

## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report

Fera Science Ltd,  
York Biotech Campus  
Sand Hutton,  
York,  
YO41 1LZ,  
United Kingdom



**Tel:** +44 (0) 300 100 0323  
**Email:** Sales@fera.co.uk  
**Website:** [www.fera.co.uk](http://www.fera.co.uk)



Quotation No. 7150 Customer ID: 144640

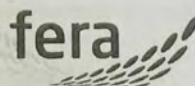
<b>Name</b>	Katie Bruce
<b>Company</b>	AECOM
<b>Address</b>	Sunley House 4 Bedford Park Croydon CR0 2AP
<b>Email</b>	katie.bruce@aecom.com
<b>Tel</b>	+44 203 043 9662 07979 498782

Send Report To: [katie.bruce@aecom.com](mailto:katie.bruce@aecom.com) and [david.dyson@aecom.com](mailto:david.dyson@aecom.com)

Customer Purchase Order No: 60632092

Sample Type	Quantity (g)	Date	Analysis Required	Customer Sample Reference
Grapes		24.9.20	On hold store in freezer	G T C S 2 - P 013
Horseradish		24.9.20	On hold store in freezer	G T C S 2 - P 014
Spinach		24.9.20	On hold store in freezer	G T C S 2 - P 015
<del>Runner Bean</del> Runner Bean	255	28.9.20	On hold store in freezer	G T C S 2 - P 016
<del>Pumpkin</del> Pumpkin	400g	28.9.20	On hold store in freezer	G T C S 2 - P 068
New Potatoes	180	28.9.20	On hold store in freezer	G T C S 2 - P 069
Runner Beans	200	28.9.20	On hold store in freezer	G T C S 2 - P 070

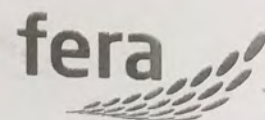
\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions

[illegible]



Fera Science Ltd  
Sand Hutton  
York  
North Yorkshire  
YO41 1LZ

Tel: +44 (0) 300 100 0323  
Email: [Sales@fera.co.uk](mailto:Sales@fera.co.uk)  
Website: [www.fera.co.uk](http://www.fera.co.uk)



## Fera Sample Submission Form

Quotation No. 7150 Customer ID: 144640

### Customer Contact Details

Name	Katie Bruce
Company	AECOM
Address	Sunley House 4 Bedford Park Croydon CR0 2AP
Email	<a href="mailto:katie.bruce@aecom.com">katie.bruce@aecom.com</a>
Tel	+44 203 043 9662 07979 498782

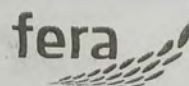
Send Report To: [katie.bruce@aecom.com](mailto:katie.bruce@aecom.com) and [david.dyson@aecom.com](mailto:david.dyson@aecom.com)

Customer Purchase Order No: 60632092

### Sample Details

Sample Type	Quantity (g)	Date	Analysis Required	Customer Sample Reference
Plum tomato	225	28.9.20	On hold store in freezer	GTCS2 - P025
Cabbage	250	28.9.20	On hold store in freezer	GTCS2 - P026
Tomato	210	28.9.20	On hold store in freezer	" - P027
Celery	180	29.9.20	On hold store in freezer	" - P028
French Beans	150	29.9.20	On hold store in freezer	" - P029

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to



Ruby Chard	900	29.9.20	On hold store in freezer	GTCS2 - P030
Spinach	100	29.9.20	On hold store in freezer	GTCS2 - P037
Potato	30	29.9.20	On hold store in freezer	GTCS2 - P038
Tomato	180	29.9.20	On hold store in freezer	GTCS2 - P039
Rhubarb	200	29.9.20	On hold store in freezer	GTCS2 - P040
Cabbage	<del>150</del> 150	29.9.20	On hold store in freezer	GTCS2 - P041
Rhubarb	250	29.9.20	On hold store in freezer	GTCS2 - P042
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	

For information please contact customer service on +44 (0) 300 100 0323 or [Sales@fera.co.uk](mailto:Sales@fera.co.uk)

Please send samples to

Food Group Sample Reception

Fera Science Ltd,  
York Biotech Campus  
Sand Hutton,  
York,  
YO41 1LZ,  
United Kingdom

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to



Fera Science Ltd  
Sand Hutton  
York  
North Yorkshire  
YO41 1LZ

Tel: +44 (0) 300 100 0323  
Email: [Sales@fera.co.uk](mailto:Sales@fera.co.uk)  
Website: [www.fera.co.uk](http://www.fera.co.uk)

Page 1 of 2



# Fera Sample Submission Form

Quotation No. 7150 Customer ID: 144640

## Customer Contact Details

Name	Katie Bruce
Company	AECOM
Address	Sunley House 4 Bedford Park Croydon CR0 2AP
Email	<a href="mailto:katie.bruce@aecom.com">katie.bruce@aecom.com</a>
Tel	+44 203 043 9662 07979 498782

Send Report To: [katie.bruce@aecom.com](mailto:katie.bruce@aecom.com) and [david.dyson@aecom.com](mailto:david.dyson@aecom.com)

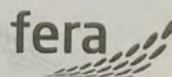
Customer Purchase Order No: 60632092

## Sample Details

Sample Type	Quantity	Date	Analysis Required	Customer Sample Reference
Rhubarb		29.9.20	On hold store in freezer	GTCS2 - P013
Runner Bean			On hold store in freezer	GTCS2 - P014
Beetroot			On hold store in freezer	P015
Kale			On hold store in freezer	P019
Beans			On hold store in freezer	P020
Potato			On hold store in freezer	P021
			On hold store in freezer	

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions

Katie Bruce Aecom  
07979 498782



Page 2 of 2

Apples	29.9.20	On hold store in freezer	GTCS2 - P001
Apples	29.9.20	On hold store in freezer	- P002
Tomatoes	30.9.20	On hold store in freezer	- <del>P006</del> P016
Beans	30.9.20	On hold store in freezer	- P017
Potato		On hold store in freezer	- P007
Horseradish		On hold store in freezer	- P008
Butternut Squash		On hold store in freezer	- P009
Marrow		On hold store in freezer	- P010
Raspberry		On hold store in freezer	- P011
Rhubarb		On hold store in freezer	- P012
Palm Nuts		On hold store in freezer	- P061
Callaloo		On hold store in freezer	- P062
Tomatoes		On hold store in freezer	- P063
Potato		On hold store in freezer	- P064
Grapes	✓	On hold store in freezer	- P03
		On hold store in freezer	
		On hold store in freezer	
		On hold store in freezer	
		On hold store in freezer	
		On hold store in freezer	
		On hold store in freezer	
		On hold store in freezer	

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions

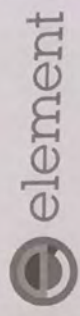






# CHAIN OF CUSTODY

CLIENT: AECOM  
 ADDRESS: Croydon Office  
 PROJECT MANAGER (PM): David Dyson  
 MOBILE: 07979498782  
 PROJECT ID: 60632092  
 SITE: Stage 2 Grenfell



Chain of Custody sheet page ..... of .....

TURNAROUND - please tick  
 10 DAY ☐ 4 DAY ☐ Other ☐  
 5 DAY ☐ 3 DAY ☐

MATRIX:- S=Soil, GW=GroundWater, SW=SurfaceWater, LE=Leachate/Effluent, OW=OtherWater, P=Product/Oil

Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	SGW/SW /LE/OW/P	Date	Time	Depth in Metres	Preservation	Asbestos risk		
										High	Medium	Low
5 TCS 2-P 0 25 soil						28.9.20						✓
5 TCS 2-P 0 26 soil						"						✓
0 27 soil						"						✓
0 55 soil						"						✓
0 56 soil						"						✓
0 57 soil						"						✓
0 58 soil						"						✓
0 67 soil						"						✓
0 68 soil						"						✓
0 69 soil						"						✓
0 70 soil						"						✓
0 71 soil						"						✓
0 72 soil						"						✓
0 49 soil						"						✓
0 50 soil						"						✓
0 51 soil						"						✓
0 52 soil						"						✓
0 53 soil						"						✓
0 54 soil						"						✓

RELINQUISHED BY: K. Bruce  
 Name: AECOM  
 Of: AECOM

28.9.20

RECEIVED BY: K. Bruce  
 Date: 28.9.20  
 Time: 18:15

Health & Safety instructions including known hazards (eg suspected asbestos). Please let us know if samples are heavily contaminated, high PAHs expected, provide PID readings if available

METHOD of SHIPMENT  
 Consignment note No:  
 Courier Company:

SOILS - We are MCERTS accredited for samples predominantly made up of sand, loam and clay (no other matrices). Please request an MCERTS report if required.  
 WATERS - we are accredited for surface and groundwaters (leachates and effluents are accredited for some tests, please see UKAS schedule). Please tick whether analysis is required on settled or shaken samples

## Element Materials Technology











EMT 194991EMT 194992EMT 194993



CHAIN OF CUSTODY										ANALYSIS REQUIRED including SUITE names									
CLIENT: <b>AECOM</b>					If Electronic File Required please select file format below					SAMPLER: <b>Katie Bruce</b>					<b>Batch 2</b> Chain of Custody sheet page 1 of 2				
ADDRESS: <b>CROYDON OFFICE</b>					EQUIS					MOBILE: <b>07979 498782</b>									
PROJECT MANAGER (PM): <b>David Dyson</b>					CROSSTAB					EMAIL REPORT TO: <b>david.dyson@aecom.com</b>									
MOBILE: <b>07799 647173</b>					CLIENT					cc REPORT TO: <b>katie.bruce@aecom.com</b>									
PROJECT ID: <b>60632 092</b>					AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)					INVOICE TO: (if different to report)					QUOTE NUMBER: _____ P.O. No: _____				
SITE: <b>Grenfell Stage 2</b>					AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)					P.O. No: _____					Chain of Custody sheet page 1 of 2				
TURNAROUND - please tick					FOR LABORATORY USE ONLY					Asbestos risk					SOILS - We are MCERTS accredited for samples predominantly made up of sand, loam and clay (no other matrices). Please request an MCERTS report if required.				
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/>					AVERAGE COOL BOX TEMP (if required):					High Medium Low					WATERS - we are accredited for surface and groundwaters (leachates and effluents are accredited for some tests, please see UKAS schedule). Please tick whether analysis is required on settled or shaken samples				
5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>					SAMPLE RECEIPT CONDITION:														
MATRIX:- S=Soil, GW=GroundWater, SW=SurfaceWater, L/E=Leachate/Effluent, OW=OtherWater, P=Product/Oil																			
Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW L/E/OW/P	Date	Time	Depth in Metres	Preservation	High	Medium	Low	Suite 1	Suite 1 & 2	Suite 2	On Hold (long term)			
GTCS2-S261a					S	23/10/20		0-0.02											
-S261b																			
-S264a																			
-S264b																			
-S265a																			
-S265b																			
-S266a																			
-S267a																			
-S267b																			
-S268a								0-0.2											
-S268b																			
-S269a																			
-S269b																			
-S270a																			
-S270b																			
-S266b					S			0-0.02											
GTCS2-DUP16a					S	23/10/20		0-0.2											
-DUP16b					S	"		0-0.2											
RELINQUISHED BY: <b>K Bruce Aecom</b>										RECEIVED BY:					METHOD of SHIPMENT				
Name: <b>K Bruce Aecom</b>										Date: <b>23/10/20</b>					Consignment note No:				
Of: <b>Aecom</b>										Time: <b>13:15</b>					Courier Company:				
Health & Safety instructions including known hazards (eg suspected asbestos). Please let us know if samples are heavily contaminated, high PAHs expected, provide PID readings if available																			

CHAIN OF CUSTODY										ANALYSIS REQUIRED including SUITE names									
CLIENT: <b>AECOM</b>					If Electronic File Required please select file format below					SAMPLER: <b>Katie Bruce</b>					<b>Batch 2</b> Chain of Custody sheet page 2 of 2				
ADDRESS: <b>CROYDON OFFICE</b>					EQUIS					MOBILE: <b>07979 498782</b>									
PROJECT MANAGER (PM): <b>DAVID DYSON</b>					CROSSTAB					EMAIL REPORT TO: <b>david.dyson@aecom.com</b>									
MOBILE: <b>07799 647173</b>					CLIENT					cc REPORT TO: <b>katie.bruce@aecom.com</b>									
PROJECT ID: <b>60632 092</b>					AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)					INVOICE TO: (if different to report)					QUOTE NUMBER: _____ P.O. No: _____				
SITE: <b>Grenfell Stage 2</b>					AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)					P.O. No: _____					Chain of Custody sheet page 2 of 2				
TURNAROUND - please tick					FOR LABORATORY USE ONLY					Asbestos risk					SOILS - We are MCERTS accredited for samples predominantly made up of sand, loam and clay (no other matrices). Please request an MCERTS report if required.				
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/>					AVERAGE COOL BOX TEMP (if required):					High Medium Low					WATERS - we are accredited for surface and groundwaters (leachates and effluents are accredited for some tests, please see UKAS schedule). Please tick whether analysis is required on settled or shaken samples				
5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>					SAMPLE RECEIPT CONDITION:														
MATRIX:- S=Soil, GW=GroundWater, SW=SurfaceWater, L/E=Leachate/Effluent, OW=OtherWater, P=Product/Oil																			
Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW L/E/OW/P	Date	Time	Depth in Metres	Preservation	High	Medium	Low	Suite 1	Suite 1 + 2	Suite 2	On Hold (long term)			
GTCS2-S351a						23/10/20		0-0.02											
GTCS2-S351b																			
-S352a																			
-S352b																			
-S353a																			
-S353b																			
-S354a																			
-S354b																			
-S355a																			
-S355b																			
GTCS2-DUP21A						23/10/20		0-0.02											
DUP21B						"		"											
RELINQUISHED BY: <b>K Bruce Aecom</b>										RECEIVED BY:					METHOD of SHIPMENT				
Name: <b>K Bruce Aecom</b>										Date: <b>23/10/20</b>					Consignment note No:				
Of: <b>Aecom</b>										Time: <b>13:15</b>					Courier Company:				
Health & Safety instructions including known hazards (eg suspected asbestos). Please let us know if samples are heavily contaminated, high PAHs expected, provide PID readings if available																			



