

Mitchell Garrington
Redrow Homes
Faraday Office Park
Basingstoke
Hampshire
RG24 8QQ

CAT/RAN/44161-009

18 October 2021

Windmill Views, Barnham

Dear Mitchell,

We write to report on the verification of the capping placed in the garden of plot 7 at the above site. Eastwood & Partners produced a letter (ref 44161/005, dated 22 September 2020) summarising the remedial requirements for the site following the identification of glass fragments in the topsoil. This letter states that a 450 mm layer of clean soil is required in garden areas over any unsuitable soil (currently deemed to affect plots 3-4, 6-7, 9-15, 33-42 and 47-49), with a geotextile marker layer the base. Asbestos fragments were then later identified in the eastern area of the site and it was recommended that plots in the affected area (plots 12 to 15) should have the capping thickness increased to 600 mm with an anti-dig layer at the base.

Verification of Capping Thickness

We visited site and excavated one verification pit in the rear garden of plot 49 on 24 September 2021. Photographs of the verification pit are enclosed. The following materials were encountered:

Plot	Description	Thickness (mm)	Total Depth (mm)
49	TOPSOIL: Dark brown slightly clayey, slightly gravelly sand. Gravel is fine to medium, sub-rounded to rounded of wood fragments and occasional sandstone.	370	720
	SUBSOIL: Brown/orange slightly gravelly CLAY. Gravel is fine to coarse, sub-rounded to sub-angular of flint with rare brick fragments. Black geotextile marker membrane at base.	350	

The required minimum capping thickness has therefore been achieved.

Capping Material – Topsoil

Directors: P Richardson BSc CEng MICE F1StructE S R Ellis BEng CEng M1StructE MICE C A Topliss BSc CEng CSci CGeol SiLC MICE FGS
S J English BEng CEng M1StructE A R Priest BEng A G Marshall BEng CEng M1StructE
Technical Directors: A Allison BEng M P Chappell BEng IEng AM1StructE K Edwards MSci CGeol FGS
P A Harrison BEng CEng M1StructE C Hodge EngTech MICE A J Kerslake BEng FGS
Senior Associates: S J Mitchell BSc MSc CEng MEI MCIBSE MASHRAE
C A Wood BSc, CEng, M1StructE, MICE M Dyson BSc CEng M1StructE
Associates: A M Cross MEng CEng MICE A Lavelle MEng CEng MICE S R Jackson MEng CEng M1StructE R A Noble BSc FGS
Consultants: S D Preston BEng CEng FICE F1StructE K R Pursall BEng CEng M1StructE

We have been informed that the topsoil used in the capping layer was imported from The Woodhorn Group's Tangmere Composting Site. Import tickets for five loads of topsoil from The Woodhorn Group dated 11 October are enclosed.

The material is a manufactured topsoil and was supplied with certification undertaken by Tim O'Hare Associates LLP in their letter referenced TOHA/20/7135/SS, dated 26 August 2021. This letter reports the results of the testing of one sample of topsoil from the Tangmere Composting Site. It includes details of the chemical and physical properties of the topsoil and the results indicate that the material is suitable for re-use as multipurpose topsoil which will not pose a risk to human health.

A sample of the topsoil was also collected from the verification pit of plot 49 during a previous site visit. This was dispatched to the chemical testing laboratory and tested for a generic suite of common contaminants. A copy of the results (Chemtest 21-34181) is enclosed. These demonstrate that all determinants were recorded below the relevant assessment concentrations and the material is suitable to remain in place.

It is therefore considered that this demonstrates that the soil placed in plot 7 is both chemically and physically suitable.

Capping Material – Subsoil

The subsoil used in the capping layer was site won material. No elevated levels of contaminants were identified during previous rounds of investigation. The natural site-won subsoil was therefore considered suitable for re-use and no further testing of this material was considered necessary.

Conclusion

The material used in the capping is considered to be physically and chemically suitable for use in a residential setting. The capping thickness encountered is also considered to be sufficient and in accordance with the Remediation Strategy. The capping placed in the garden of plot 7 is therefore considered to be satisfactory.

