Address**

Delivery to. *Mr. J. Smith*

Customer Order No.

234511

Delivery Ticket No.

123456

Vehicle Registration No.

ABC 123

Driver.

John Smith

Special Instructions.

Deliver to back garden

Delivery Date & Time Required.

15/05/06 10:00

Qty. Unit Description

1000 1000 1000

1000 1000 1000

Hauliers Signature:

Haulage Company:

Received the above in good order and condition.

Signed.....

Print Name.....

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damage incurred

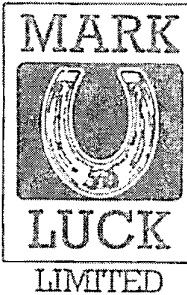
Any complaint to made within 48 hours of delivery.

Subject to our Standard Conditions of Sale and Contract.

Site Copy - White

Haulier Copy - Blue

Customer Copy - Pink



MARK LUCK LIMITED

Mark Luck Haulage Yard

Railway Sidings Wested Lane Swanley Kent BR8 8EE

Telephone: (01322) 613355 Fax: (01322) 613265

Website: www.markluckltd.co.uk

E-mail: info@markluckltd.co.uk

All Aggregates - Recycled Materials - Site Clearance - T/Soils

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE

Nº 896607

234511



Section A.

Description of Waste/Material

BS SPEC
CERT SOIL

CLIENT
SIC

☐☐☐☐☐

EWC

☐☐☐☐☐☐

Vehicle Reg. No.

GD15 DSA

Cubic Metres

15

In Words

1 LOAD

GROSS

TARE

NETT

Driver's Name

DEIGHTON

Section B. Current Holder of Waste/Material/Collection Point

Name

F REELANDS

Address

SEVEN OAKS

Waste Reg. No (if applicable)

Section C. Person Collecting Waste SIC Code 49.41

MARK LUCK LIMITED

Registered Waste Carrier No. CBDU90780

Issued by KENT COUNTY COUNCIL

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011

Section D. Authorised Tip / Delivery Point / Daywork

Name

MOSTRIM GROUNDWORKS

Address

ELM BRIDGE RD, CRANLEIGH, GL16 8LW.

Authorised Tip No. (if applicable)

Waiting time on Site/Daywork

Arrival Time

Departure Time

Allowance/TT

Hours Chargeable

Signed on behalf of Customer

PRINT NAME

N.B. To Customers, Authorised Agents, Representatives, or Responsible Persons signing this Delivery Ticket. This is in your interest - Please read this ticket fully and inspect material, agreeing quantity, quality and that everything is to your satisfaction, before finally signing this receipt note. We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site and a clear signature has been given. We cannot accept responsibility for damage caused by our vehicles while delivering material to your site.

Signed by Driver

Signed on behalf of Customer

Date

4/3/22

PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk



Rosedale Nursery
College Road
Hextable
Kent
BR6 7LT

234512

Tel: 01322 619161
Fax: 01322 619135

E-mail: enquiries@freelandhorticulture.co.uk

ORDER NOTE

Customer / Delivery Address

Delivery to.

Customer Order No.

Delivery Ticket No.

Vehicle Registration No.

Driver.

Special Instructions.

Delivery Date & Time Required.

Qty. Unit Description

Hauliers Signature:

Haulage Company:

Received the above in good order and condition.

Signed.....

Print Name.....

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damage incurred

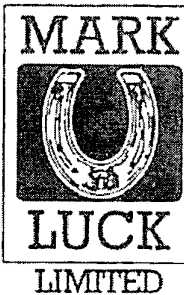
Any complaint to made within 48 hours of delivery.

Subject to our Standard Conditions of Sale and Contract.

Site Copy - White

Haulier Copy - Blue

Customer Copy - Pink



MARK LUCK LIMITED

Mark Luck Haulage Yard

Railway Sidings Wested Lane Swanley Kent BR8 8EE

Telephone: (01322) 613355 Fax: (01322) 613265

Website: www.markluckltd.co.uk

E-mail: info@markluckltd.co.uk

All Aggregates - Recycled Materials - Site Clearance - T/Soils

CONVEYANCE/CONTROLLED WASTE TRANSFER NOTE

Nº 880779

234512



Section A.

Description of Waste/Material

BSSpec Cert
Soil

Vehicle Reg. No. ~~YDI7YUH~~

Cubic Metres

15

In Words

1 Load

GROSS

TARE

NETT

Driver's Name

Conner B

CLIENT
SIC

☐☐☐☐☐☐

EWC

☐☐☐☐☐☐

Section B. Current Holder of Waste/Material/Collection Point

Name

Freeland Ltd

Address

Bat And Ball Road, Severnorks, TN14 5SR

Waste Reg. No (if applicable)

160605

Section C. Person Collecting Waste

MARK LUCK LIMITED

SIC Code 49.41

Registered Waste Carrier No. CBDU90780

Issued by KENT COUNTY COUNCIL

I confirm that I have fulfilled my duty to apply the waste hierarchy as required by Regulation 12 of the Waste (England and Wales) Regulations 2011

Section D. Authorised Tip / Delivery Point / Daywork

Name

Mostrim Groundworks Ltd

Address

Miller Homes, Elmbridge Road, Cranleigh, GU6 8LW

Authorised Tip No. (if applicable)

Waiting time on Site/Daywork

Arrival Time

Departure Time

Allowance/TT

Hours Chargeable

Signed on behalf of Customer

PRINT NAME

N.B. To Customers, Authorised Agents, Representatives, or Responsible Persons signing this Delivery Ticket. This is in your interest - Please read this ticket fully and inspect material, agreeing quantity, quality and that everything is to your satisfaction, before finally signing this receipt note. We regret we cannot under any circumstances entertain any claims concerning quantity or quality, once the vehicle has left the site and a clear signature has been given. We Cannot accept responsibility for damage caused by our vehicles while delivering material to your site.

Signed by Driver

Signed on behalf of Customer

Date

4/3/12

PLEASE PRINT

Customers ordering vehicles off the public roads do so entirely at their own risk



Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

234513

Tel: 01322 619161
Fax: 01322 619135

E-mail: enquiries@freelandhorticulture.co.uk

Customer / Delivery Address

ORDER NOTE

Delivery to.

Customer Order No.

Delivery Ticket No.

Vehicle Registration No.

Driver.

Special Instructions.

Delivery Date & Time Required.

Qty. Unit Description

Hauliers Signature:

Haulage Company:

Received the above in good order and condition.

Signed.....

Print Name.....

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damage incurred

Any complaint to made within 48 hours of delivery.

Subject to our Standard Conditions of Sale and Contract.