## CHAIN OF CUSTODY

CLIENT: <b>Aecom</b>		If Electronic File Required please select file format below		SAMPLER: <b>Kahle Bruce</b>		Batch 3	
ADDRESS: <b>Croydon Office</b>		EQUIS		MOBILE: <b>07979 498782</b>		element	
PROJECT MANAGER (PM): <b>David Dyson</b>		CROSSTAB		EMAIL REPORT TO: <b>david.dyson@aecom.com</b>			
MOBILE: <b>07799 647173</b>		CLIENT		cc REPORT TO: <b>kahle.bruce@aecom.com</b>			
PROJECT ID: <b>60632 092</b>		AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)		INVOICE TO: (if different to report)			
SITE: <b>Grenfell Stage 2</b>				QUOTE NUMBER:		P.O. No:	
TURNAROUND - please tick		FOR LABORATORY USE ONLY		ANALYSIS REQUIRED including SUITE names		Chain of Custody sheet page 1 of 2	
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/>		AVERAGE COOL BOX TEMP. (if required):		Asbestos risk		SOILS - We are MCERTS accredited for samples predominantly made up of sand, loam and clay (no other matrices). Please request an MCERTS report if required.	
5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>		SAMPLE RECEIPT CONDITION:		High Medium Low		WATERS - we are accredited for surface and groundwaters (leachates and effluents are accredited for some tests, please see UKAS schedule). Please tick whether analysis is required on settled or shaken samples	
MATRIX: S=Soil, GW=Groundwater, SW=SurfaceWater, L/E=Leachate/Effluent, OW=OtherWater, P=Product/Oil				Suite 1 Suite 1 + TOC Suite 2 Onhold (long term)			
Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW L/E/OW/P	Date	Time
GTC S2-S262a					S	23.10.20	0-0.01
-S262b					S		
-S263a					S		
-S263b					S		
-S356a					S	23.10.20	0-0.02
-S356b							
-S357a							
-S357b							
-S358a							
-S358b							
-S359a							
-S359b							
-S360a							
-S360b							
GTC S2-S035a					S	26.10.20	0-0.02
GTC S2-S035b					S	26.10.20	0-0.02
RELINQUISHED BY:		Name: <b>K Bruce</b>		Date: <b>26.10.20</b>		Time: <b>13:40</b>	
Name: <b>AECOM</b>		Date:		Time:		METHOD of SHIPMENT	
Of:		Date:		Time:		Consignment note No:	
		Date:		Time:		Courier Company:	

Health & Safety instructions including known hazards (eg suspected asbestos). Please let us know if samples are heavily contaminated, high PAHs expected, provide PID readings if available

## Element Materials Technology

Unit 3 Deeside Point, Zone 3 Deeside Industrial Park, Deeside, CH5 2UA Tel: 0044 1244 833 780

Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

EMT 194823

## CHAIN OF CUSTODY

CLIENT: <b>AECOM</b>		If Electronic File Required please select file format below		SAMPLER: <b>Kahle Bruce</b>		Batch 3	
ADDRESS: <b>CROYDON OFFICE</b>		EQUIS		MOBILE: <b>07979 498782</b>		element	
PROJECT MANAGER (PM): <b>David Dyson</b>		CROSSTAB		EMAIL REPORT TO: <b>kahle.bruce@aecom.com</b>			
MOBILE: <b>07799 647173</b>		CLIENT		cc REPORT TO: <b>david.dyson@aecom.com</b>			
PROJECT ID: <b>60632 092</b>		AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)		INVOICE TO: (if different to report)			
SITE: <b>Grenfell Stage 2</b>				QUOTE NUMBER:		P.O. No:	
TURNAROUND - please tick		FOR LABORATORY USE ONLY		ANALYSIS REQUIRED including SUITE names		Chain of Custody sheet page 2 of 2	
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/>		AVERAGE COOL BOX TEMP. (if required):		Asbestos risk		SOILS - We are MCERTS accredited for samples predominantly made up of sand, loam and clay (no other matrices). Please request an MCERTS report if required.	
5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>		SAMPLE RECEIPT CONDITION:		High Medium Low		WATERS - we are accredited for surface and groundwaters (leachates and effluents are accredited for some tests, please see UKAS schedule). Please tick whether analysis is required on settled or shaken samples	
MATRIX: S=Soil, GW=Groundwater, SW=SurfaceWater, L/E=Leachate/Effluent, OW=OtherWater, P=Product/Oil				Suite 1 Suite 1 + TOC Suite 2 Onhold (long term)			
Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW L/E/OW/P	Date	Time
GTC S2-S111a					S	26.10.20	0-0.02
-S111b							
-S112a							
-S112b							
-S113a							
-S113b							
-S115a							
-S115b							
-S116a							
-S116b							
-S117a							
-S117b							
GTC S2-S031a							
S031b							
S032a							
S032b							
S033a							
S033b							
S034a							
S034b							
RELINQUISHED BY:		Name: <b>Kahle Bruce</b>		Date: <b>26.10.20</b>		Time: <b>13:40</b>	
Name: <b>AECOM</b>		Date:		Time:		METHOD of SHIPMENT	
Of:		Date:		Time:		Consignment note No:	
		Date:		Time:		Courier Company:	

Health & Safety instructions including known hazards (eg suspected asbestos). Please let us know if samples are heavily contaminated, high PAHs expected, provide PID readings if available

## Element Materials Technology

Unit 3 Deeside Point, Zone 3 Deeside Industrial Park, Deeside, CH5 2UA Tel: 0044 1244 833 780

Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

EMT 194825







CHAIN OF CUSTODY										Batch 5	
CLIENT: AECOM				ADDRESS: Craydon Office				If Electronic File Required please select file format below		SAMPLER: Katie Bruce	
PROJECT MANAGER (PM): David Dyson				MOBILE: 07999 647 173				EQUIS		MOBILE: 07999 498782	
PROJECT ID: 60632092				SITE: Grenfell Stage 2				CROSSTAB		EMAIL REPORT TO: david.dyson@aecom.com	
AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)				CLIENT				cc REPORT TO: katie.bruce@aecom.com		INVOICE TO: (if different to report)	
TURNAROUND - please tick				FOR LABORATORY USE ONLY				ANALYSIS REQUIRED including SUITE names		Chain of Custody sheet page 1 of 2	
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/>				AVERAGE COOL BOX TEMP. (if required):				Asbestos risk		SOILS - We are MCERTS accredited for samples predominantly made up of sand, loam and clay (no other matrices). Please request an MCERTS report. If required WATERS - we are accredited for surface and groundwaters (leachates and effluents are accredited for some tests, please see UKAS schedule). Please tick whether analysis is required on settled or shaken samples	
5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>				SAMPLE RECEIPT CONDITION:				High Medium Low		Suite 1 Suite 2 On Hold	
MATRIX: S=Soil, GW=GroundWater, SW=SurfaceWater, L/E=Leachate/Effluent, OW=OtherWater, P=Product/Oil				Date Time Depth in Metres Preservation							
Sample ID				AGS SAMP. TYPE AGS SAMP. REF Shaken Settled S/GW/SW L/E/OW/P							
GTCS2-S051a				S 27.10.20 0-0.02							
S051b											
S052a											
S052b											
S053a											
S053b											
S054a											
S054b											
S055a											
S055b											
GTCS2-S062a				28.10.20 0-0.02							
S062b											
S063a											
S063b											
S064a											
S064b											
S065a											
S065b											
DUP04a											
DUP04b											
RELINQUISHED BY: K. Bruce AECOM				Date: 28.10.20 Time: 12:00				RECEIVED BY:		METHOD OF SHIPMENT	
Name: K. Bruce				Date: 28.10.20 Time: 12:00				Name:		Consignment note No:	
Of: AECOM				Date: Time:				Of:		Courier Company:	

Health & Safety instructions including known hazards (eg suspected asbestos). Please let us know if samples are heavily contaminated, high PAHs expected, provide PID readings if available

Element Materials Technology  
Unit 3 Deeside Point, Zone 3 Deeside Industrial Park, Deeside, CH5 2UA Tel: 0044 1244 833 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

EMT 194829

CHAIN OF CUSTODY										Batch 5	
CLIENT: AECOM				ADDRESS: Craydon Office				If Electronic File Required please select file format below		SAMPLER: Katie Bruce	
PROJECT MANAGER (PM): David Dyson				MOBILE: 07999 647 173				EQUIS		MOBILE: 07999 498782	
PROJECT ID: 60632092				SITE: Grenfell Stage 2				CROSSTAB		EMAIL REPORT TO: david.dyson@aecom.com	
AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)				CLIENT				cc REPORT TO: katie.bruce@aecom.com		INVOICE TO: (if different to report)	
TURNAROUND - please tick				FOR LABORATORY USE ONLY				ANALYSIS REQUIRED including SUITE names		Chain of Custody sheet page 2 of 2	
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/>				AVERAGE COOL BOX TEMP. (if required):				Asbestos risk		SOILS - We are MCERTS accredited for samples predominantly made up of sand, loam and clay (no other matrices). Please request an MCERTS report. If required WATERS - we are accredited for surface and groundwaters (leachates and effluents are accredited for some tests, please see UKAS schedule). Please tick whether analysis is required on settled or shaken samples	
5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>				SAMPLE RECEIPT CONDITION:				High Medium Low		Suite 1 Suite 2 On Hold	
MATRIX: S=Soil, GW=GroundWater, SW=SurfaceWater, L/E=Leachate/Effluent, OW=OtherWater, P=Product/Oil				Date Time Depth in Metres Preservation							
Sample ID				AGS SAMP. TYPE AGS SAMP. REF Shaken Settled S/GW/SW L/E/OW/P							
GTCS2-S041a				S 28.10.20 0-0.02							
S041b											
S042a											
S042b											
S043a											
S043b											
S048a											
S048b											
S049a											
S049b											
S050a											
S050b											
DUP03a											
DUP03b											
RELINQUISHED BY: K. Bruce AECOM				Date: 28.10.20 Time: 12:00				RECEIVED BY:		METHOD OF SHIPMENT	
Name: K. Bruce				Date: 28.10.20 Time: 12:00				Name:		Consignment note No:	
Of: AECOM				Date: Time:				Of:		Courier Company:	

Health & Safety instructions including known hazards (eg suspected asbestos). Please let us know if samples are heavily contaminated, high PAHs expected, provide PID readings if available

Element Materials Technology  
Unit 3 Deeside Point, Zone 3 Deeside Industrial Park, Deeside, CH5 2UA Tel: 0044 1244 833 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

EMT 192274



EMT 1967651244 833 760196766 EMT0 1244 833 780











**Element**  
Unit 3 Derriside Point, Zone 3 Derriside Industrial Park, Derriside, CH5 2JA Tel: 0944 1244 833 780  
Fax: 0944 1244 833 780  
E-mail: [info@element.co.uk](mailto:info@element.co.uk)  
Web: [www.element.co.uk](http://www.element.co.uk)  
Head Office: Element Materials Technology Environmental UK Limited, 10 Lear Corporation Place, London SW1W 6BN Company Reg No: 11374115







[illegible]







**Eleman**  
Zone 1 Deside Industrial Park, Deside, CHS 2UA  
Tel 0044 1244 833 750  
E-mail: [info@eleman.com](mailto:info@eleman.com) Company Reg No 11371615



**CHAIN OF CUSTODY**

CLIENT: **ARECOM** ADDRESS: **Craydon Office**

PROJECT MANAGER: **David Dyson** MOBILE: **07799 647 173**

PROJECT ID: **07799 647 173** CLIENT: **David Dyson**

SITE: **Greenfield Stage 2** TURNAROUND - phase 561 (SUSPENDED MAY APPLY)

10 DAY 4 DAY 3 DAY

ANALYSIS REQUIRED INCLUDING SUITE NAMES

ASBESTOS risk

RECEIVED BY: **K. Bruce** DATE: **9/11/20** TIME: **16:00**

METHOD OF SHIPMENT: **By Road**

Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high PAINs expected, provide PFD readings if available.

Representative Sample Temperature: This should represent the in-ground sample temperature of subgrade material at time of sampling, and not the ambient air.

EMT 197383

Unit 3 Denside Park, Zone 3 Denside Industrial Park, Denside, CH5 2UA Tel: 0544 1244 833 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

**CHAIN OF CUSTODY**

CLIENT: **ARECOM** ADDRESS: **Craydon Office**

PROJECT MANAGER: **David Dyson** MOBILE: **07799 647 173**

PROJECT ID: **07799 647 173** CLIENT: **David Dyson**

SITE: **Greenfield Stage 2** TURNAROUND - phase 561 (SUSPENDED MAY APPLY)

10 DAY 4 DAY 3 DAY

ANALYSIS REQUIRED INCLUDING SUITE NAMES

ASBESTOS risk

RECEIVED BY: **K. Bruce** DATE: **9/11/20** TIME: **16:00**

METHOD OF SHIPMENT: **By Road**

Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high PAINs expected, provide PFD readings if available.