Yours sincerely



Ruth Noble

Associate

Enc. Verification pit photographs

Import tickets

Tim O'Hare Associates 'Topsoil Analysis Report' ref TOHA/21/7135/SS

Chemtest report 21-34181



Verification pit – Plot 7



Capping depth – plot 7



Plot 7 rear garden

Dispatch Note

Bill/Sold To:

Blaze Construction Ltd
93 Leigh Road
Hampshire
Eastleigh
SO50 9DQ

Job Site/Ship To:

Blaze Construction Ltd
Redrow Homes
Blaze Site
Yapton Road
BARNHAM
po22 0ay

Quote No.	Job No.	Salesperson	Manager	Ref
49232	67524	-No Sales Employee-		

DESCRIPTION	QTY / UNIT	UNIT PRICE	EXTENDED PRICE
-------------	------------	------------	----------------

13/10/2021

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

18.40 / Tonnes

Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

Dispatch Note

Bill/Sold To: Blaze Construction Ltd 93 Leigh Road Hampshire Eastleigh SO50 9DQ	Job Site/Ship To: Blaze Construction Ltd Redrow Homes Blaze Site Yapton Road BARNHAM po22 0ay
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Quote No.	Job No.	Salesperson	Manager	Ref
49233	67526	-No Sales Employee-		

DESCRIPTION	QTY / UNIT	UNIT PRICE	EXTENDED PRICE
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13/10/2021

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

19.42 / Tonnes

Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

Dispatch Note

Bill/Sold To:

Blaze Construction Ltd
93 Leigh Road
Hampshire
Eastleigh
SO50 9DQ

Job Site/Ship To:

Blaze Construction Ltd
Redrow Homes
Blaze Site
Yapton Road
BARNHAM
po22 0ay

Quote No.	Job No.	Salesperson	Manager	Ref
49234	67527	-No Sales Employee-		

DESCRIPTION	QTY / UNIT	UNIT PRICE	EXTENDED PRICE
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13/10/2021

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

18.90 / Tonnes

Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

Dispatch Note

Bill/Sold To:

Blaze Construction Ltd
93 Leigh Road
Hampshire
Eastleigh
SO50 9DQ

Job Site/Ship To:

Blaze Construction Ltd
Redrow Homes
Blaze Site
Yapton Road
BARNHAM
po22 0ay

Quote No.	Job No.	Salesperson	Manager	Ref
49235	67528	-No Sales Employee-		

DESCRIPTION	QTY / UNIT	UNIT PRICE	EXTENDED PRICE
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13/10/2021

Container

8 Wheel Tipper

1.00 /

Product

Topsoil BS3882 (20MM)

19.58 / Tonnes

Company Representative (signature)

Company Registration Number: 3629015

Company VAT Number: 816160744

Dispatch Note

Bill/Sold To:

Blaze Construction Ltd
93 Leigh Road
Hampshire
Eastleigh
SO50 9DQ

Job Site/Ship To:

Blaze Construction Ltd
Redrow Homes
Blaze Site
Yapton Road
BARNHAM
po22 0ay

Quote No.	Job No.	Salesperson	Manager	Ref
49236	67529	-No Sales Employee-		

DESCRIPTION	QTY / UNIT	UNIT PRICE	EXTENDED PRICE
13/10/2021			
Container			
8 Wheel Tipper	1.00 /		
Product			
Topsoil BS3882 (20MM)	18.52 / Tonnes		
			88.25
Company Representative (signature)			
Company Registration Number: 3629015		Company VAT Number: 816160744	
Page 5 of 5			

WEIGHBRIDGE TICKET

Ticket No. DO712050

WOODHORN GROUP Ltd

Tangmere Composting Facility

City Fields Industrial Estate

Tangmere

West Sussex

PO20 2FP

EA Permit No:EPR/DB3703HG

Company Reg No.3629015

VAT No.816160744

SIC Code: 38210

Waste Carrier Licence no: CBDU162145

Time In	08:00
Date In	13/10/2021
Time Out	08:17
Date Out	13/10/2021
Vehicle	V9TJT
Carrier	TJ Transport Ltd
License No.	
Client	Blaze Construction Ltd
Address	Blaze Site, Yapton Road, BARNHAM, po22 0ay, SIC Code:
Permit	
Zone	F8
Product	Topsoil BS3882 (20MM)
EWC Code	
1st Weight:	12,760.00 Kg NONE
2nd Weight:	31,160.00 Kg NONE
Net Weight:	18,400.00 Kg