Site Copy - White

Haulier Copy - Blue

Customer Copy - Pink



Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161

Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

159949

Vehicle Registration

X44 JSS

Driver

SARON

Special Instructions

Delivery Date & Time Required

25/02/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature

Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name _____

**Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred**

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

ORDER NOTE

Customer Order No **P0170**

Delivery Ticket No **156202**

Vehicle Registration

X44JSS

Driver

SEAN

Special Instructions

Delivery Date & Time Required

25/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name **LONOL**

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

ORDER NOTE

Customer Order No

P0170

Delivery Ticket No

156201

Vehicle Registration

X440SS

Driver

SUAW

Special Instructions

Delivery Date & Time Required

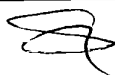
25/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name **LONG**

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

345

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

ORDER NOTE

Customer Order No

P0170

Delivery Ticket No

156200

Vehicle Registration

XLUJSS

Driver

SUAVN

Special Instructions

Delivery Date & Time Required

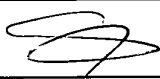
25/01/2022

QTY Unit Description

15.00 Metre Cu Mt Topsoil - Beenham

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name **LONEL**

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

156459

Vehicle Registration

V200JSS

Driver

R. Walker

Special Instructions

Delivery Date & Time Required

26/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature

Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name _____

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

ORDER NOTE

Customer Order No **P0170**

Delivery Ticket No **156458**

Vehicle Registration

V200JSS

Driver

R. WALKER

Special Instructions

Delivery Date & Time Required

26/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature

Haulage Company **Stacey**

Received the above in good order and condition

Signed JONEL

Print Name -----

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

156457

Vehicle Registration

X200 JSS

Driver

R. WALKER

Special Instructions

Delivery Date & Time Required

26/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed

Print Name

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

A JOHN STACEY COMPANY
JOHN STACEY & SONS LTD

TIPPER & PLANT HIRE - DEMOLITION
RECYCLED CONSTRUCTION MATERIALS

SILCHESTER ROAD, TADLEY, BASINGSTOKE, HANTS. RG26 3PZ
Telephone: (0118) 981 3531 Fax: (0118) 981 3458
This Transfer Note forms part of the Duty of Care laid down by the Environment
Protection Act 1991. Please ensure the information given is accurate.

c 400027
CONVEYANCE NOTE C (Weight and Vol.)
CONTROLLED WASTE TRANSFER NOTE
ACCOUNTS COPY
VAT Reg. No. 198 9545 85

PLACE OF LOADING BEENHAM		DATE: 26-1-22									
VEHICLE REG. No.: V260JSS	FLEET No.: 371	NAME OF PERSON IN CHARGE OF VEHICLE: R. WALKER									
CUSTOMER: WOMSTRIM FREELANDS		SITE ADDRESS: CARDIFF RD READING									
Standard Industrial Classification (SIC) Code <table><tr><td></td><td></td><td></td><td></td><td></td></tr></table>											
DESCRIPTION OF MATERIAL TOP SOIL		WEIGHT OR VOLUME TONNES Kg									
This aggregate was produced under a quality scheme meeting the WRAP Aggregate Quality Protocol											
SOIL + STONES	<table><tr><td>1</td><td>7</td><td>-</td><td>0</td><td>5</td><td>-</td><td>0</td><td>4</td></tr></table>	1	7	-	0	5	-	0	4	Gross Weight of Vehicle at Weighbridge	
1	7	-	0	5	-	0	4				
CONCRETE	<table><tr><td>1</td><td>7</td><td>-</td><td>0</td><td>1</td><td>-</td><td>0</td><td>1</td></tr></table>	1	7	-	0	1	-	0	1	Tare Weight of Vehicle	
1	7	-	0	1	-	0	1				
BRICK	<table><tr><td>1</td><td>7</td><td>-</td><td>0</td><td>1</td><td>-</td><td>0</td><td>2</td></tr></table>	1	7	-	0	1	-	0	2	Net Weight	
1	7	-	0	1	-	0	2				
OTHER	<table><tr><td></td><td></td><td>-</td><td></td><td></td><td>-</td><td></td><td></td></tr></table>			-			-			Certified that the above particulars are true and relate to the material being conveyed in the vehicle described, which material is being so conveyed in pursuance of:- (a) A sale or an agreement for the sale thereof made by weight. (b) An agreement for the carriage thereof made by weight. Delete (a) or (b) as applicable. On behalf of the seller.	
		-			-						
DAYWORK / WAITING TIME TKT NO 156458		Registered Waste Carrier ☒ Registration No. CBDU92361 Issued by: Environment Agency									
TIME ARRIVED ON SITE		SIGNED BY PRODUCER/SITE X									
TIME LEFT SITE		PRINT NAME X IONEL COZMA									
TRAVELLING TIME		TRANSFER OF WASTE WASTE PRE-TREATED YES ☐ NO ☐									
TOTAL HOURS		SITE LICENCE No.									
QUANTITY IN METRES LOAD		SIGNED BY DRIVER R									
HAULIER WASTE CARRIER NO.											
ADDRESS OF TIP/TRANSFER POINT READING											

We have applied the Waste Management hierarchy as required by regulation 12 of the Waste (England & Wales) regulations 2011.

A JOHN STACEY COMPANY
JOHN STACEY & SONS LTD

TIPPER & PLANT HIRE - DEMOLITION
RECYCLED CONSTRUCTION MATERIALS

SILCHESTER ROAD, TADLEY, BASINGSTOKE, HANTS. RG26 3PZ
Telephone: (0118) 981 3531 Fax: (0118) 981 3458
This Transfer Note forms part of the Duty of Care laid down by the Environment
Protection Act 1991. Please ensure the information given is accurate.