Representative Sample Temperature: This should represent the in-ground sample temperature of subgrade material at time of sampling, and not the ambient air.

EMT 197382

Unit 3 Denside Park, Zone 3 Denside Industrial Park, Denside, CH5 2UA Tel: 0544 1244 833 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

**CHAIN OF CUSTODY**

CLIENT: **ARECOM** ADDRESS: **Craydon Office**

PROJECT MANAGER: **David Dyson** MOBILE: **07799 647 173**

PROJECT ID: **07799 647 173** CLIENT: **David Dyson**

SITE: **Greenfield Stage 2** TURNAROUND - phase 561 (SUSPENDED MAY APPLY)

10 DAY 4 DAY 3 DAY

ANALYSIS REQUIRED INCLUDING SUITE NAMES

ASBESTOS risk

RECEIVED BY: **K. Bruce** DATE: **9/11/20** TIME: **16:00**

METHOD OF SHIPMENT: **By Road**

Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high PAINs expected, provide PFD readings if available.

Representative Sample Temperature: This should represent the in-ground sample temperature of subgrade material at time of sampling, and not the ambient air.

EMT 197384

Unit 3 Denside Park, Zone 3 Denside Industrial Park, Denside, CH5 2UA Tel: 0544 1244 833 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415















**Batch 17**  
**element**

**CHAIN OF CUSTODY**

CLIENT: **Accon** **Crayon** **Office**

PROJECT MANAGER: **David Dyson**

MOBILE: **07799 6173**

PROJECT ID: **60632092**

SITE: **Greenfield Stage 2**

TURNAROUND - please tick (PURCHASES MAY APPLY)

10 DAY ☐ 4 DAY ☐ 3 DAY ☐ Other ☐

ANALYSIS REQUIRED INCLUDING SUITE names

ADDITIONAL RISK

Low Medium High

DATE: **13/11/20** TIME: **15:30**

RECEIVED BY: **Kate Bruce** **Accon**

DATE: **13/11/20** TIME: **15:30**

METHOD OF SHIPMENT: **Carrier Company**

Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high pH or asbestos, provide PFD readings if available.

Representative Sample Temperature: This should represent the in-ground sample temperature of subgrade material at time of sampling, and not the ambient air.

EMT 196608

Element  
Unit 3 Donatella Park, Zone 3 Donatella Industrial Park, Donatella, CHS 21A. Tel: 0044 1244 832 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Gower Street, London, W1P 6EN. Company Reg No: 11371415

**Batch 17**  
**element**

**CHAIN OF CUSTODY**

CLIENT: **Accon** **Crayon** **Office**

PROJECT MANAGER: **David Dyson**

MOBILE: **07799 6173**

PROJECT ID: **60632092**

SITE: **Greenfield Stage 2**

TURNAROUND - please tick (PURCHASES MAY APPLY)

10 DAY ☐ 4 DAY ☐ 3 DAY ☐ Other ☐

ANALYSIS REQUIRED INCLUDING SUITE names

ADDITIONAL RISK

Low Medium High

DATE: **13/11/20** TIME: **15:30**

RECEIVED BY: **Kate Bruce** **Accon**

DATE: **13/11/20** TIME: **15:30**

METHOD OF SHIPMENT: **Carrier Company**

Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high pH or asbestos, provide PFD readings if available.

Representative Sample Temperature: This should represent the in-ground sample temperature of subgrade material at time of sampling, and not the ambient air.

EMT 197398

Element  
Unit 3 Donatella Park, Zone 3 Donatella Industrial Park, Donatella, CHS 21A. Tel: 0044 1244 832 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Gower Street, London, W1P 6EN. Company Reg No: 11371415

**Batch 17**  
**element**

**CHAIN OF CUSTODY**

CLIENT: **Accon** **Crayon** **Office**

PROJECT MANAGER: **David Dyson**

MOBILE: **07799 6173**

PROJECT ID: **60632092**

SITE: **Greenfield Stage 2**

TURNAROUND - please tick (PURCHASES MAY APPLY)

10 DAY ☐ 4 DAY ☐ 3 DAY ☐ Other ☐

ANALYSIS REQUIRED INCLUDING SUITE names

ADDITIONAL RISK

Low Medium High

DATE: **13/11/20** TIME: **15:30**

RECEIVED BY: **Kate Bruce** **Accon**

DATE: **13/11/20** TIME: **15:30**

METHOD OF SHIPMENT: **Carrier Company**

Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high pH or asbestos, provide PFD readings if available.

Representative Sample Temperature: This should represent the in-ground sample temperature of subgrade material at time of sampling, and not the ambient air.

EMT 197400

Element  
Unit 3 Donatella Park, Zone 3 Donatella Industrial Park, Donatella, CHS 21A. Tel: 0044 1244 832 780  
Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Gower Street, London, W1P 6EN. Company Reg No: 11371415















CHAIN OF CUSTODY										REPRESENTATIVE SAMPLE TEMPERATURE (°C)										Batch 21																																																																																																																																																																																																																					
CLIENT: <b>Aecom</b>					ADDRESS: <b>Croydon Office</b>					If electronic file required please select file format below					SAMPLER: <b>Katie Bruce</b>					element																																																																																																																																																																																																																					
PROJECT MANAGER: <b>David Dyson</b>					MOBILE: <b>07799 647 173</b>					EQUIS					MOBILE: <b>07799 498782</b>																																																																																																																																																																																																																										
PROJECT ID: <b>60632 092</b>					SITE: <b>Grenfell Stage 2</b>					CROSSTAB					cc REPORT TO: <b>David Dyson@aecan.com</b>																																																																																																																																																																																																																										
AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)					CLIENT					INVOICE TO: (if different to report)					QUOTE NUMBER:					P.O. No:																																																																																																																																																																																																																					
TURNAROUND - please tick (SURCHARGES MAY APPLY)										ANALYSIS REQUIRED including SUITE names										Chain of Custody sheet page 1 of 2																																																																																																																																																																																																																					
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/> 5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>										All waters - tick for samples to be tested shaken or settled FOR LABORATORY USE ONLY AVERAGE COOL BOX TEMP. (if required): SAMPLE RECEIPT CONDITION:										Asbestos risk High Medium Low																																																																																																																																																																																																																					
MATRIX: S=Soil, GW=GroundWater, SW=SurfaceWater, LE=Leachate/Effluent, OW=OtherWater, P=Product/Oil																																																																																																																																																																																																																																									
<table border="1"> <thead> <tr> <th>Sample ID</th> <th>AGS SAMP TYPE</th> <th>AGS SAMP REF</th> <th>Shaken</th> <th>Settled</th> <th>S/GW/SW LE/OW/P</th> <th>Date</th> <th>Time</th> <th>Depth in Metres</th> <th>Preservation</th> </tr> </thead> <tbody> <tr><td>GTC S2-SO21a</td><td></td><td></td><td></td><td></td><td>S</td><td>19.11.20</td><td>0-0.02</td><td></td><td></td></tr> <tr><td>SO21b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO22a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO22b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO23a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO23b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO24a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO24b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO25a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO25b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO26a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO26b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO27a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO27b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO28a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO28b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO29a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO29b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO30a</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SO30b</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>										Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW LE/OW/P	Date	Time	Depth in Metres	Preservation	GTC S2-SO21a					S	19.11.20	0-0.02			SO21b										SO22a										SO22b										SO23a										SO23b										SO24a										SO24b										SO25a										SO25b										SO26a										SO26b										SO27a										SO27b										SO28a										SO28b										SO29a										SO29b										SO30a										SO30b																				SUITE 1 SUITE 1+TOC SUITE 2 On Hold			
Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW LE/OW/P	Date	Time	Depth in Metres	Preservation																																																																																																																																																																																																																																
GTC S2-SO21a					S	19.11.20	0-0.02																																																																																																																																																																																																																																		
SO21b																																																																																																																																																																																																																																									
SO22a																																																																																																																																																																																																																																									
SO22b																																																																																																																																																																																																																																									
SO23a																																																																																																																																																																																																																																									
SO23b																																																																																																																																																																																																																																									
SO24a																																																																																																																																																																																																																																									
SO24b																																																																																																																																																																																																																																									
SO25a																																																																																																																																																																																																																																									
SO25b																																																																																																																																																																																																																																									
SO26a																																																																																																																																																																																																																																									
SO26b																																																																																																																																																																																																																																									
SO27a																																																																																																																																																																																																																																									
SO27b																																																																																																																																																																																																																																									
SO28a																																																																																																																																																																																																																																									
SO28b																																																																																																																																																																																																																																									
SO29a																																																																																																																																																																																																																																									
SO29b																																																																																																																																																																																																																																									
SO30a																																																																																																																																																																																																																																									
SO30b																																																																																																																																																																																																																																									
RELINQUISHED BY: <b>Katie Bruce Aecom</b>										RECEIVED BY:										METHOD OF SHIPMENT																																																																																																																																																																																																																					
Name: <b>Katie Bruce</b>										Name:										Consignment note No:																																																																																																																																																																																																																					
Date: <b>19.11.20</b>										Date:										Courier Company:																																																																																																																																																																																																																					
Of: <b>Aecom</b>										Of:																																																																																																																																																																																																																															
Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high PAHs expected, provide PID readings if available. Representative Sample Temperature: this should represent the in-ground sample temperature of soil/groundwater at time of sampling, and not the ambient air.																																																																																																																																																																																																																																									

**Element**  
 Unit 3 Deeside Point, Zone 3 Deeside Industrial Park, Deeside, CH5 2UA Tel: 0044 1244 833 780  
 Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

**EMT 197641**

CHAIN OF CUSTODY										REPRESENTATIVE SAMPLE TEMPERATURE (°C)										Batch 21																																	
CLIENT: <b>Aecom</b>					ADDRESS: <b>Croydon Office</b>					If electronic file required please select file format below					SAMPLER: <b>Katie Bruce</b>					element																																	
PROJECT MANAGER: <b>David Dyson</b>					MOBILE: <b>07799 647 173</b>					EQUIS					MOBILE: <b>07799 498782</b>																																						
PROJECT ID: <b>60632 092</b>					SITE: <b>Grenfell Stage 2</b>					CROSSTAB					cc REPORT TO: <b>David Dyson@aecan.com</b>																																						
AGS (please also fill in AGS SAMP. TYPE & SAMP. REF below)					CLIENT					INVOICE TO: (if different to report)					QUOTE NUMBER:					P.O. No:																																	
TURNAROUND - please tick (SURCHARGES MAY APPLY)										ANALYSIS REQUIRED including SUITE names										Chain of Custody sheet page 2 of 2																																	
10 DAY <input type="checkbox"/> 4 DAY <input type="checkbox"/> Other <input type="checkbox"/> 5 DAY <input type="checkbox"/> 3 DAY <input type="checkbox"/>										All waters - tick for samples to be tested shaken or settled FOR LABORATORY USE ONLY AVERAGE COOL BOX TEMP. (if required): SAMPLE RECEIPT CONDITION:										Asbestos risk High Medium Low																																	
MATRIX: S=Soil, GW=GroundWater, SW=SurfaceWater, LE=Leachate/Effluent, OW=OtherWater, P=Product/Oil																																																					
<table border="1"> <thead> <tr> <th>Sample ID</th> <th>AGS SAMP TYPE</th> <th>AGS SAMP REF</th> <th>Shaken</th> <th>Settled</th> <th>S/GW/SW LE/OW/P</th> <th>Date</th> <th>Time</th> <th>Depth in Metres</th> <th>Preservation</th> </tr> </thead> <tbody> <tr><td>GTC S2-Dup02a</td><td></td><td></td><td></td><td></td><td>S</td><td>19.11.20</td><td>0-0.02</td><td></td><td></td></tr> <tr><td>GTC S2-Dup02b</td><td></td><td></td><td></td><td></td><td>S</td><td>19.11.20</td><td>"</td><td></td><td></td></tr> </tbody> </table>										Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW LE/OW/P	Date	Time	Depth in Metres	Preservation	GTC S2-Dup02a					S	19.11.20	0-0.02			GTC S2-Dup02b					S	19.11.20	"													SUITE 1 SUITE 1+TOC SUITE 2 On Hold		x 5 containers each " "	
Sample ID	AGS SAMP TYPE	AGS SAMP REF	Shaken	Settled	S/GW/SW LE/OW/P	Date	Time	Depth in Metres	Preservation																																												
GTC S2-Dup02a					S	19.11.20	0-0.02																																														
GTC S2-Dup02b					S	19.11.20	"																																														
RELINQUISHED BY: <b>Katie Bruce Aecom</b>										RECEIVED BY:										METHOD OF SHIPMENT																																	
Name: <b>Katie Bruce</b>										Name:										Consignment note No:																																	
Date: <b>19.11.20</b>										Date:										Courier Company:																																	
Of: <b>Aecom</b>										Of:																																											
Health & Safety instructions including known hazards (e.g. suspected asbestos). Please let us know if samples are heavily contaminated e.g. high PAHs expected, provide PID readings if available. Representative Sample Temperature: this should represent the in-ground sample temperature of soil/groundwater at time of sampling, and not the ambient air.																																																					

**Element**  
 Unit 3 Deeside Point, Zone 3 Deeside Industrial Park, Deeside, CH5 2UA Tel: 0044 1244 833 780  
 Reg Office: Element Materials Technology Environmental UK Limited, 10 Lower Grosvenor Place, London, SW1W 0EN Company Reg No: 11371415

**EMT 197642**



Fera Science Ltd  
Sand Hutton  
York  
North Yorkshire  
YO41 1LZ

Tel: +44 (0) 300 100 0323  
Email: [Sales@fera.co.uk](mailto:Sales@fera.co.uk)  
Website: [www.fera.co.uk](http://www.fera.co.uk)



Analysis required  
to be emitted by  
David Dyson.