Signature waste depositor

Signature waste receiver

WEIGHBRIDGE TICKET

Ticket No. DO712066

WOODHORN GROUP Ltd

Tangmere Composting Facility

City Fields Industrial Estate

Tangmere

West Sussex

PO20 2FP

EA Permit No:EPR/DB3703HG

Company Reg No.3629015

VAT No.816160744

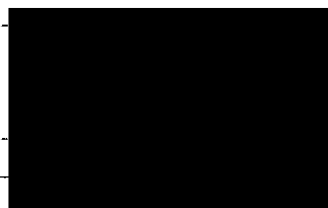
SIC Code: 38210

Waste Carrier Licence no: CBDU162145

Time In	09:26
Date In	13/10/2021
Time Out	09:37
Date Out	13/10/2021
Vehicle	V9TJT
Carrier	TJ Transport Ltd
License No.	
Client	Blaze Construction Ltd
Address	Blaze Site, Yapton Road, BARNHAM, po22 0ay, SIC Code:
Permit	
Zone	F8
Product	Topsoil BS3882 (20MM)
EWC Code	
1st Weight:	12,760.00 Kg NONE
2nd Weight:	32,180.00 Kg NONE
Net Weight:	19,420.00 Kg

Signature waste depositer

Signature waste receiver



WEIGHBRIDGE TICKET

Ticket No. DO712079

WOODHORN GROUP Ltd

Tangmere Composting Facility

City Fields Industrial Estate

Tangmere

West Sussex

PO20 2FP

EA Permit No:EPR/DB3703HG

Company Reg No.3629015

VAT No.816160744

SIC Code: 38210

Waste Carrier Licence no: CBDU162145

Time In	10:30
Date In	13/10/2021
Time Out	10:43
Date Out	13/10/2021
Vehicle	V9TJT
Carrier	TJ Transport Ltd
License No.	
Client	Blaze Construction Ltd
Address	Blaze Site, Yapton Road, BARNHAM, po22 0ay, SIC Code:
Permit	
Zone	F8
Product	Topsoil BS3882 (20MM)
EWC Code	
1st Weight:	12,760.00 Kg NONE
2nd Weight:	31,660.00 Kg NONE
Net Weight:	18,900.00 Kg

Signature waste depositer

Signature waste receiver



WEIGHBRIDGE TICKET

Ticket No. DO712093

WOODHORN GROUP Ltd

Tangmere Composting Facility

City Fields Industrial Estate

Tangmere

West Sussex

PO20 2FP

EA Permit No:EPR/DB3703HG

Company Reg No.3629015

VAT No.816160744

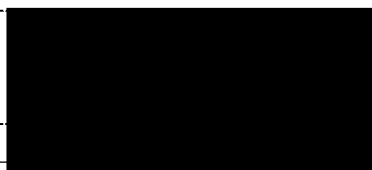
SIC Code: 38210

Waste Carrier Licence no: CBDU162145

Time In	11:39
Date In	13/10/2021
Time Out	11:51
Date Out	13/10/2021
Vehicle	V9TJT
Carrier	TJ Transport Ltd
License No.	
Client	Blaze Construction Ltd
Address	Blaze Site, Yapton Road, BARNHAM, po22 0ay, SIC Code:
Permit	
Zone	F8
Product	Topsoil BS3882 (20MM)
EWC Code	
1st Weight:	12,740.00 Kg NONE
2nd Weight:	32,320.00 Kg NONE
Net Weight:	19,580.00 Kg