c 400026
CONVEYANCE NOTE C (Weight and Vol.)
CONTROLLED WASTE TRANSFER NOTE
ACCOUNTS COPY
VAT Reg. No. 198 9545 85

PLACE OF LOADING BEENHAM		DATE: 26-1-22									
VEHICLE REG. No.: V260JSS	FLEET No.: 371	NAME OF PERSON IN CHARGE OF VEHICLE: R. WALKER									
CUSTOMER: WOMSTRIM FREELAND		SITE ADDRESS: CARDIFF RD READING									
Standard Industrial Classification (SIC) Code <table><tr><td></td><td></td><td></td><td></td><td></td></tr></table>											
DESCRIPTION OF MATERIAL TOP SOIL		WEIGHT OR VOLUME TONNES Kg									
This aggregate was produced under a quality scheme meeting the WRAP Aggregate Quality Protocol											
SOIL + STONES	<table><tr><td>1</td><td>7</td><td>-</td><td>0</td><td>5</td><td>-</td><td>0</td><td>4</td></tr></table>	1	7	-	0	5	-	0	4	Gross Weight of Vehicle at Weighbridge	
1	7	-	0	5	-	0	4				
CONCRETE	<table><tr><td>1</td><td>7</td><td>-</td><td>0</td><td>1</td><td>-</td><td>0</td><td>1</td></tr></table>	1	7	-	0	1	-	0	1	Tare Weight of Vehicle	
1	7	-	0	1	-	0	1				
BRICK	<table><tr><td>1</td><td>7</td><td>-</td><td>0</td><td>1</td><td>-</td><td>0</td><td>2</td></tr></table>	1	7	-	0	1	-	0	2	Net Weight	
1	7	-	0	1	-	0	2				
OTHER	<table><tr><td></td><td></td><td>-</td><td></td><td></td><td>-</td><td></td><td></td></tr></table>			-			-			Certified that the above particulars are true and relate to the material being conveyed in the vehicle described, which material is being so conveyed in pursuance of:- (a) A sale or an agreement for the sale thereof made by weight. (b) An agreement for the carriage thereof made by weight. Delete (a) or (b) as applicable. On behalf of the seller.	
		-			-						
DAYWORK / WAITING TIME TKT NO 156458		Registration No. CBDU92361 Issued by: Environment Agency									
TIME ARRIVED ON SITE		SIGNED BY PRODUCER/SITE X									
TIME LEFT SITE		PRINT NAME X IONEL COZMA									
TRAVELLING TIME		TRANSFER OF WASTE WASTE PRE-TREATED YES ☐ NO ☐									
TOTAL HOURS		SITE LICENCE No.									
QUANTITY IN METRES LOAD		SIGNED BY DRIVER R									
HAULIER WASTE CARRIER NO.											
ADDRESS OF TIP/TRANSFER POINT READING											

We have applied the Waste Management hierarchy as required by regulation 12 of the Waste (England & Wales) regulations 2011.

STACEY COMPANY
IN STACEY & SONS LTD

ER & PLANT HIRE - DEMOLITION
CLED CONSTRUCTION MATERIALS

STER ROAD, TADLEY, BASINGSTOKE, HANTS. RG26 3PZ
Phone: (0118) 981 3531 Fax: (0118) 981 3458

Transfer Note forms part of the Duty of Care laid down by the Environment
Act 1991. Please ensure the information given is accurate.



C 400020

CONVEYANCE NOTE C (Weight and Vol.)
CONTROLLED WASTE TRANSFER NOTE

ACCOUNTS COPY

VAT Reg. No. 198 9545 85

DATE: **26-1-22**

OF LOADING **BEENHAM.**

VEHICLE REG. No.: **V200JSS**

FLEET No: **371**

NAME OF PERSON IN CHARGE OF VEHICLE:
R WALKER

FROM: **C10 MOSTRIM**
FREE LAND G/WORKS

SITE ADDRESS:
CARDIFF RD
READING

Standard Industrial
Classification (SIC) Code

WEIGHT OR VOLUME TONNES Kg

DESCRIPTION OF MATERIAL

Gross Weight of
Vehicle at Weighbridge

TOP SOIL

Tare Weight of Vehicle

is aggregate was produced under a quality scheme
setting the WRAP Aggregate Quality Protocol

Net Weight

AGGREGATE

GRAVEL + STONES

CONCRETE

BRICK

OTHER

Certified that the above particulars are true and relate to the
material being conveyed in the vehicle described, which material is
being so conveyed in pursuance of:-
(a) A sale or an agreement for the sale thereof made by weight.
(b) An agreement for the carriage thereof made by weight.
Delete (a) or (b) as applicable.
On behalf of the seller.

DAYWORK / WAITING TIME

TIME ARRIVED ON SITE

TIME LEFT SITE

TRAVELLING TIME

TOTAL HOURS

QUANTITY IN METRES

HAULIER WASTE
CARRIER NO.

ADDRESS OF TIP/TRANSFER POINT

TKT NO
156457

Registered
Waste
Carrier

Registration
No.
Issued
by:

CBDU92361
**Environment
Agency**

SIGNED BY PRODUCER/SITE

PRINT NAME

IONEL COZMA

TRANSFER OF WASTE

WASTE PRE-TREATED

SITE LICENCE No.

YES ☐ NO ☐

We have applied the Waste Management hierarchy as required by regulation 12 of the Waste
(England & Wales) regulations 2011.

SIGNED BY DRIVER

R

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

ORDER NOTE

Customer Order No **P0170**

Delivery Ticket No **156850**

Vehicle Registration

X44 JSS

Driver

SWAUN

Special Instructions

Delivery Date & Time Required

31/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name **LOVELL**

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155908

Vehicle Registration

X44JSS

Driver

SHAWN

Special Instructions

Delivery Date & Time Required

20/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature

Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name **SHAWN**

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155907

Vehicle Registration

X46 JSS

Driver

SUAUN

Special Instructions

Delivery Date & Time Required

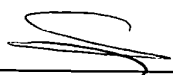
20/01/2022

QTY Unit Description

15.00 Metre Cu Mt Topsoil - Beenham

Weighbridge Signature

Hauliers Signature



Haulage Company Stacey

Received the above in good order and condition

Signed _____

Print Name LANE

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161
Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

155906

Vehicle Registration

X44 JSS

Driver

SWAN

Special Instructions

Delivery Date & Time Required

20/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name WONOL

Customer ordering Vehicle off the Public Road do
so entirely at their Own risk and will be liable
for any damages incurred



Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161

Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

156152

Vehicle Registration

X44 JSS

Driver

SWAN

Special Instructions

Delivery Date & Time Required

24/01/2022

QTY Unit Description

15.00 Metre Cu Mt Topsoil - Beenham

Weighbridge Signature

Hauliers Signature

Haulage Company Stacey

Received the above in good order and condition

Signed _____

Print Name **UNOZ** _____

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161

Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

156151

Vehicle Registration

XLE JSS

Driver

SUAVN

Special Instructions

Delivery Date & Time Required

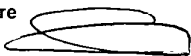
24/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name Jonas

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

Freeland

HORTICULTURE LIMITED

Rosedale Nursery
College Road
Hextable
Kent
BR8 7LT

Tel: 01322 619161

Fax: 01322 619135

Email: enquiries@freelandhorticulture.co.uk

Customer/Delivery Address

ORDER NOTE

Mostrim Groundworks Ltd

Delivey To

Bellway Homes
Cardiff Road
100 Meadow Road
Reading
RG1 8EF

Customer Order No

P0170

Delivery Ticket No

156153

Vehicle Registration

XLHJSS

Driver

SUTTON

Special Instructions

Delivery Date & Time Required

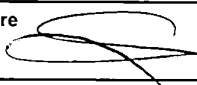
24/01/2022

QTY	Unit	Description
-----	------	-------------

15.00	Metre	Cu Mt Topsoil - Beenham
-------	-------	-------------------------

Weighbridge Signature

Hauliers Signature



Haulage Company **Stacey**

Received the above in good order and condition

Signed _____

Print Name **LONDLE**

Customer ordering Vehicle off the Public Road do so entirely at their Own risk and will be liable for any damages incurred

APPENDIX D – IMPORTED SOILS CHEMICAL ANALYSIS



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Darrel Burgess
MCM (SE) Ltd
7 Coppergate Mews
103-107 Brighton Road
Surbiton, Surrey
KT6 5NE

15th March 2021
Our Ref: TOHA/21/9863/1/SS
Your Ref: see below

Dear Sirs

Topsoil Analysis: Denham Topsoil

We have completed the analysis of the soil sample recently submitted, referenced *Denham Topsoil* and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for general landscape purposes. In addition, this sample has been assessed to determine its compliance with the requirements of the British Standard for Topsoil (*BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil*).