### Fera Sample Submission Form

Quotation No. 7150 Customer ID: 144640

#### Customer Contact Details

Name	Katie Bruce
Company	AECOM
Address	Sunley House 4 Bedford Park Croydon CR0 2AP
Email	<a href="mailto:katie.bruce@aecom.com">katie.bruce@aecom.com</a>
Tel	+44 203 043 9662 07979 498782

Send Report To: [katie.bruce@aecom.com](mailto:katie.bruce@aecom.com) and [david.dyson@aecom.com](mailto:david.dyson@aecom.com)

Customer Purchase Order No: 60632092

#### Sample Details

Sample Type	Quantity	Date	Analysis Required	Customer Sample Reference
Soil	2	11.11.20	On hold store in freezer	GTCS2 - S381a 0-0.02m
Soil	2	11.11.20	On hold store in freezer	GTCS2 - S381b 0-0.02m
Soil	2	11.11.20	On hold store in freezer	GTCS2 - S381a 0-0.2m
Soil	2	11.11.20	On hold store in freezer	GTCS2 - S381b 0-0.2m
<del>Soil</del>			On hold store in freezer	PTO

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions



Soil	2	11.11.20	On hold store in freezer	GTCS2 - S381a 0.5 - 0.6m
Soil	2	11.11.20	On hold store in freezer	GTCS2 - S381b 0.5 - 0.6m
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	

For information please contact customer service on +44 (0) 300 100 0323 or [Sales@fera.co.uk](mailto:Sales@fera.co.uk)

Please send samples to Food Group Sample Reception

Fera Science Ltd,  
York Biotech Campus  
Sand Hutton,  
York,  
YO41 1LZ,  
United Kingdom

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions



Fera Science Ltd  
Sand Hutton  
York  
North Yorkshire  
YO41 1LZ

Tel: +44 (0) 300 100 0323  
Email: [Sales@fera.co.uk](mailto:Sales@fera.co.uk)  
Website: [www.fera.co.uk](http://www.fera.co.uk)



Analysis schedule  
will be emailed  
by David Dyson  
of AECOM

# Fera Sample Submission Form

Quotation No. 7150 Customer ID: 144640

## Customer Contact Details

Name	Katie Bruce
Company	AECOM
Address	Sunley House 4 Bedford Park Croydon CR0 2AP
Email	katie.bruce@aecom.com
Tel	+44 203 043 9662 07979 498782

Send Report To: [katie.bruce@aecom.com](mailto:katie.bruce@aecom.com) and [david.dyson@aecom.com](mailto:david.dyson@aecom.com)

Customer Purchase Order No: 60632092

## Sample Details

Sample Type	Quantity Jars	Date	Analysis Required	Customer Sample Reference
Soil	x 2	17.11.20	On hold store in freezer	GTCS2 - S131 a 0-0.02
Soil	x 2	17.11.20	On hold store in freezer	GTCS2 - S131 b 0-0.2
"	x 2	"	On hold store in freezer	GTCS2 - S133 a 0-0.2
"	x 2	"	On hold store in freezer	GTCS2 - S133 b 0-0.2
"	x 2	"	On hold store in freezer	GTCS2 - S135 a 0-0.2

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions



Soil	x 2	17.11.20	On hold store in freezer	GTCS2 - S135 b 0-0.2
"	"	"	On hold store in freezer	GTCS2 - S137 a 0-0.2
"	"	"	On hold store in freezer	GTCS2 - S137 b 0-0.2
"	"	"	On hold store in freezer	GTCS2 - S140 a 0-0.05
"	"	"	On hold store in freezer	GTCS2 - S140 b 0-0.05
"	"	"	On hold store in freezer	GTCS2 - S140 a 0-0.2
"	"	"	On hold store in freezer	GTCS2 - S140 b 0-0.2
"	"	"	On hold store in freezer	GTCS2 - S140 a 0.5
"	"	"	On hold store in freezer	GTCS2 - S140 b 0.5
"	"	"	On hold store in freezer	GTCS2 - Dup 08
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	

For information please contact customer service on +44 (0) 300 100 0323 or [Sales@fera.co.uk](mailto:Sales@fera.co.uk)

Please send samples to Food Group Sample Reception

Fera Science Ltd,  
York Biotech Campus  
Sand Hutton,  
York,  
YO41 1LZ,  
United Kingdom

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions



Fera Science Ltd  
Sand Hutton  
York  
North Yorkshire  
YO41 1LZ

Tel: +44 (0) 300 100 0323  
Email: [Sales@fera.co.uk](mailto:Sales@fera.co.uk)  
Website: [www.fera.co.uk](http://www.fera.co.uk)



## Fera Sample Submission Form

Quotation No. 7150 Customer ID: 144640

### Customer Contact Details

Name	Katie Bruce
Company	AECOM
Address	Sunley House 4 Bedford Park Croydon CR0 2AP
Email	<a href="mailto:katie.bruce@aecom.com">katie.bruce@aecom.com</a>
Tel	+44 203 043 9662 07979 498782

Send Report To: [katie.bruce@aecom.com](mailto:katie.bruce@aecom.com) and [david.dyson@aecom.com](mailto:david.dyson@aecom.com)

Customer Purchase Order No: 60632092

### Sample Details

Sample Type	Quantity	Date	Analysis Required	Customer Sample Reference
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S361a 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S361b 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S363a 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S363b 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S365a 0-0.02m

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions



Soil	x2	18.11.20	On hold store in freezer	GTCS2-S365b 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S367a 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S367b 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S369a 0-0.02m
Soil	x2	18.11.20	On hold store in freezer	GTCS2-S369b 0-0.02m
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	
			On hold store in freezer	

For information please contact customer service on +44 (0) 300 100 0323 or [Sales@fera.co.uk](mailto:Sales@fera.co.uk)

### Please send samples to

Food Group Sample Reception  
Fera Science Ltd,  
York Biotech Campus  
Sand Hutton,  
York,  
YO41 1LZ,  
United Kingdom

\* Where Fera and the Customer have entered into a pre-existing contractual relationship and where this contract is still valid, those Terms and Conditions will apply. \*by sending a sample to Fera the Customer is deemed to have accepted this quote and the Fera Standard Terms and Conditions

Analysis suite will  
be emailed through  
by David Dyson of  
Aecom.



## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report



**Fera PAH Uncertainty Data (provided by Fera)**

	SRM 1944 Sediment	Certified Reference material Value	Uncertainty	% uncertainty (uncertainty/CR M value * 100)
	mg/kg	mg/kg		
Acenaphthylene	<1.34			
Acenaphthene	0.4			
Fluorene	0.42			
Phenanthrene	5.16	5.27	0.22	4.17%
Anthracene	1.2			
Fluoranthene	11.46	8.92	0.32	3.59%
Benzo(c)fluorene	0.18			
Pyrene	11.57	9.7	0.42	4.33%
Benzo(ghi)fluoranthene	1.65			
Benzo(a)anthracene	4.94	4.72	0.11	2.33%
Benzo(b)naphtho	0.9			
Cyclopenta(cd)pyrene	0.69			
Chrysene	3.29	4.86	0.1	2.06%
5-Methylchrysene	<0.16			
Benzo(b)fluoranthene	4.16	3.87	0.42	10.85%
Benzo(j)fluoranthene	2.5	2.09	0.44	21.05%
Benzo(k)fluoranthene	1.97	2.3	0.2	8.70%
Benzo(e)pyrene	5.42	3.28	0.11	3.35%
Benzo(a)pyrene	4.23	4.3	0.13	3.02%
Indeno(123cd)pyrene	2.79	2.78	0.1	3.60%
Benzo(ah)anthracene	0.59	0.42	0.07	16.67%
Benzo(ghi)perylene	2.78	2.84	0.1	3.52%



## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report



Comparison of Fera and Element Data

	Fera GTCS2-P055	Element GTCS2-S228	Fera GTCS2-P057	Element GTCS2-S226
Naphthalene	0.1	<0.04	0.11	<0.04
Acenaphthylene	0.15	0.13	<0.22	0.07
Acenaphthene	0.02	<0.05	0.05	<0.05
Fluorene	0.02	<0.04	0.04	<0.04
Phenanthrene	0.32	0.37	0.69	0.32
Anthracene	0.15	0.16	0.29	0.09
Fluoranthene	0.85	1.32	1.3	1.01
Pyrene	0.63	1.16	1.1	0.89
Benzo(a)anthracene	0.51	0.76	1.22	0.54
Chrysene	0.28	0.72	0.38	0.59
Benzo(b)fluoranthene	0.46	1.1	0.75	0.88
Benzo(k)fluoranthene	0.22	0.43	0.38	0.34
Benzo(a)pyrene	0.45	0.87	0.87	0.68
Indeno(123cd)pyrene	0.35	0.65	0.65	0.05
Dibenzo(ah)anthracene	0.07	0.12	0.12	0.09
Benzo(ghi)perylene	0.37	0.6	0.6	0.5



## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
    - Element Stage 1 re-issued data including carbon disulphide
    - Element lead in root zone soil certificates
    - Element soil certificates batches 1 – 21
    - Element bioaccessibility certificates
- Data Validation Summary Report



**Test:** PAH, PBB, Lead  
**Report Date:** 19<sup>th</sup> May 2021

**Client Details:**

**David Dyson**  
**Aecom**  
**Sunley House**  
**4 Bedford Park**  
**Croydon**  
**CR0 2AP**  
**UK**

**Sample Details:**

**Your Reference/  
Sample Details:**

Soils (35 for PAHs and 19  
for PBBs)  
Fruit and vegetables (35  
for PAHs and 35 for lead)

**Summary of Methods used:**

PBBs in soils: Followed procedures described in Fera SOPs FSG 401-406, 409-412, 414  
PAHs in soils: Followed procedure described in Fera SOP FSG 410 with minor modifications  
PAHs in fruit and veg: Followed procedure described in Fera SOP FSG 410  
Lead in fruit and veg: Followed procedures described in Fera SOPs FSG 457 and 461

**Signed:**

A handwritten signature in black ink, appearing to be "FD" followed by a stylized flourish.

Frankie Smith  
Analytical Chemist  
[frankie.smith@fera.co.uk](mailto:frankie.smith@fera.co.uk)  
Tel: +44 (0)1904 462525

A handwritten signature in black ink, appearing to be "SP" followed by a stylized flourish.

Sean Panton  
Analytical Chemist  
[sean.panton@fera.co.uk](mailto:sean.panton@fera.co.uk)  
Tel: +44 (0)1904 462098



## Outlines of Methods:

### PBBs - procedures described in Fera SOPs FSG 401-406, 409-412 and 414

An aliquot of the dried sample was fortified with known amounts of surrogate ( $^{13}\text{C}_{12}$ -labelled) analogues of target analytes and exhaustively extracted using Soxhlet apparatus. The extract was cleaned up using adsorption chromatography. The targeted PBBs were segregated into one fraction which was concentrated and further cleaned up before the inclusion of additional surrogate standards. Final determination was by high resolution gas chromatography with high resolution mass spectrometric detection (HRGC-HRMS).

The results have been expressed on a dry weight basis.

### PAHs - procedures described in Fera SOP FSG 410 (with minor modifications for soils)

For fruit and vegetables, an aliquot of the sample was fortified with appropriate  $^{13}\text{C}$  Internal standards and subjected to saponification followed by liquid-liquid extraction. Cleanup was by DMF/cyclohexane partition followed by elution through a silica gel column. Analysis was by HRGC – LRMS.

The same method with minor modifications was applied for the analysis of PAHs in soil samples. Saponification was carried out at a slightly elevated temperature and only one fifth of the extract was taken through clean-up and analysed.

The results have been expressed on a fresh (wet) weight basis (ie. as received) for the fruit and vegetables, whereas the results are on a dry weight basis for the soils. BAP is marked in bold. The sum of the 4 PAH compounds (also marked in bold including BAP) that are included in EU food regulations has also been given as upper and lower bound (assuming non detected or below limit of detection compounds are at the Limit of Detection or at zero concentrations respectively).

### Lead - procedures described in Fera SOPs FSG 457 and 461

Aliquots of the homogenised sample were weighed into allotted digestion vessels and a mixture (4:1) of nitric acid and hydrochloric acid added. The vessels were capped and the contents digested using a high-pressure microwave digestion system. Reagent blanks, certified reference materials and a spiked sample were also taken through the procedure. The resulting solutions were transferred to pre-marked acid-clean plastic test tubes and diluted to 10 ml with deionised water. The digest solutions together with a set of standards covering the expected concentration range, were internally standardised with indium and rhodium in dilute nitric acid (1 %v/v). Measurements were made using an Agilent 7700x ICP-MS with collision cell.