Signature waste depositer

Signature waste receiver



WEIGHBRIDGE TICKET

Ticket No. DO712111

WOODHORN GROUP Ltd

Tangmere Composting Facility

City Fields Industrial Estate

Tangmere

West Sussex

PO20 2FP

EA Permit No:EPR/DB3703HG

Company Reg No.3629015

VAT No.816160744

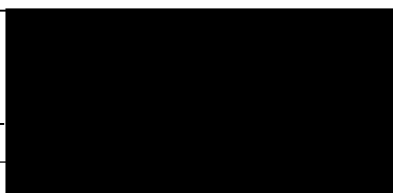
SIC Code: 38210

Waste Carrier Licence no: CBDU162145

Time In	13:30
Date In	13/10/2021
Time Out	13:40
Date Out	13/10/2021
Vehicle	V9TJT
Carrier	TJ Transport Ltd
License No.	
Client	Blaze Construction Ltd
Address	Blaze Site, Yapton Road, BARNHAM, po22 0ay, SIC Code:
Permit	
Zone	F8
Product	Topsoil BS3882 (20MM)
EWC Code	
1st Weight:	12,740.00 Kg NONE
2nd Weight:	31,260.00 Kg NONE
Net Weight:	18,520.00 Kg

Signature waste depositer

Signature waste receiver





Final Report

Report No.: 21-34181-1
Initial Date of Issue: 07-Oct-2021
Client Eastwood & Partners
Client Address: St. Andrews House
23 Kingfield Road
Sheffield
South Yorkshire
S11 9AS
Contact(s): Geo
Ruth Noble
Project 44161 Windmill Views, Barnham
Quotation No.:
Order No.: 44161/04
No. of Samples: 1
Turnaround (Wkdays): 5
Date Approved: 07-Oct-2021
Approved By:

Date Received: 29-Sep-2021
Date Instructed: 01-Oct-2021
Results Due: 07-Oct-2021

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: 44161 Windmill Views, Barnham

Client: Eastwood & Partners	Chemtest Job No.:		21-34181		
Quotation No.:	Chemtest Sample ID.:		1290260		
	Sample Location:		Plot 49		
	Sample Type:		SOIL		
	Top Depth (m):		0.10		
	Date Sampled:		24-Sep-2021		
	Asbestos Lab:		DURHAM		
Determinand	Accred.	SOP	Units	LOD	
ACM Type	U	2192		N/A	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected
Moisture	N	2030	%	0.020	20
Soil Colour	N	2040		N/A	Brown
Other Material	N	2040		N/A	Stones
Soil Texture	N	2040		N/A	Sand
pH	M	2010		4.0	8.2
Arsenic	M	2450	mg/kg	1.0	5.8
Cadmium	M	2450	mg/kg	0.10	0.18
Chromium	M	2450	mg/kg	1.0	9.7
Copper	M	2450	mg/kg	0.50	14
Mercury	M	2450	mg/kg	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	10
Lead	M	2450	mg/kg	0.50	22
Selenium	M	2450	mg/kg	0.20	< 0.20
Zinc	M	2450	mg/kg	0.50	51
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50
Naphthalene	M	2800	mg/kg	0.10	< 0.10
Acenaphthylene	N	2800	mg/kg	0.10	< 0.10
Acenaphthene	M	2800	mg/kg	0.10	< 0.10
Fluorene	M	2800	mg/kg	0.10	< 0.10
Phenanthrene	M	2800	mg/kg	0.10	0.11
Anthracene	M	2800	mg/kg	0.10	< 0.10
Fluoranthene	M	2800	mg/kg	0.10	0.26
Pyrene	M	2800	mg/kg	0.10	0.19
Benzo[a]anthracene	M	2800	mg/kg	0.10	0.17
Chrysene	M	2800	mg/kg	0.10	0.14
Benzo[b]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[k]fluoranthene	M	2800	mg/kg	0.10	< 0.10
Benzo[a]pyrene	M	2800	mg/kg	0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	M	2800	mg/kg	0.10	< 0.10
Dibenz(a,h)Anthracene	N	2800	mg/kg	0.10	< 0.10
Benzo[g,h,i]perylene	M	2800	mg/kg	0.10	< 0.10
Total Of 16 PAH's	N	2800	mg/kg	2.0	< 2.0

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Dibenzo[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