This report presents the results of analysis for the sample submitted to our office, and it should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The sample was described as a dark brown (Munsell Colour 10YR 3/3) slightly moist, friable, slightly calcareous SANDY LOAM with a weakly developed, fine granular structure*. The sample was slightly stony and contained a high proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

* This appraisal of soil structure was made from examination of a disturbed sample(s). Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk



Plate 1: Denham Topsoil Sample

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- particle size analysis (% sand, silt, clay);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- major plant nutrients (N, P, K, Mg);
- organic matter content;
- C:N ratio;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX).

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy loam* texture class, which is usually considered suitable for general landscape applications provided the soil's physical condition is satisfactory.

Further detailed particle size analysis revealed the sample to have a sufficiently narrow particle size distribution and a predominance of *medium sand* (0.25-0.50mm) and smaller proportions of *fine sand* (0.15-0.25mm). This is usually acceptable for topsoil in general landscape applications as reasonable porosity levels are generally maintained in a consolidated state and the risk of particle interpacking is reduced. The sample should therefore provide adequate drainage and aeration properties for general landscape applications.

The stone content of the sample was low and, as such, stones should not restrict the use of the soil for general landscape purposes.

pH and Electrical Conductivity Values

The sample was strongly alkaline in reaction (pH 8.3). This pH value would be considered suitable for general landscape purposes providing species with a wide pH tolerance or those known to prefer alkaline soils are selected for planting, turfing and seeding.

The electrical conductivity (salinity) value (water extract) was moderately high. Although the growth of most hardy plant species (including amenity turf) are unlikely to be affected by this level of salinity, it is possible that salt sensitive species, including emergent seedlings and annuals, could show reduced growth potential.

The electrical conductivity value by CaSO₄ extract (3507 µS/cm - BS3882 requirement) exceeded the maximum specified value (3300 µS/cm) given in BS3882:2015 – Table 1.

Organic Matter and Fertility Status

The sample was well supplied with organic matter all major plant nutrients.

The sample contained a level of extractable potassium (1769 mg/l) that exceeded the maximum permissible value given in BS3882:2015 – Table 1 (1500 mg/l).

The C:N ratio of the sample was acceptable for general landscape purposes.

Potential Contaminants

With reference to BS3882:2015 - Table 1: Notes 3 and 4, there is a recommendation to confirm levels of potential contaminants in relation to the topsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations that affect human health have been compared with the *residential with homegrown produce* land use in the Suitable For Use Levels (S4ULs) presented in *The LQM/CIEH S4ULs for Human Health Risk Assessment* (2015) and the DEFRA SP1010: *Development of Category 4 Screening Levels (C4SLs) for Assessment of Land Affected by Contamination – Policy Companion Document* (2014).

Of the potential contaminants determined, none was found at levels that exceed their guideline values.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in BS3882:2015 – Table 1.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil (BS3882:2015 – *Specification for Topsoil – Table 1, Multipurpose Topsoil*).

From the soil examination and subsequent laboratory analysis, the sample was described as a strongly alkaline, saline sandy loam with a weakly developed structure and low stone content. The sample was well supplied with organic matter and all major plant nutrients and contained a high level of extractable potassium. Of the potential contaminants determined, none exceeded their guideline values.

To conclude, based on our findings, the topsoil represented by this sample would not be considered suitable for general landscape purposes (trees, shrubs and amenity grass) due to the elevated electrical conductivity values and high extractable potassium content.

High potassium levels such as that found in this sample can also have an antagonistic effect on other soil nutrients, particularly magnesium. This can reduce nutrient uptake, leading to plant stress, particularly for establishing specimens. On this basis, the sample is not considered suitable for general landscape purposes.

The source of the elevated potassium and electrical conductivity values could be associated with the proportion and/or the type of compost in the blend.

The topsoil was non-compliant with the requirements of the British Standard for Topsoil (BS3882:2015 – Specification for Topsoil – Table 1, Multipurpose Topsoil) due to the elevated electrical conductivity value and high extractable potassium content.

Essentially, there appears to be too much organic substrate in this topsoil blend. We recommend reviewing the quality and quantity of the organic substrate used.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully


Tilly Kimble-Wilde
BSc MSc
Graduate Soil Scientist


Tim O'Hare
BSc MSc FISOilSci MBIAC CSci
Principal Consultant

For & on behalf of Tim O'Hare Associates LLP



Client:	MCM (SE) Ltd
Project:	Denham Topsoil
Job:	Topsoil Analysis - BS3882:2015
Date:	15/03/2021
Job Ref No:	TOHA/21/9863/1/SS

Sample Reference		Accreditation
Clay (<0.002mm)	%	UKAS
Silt (0.002-0.05mm)	%	UKAS
Very Fine Sand (0.05-0.15mm)	%	UKAS
Fine Sand (0.15-0.25mm)	%	UKAS
Medium Sand (0.25-0.50mm)	%	UKAS
Coarse Sand (0.50-1.0mm)	%	UKAS
Very Coarse Sand (1.0-2.0mm)	%	UKAS
Total Sand (0.05-2.0mm)	%	UKAS
Texture Class (UK Classification)	-	UKAS
Stones (2-20mm)	% DW	GLP
Stones (20-50mm)	% DW	GLP
Stones (>50mm)	% DW	GLP

Denham Topsoil	
Clay (<0.002mm)	14
Silt (0.002-0.05mm)	6
Very Fine Sand (0.05-0.15mm)	15
Fine Sand (0.15-0.25mm)	18
Medium Sand (0.25-0.50mm)	30
Coarse Sand (0.50-1.0mm)	9
Very Coarse Sand (1.0-2.0mm)	8
Total Sand (0.05-2.0mm)	80
Texture Class (UK Classification)	SL
Stones (2-20mm)	14
Stones (20-50mm)	0
Stones (>50mm)	0

pH Value (1:2.5 water extract)	units	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS
Electrical Conductivity (1:2 CaSO ₄ extract)	uS/cm	UKAS
Exchangeable Sodium Percentage	%	UKAS
Organic Matter (LOI)	%	UKAS
Total Nitrogen (Dumas)	%	UKAS
C : N Ratio	ratio	UKAS
Extractable Phosphorus	mg/l	UKAS
Extractable Potassium	mg/l	UKAS
Extractable Magnesium	mg/l	UKAS

pH Value (1:2.5 water extract)	8.3
Electrical Conductivity (1:2.5 water extract)	1707
Electrical Conductivity (1:2 CaSO ₄ extract)	3507
Exchangeable Sodium Percentage	4.5
Organic Matter (LOI)	7.7
Total Nitrogen (Dumas)	0.32
C : N Ratio	14
Extractable Phosphorus	81
Extractable Potassium	1769
Extractable Magnesium	184