The analytical procedure is accredited to the ISO 17025 standard. The criteria used to assess data included checks on instrument drift, spike recovery, replicate agreement, limits of detection and certified reference material (e.g. CE 278K mussel tissue) values. Regular, successful participation in FAPAS inter-comparison exercises provides further confidence in the data. In addition, as NRL for trace elements, Fera participates in PT exercises and other inter-laboratory exercises as organised by the EU-RL and achieves consistently good results.



**PBBs in soils (dry)**

Fera LIMS no.	S20-049536	S20-049522	S20-049524	S20-049526	S20-049528	S20-049530	S20-049532	S20-049534	S20-048959	S20-048961
Customer Reference	GTCS2 - Dup 08	GTCS2 - S131a 0 - 0.2	GTCS2 - S133a 0 - 0.2	GTCS2 - S135a 0 - 0.2	GTCS2 - S137a 0 - 0.2	GTCS2 - S140a 0 - 0.05	GTCS2 - S140a 0 - 0.2	GTCS2 - S140a 0.5	GTCS2 - S381a 0 - 0.02m	GTCS2 - S381a 0 - 0.2m
	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
BB-15	0.083i	0.013i	0.062i	0.062i	0.049i	0.102i	0.031i	0.018i	<0.004i	<0.008i
BB-49	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
BB-52	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
BB-80	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
BB-101	<0.002	<0.003	<0.002	<0.002	<0.002	<0.006	<0.002	<0.002	<0.002	<0.002
BB-153	<0.005	0.004	<0.003	<0.003	0.009	<0.004	<0.008	<0.002	<0.003	0.004
BB-209	<0.116	<0.119	nm	<0.116	<0.12	0.133	0.148	<0.049	<0.119	<0.049

Fera LIMS no.	S20-048963	S20-049747	S20-049749	S20-049751	S20-049753	S20-049755	S20-048473	S20-048475	S20-048477
Customer Reference	GTCS2 - S381a 0.5 - 0.6m	GTCS2- S361a	GTCS2- S363a	GTCS2- S365a	GTCS2- S367a	GTCS2- S369a	GTCS2- S383a	GTCS2- S386a	GTCS2- S388a
	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
BB-15	<0.004i	0.024i	0.027i	0.013i	0.033i	0.058i	<0.019i	<0.005i	<0.005i
BB-49	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
BB-52	<0.002	<0.002	<0.002	<0.002	0.004	<0.002	<0.002	<0.002	<0.002
BB-80	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
BB-101	<0.002	<0.002	<0.002	<0.002	<0.003	<0.002	<0.002	<0.002	<0.002
BB-153	<0.003	<0.002	0.005	<0.003	0.012	<0.006	0.002	0.003	<0.002
BB-209	<0.12	<0.05	<0.05	<0.05	<0.049	nm	<0.049	<0.049	<0.049

i – indicative result; due to the volatility of BB-15, extraction recoveries are poor leading to increased uncertainty in result; nm – not measured



### PAHs in soils (dry)

<b>Fera LIMS Sample ID</b>	S20-045774	S20-045776	S20-045777	S20-045778	S20-045779
<b>Fera Extract #</b>	PX13860	PX13935	PX13936	PX13937	PX13938
	S20-045774	S20-045776	S20-045777	S20-045778	S20-045779
	GTCS2-	GTCS2-	GTCS2-	GTCS2-	GTCS2-
<b>Aecom Ref</b>	P002_Soil	P007_Soil	P008_Soil	P009_Soil	P010_Soil
	No. 178, 179, 180.	No. 182, 183, 184.	No. 186, 187, 188.	No. 190, 191, 192.	No. 194, 195, 196.
	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.
<b>Sample Details</b>	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.
	60632092.	60632092.	60632092.	60632092.	60632092.
	Date 29.9.	Date 30.9.	Date 30.9.	Date 30.9.	Date 30.9.
	Depth: 0.2 m	Depth: 0.2 m	Depth: 0.2 m	Depth: 0.2 m	Depth: 0.2 m
<b>Units</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.11	<0.33	<0.3	<0.2	<0.22
acenaphthylene	<0.17	0.72	0.74	0.41	0.45
acenaphthene	0.02	0.16	0.20	0.09	0.11
fluorene	0.03	0.17	0.22	0.09	0.11
phenanthrene	0.37	3.18	4.47	1.81	1.65
anthracene	0.14	1.00	1.32	0.59	0.54
fluoranthene	0.82	2.96	4.60	2.28	1.91
benzo(c)fluorene	0.02	0.92	1.51	0.06	0.09
pyrene	0.71	2.26	2.37	1.94	1.46
benzo(ghi)fluoranthene	0.13	0.40	0.45	0.25	0.27
<b>benzo(a)anthracene</b>	<b>0.44</b>	<b>0.45</b>	<b>0.47</b>	<b>0.30</b>	<b>0.29</b>
benzo(b)naptho	<0.01	0.06	0.33	0.18	0.18
cyclopenta(cd)pyrene	0.07	0.01	0.01	0.01	0.01
<b>chrysene</b>	<b>0.42</b>	<b>2.21</b>	<b>1.86</b>	<b>1.90</b>	<b>1.82</b>
5-methylchrysene	<0.02	<0.16	<0.15	<0.05	<0.05
<b>benzo(b)fluoranthene</b>	<b>0.66</b>	<b>2.38</b>	<b>2.47</b>	<b>1.24</b>	<b>1.10</b>
benzo(j)fluoranthene	0.33	3.07	2.92	1.51	1.68
benzo(k)fluoranthene	0.33	2.83	0.75	1.00	1.00
benzo(e)pyrene	0.87	3.60	2.76	1.51	2.08
<b>benzo(a)pyrene</b>	<b>0.67</b>	<b>3.92</b>	<b>4.35</b>	<b>1.84</b>	<b>2.66</b>
indeno(123cd)pyrene	0.68	2.06	2.49	1.39	1.56
dibenzo(ah)anthracene	0.15	0.80	0.51	0.29	0.41
benzo(ghi)perylene	0.71	3.19	3.64	1.45	1.84
anthanthrene	0.02	1.07	1.73	0.18	0.30
dibenzo(al)pyrene	0.14	0.41	0.52	0.32	0.23
dibenzo(ae)pyrene	0.17	0.59	0.76	0.45	0.33
dibenzo(ai)pyrene	<0.01	0.33	0.45	0.16	0.20
dibenzo(ah)pyrene	<0.01	0.08	0.13	0.03	0.02
coronene	0.23	0.48	0.65	0.38	0.31
<b>PAH 4 SUM Upper mg/kg</b>	<b>2.19</b>	<b>8.96</b>	<b>9.15</b>	<b>5.29</b>	<b>5.86</b>
<b>PAH 4 SUM Lower mg/kg</b>	<b>2.19</b>	<b>8.96</b>	<b>9.15</b>	<b>5.29</b>	<b>5.86</b>



**PAHs in soils (dry) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-045780	S20-045781	S20-045782	S20-045786	S20-045789
<b>Fera Extract #</b>	PX13939	PX13940	PX13941	PX13850	PX13947
	S20-045780	S20-045781	S20-045782	S20-045786	S20-045789
	GTCS2-	GTCS2-	GTCS2-	GTCS2-	GTCS2-
<b>Aecom Ref</b>	P011_Soil	P012_Soil	P013_Soil	P014_Soil	P017_Soil
	No. 198, 199, 200.	No. 202, 203, 204.	No. 26, 27, 28.	No. 30, 31, 32.	No. 210, 211, 212.
	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.
<b>Sample Details</b>	Site: Stage 2 Grenfell. 60632092. Date 30.9. Depth: 0.2 m	Site: Stage 2 Grenfell. 60632092. Date 30.9. Depth: 0.2 m	Site: Stage 2 Grenfell. 60632092. Date 24.9. Depth: 0.2 m	Site: Stage 2 Grenfell. 60632092. Date: 24.9. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 30.9. Depth: 0.2m
<b>Units</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.26	<0.17	<0.15	0.03	0.03
acenaphthylene	0.24	0.15	0.05	<0.03	0.01
acenaphthene	0.09	0.13	0.01	<0.01	0.01
fluorene	0.09	0.11	0.01	0.01	0.01
phenanthrene	1.62	1.61	0.08	0.05	0.06
anthracene	0.43	0.44	0.05	0.03	0.02
fluoranthene	2.11	1.38	0.14	0.10	0.12
benzo(c)fluorene	0.10	0.07	<0.01	<0.01	<0.01
pyrene	2.26	2.11	0.11	0.09	0.10
benzo(ghi)fluoranthene	0.46	0.27	0.03	0.03	0.02
<b>benzo(a)anthracene</b>	<b>0.36</b>	<b>1.09</b>	<b>0.06</b>	<b>0.05</b>	<b>0.06</b>
benzo(b)naphtho	0.12	<0.01	0.01	0.01	0.01
cyclopenta(cd)pyrene	0.02	<0.01	<0.01	0.02	<0.01
<b>chrysene</b>	<b>1.83</b>	<b>0.89</b>	<b>0.08</b>	<b>0.05</b>	<b>0.06</b>
5-methylchrysene	<0.05	<0.02	<0.01	<0.01	<0.01
<b>benzo(b)fluoranthene</b>	<b>1.09</b>	<b>1.13</b>	<b>0.16</b>	<b>0.12</b>	<b>0.13</b>
benzo(j)fluoranthene	1.16	0.61	0.07	0.06	0.06
benzo(k)fluoranthene	0.87	0.58	0.05	<0.01	0.05
benzo(e)pyrene	1.16	1.45	0.19	0.14	0.17
<b>benzo(a)pyrene</b>	<b>1.81</b>	<b>1.18</b>	<b>0.09</b>	<b>0.07</b>	<b>0.09</b>
indeno(123cd)pyrene	1.30	0.84	0.12	0.10	0.10
dibenzo(ah)anthracene	0.31	0.18	0.02	0.02	0.02
benzo(ghi)perylene	1.72	0.79	0.13	0.11	0.12
anthanthrene	0.35	<0.01	<0.01	0.01	0.01
dibenzo(al)pyrene	0.19	0.14	0.02	0.02	0.02
dibenzo(ae)pyrene	0.26	0.18	0.03	<0.03	0.03
dibenzo(ai)pyrene	0.15	0.10	0.01	0.01	0.01
dibenzo(ah)pyrene	0.02	<0.01	<0.01	<0.01	<0.01
coronene	0.25	0.18	0.03	0.04	0.04
<b>PAH 4 SUM Upper mg/kg</b>	<b>5.09</b>	<b>4.29</b>	<b>0.40</b>	<b>0.29</b>	<b>0.33</b>
<b>PAH 4 SUM Lower mg/kg</b>	<b>5.09</b>	<b>4.29</b>	<b>0.40</b>	<b>0.29</b>	<b>0.33</b>



**PAHs in soils (dry) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-045790	S20-045793	S20-045794	S20-046038	S20-046042
<b>Fera Extract #</b>	PX13948	PX13949	PX13950	PX13951	PX13952
	S20-045790	S20-045793	S20-045794	S20-046038	S20-046042
	GTC2-	GTC2-	GTC2-	GTC2-	GTC2-
<b>Aecom Ref</b>	P019_Soil	P022_Soil	P023_Soil	P025_Soil	P029_Soil
	No. 150, 151, 152.	No. 162, 163, 164.	No. 166, 167, 168.	No.38, 39, 40.	No.118, 119, 120.
	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.
<b>Sample Details</b>	Site: Stage 2 Grenfell. 60632092. Date: 29.9. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 29.9. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 29.9. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 28.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 29.09. Depth: 0.2m
<b>Units</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.13	0.08	0.08	0.05	0.07
acenaphthylene	0.06	0.02	0.02	0.04	0.05
acenaphthene	0.01	0.01	0.01	0.01	0.01
fluorene	0.02	0.01	0.01	0.01	0.01
phenanthrene	0.14	0.06	0.07	0.06	0.05
anthracene	0.07	0.03	0.03	0.04	0.05
fluoranthene	0.25	0.10	0.19	0.15	0.23
benzo(c)fluorene	<0.01	<0.01	<0.01	<0.01	<0.01
pyrene	0.19	0.08	0.17	0.14	0.19
benzo(ghi)fluoranthene	0.05	0.03	0.03	0.03	0.04
<b>benzo(a)anthracene</b>	<b>0.13</b>	<b>0.05</b>	<b>0.12</b>	<b>0.08</b>	<b>0.14</b>
benzo(b)naphtho	0.02	0.01	0.02	0.02	0.02
cyclopenta(cd)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01
<b>chrysene</b>	<b>0.14</b>	<b>0.06</b>	<b>0.11</b>	<b>0.10</b>	<b>0.14</b>
5-methylchrysene	<0.01	<0.01	<0.01	<0.01	<0.01
<b>benzo(b)fluoranthene</b>	<b>0.27</b>	<b>0.15</b>	<b>0.17</b>	<b>0.22</b>	<b>0.24</b>
benzo(j)fluoranthene	0.13	0.06	0.10	0.10	0.13
benzo(k)fluoranthene	0.11	0.05	0.09	0.09	0.11
benzo(e)pyrene	0.35	0.19	0.19	0.26	0.24
<b>benzo(a)pyrene</b>	<b>0.21</b>	<b>0.10</b>	<b>0.17</b>	<b>0.15</b>	<b>0.22</b>
indeno(123cd)pyrene	0.21	0.13	0.15	0.22	0.20
dibenzo(ah)anthracene	0.04	0.03	0.03	0.04	0.04
benzo(ghi)perylene	0.24	0.13	0.14	0.20	0.19
anthanthrene	0.02	0.01	0.02	0.02	0.02
dibenzo(al)pyrene	0.04	0.02	0.02	0.03	0.03
dibenzo(ae)pyrene	0.06	0.03	0.03	0.04	0.04
dibenzo(ai)pyrene	0.02	0.01	0.01	0.02	0.02
dibenzo(ah)pyrene	0.01	<0.01	<0.01	<0.01	<0.01
coronene	0.07	0.03	0.04	0.04	0.04
<b>PAH 4 SUM Upper mg/kg</b>	<b>0.75</b>	<b>0.37</b>	<b>0.57</b>	<b>0.55</b>	<b>0.74</b>
<b>PAH 4 SUM Lower mg/kg</b>	<b>0.75</b>	<b>0.37</b>	<b>0.57</b>	<b>0.55</b>	<b>0.74</b>