Total Arsenic (As)	mg/kg	MCERTS
Total Cadmium (Cd)	mg/kg	MCERTS
Total Chromium (Cr)	mg/kg	MCERTS
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS
Total Copper (Cu)	mg/kg	MCERTS
Total Lead (Pb)	mg/kg	MCERTS
Total Mercury (Hg)	mg/kg	MCERTS
Total Nickel (Ni)	mg/kg	MCERTS
Total Selenium (Se)	mg/kg	MCERTS
Total Zinc (Zn)	mg/kg	MCERTS
Water Soluble Boron (B)	mg/kg	MCERTS
Total Cyanide (CN)	mg/kg	MCERTS
Total (mono) Phenols	mg/kg	MCERTS

Total Arsenic (As)	13
Total Cadmium (Cd)	< 0.2
Total Chromium (Cr)	21
Hexavalent Chromium (Cr VI)	< 4.0
Total Copper (Cu)	36
Total Lead (Pb)	68
Total Mercury (Hg)	< 0.3
Total Nickel (Ni)	16
Total Selenium (Se)	< 1.0
Total Zinc (Zn)	100
Water Soluble Boron (B)	2.2
Total Cyanide (CN)	< 1
Total (mono) Phenols	< 1.0

Naphthalene	mg/kg	MCERTS
Acenaphthylene	mg/kg	MCERTS
Acenaphthene	mg/kg	MCERTS
Fluorene	mg/kg	MCERTS
Phenanthrene	mg/kg	MCERTS
Anthracene	mg/kg	MCERTS
Fluoranthene	mg/kg	MCERTS
Pyrene	mg/kg	MCERTS
Benzo(a)anthracene	mg/kg	MCERTS
Chrysene	mg/kg	MCERTS
Benzo(b)fluoranthene	mg/kg	MCERTS
Benzo(k)fluoranthene	mg/kg	MCERTS
Benzo(a)pyrene	mg/kg	MCERTS
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS
Dibenzo(a,h)anthracene	mg/kg	MCERTS
Benzo(g,h,i)perylene	mg/kg	MCERTS
Total PAHs (sum USEPA16)	mg/kg	MCERTS

Naphthalene	< 0.05
Acenaphthylene	< 0.05
Acenaphthene	< 0.05
Fluorene	< 0.05
Phenanthrene	0.46
Anthracene	< 0.05
Fluoranthene	1.30
Pyrene	1.10
Benzo(a)anthracene	0.84
Chrysene	0.55
Benzo(b)fluoranthene	1.00
Benzo(k)fluoranthene	0.34
Benzo(a)pyrene	0.82
Indeno(1,2,3-cd)pyrene	0.46
Dibenzo(a,h)anthracene	< 0.05
Benzo(g,h,i)perylene	0.63
Total PAHs (sum USEPA16)	7.5

Aliphatic TPH >C5 - C6	mg/kg	MCERTS
Aliphatic TPH >C6 - C8	mg/kg	MCERTS
Aliphatic TPH >C8 - C10	mg/kg	MCERTS
Aliphatic TPH >C10 - C12	mg/kg	MCERTS
Aliphatic TPH >C12 - C16	mg/kg	MCERTS
Aliphatic TPH >C16 - C21	mg/kg	MCERTS
Aliphatic TPH >C21 - C35	mg/kg	MCERTS
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS
Aromatic TPH >C5 - C7	mg/kg	MCERTS
Aromatic TPH >C7 - C8	mg/kg	MCERTS
Aromatic TPH >C8 - C10	mg/kg	MCERTS
Aromatic TPH >C10 - C12	mg/kg	MCERTS
Aromatic TPH >C12 - C16	mg/kg	MCERTS
Aromatic TPH >C16 - C21	mg/kg	MCERTS
Aromatic TPH >C21 - C35	mg/kg	MCERTS
Aromatic TPH (C5 - C35)	mg/kg	MCERTS

Aliphatic TPH >C5 - C6	< 0.001
Aliphatic TPH >C6 - C8	< 0.001
Aliphatic TPH >C8 - C10	< 0.001
Aliphatic TPH >C10 - C12	< 1.0
Aliphatic TPH >C12 - C16	< 2.0
Aliphatic TPH >C16 - C21	< 8.0
Aliphatic TPH >C21 - C35	49
Aliphatic TPH (C5 - C35)	57
Aromatic TPH >C5 - C7	< 0.001
Aromatic TPH >C7 - C8	< 0.001
Aromatic TPH >C8 - C10	< 0.001
Aromatic TPH >C10 - C12	< 1.0
Aromatic TPH >C12 - C16	2.3
Aromatic TPH >C16 - C21	< 10
Aromatic TPH >C21 - C35	51
Aromatic TPH (C5 - C35)	59

Benzene	mg/kg	MCERTS
Toluene	mg/kg	MCERTS
Ethylbenzene	mg/kg	MCERTS
p & m-xylene	mg/kg	MCERTS
o-xylene	mg/kg	MCERTS
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS

Benzene	< 0.001
Toluene	< 0.001
Ethylbenzene	< 0.001
p & m-xylene	< 0.001
o-xylene	< 0.001
MTBE (Methyl Tertiary Butyl Ether)	< 0.001

SL = SANDY LOAM

Visual Examination

The sample was described as a dark brown (Munsell Colour 10YR 3/3) slightly moist, friable, slightly calcareous SANDY LOAM with a weakly developed, fine granular structure. The sample was slightly stony and contained a high proportion of organic fines and occasional woody fragments. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

mfumble-wilde

Tilly Kimble-Wilde
BSc MSc
Graduate Soil Scientist

Results of analysis should be read in conjunction with the report they were issued with.

The contents of this certificate shall not be reproduced without the express written permission of Tim O'Hare Associates LLP.



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Darryl Burgess
MCM (SE) Ltd
7 Coppergate Mews
103-107 Brighton Road
Surbiton, Surrey
KT6 5NE

15th March 2021
Our Ref: TOHA/21/9863/2/SS
Your ref: as below

Dear Sirs

Subsoil Analysis Report: Denham Subsoil

We have completed the analysis of the soil sample recently submitted, referenced *Denham Subsoil*, and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the sample for use as subsoil in general landscape purposes (trees, shrubs, amenity grass). In addition, this sample has been assessed to determine its compliance with the requirements of the British Standard for Subsoil (*BS8601:2013 – Specification for subsoil and requirements for use – Table 1, Multipurpose Subsoil*), including analysis of potential contaminants.

This report presents the results of analysis for the sample submitted and should be considered 'indicative' of the subsoil source. The report and results should therefore not be used by third parties as a means of verification testing, validation testing or waste designation purposes.

SAMPLE EXAMINATION

The subsoil was described as a dark yellowish brown (Munsell Colour 10YR 5/4), slightly moist, friable, non-calcareous SAND with a single grain structure. The sample was slightly stony, comprising stones up to 40mm in length. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

Tim O'Hare Associates LLP
Howbery Park Wallingford Oxfordshire OX10 8BA
T:01491 822653 E:info@toha.co.uk
www.toha.co.uk



Plate 1: Denham Subsoil sample

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition of the soil, and the concentration of selected potential contaminants. The following parameters were determined:

- detailed particle size analysis (% 5 sands, silt, clay);
- stone content (2-20mm, 20-50mm, >50mm);
- pH and electrical conductivity values;
- exchangeable sodium percentage;
- organic matter content;
- heavy metals (As, B, Cd, Cr, Cu, Pb, Hg, Ni, Se, Zn);
- total cyanide and total (mono) phenols;
- speciated PAHs (US EPA16 suite);
- aromatic and aliphatic TPH (C5-C35 banding);
- benzene, toluene, ethylbenzene, xylene (BTEX).

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Detailed Particle Size Analysis and Stone Content

The sample fell into the *sand* texture class, which falls outside the requirements of BS8601:2013 due to the elevated sand content. Further detailed particle size analysis revealed the sample to have a relatively high proportion of sand falling into the *very fine sand* (0.05-0.15mm) and *fine sand* (0.15-0.25mm) classes, which should reduce the drainage rate of the soil to a more acceptable level for general landscape applications.

The stone content of the sample was low and, as such, stones should not restrict the use of the soil for use as subsoil in general landscape purposes.

pH and Electrical Conductivity Values

The sample was strongly alkaline in reaction (pH 8.5). This pH value would be considered suitable for general landscape purposes providing species with a wide pH tolerance or those known to prefer alkaline soils are selected.

The electrical conductivity (salinity) value (water extract) was moderate, which indicates that soluble salts should not be present at levels that would be harmful to plants.

Organic Matter Content

The organic matter content was low (<2%) and compliant with *BS8601:2013 – Table 1*.

Potential Contaminants

With reference to *BS8601:2013 – Section 4.2: Note 2*, there is a recommendation to confirm levels of potential contaminants in relation to the subsoil's proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific assessment criteria, the concentrations of selected potential contaminants that affect human health have been assessed for the concentrations that affect human health have been assessed for *residential* end-use against the Suitable For Use Levels (S4ULs) presented in the LQM/CIEH S4ULs for Human Health Risk Assessment (2015) and the DEFRA SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document (2014).

Of the potential contaminants determined, none exceeded their respective guideline values.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS8601:2013 – Table 1*.

CONCLUSION

The purpose of the analysis was to determine the suitability of the subsoil sample for general landscape purposes and to determine its compliance with the *British Standard for Subsoil (BS8601:2013)*.

From the soil examination and subsequent laboratory analysis, the sample was described as an extremely alkaline, non-saline, non-calcareous sand with a low stone content. The organic matter content was low and consistent with subsoil. Of the potential contaminants determined, none exceeded their respective guideline values.

To conclude, based on our findings, the soil represented by this sample would be considered suitable for use as subsoil for general landscape purposes (trees, shrubs and amenity grass), provided species with a wide pH tolerance or those known to prefer alkaline soils are selected, and the physical condition of the soil is satisfactory.

The sample was largely compliant with the requirements of the British Standard for Subsoil (*BS8601:2013 – Specification for subsoil and requirements for use – Table 1, Multipurpose Subsoil*) with the exception of a high sand content. On this occasion, this non-compliance is considered minor when reviewed in the context of the detailed grading analysis.

RECOMMENDATIONS

Soil Handling Recommendations

Reference should be made to Section 6.0 of BS8601:2013 with regard to the handling and management of the subsoil:

"Soils generally lose strength and become less resistant to damage as they become wetter; therefore, it is essential that they are stripped, handled and trafficked only in the appropriate conditions of weather and soil moisture, and with suitable machinery. If sustained heavy rainfall (e.g. >10 mm in 24 h) occurs during soil stripping operations, work should be suspended and not restarted until the ground has had at least one dry day or until a suitable moisture content has been reached. A soil can be considered to have a suitable moisture content for stripping and handling if the whole thickness of the subsoil layer being stripped and/or handled is at a moisture content below the plastic limit as determined in accordance with BS 1377-2:1990 (incorporating Amendment No. 1).

Machinery should be selected and routed to minimize soil compaction."

Further guidance is provided in Clauses 6.1–6.5.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully



Tilly Kimble-Wilde
BSc MSc
Graduate Soil Scientist



Tim O'Hare
BSc MSc FSoilSci MBIAC CSci
Principal Consultant

For & on behalf of Tim O'Hare Associates LLP



TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client:	MCM (SE) Ltd
Project:	Denham Subsoil
Job:	Subsoil Testing (BS8601:2013)
Date:	15/03/2021
Job Ref No:	TOHA/21/9863/2/SS

Sample Reference		Accreditation
Clay (<0.002mm)	%	UKAS
Silt (0.002-0.05mm)	%	UKAS
Very Fine Sand (0.05-0.15mm)	%	UKAS
Fine Sand (0.15-0.25mm)	%	UKAS
Medium Sand (0.25-0.50mm)	%	UKAS
Coarse Sand (0.50-1.0mm)	%	UKAS
Very Coarse Sand (1.0-2.0mm)	%	UKAS
Total Sand (0.05-2.0mm)	%	UKAS
Texture Class (UK Classification)	--	UKAS
Stones (2-20mm)	% DW	GLP
Stones (20-75mm)	% DW	GLP
Stones (>75mm)	% DW	GLP

Denham Subsoil
4
2
26
26
36
5
1
94
S
5
1
0

pH Value (1:2.5 water extract)	units	UKAS
Electrical Conductivity (1:2.5 water extract)	uS/cm	UKAS
Electrical Conductivity (1:2 CaSO ₄ extract)	uS/cm	UKAS
Organic Matter (LOI)	%	UKAS
Exchangeable Sodium Percentage	%	UKAS

8.5
1060
2313
1.4
1.9

Total Arsenic (As)	mg/kg	MCERTS
Total Cadmium (Cd)	mg/kg	MCERTS
Total Chromium (Cr)	mg/kg	MCERTS
Hexavalent Chromium (Cr VI)	mg/kg	MCERTS
Total Copper (Cu)	mg/kg	MCERTS
Total Lead (Pb)	mg/kg	MCERTS
Total Mercury (Hg)	mg/kg	MCERTS
Total Nickel (Ni)	mg/kg	MCERTS
Total Selenium (Se)	mg/kg	MCERTS
Total Zinc (Zn)	mg/kg	MCERTS
Water Soluble Boron (B)	mg/kg	MCERTS
Total Cyanide (CN)	mg/kg	MCERTS
Total (mono) Phenols	mg/kg	MCERTS