**PAHs in soils (dry) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-046043	S20-046044	S20-046046	S20-046048	S20-046049
<b>Fera Extract #</b>	PX13953	PX13954	PX13955	PX13958	PX13959
	S20-046043	S20-046044	S20-046046	S20-046048	S20-046049
	GTCS2-	GTCS2-	GTCS2-	GTCS2-	GTCS2-
<b>Aecom Ref</b>	P030_Soil	P031_Soil	P033_Soil	P035_Soil	P036_Soil
	No.122, 123, 124.	No.3, 4, 5.	No.10, 11, 12.	No.18, 19, 20.	No.22, 23, 24.
	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.
<b>Sample Details</b>	Site: Stage 2 Grenfell. 60632092. Date: 29.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 24.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 24.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 24.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 24.09. Depth: 0.2m
<b>Units</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.05	0.36	0.44	1.03	0.42
acenaphthylene	0.03	0.46	0.29	0.32	0.49
acenaphthene	0.01	0.14	0.06	0.07	0.09
fluorene	0.01	0.14	0.06	0.07	0.09
phenanthrene	0.07	2.88	1.23	2.16	1.89
anthracene	0.04	0.78	0.43	0.58	0.71
fluoranthene	0.22	5.42	2.62	3.31	3.55
benzo(c)fluorene	<0.01	<0.01	<0.01	0.06	0.04
pyrene	0.20	3.29	2.26	1.92	2.14
benzo(ghi)fluoranthene	0.03	0.25	0.19	0.55	0.53
<b>benzo(a)anthracene</b>	<b>0.10</b>	<b>0.19</b>	<b>0.23</b>	<b>2.03</b>	<b>1.98</b>
benzo(b)naphtho	0.02	0.19	0.12	0.33	0.35
cyclopenta(cd)pyrene	<0.01	0.02	0.02	0.09	0.07
<b>chrysene</b>	<b>0.11</b>	<b>1.36</b>	<b>0.88</b>	<b>1.16</b>	<b>1.11</b>
5-methylchrysene	<0.01	<0.07	<0.05	<0.06	<0.05
<b>benzo(b)fluoranthene</b>	<b>0.19</b>	<b>3.58</b>	<b>2.63</b>	<b>4.59</b>	<b>3.61</b>
benzo(j)fluoranthene	0.10	2.72	2.13	2.64	1.96
benzo(k)fluoranthene	0.08	1.49	1.13	1.52	1.52
benzo(e)pyrene	0.22	3.23	2.03	2.57	2.80
<b>benzo(a)pyrene</b>	<b>0.16</b>	<b>4.01</b>	<b>1.72</b>	<b>3.12</b>	<b>3.23</b>
indeno(123cd)pyrene	0.14	<0.02	<0.02	2.03	2.44
dibenzo(ah)anthracene	0.03	0.34	0.33	0.35	0.35
benzo(ghi)perylene	0.15	4.09	1.46	1.85	2.15
anthanthrene	0.02	1.60	0.36	0.48	0.58
dibenzo(al)pyrene	0.02	0.23	0.21	0.38	0.43
dibenzo(ae)pyrene	0.03	0.33	0.28	0.44	0.50
dibenzo(ai)pyrene	0.02	0.29	0.20	0.28	0.26
dibenzo(ah)pyrene	<0.01	0.05	0.04	0.06	0.08
coronene	0.04	0.27	0.21	0.27	0.37
<b>PAH 4 SUM Upper mg/kg</b>	<b>0.56</b>	<b>9.13</b>	<b>5.46</b>	<b>10.90</b>	<b>9.92</b>
<b>PAH 4 SUM Lower mg/kg</b>	<b>0.56</b>	<b>9.13</b>	<b>5.46</b>	<b>10.90</b>	<b>9.92</b>



**PAHs in soils (dry) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-046050	S20-046051	S20-046054	S20-046055	S20-046056
<b>Fera Extract #</b>	PX13960	PX13961	PX13962	PX13963	PX13964
	S20-046050	S20-046051	S20-046054	S20-046055	S20-046056
	GTC2-	GTC2-	GTC2-	GTC2-	GTC2-
<b>Aecom Ref</b>	P037_Soil	P038_Soil	P041_Soil	P042_Soil	P049_Soil
	No.126, 127, 128.	No.130, 131, 132.	No.142, 143, 144.	No.146, 147, 148.	No.90, 91, 92.
	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.
<b>Sample Details</b>	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.
	60632092.	60632092.	60632092.	60632092.	60632092.
	Date: 29.09.	Date: 29.09.	Date: 29.09.	Date: 29.09.	Date: 28.09.
	Depth: 0.2m	Depth: 0.2m	Depth: 0.2m	Depth: 0.2m	Depth: 0.2m
<b>Units</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.09	0.17	0.08	0.15	0.07
acenaphthylene	0.10	0.06	0.06	0.15	0.34
acenaphthene	0.02	0.03	0.02	0.03	0.03
fluorene	0.02	0.03	0.02	0.03	0.07
phenanthrene	0.26	0.33	0.17	0.57	0.49
anthracene	0.15	0.12	0.09	0.15	0.53
fluoranthene	0.87	0.62	0.47	0.82	4.64
benzo(c)fluorene	0.02	<0.01	0.01	0.01	0.09
pyrene	0.70	0.46	0.39	0.59	3.21
benzo(ghi)fluoranthene	0.14	0.09	0.11	0.11	0.27
<b>benzo(a)anthracene</b>	<b>0.54</b>	<b>0.36</b>	<b>0.28</b>	<b>0.39</b>	<b>0.41</b>
benzo(b)naptho	0.07	0.06	0.05	0.07	0.25
cyclopenta(cd)pyrene	0.01	0.01	0.01	0.01	0.01
<b>chrysene</b>	<b>0.34</b>	<b>0.26</b>	<b>0.24</b>	<b>0.32</b>	<b>0.45</b>
5-methylchrysene	<0.01	<0.01	<0.01	<0.01	<0.01
<b>benzo(b)fluoranthene</b>	<b>0.64</b>	<b>0.44</b>	<b>0.45</b>	<b>0.51</b>	<b>0.33</b>
benzo(j)fluoranthene	0.35	0.24	0.23	0.26	0.17
benzo(k)fluoranthene	0.31	0.21	0.20	0.23	0.14
benzo(e)pyrene	0.57	0.40	0.42	0.50	0.33
<b>benzo(a)pyrene</b>	<b>0.64</b>	<b>0.43</b>	<b>0.45</b>	<b>0.44</b>	<b>0.29</b>
indeno(123cd)pyrene	0.49	0.37	0.35	0.39	0.25
dibenzo(ah)anthracene	0.11	0.07	0.07	0.08	0.05
benzo(ghi)perylene	0.54	0.37	0.37	0.45	0.28
anthanthrene	0.09	0.08	0.06	0.07	0.03
dibenzo(al)pyrene	0.11	0.06	0.07	0.08	0.06
dibenzo(ae)pyrene	0.12	0.08	0.08	0.10	0.07
dibenzo(ai)pyrene	0.05	0.03	0.03	0.04	0.02
dibenzo(ah)pyrene	0.01	0.01	0.01	0.01	0.01
coronene	0.11	0.07	0.07	0.12	0.07
<b>PAH 4 SUM Upper mg/kg</b>	<b>2.16</b>	<b>1.49</b>	<b>1.42</b>	<b>1.67</b>	<b>1.47</b>
<b>PAH 4 SUM Lower mg/kg</b>	<b>2.16</b>	<b>1.49</b>	<b>1.42</b>	<b>1.67</b>	<b>1.47</b>



**PAHs in soils (dry) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-046057	S20-046060	S20-046062	S20-046064	S20-046067
<b>Fera Extract #</b>	PX13965	PX13966	PX13946	PX13851	PX13852
	S20-046057	S20-046060	S20-046062	S20-046064	S20-046067
	GTC2-	GTC2-	GTC2-	GTC2-	GTC2-
<b>Aecom Ref</b>	P050_Soil	P053_Soil	P055_Soil	P057_Soil	P062_Soil
	No.94, 95, 96.	No.106, 107, 108.	No.50, 51, 52.	No.57, 58, 59.	No.218, 219, 220.
	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.
<b>Sample Details</b>	Site: Stage 2 Grenfell. 60632092. Date: 28.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 28.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 28.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 28.09. Depth: 0.2m	Site: Stage 2 Grenfell. 60632092. Date: 30.09. Depth: 0.2m
<b>Units</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.13	0.12	0.09	0.12	0.25
acenaphthylene	0.20	0.39	0.17	<0.26	<0.25
acenaphthene	0.03	0.06	0.08	0.05	0.03
fluorene	0.04	0.06	0.09	0.05	0.03
phenanthrene	0.51	2.01	1.10	0.81	0.70
anthracene	0.26	0.81	0.31	0.34	0.25
fluoranthene	1.49	4.58	1.87	1.53	1.46
benzo(c)fluorene	0.01	0.06	<0.01	0.04	0.04
pyrene	1.15	2.84	1.51	1.29	1.16
benzo(ghi)fluoranthene	0.20	0.51	0.26	0.35	0.31
<b>benzo(a)anthracene</b>	<b>0.73</b>	<b>1.84</b>	<b>1.05</b>	<b>1.44</b>	<b>1.15</b>
benzo(b)naphtho	0.13	0.42	0.17	0.21	0.18
cyclopenta(cd)pyrene	0.01	0.02	0.02	0.16	0.16
<b>chrysene</b>	<b>0.47</b>	<b>0.94</b>	<b>0.47</b>	<b>0.45</b>	<b>0.47</b>
5-methylchrysene	<0.02	<0.03	<0.02	<0.02	<0.02
<b>benzo(b)fluoranthene</b>	<b>0.79</b>	<b>1.49</b>	<b>0.73</b>	<b>0.88</b>	<b>0.92</b>
benzo(j)fluoranthene	0.43	0.75	0.40	0.47	0.48
benzo(k)fluoranthene	0.38	0.67	0.39	0.44	0.44
benzo(e)pyrene	0.73	1.09	0.68	0.79	0.81
<b>benzo(a)pyrene</b>	<b>0.77</b>	<b>1.26</b>	<b>0.79</b>	<b>0.93</b>	<b>0.88</b>
indeno(123cd)pyrene	0.56	0.88	0.57	0.78	0.76
dibenzo(ah)anthracene	0.12	0.19	0.11	0.16	0.16
benzo(ghi)perylene	0.60	0.90	0.54	0.71	0.72
anthanthrene	0.08	0.18	0.11	0.12	0.13
dibenzo(al)pyrene	0.11	0.15	0.08	0.12	0.13
dibenzo(ae)pyrene	0.13	0.18	0.11	0.15	0.16
dibenzo(ai)pyrene	0.07	0.07	0.07	0.06	0.06
dibenzo(ah)pyrene	0.01	0.02	0.01	<0.03	<0.04
coronene	0.15	0.14	0.11	0.14	0.16
<b>PAH 4 SUM Upper mg/kg</b>	<b>2.76</b>	<b>5.53</b>	<b>3.05</b>	<b>3.69</b>	<b>3.42</b>
<b>PAH 4 SUM Lower mg/kg</b>	<b>2.76</b>	<b>5.53</b>	<b>3.05</b>	<b>3.69</b>	<b>3.42</b>



**PAHs in soils (dry) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-046069	S20-046070	S20-046072	S20-046073	S20-046076
<b>Fera Extract #</b>	PX13853	PX13854	PX13855	PX13856	PX13859
	S20-046069	S20-046070	S20-046072	S20-046073	S20-046076
	GTC2-	GTC2-	GTC2-	GTC2-	GTC2-
<b>Aecom Ref</b>	P064_Soil	P065_Soil	P068_Soil	P069_Soil	P072_Soil
	No.226, 227, 228.	No.230, 231, 232.	No.70, 71, 72.	No.74, 75, 76.	No.86, 87, 88.
	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.	UK20/13239.
<b>Sample Details</b>	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.	Site: Stage 2 Grenfell.
	60632092.	60632092.	60632092.	60632092.	60632092.
	Date: 30.09.	Date: 30.09.	Date: 28.09.	Date: 28.09.	Date: 28.09.
	Depth: 0.2m	Depth: 0.2m	Depth: 0.2m	Depth: 0.2m	Depth: 0.2m
<b>Units</b>	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.14	0.10	0.11	0.12	0.11
acenaphthylene	<0.15	<0.03	<0.11	<0.09	<0.12
acenaphthene	0.02	<0.01	0.01	0.01	0.01
fluorene	0.02	<0.01	0.02	0.01	0.02
phenanthrene	0.33	0.02	0.27	0.18	0.20
anthracene	0.16	0.02	0.13	0.11	0.12
fluoranthene	0.83	0.11	0.72	0.56	0.57
benzo(c)fluorene	0.02	<0.01	0.02	0.02	0.01
pyrene	0.70	0.11	0.59	0.49	0.53
benzo(ghi)fluoranthene	0.24	0.03	0.30	0.12	0.13
<b>benzo(a)anthracene</b>	<b>0.84</b>	<b>0.08</b>	<b>1.01</b>	<b>0.39</b>	<b>0.52</b>
benzo(b)naptho	0.13	0.01	0.15	0.06	0.07
cyclopenta(cd)pyrene	0.14	0.02	0.15	0.06	0.06
<b>chrysene</b>	<b>0.32</b>	<b>0.08</b>	<b>0.28</b>	<b>0.24</b>	<b>0.31</b>
5-methylchrysene	<0.01	<0.01	<0.01	<0.01	<0.01
<b>benzo(b)fluoranthene</b>	<b>0.64</b>	<b>0.15</b>	<b>0.46</b>	<b>0.40</b>	<b>0.53</b>
benzo(j)fluoranthene	0.30	0.07	0.25	0.23	0.29
benzo(k)fluoranthene	0.26	0.06	0.21	0.18	0.27
benzo(e)pyrene	0.59	0.17	0.43	0.39	0.49
<b>benzo(a)pyrene</b>	<b>0.54</b>	<b>0.11</b>	<b>0.47</b>	<b>0.41</b>	<b>0.52</b>
indeno(123cd)pyrene	0.54	0.13	0.38	0.37	0.47
dibenzo(ah)anthracene	0.12	0.03	0.08	0.08	0.09
benzo(ghi)perylene	0.59	0.14	0.38	0.36	0.42
anthanthrene	0.07	0.01	0.06	0.05	0.06
dibenzo(al)pyrene	0.10	0.02	0.06	0.06	0.08
dibenzo(ae)pyrene	0.14	0.03	0.08	0.08	0.10
dibenzo(ai)pyrene	0.04	<0.01	0.03	0.03	0.03
dibenzo(ah)pyrene	<0.01	<0.01	0.01	0.01	<0.01
coronene	0.16	0.04	0.08	0.08	0.09
<b>PAH 4 SUM Upper mg/kg</b>	<b>2.35</b>	<b>0.43</b>	<b>2.21</b>	<b>1.43</b>	<b>1.88</b>
<b>PAH 4 SUM Lower mg/kg</b>	<b>2.35</b>	<b>0.43</b>	<b>2.21</b>	<b>1.43</b>	<b>1.88</b>



## PAHs in Fruit and Vegetables (fresh/wet)

<b>Fera LIMS Sample ID</b>	S20-044553	S20-044556	S20-044557	S20-044558	S20-044559
<b>Fera Extract #</b>	Px13918	Px13930	Px13931	Px13932	Px13933
<b>Aecom Ref</b>	GTCS2-P002	GTCS2-P007	GTCS2-P008	GTCS2-P009	GTCS2-P010
<b>Sample Details</b>	Apples	Potatoes	Horseradish	Butternut squash	Marrow
<b>Fera PAH Batch #</b>	1191	1192	1192	1192	1192
<b>Units</b>	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
naphthalene	3.98	<2.31	2.48	1.99	1.81
acenaphthylene	0.10	<0.10	0.26	<0.10	<0.10
acenaphthene	<0.18	<0.23	0.23	<0.19	<0.19
fluorene	0.27	<0.23	0.24	<0.19	<0.19
phenanthrene	<0.37	<0.36	<0.34	<0.29	<0.30
anthracene	<0.10	<0.10	<0.10	<0.10	<0.10
fluoranthene	<0.34	0.30	2.02	0.28	<0.18
benzo(c)fluorene	<0.10	<0.10	<0.10	<0.10	<0.10
pyrene	<0.25	0.34	1.71	<0.19	<0.19
benzo(ghi)fluoranthene	<0.10	<0.10	0.30	<0.10	<0.10
<b>benzo(a)anthracene</b>	<b>&lt;0.10</b>	<b>0.13</b>	<b>0.75</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
benzo(b)naphtho	<0.10	<0.10	0.15	<0.10	<0.10
cyclopenta(cd)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>chrysene</b>	<b>&lt;0.10</b>	<b>0.18</b>	<b>0.87</b>	<b>0.25</b>	<b>&lt;0.10</b>
5-methylchrysene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>benzo(b)fluoranthene</b>	<b>&lt;0.10</b>	<b>0.21</b>	<b>1.11</b>	<b>&lt;0.10</b>	<b>0.26</b>
benzo(j)fluoranthene	<0.10	<0.10	0.51	<0.10	<0.10
benzo(k)fluoranthene	<0.10	<0.10	0.47	<0.10	<0.10
benzo(e)pyrene	<0.10	0.29	1.43	<0.10	<0.10
<b>benzo(a)pyrene</b>	<b>&lt;0.10</b>	<b>0.14</b>	<b>0.93</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
indeno(123cd)pyrene	<0.10	0.15	0.80	<0.10	<0.10
dibenzo(ah)anthracene	<0.10	<0.10	0.16	<0.10	<0.10
benzo(ghi)perylene	<0.10	0.13	0.84	<0.10	<0.10
anthanthrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(al)pyrene	<0.10	<0.10	<0.12	<0.10	<0.10
dibenzo(ae)pyrene	<0.10	<0.10	0.19	<0.10	<0.10
dibenzo(ai)pyrene	<0.14	<0.10	<0.10	<0.10	<0.10
dibenzo(ah)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
coronene	<0.10	<0.10	0.16	<0.10	<0.10
<b>PAH 4 SUM Upper</b>					
<b>µg/kg</b>	<b>0.11</b>	<b>0.66</b>	<b>3.66</b>	<b>0.39</b>	<b>0.41</b>
<b>PAH 4 SUM Lower</b>					
<b>µg/kg</b>	<b>&lt;0.10</b>	<b>0.66</b>	<b>3.66</b>	<b>0.32</b>	<b>0.34</b>



**PAHs in Fruit and Vegetables (fresh/wet) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-044560	S20-044561	S20-043861	S20-043862	S20-044555
<b>Fera Extract #</b>	Px13973	Px13974	PX13906	PX13907	Px13929
<b>Aecom Ref</b>	GTCS2-P011	GTCS2-P012	GTCS2-P013	GTCS2-P014	GTCS2-P017
<b>Sample Details</b>	Raspberry	Rhubarb	Grapes	Horseradish	Beans
<b>Fera PAH Batch #</b>	1196	1196	1190	1190	1192
<b>Units</b>	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
naphthalene	1.69	4.22	3.76	<3.61	1.94
acenaphthylene	<0.19	<0.18	0.10	<0.10	<0.10
acenaphthene	0.35	0.28	<0.20	<0.19	<0.19
fluorene	0.80	0.45	0.29	0.24	<0.19
phenanthrene	5.60	<0.39	<0.35	<0.33	<0.30
anthracene	0.17	<0.10	<0.10	<0.10	<0.10
fluoranthene	2.33	0.43	1.70	<0.23	0.18
benzo(c)fluorene	<0.10	<0.10	<0.10	<0.10	<0.10
pyrene	1.08	0.36	1.24	<0.25	0.22
benzo(ghi)fluoranthene	<0.10	<0.10	0.24	<0.10	<0.10
<b>benzo(a)anthracene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.11</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
benzo(b)naphtho	<0.10	<0.10	<0.10	<0.10	<0.10
cyclopenta(cd)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>chrysene</b>	<b>0.15</b>	<b>&lt;0.10</b>	<b>0.27</b>	<b>&lt;0.20</b>	<b>&lt;0.10</b>
5-methylchrysene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>benzo(b)fluoranthene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.11</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
benzo(j)fluoranthene	<0.10	<0.10	<0.10	<0.10	<0.10
benzo(k)fluoranthene	<0.10	<0.10	<0.10	<0.10	<0.10
benzo(e)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>benzo(a)pyrene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
indeno(123cd)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ah)anthracene	<0.10	<0.10	<0.10	<0.10	<0.10
benzo(ghi)perylene	<0.10	<0.10	<0.10	<0.10	<0.10
anthanthrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(al)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ae)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ai)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ah)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
coronene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>PAH 4 SUM Upper</b>					
<b>µg/kg</b>	<b>0.34</b>	<b>0.20</b>	<b>0.57</b>	<b>0.31</b>	<b>0.15</b>
<b>PAH 4 SUM Lower</b>					
<b>µg/kg</b>	<b>0.30</b>	<b>0.19</b>	<b>0.57</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>



**PAHs in Fruit and Vegetables (fresh/wet) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-044549	S20-044546	S20-044547	S20-044497	S20-044501
<b>Fera Extract #</b>	Px13928	Px13919	Px13927	Px13924	Px13925
<b>Aecom Ref</b>	GTCS2-P019	GTCS2-P022	GTCS2-P023	GTCS2-P025	GTCS2-P029
<b>Sample Details</b>	Kale	Rhubarb	Runner beans	Plum tomato	French beans
<b>Fera PAH Batch #</b>	1192	1191	1192	1192	1192
<b>Units</b>	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
naphthalene	2.11	4.45	2.15	<0.64	<0.71
acenaphthylene	0.13	0.15	<0.10	<0.10	<0.10
acenaphthene	0.22	<0.18	<0.23	<0.18	<0.20
fluorene	0.33	0.41	<0.23	<0.19	<0.21
phenanthrene	1.53	<0.37	<0.35	<0.29	0.83
anthracene	<0.10	<0.10	<0.10	<0.10	<0.10
fluoranthene	2.18	<0.33	0.24	<0.17	0.54
benzo(c)fluorene	<0.10	<0.10	<0.10	<0.10	<0.10
pyrene	1.08	<0.24	<0.23	<0.19	0.32
benzo(ghi)fluoranthene	0.17i	<0.10	<0.10	<0.10	<0.10
<b>benzo(a)anthracene</b>	<b>0.18</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
benzo(b)naphtho	0.11	<0.10	<0.10	<0.10	<0.10
cyclopenta(cd)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>chrysene</b>	<b>0.80i</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
5-methylchrysene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>benzo(b)fluoranthene</b>	<b>0.27</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
benzo(j)fluoranthene	0.24	<0.10	<0.10	<0.10	<0.10
benzo(k)fluoranthene	0.12	<0.10	<0.10	<0.10	<0.10
benzo(e)pyrene	0.21	<0.10	<0.10	<0.10	<0.10
<b>benzo(a)pyrene</b>	<b>0.14</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
indeno(123cd)pyrene	0.17	<0.10	<0.10	<0.10	<0.10
dibenzo(ah)anthracene	<0.10	<0.10	<0.10	<0.10	<0.10
benzo(ghi)perylene	0.14	<0.10	<0.10	<0.10	<0.10
anthanthrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(al)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ae)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ai)pyrene	<0.10	<0.13	<0.10	<0.10	<0.10
dibenzo(ah)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
coronene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>PAH 4 SUM Upper</b>					
<b>µg/kg</b>	<b>1.39</b>	<b>0.17</b>	<b>0.18</b>	<b>0.11</b>	<b>0.18</b>
<b>PAH 4 SUM Lower</b>					
<b>µg/kg</b>	<b>1.39</b>	<b>0.11</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.10</b>



**PAHs in Fruit and Vegetables (fresh/wet) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-044502	S20-043791	S20-043793	S20-043795	S20-043796
<b>Fera Extract #</b>	PX13892	PX13902	PX13903	PX13904	PX13905
<b>Aecom Ref</b>	GTCS2-P030	GTCS2-P031	GTCS2-P033	GTCS2-P035	GTCS2-P036
<b>Sample Details</b>	Ruby Chard	Pears	Horseradish	Apples	Beetroot
<b>Fera PAH Batch #</b>	1189	1190	1190	1190	1190
<b>Units</b>	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
naphthalene	<0.99	3.26	5.20	3.14	4.18
acenaphthylene	0.08	<0.10	0.19	<0.10	0.11
acenaphthene	<0.22	<0.17	0.21	<0.18	<0.24
fluorene	<0.56	0.23	0.34	0.32	<0.30
phenanthrene	1.67	<0.30	<0.36	0.49	<0.43
anthracene	0.11	<0.10	<0.10	<0.10	<0.10
fluoranthene	1.32	0.23	1.29	0.44	<0.30
benzo(c)fluorene	<0.04	<0.10	<0.10	<0.10	<0.10
pyrene	1.02	<0.22	1.10	0.26	<0.32
benzo(ghi)fluoranthene	0.20	<1.46	0.22	<0.10	<0.10
<b>benzo(a)anthracene</b>	<b>0.26</b>	<b>&lt;0.10</b>	<b>0.51</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
benzo(b)naphtho	0.08	<0.10	<0.10	<0.10	<0.10
cyclopenta(cd)pyrene	0.02	<0.10	<0.10	<0.10	<0.10
<b>chrysene</b>	<b>0.45</b>	<b>&lt;0.10</b>	<b>0.68</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>
5-methylchrysene	<0.01	<0.10	<0.10	<0.10	<0.10
<b>benzo(b)fluoranthene</b>	<b>0.41</b>	<b>&lt;0.10</b>	<b>0.66</b>	<b>&lt;0.10</b>	<b>0.12</b>
benzo(j)fluoranthene	0.21	<0.10	0.37	<0.10	<0.10
benzo(k)fluoranthene	0.18	<0.10	0.31	<0.10	<0.10
benzo(e)pyrene	0.34	<0.10	0.67	<0.10	0.11
<b>benzo(a)pyrene</b>	<b>0.31</b>	<b>&lt;0.10</b>	<b>0.67</b>	<b>&lt;0.10</b>	<b>0.10</b>
indeno(123cd)pyrene	0.30	<0.10	0.39	<0.10	<0.10
dibenzo(ah)anthracene	<0.08	<0.10	0.10	<0.10	<0.10
benzo(ghi)perylene	0.26	<0.10	0.39	<0.10	<0.10
anthanthrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(al)pyrene	<0.13	<0.10	<0.11	<0.10	<0.10
dibenzo(ae)pyrene	<0.17	<0.10	<0.11	<0.10	<0.11
dibenzo(ai)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ah)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
coronene	0.11	<0.10	<0.10	<0.10	<0.10
<b>PAH 4 SUM Upper</b>					
<b>µg/kg</b>	<b>1.43</b>	<b>0.16</b>	<b>2.52</b>	<b>0.15</b>	<b>0.34</b>
<b>PAH 4 SUM Lower</b>					
<b>µg/kg</b>	<b>1.43</b>	<b>&lt;0.10</b>	<b>2.52</b>	<b>&lt;0.10</b>	<b>0.34</b>