14
< 0.2
19
< 4.0
26
47
< 0.3
16
< 1.0
74
1
< 1
< 1.0

Naphthalene	mg/kg	MCERTS
Acenaphthylene	mg/kg	MCERTS
Acenaphthene	mg/kg	MCERTS
Fluorene	mg/kg	MCERTS
Phenanthrene	mg/kg	MCERTS
Anthracene	mg/kg	MCERTS
Fluoranthene	mg/kg	MCERTS
Pyrene	mg/kg	MCERTS
Benzo(a)anthracene	mg/kg	MCERTS
Chrysene	mg/kg	MCERTS
Benzo(b)fluoranthene	mg/kg	MCERTS
Benzo(k)fluoranthene	mg/kg	MCERTS
Benzo(a)pyrene	mg/kg	MCERTS
Indeno(1,2,3-cd)pyrene	mg/kg	MCERTS
Dibenzo(a,h)anthracene	mg/kg	MCERTS
Benzo(g,h,i)perylene	mg/kg	MCERTS
Total PAHs (sum USEPA16)	mg/kg	MCERTS

< 0.05
< 0.05
< 0.05
< 0.05
0.9
< 0.05
2.4
2.6
1.3
1.4
1.9
0.62
1.2
0.95
< 0.05
1.2
14.4

Aliphatic TPH >C5 - C6	mg/kg	MCERTS
Aliphatic TPH >C6 - C8	mg/kg	MCERTS
Aliphatic TPH >C8 - C10	mg/kg	MCERTS
Aliphatic TPH >C10 - C12	mg/kg	MCERTS
Aliphatic TPH >C12 - C16	mg/kg	MCERTS
Aliphatic TPH >C16 - C21	mg/kg	MCERTS
Aliphatic TPH >C21 - C35	mg/kg	MCERTS
Aliphatic TPH (C5 - C35)	mg/kg	MCERTS
Aromatic TPH >C5 - C7	mg/kg	MCERTS
Aromatic TPH >C7 - C8	mg/kg	MCERTS
Aromatic TPH >C8 - C10	mg/kg	MCERTS
Aromatic TPH >C10 - C12	mg/kg	MCERTS
Aromatic TPH >C12 - C16	mg/kg	MCERTS
Aromatic TPH >C16 - C21	mg/kg	MCERTS
Aromatic TPH >C21 - C35	mg/kg	MCERTS
Aromatic TPH (C5 - C35)	mg/kg	MCERTS

< 0.001
< 0.001
< 0.001
< 1.0
< 2.0
< 8.0
< 8.0
< 10
< 0.001
< 0.001
< 0.001
< 1.0
< 2.0
10
34
45

Benzene	mg/kg	MCERTS
Toluene	mg/kg	MCERTS
Ethylbenzene	mg/kg	MCERTS
p & m-xylene	mg/kg	MCERTS
o-xylene	mg/kg	MCERTS
MTBE (Methyl Tertiary Butyl Ether)	mg/kg	MCERTS

< 0.001
< 0.001
< 0.001
< 0.001
< 0.001
< 0.001

S = SAND

Visual Examination

The subsoil was described as a yellowish brown (Munsell Colour 10YR 5/4), slightly moist, friable, non-calcareous SAND with a single grain structure. The sample was slightly stony, comprising stones up to 40mm in length. No unusual odours, deleterious materials, roots or rhizomes of pernicious weeds were observed.

Results of analysis should be read in conjunction with the report they were issued with.

The contents of this certificate shall not be reproduced without the express written permission of Tim O'Hare Associates LLP.

mfumble-wilde

Tilly Kimble-Wilde
BSc MSc
Graduate Soil Scientist

APPENDIX E – BLOCK A + B, LABORATORY RESULTS

**Richard Reece**

Enzygo Geoenvironmental Ltd
The Byre
Woodend Lane
Cromhall
Gloucestershire
GL12 8AA

e: richard.reece@enzygo.com

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 22-54252

Project / Site name:	Cardiff Road	Samples received on:	27/04/2022
Your job number:	CRM.1265.013	Samples instructed on/ Analysis started on:	27/04/2022
Your order number:	CRM.1265.013	Analysis completed by:	04/05/2022
Report Issue Number:	1	Report issued on:	04/05/2022
Samples Analysed:	2 soil samples		

Signed:

Adam Fenwick
Technical Reviewer
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 only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-54252

Project / Site name: Cardiff Road

Your Order No: CRM.1265.013

Lab Sample Number				2253224	2253225
Sample Reference				HP11	HP15
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.40	0.00-0.40
Date Sampled				26/04/2022	26/04/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	9.9
Total mass of sample received	kg	0.001	NONE	0.8	0.8

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	PDO	PDO

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	8.4
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3	2.2

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.32	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.28	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80
-----------------------------	-------	-----	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	7.6	7
Boron (water soluble)	mg/kg	0.2	MCERTS	2	1.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	4	NONE	< 4.0	< 4.0
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	13	9.8
Copper (aqua regia extractable)	mg/kg	1	MCERTS	24	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	33	11
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.8	7.9
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	56	28

Analytical Report Number: 22-54252

Project / Site name: Cardiff Road

Your Order No: CRM.1265.013

Lab Sample Number	2253224	2253225
Sample Reference	HP11	HP15
Sample Number	None Supplied	None Supplied
Depth (m)	0.00-0.40	0.00-0.40
Date Sampled	26/04/2022	26/04/2022
Time Taken	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection
		Accreditation Status

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS_1D_AL}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS_1D_AL}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS_1D_AL}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH_CU_1D_AL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH_CU_1D_AL}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH_CU_1D_AL}	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic > EC35 - EC44 _{EH_CU_1D_AL}	mg/kg	8.4	NONE	< 8.4	< 8.4
TPH-CWG - Aliphatic (EC5 - EC35) _{EH_CU+HS_1D_AL}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aliphatic (EC5 - EC44) _{EH_CU+HS_1D_AL}	mg/kg	10	NONE	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 _{HS_1D_AR}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS_1D_AR}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS_1D_AR}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH_CU_1D_AR}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH_CU_1D_AR}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH_CU_1D_AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic > EC35 - EC44 _{EH_CU_1D_AR}	mg/kg	8.4	NONE	< 8.4	< 8.4
TPH-CWG - Aromatic (EC5 - EC35) _{EH_CU+HS_1D_AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC44) _{EH_CU+HS_1D_AR}	mg/kg	10	NONE	< 10	< 10

TPH (>C5 - C7) _{HS_1D_TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (>C7 - C8) _{HS_1D_TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (C8 - C10) _{HS_1D_TOTAL}	mg/kg	0.1	MCERTS	< 0.1	< 0.1
TPH (C10 - C12) _{EH_CU_1D_TOTAL}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH (C12 - C16) _{EH_CU_1D_TOTAL}	mg/kg	4	MCERTS	< 4.0	< 4.0
TPH (C16 - C21) _{EH_CU_1D_TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (C21 - C35) _{EH_CU_1D_TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (C35 - C44) _{EH_CU_1D_TOTAL}	mg/kg	10	NONE	< 10	< 10
TPH Total C5 - C44 _{EH_CU+HS_1D_TOTAL}	mg/kg	10	NONE	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-54252

Project / Site name: Cardiff Road

* 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 *
2253224	HP11	None Supplied	0.00-0.40	Brown loam and sand with vegetation and gravel.
2253225	HP15	None Supplied	0.00-0.40	Brown loam and sand with vegetation and gravel.

Analytical Report Number : 22-54252

Project / Site name: Cardiff Road

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	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.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics

Analytical Report Number : 22-54252

Project / Site name: Cardiff Road

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
AR	Aromatics				
#1	EH_2D_Total but with humics mathematically subtracted				
#2	EH_2D_Total but with fatty acids mathematically subtracted				
_	Operator - understore to separate acronyms (exception for +)				
+	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				

Richard Reece

Enzygo Geoenvironmental Ltd
The Byre
Woodend Lane
Cromhall
Gloucestershire
GL12 8AA

e: richard.reece@enzygo.com

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404

f: 01923 237404

e: reception@i2analytical.com

Analytical Report Number : 22-58123

Project / Site name:	Cardiff Road, Reading	Samples received on:	15/05/2022
Your job number:	CRM 1265 013	Samples instructed on/ Analysis started on:	13/05/2022
Your order number:	CRM 1265 013	Analysis completed by:	19/05/2022
Report Issue Number:	1	Report issued on:	19/05/2022
Samples Analysed:	2 soil samples		


Signed:

Anna Goc
Junior Reporting Specialist
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 only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

Analytical Report Number: 22-58123
Project / Site name: Cardiff Road, Reading
Your Order No: CRM 1265 013

Lab Sample Number				2274236	2274237
Sample Reference				HP12	HP13
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.40	0.00-0.40
Date Sampled				12/05/2022	12/05/2022
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	16
Total mass of sample received	kg	0.001	NONE	1.2	0.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	MWI	MWI

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.5	8.4
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.5	3.1

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80
-----------------------------	-------	-----	--------	--------	--------

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	11	7.4
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3	1.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	11	9.1
Copper (aqua regia extractable)	mg/kg	1	MCERTS	13	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	19	20
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.1	7.8
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	41	46

Analytical Report Number: 22-58123
Project / Site name: Cardiff Road, Reading
Your Order No: CRM 1265 013

Lab Sample Number	2274236	2274237
Sample Reference	HP12	HP13
Sample Number	None Supplied	None Supplied
Depth (m)	0.00-0.40	0.00-0.40
Date Sampled	12/05/2022	12/05/2022
Time Taken	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection Accreditation Status

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6 _{HS,1D,AL}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8 _{HS,1D,AL}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10 _{HS,1D,AL}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12 _{EH,CU,1D,AL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16 _{EH,CU,1D,AL}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aliphatic >EC16 - EC21 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic >EC21 - EC35 _{EH,CU,1D,AL}	mg/kg	8	MCERTS	< 8.0	< 8.0
TPH-CWG - Aliphatic > EC35 - EC44 _{EH,CU,1D,AL}	mg/kg	8.4	NONE	< 8.4	< 8.4
TPH-CWG - Aliphatic (EC5 - EC35) _{EH,CU+HS,1D,AL}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aliphatic (EC5 - EC44) _{EH,CU+HS,1D,AL}	mg/kg	10	NONE	< 10	< 10

TPH-CWG - Aromatic >EC5 - EC7 _{HS,1D,AR}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8 _{HS,1D,AR}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10 _{HS,1D,AR}	mg/kg	0.001	MCERTS	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12 _{EH,CU,1D,AR}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH-CWG - Aromatic >EC12 - EC16 _{EH,CU,1D,AR}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH-CWG - Aromatic >EC16 - EC21 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic >EC21 - EC35 _{EH,CU,1D,AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic > EC35 - EC44 _{EH,CU,1D,AR}	mg/kg	8.4	NONE	< 8.4	< 8.4
TPH-CWG - Aromatic (EC5 - EC35) _{EH,CU+HS,1D,AR}	mg/kg	10	MCERTS	< 10	< 10
TPH-CWG - Aromatic (EC5 - EC44) _{EH,CU+HS,1D,AR}	mg/kg	10	NONE	< 10	< 10

TPH (>C5 - C7) _{HS,1D,TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (>C7 - C8) _{HS,1D,TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (C8 - C10) _{HS,1D,TOTAL}	mg/kg	0.1	MCERTS	< 0.1	< 0.1
TPH (C10 - C12) _{EH,CU,1D,TOTAL}	mg/kg	2	MCERTS	< 2.0	< 2.0
TPH (C12 - C16) _{EH,CU,1D,TOTAL}	mg/kg	4	MCERTS	< 4.0	< 4.0
TPH (C16 - C21) _{EH,CU,1D,TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (C21 - C35) _{EH,CU,1D,TOTAL}	mg/kg	1	MCERTS	< 1.0	< 1.0
TPH (C35 - C44) _{EH,CU,1D,TOTAL}	mg/kg	10	NONE	< 10	< 10
TPH Total C5 - C44 _{EH,CU+HS,1D,TOTAL}	mg/kg	10	NONE	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 22-58123

Project / Site name: Cardiff Road, Reading

* 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 *
2274236	HP12	None Supplied	0.00-0.40	Brown loam and sand with gravel and vegetation.
2274237	HP13	None Supplied	0.00-0.40	Brown loam and sand with gravel and vegetation.

Analytical Report Number : 22-58123

Project / Site name: Cardiff Road, Reading

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
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
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
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
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS

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

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

Acronym	Descriptions
HS	Headspace Analysis
MS	Mass spectrometry
FID	Flame Ionisation Detector
GC	Gas Chromatography
EH	Extractable Hydrocarbons (i.e. everything extracted by the solvent(s))
CU	Clean-up - e.g. by Florisil®, silica gel
1D	GC - Single coil/column gas chromatography
2D	GC-GC - Double coil/column gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics
AR	Aromatics
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted

Analytical Report Number : 22-58123

Project / Site name: Cardiff Road, Reading

Water matrix abbreviations:

Surface Water (SW) Potable Water (PW) Ground Water (GW) Process Waters (PrW) Final Sewage Effluent (FSE) Landfill Leachate (LL)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
_	Operator - understore to separate acronyms (exception for +)				
	Operator to indicate cumulative e.g. EH+HS_Total or EH_CU+HS_Total				
+					