**PAHs in Fruit and Vegetables (fresh/wet) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-044503	S20-044504	S20-044507	S20-044508	S20-043870
<b>Fera Extract #</b>	Px13920	Px13972	Px13926	Px13921	Px13913
<b>Aecom Ref</b>	GTCS2-P037	GTCS2-P038	GTCS2-P041	GTCS2-P042	GTCS2-P049 Cavello Nero
<b>Sample Details</b>	Spinach	Potatoes	Cabbage	Rhubarb	Kale
<b>Fera PAH Batch #</b>	1191	1196	1192	1191	1191
<b>Units</b>	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
naphthalene	5.87	<2.28	2.59	4.03	1.38
acenaphthylene	0.18	<0.36	<0.10	0.11	0.27
acenaphthene	0.29	<0.54	<0.22	<0.18	0.33
fluorene	0.56	<0.56	0.38	0.31	9.63
phenanthrene	2.48	<0.78	1.09	<0.37	142.61
anthracene	<0.10	<0.10	<0.10	<0.10	3.40
fluoranthene	2.40	<0.55	1.42	<0.34	208.50
benzo(c)fluorene	<0.10	<0.10	<0.10	<0.10	1.65
pyrene	1.60	<0.57	0.86	<0.25	73.35
benzo(ghi)fluoranthene	0.19	<0.10	0.14	<0.10	<1.37
<b>benzo(a)anthracene</b>	<b>0.18</b>	<b>0.17</b>	<b>0.10</b>	<b>&lt;0.10</b>	<b>0.27</b>
benzo(b)naphtho	0.10	<0.10	<0.10	<0.10	1.49
cyclopenta(cd)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>chrysene</b>	<b>0.51</b>	<b>0.29</b>	<b>0.29</b>	<b>&lt;0.10</b>	<b>1.30</b>
5-methylchrysene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>benzo(b)fluoranthene</b>	<b>0.34</b>	<b>0.27</b>	<b>0.14</b>	<b>&lt;0.10</b>	<b>0.17</b>
benzo(j)fluoranthene	0.17	0.12	<0.10	<0.10	0.14
benzo(k)fluoranthene	0.16	0.11	<0.10	<0.10	<0.10
benzo(e)pyrene	0.35	0.23	0.17	<0.10	0.13
<b>benzo(a)pyrene</b>	<b>0.22</b>	<b>0.14</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.10</b>
indeno(123cd)pyrene	0.22	0.13	<0.10	<0.10	0.11
dibenzo(ah)anthracene	<0.10	<0.10	<0.10	<0.10	<0.10
benzo(ghi)perylene	0.23	0.11	<0.10	<0.10	<0.10
anthanthrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(al)pyrene	<0.10	<0.18	<0.10	<0.10	<0.10
dibenzo(ae)pyrene	<0.10	<0.20	<0.10	<0.10	<0.10
dibenzo(ai)pyrene	<0.19	<0.10	<0.10	<0.14	<0.13
dibenzo(ah)pyrene	<0.14	<0.10	<0.10	<0.10	<0.10
coronene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>PAH 4 SUM Upper µg/kg</b>	<b>1.25</b>	<b>0.87</b>	<b>0.61</b>	<b>0.12</b>	<b>1.84</b>
<b>PAH 4 SUM Lower µg/kg</b>	<b>1.25</b>	<b>0.87</b>	<b>0.61</b>	<b>&lt;0.10</b>	<b>1.84</b>



**PAHs in Fruit and Vegetables (fresh/wet) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-043871	S20-043874	S20-043876	S20-043878	S20-044563
<b>Fera Extract #</b>	Px13914	Px13915	Px13916	Px13917	Px13975
<b>Aecom Ref</b>	GTCS2-P050	GTCS2-P053	GTCS2-P055	GTCS2-P057	GTCS2-P062
<b>Sample Details</b>	Turnip	Potatoes	Runner Beans	Potatoes	Callaloo
<b>Fera PAH Batch #</b>	1191	1191	1191	1191	1196
<b>Units</b>	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
naphthalene	4.40	5.31	4.02	3.44	4.50
acenaphthylene	<0.10	0.40	<0.10	0.21	<0.19
acenaphthene	0.21	0.49	0.27	<0.18	0.29
fluorene	0.35	0.49	0.25	0.24	0.48
phenanthrene	0.91	4.10	<0.37	<0.37	2.02
anthracene	<0.10	0.14	<0.10	<0.10	<0.10
fluoranthene	0.75	5.91	0.46	<0.34	1.98
benzo(c)fluorene	<0.10	<0.10	<0.10	<0.10	<0.10
pyrene	0.26	3.03	0.36	<0.25	1.58
benzo(ghi)fluoranthene	<0.10	0.13	<0.10	<0.10	0.26
<b>benzo(a)anthracene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.42</b>
benzo(b)naphtho	<0.10	0.11	<0.10	<0.10	0.14
cyclopenta(cd)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>chrysene</b>	<b>&lt;0.10</b>	<b>0.18</b>	<b>&lt;0.10</b>	<b>0.12</b>	<b>0.85</b>
5-methylchrysene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>benzo(b)fluoranthene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.19</b>	<b>0.57</b>
benzo(j)fluoranthene	<0.10	<0.10	<0.10	<0.10	0.34
benzo(k)fluoranthene	<0.10	<0.10	<0.10	<0.10	0.30
benzo(e)pyrene	<0.10	<0.10	<0.10	0.21	0.50
<b>benzo(a)pyrene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.12</b>	<b>0.43</b>
indeno(123cd)pyrene	<0.10	<0.10	<0.10	0.11	0.43
dibenzo(ah)anthracene	<0.10	<0.10	<0.10	<0.10	<0.10
benzo(ghi)perylene	<0.10	<0.10	<0.10	0.12	0.43
anthanthrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(al)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ae)pyrene	<0.10	<0.10	<0.10	<0.10	<0.11
dibenzo(ai)pyrene	<0.13	<0.14	<0.14	<0.13	<0.10
dibenzo(ah)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
coronene	<0.10	<0.10	<0.10	<0.10	0.15
<b>PAH 4 SUM Upper</b>					
<b>µg/kg</b>	<b>0.12</b>	<b>0.39</b>	<b>0.17</b>	<b>0.50</b>	<b>2.27</b>
<b>PAH 4 SUM Lower</b>					
<b>µg/kg</b>	<b>&lt;0.10</b>	<b>0.34</b>	<b>0.12</b>	<b>0.50</b>	<b>2.27</b>



**PAHs in Fruit and Vegetables (fresh/wet) (cont.)**

<b>Fera LIMS Sample ID</b>	S20-044567	S20-044565	S20-043865	S20-043866	S20-043869
<b>Fera Extract #</b>	Px13977	Px13976	PX13908	PX13909	Px13912
<b>Aecom Ref</b>	GTCS2-P064	GTCS2-P065	GTCS2-P068	GTCS2-P069	GTCS2-P072
<b>Sample Details</b>	Figs	Potatoes	Pumpkin	New Potatoes	Olives
<b>Fera PAH Batch #</b>	1196	1196	1190	1190	1191
<b>Units</b>	µg/kg	µg/kg	µg/kg	µg/kg	µg/kg
naphthalene	4.83	4.15	3.14	2.72	1.92
acenaphthylene	<0.17	<0.18	<0.10	0.11	0.16
acenaphthene	0.31	<0.27	<0.17	<0.18	0.96
fluorene	0.27	<0.28	<0.20	<0.22	0.38
phenanthrene	2.33	<0.39	<0.29	<0.32	1.92
anthracene	<0.10	<0.10	<0.10	<0.10	<0.10
fluoranthene	1.35	<0.27	<0.21	0.96	1.09
benzo(c)fluorene	<0.10	<0.10	<0.10	<0.10	<0.10
pyrene	0.78	<0.29	0.30	0.78	0.93
benzo(ghi)fluoranthene	<0.10	<0.10	<0.10	0.16	0.12
<b>benzo(a)anthracene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.45</b>	<b>&lt;0.10</b>
benzo(b)naphtho	<0.10	<0.10	<0.10	<0.10	<0.10
cyclopenta(cd)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>chrysene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.49</b>	<b>&lt;0.17</b>
5-methylchrysene	<0.10	<0.10	<0.10	<0.10	<0.15
<b>benzo(b)fluoranthene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.58</b>	<b>&lt;0.10</b>
benzo(j)fluoranthene	<0.10	<0.10	<0.10	0.30	<0.10
benzo(k)fluoranthene	<0.10	<0.10	<0.10	0.29	<0.10
benzo(e)pyrene	<0.10	<0.10	<0.10	0.57	<0.10
<b>benzo(a)pyrene</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>&lt;0.10</b>	<b>0.50</b>	<b>&lt;0.10</b>
indeno(123cd)pyrene	<0.10	<0.10	<0.10	0.40	<0.10
dibenzo(ah)anthracene	<0.10	<0.10	<0.10	0.10	<0.10
benzo(ghi)perylene	<0.10	<0.10	<0.10	0.34	<0.10
anthanthrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(al)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ae)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
dibenzo(ai)pyrene	<0.10	<0.10	<0.10	<0.10	<0.14
dibenzo(ah)pyrene	<0.10	<0.10	<0.10	<0.10	<0.10
coronene	<0.10	<0.10	<0.10	<0.10	<0.10
<b>PAH 4 SUM Upper</b>					
<b>µg/kg</b>	<b>0.18</b>	<b>0.16</b>	<b>0.12</b>	<b>2.02</b>	<b>0.32</b>
<b>PAH 4 SUM Lower</b>					
<b>µg/kg</b>	<b>0.18</b>	<b>0.11</b>	<b>&lt;0.10</b>	<b>2.02</b>	<b>0.10</b>



**Lead in fruit and vegetables (fresh/wet)**

Aecom Ref	Sample Details	Fera LIMS Sample ID	Aliquot [g]	208 Pb mg/kg
GTCS2-P002	Apple	AS20-044553-003	2.19	<b>0.001</b>
GTCS2-P007	Potato	AS20-044556-003	1.55	<b>0.017</b>
GTCS2-P008	Horseradish	AS20-044557-003	1.09	<b>0.167</b>
GTCS2-P009	Butternut squash	AS20-044558-003	1.87	<b>0.008</b>
GTCS2-P010	Marrow	AS20-044559-003	2.26	<b>0.006</b>
GTCS2-P011	Raspberry	AS20-044560-003	1.39	<b>0.009</b>
GTCS2-P012	Rhubarb	AS20-044561-003	2.41	<b>0.195</b>
GTCS2-P013	Grapes	AS20-043861-003	1.6	<b>0.005</b>
GTCS2-P014	Horseradish	AS20-043862-003	1.43	<b>0.005</b>
GTCS2-P017	Beans	AS20-044555-003	2.01	<b>0.001</b>
GTCS2-P019	Kale	AS20-044549-003	1.6	<b>0.036</b>
GTCS2-P022	Rhubarb	AS20-044546-003	2.21	<b>0.039</b>
GTCS2-P023	Runner beans	AS20-044547-003	1.77	<b>0.001</b>
GTCS2-P025	Plum tomato	AS20-044497-003	2.08	<b>&lt;0.001</b>
GTCS2-P029	French beans	AS20-044501-003	1.95	<b>0.002</b>
GTCS2-P030	Ruby Chard	AS20-044502-003	2.07	<b>0.23</b>
GTCS2-P031	Pears	AS20-043791-003	1.92	<b>0.004</b>
GTCS2-P033	Horseradish	AS20-043793-003	1.15	<b>0.447</b>
GTCS2-P035	Apples	AS20-043795-003	2.18	<b>0.002</b>
GTCS2-P036	Beetroot	AS20-043796-003	1.52	<b>0.311</b>
GTCS2-P037	Spinach	AS20-044503-003	1.98	<b>0.075</b>
GTCS2-P038	Potatoes	AS20-044504-003	1.09	<b>0.022</b>

**Lead in fruit and vegetables (cont.)**

Aecom Ref	Sample Details	Fera LIMS Sample ID	Aliquot [g]	208 Pb mg/kg
GTCS2-P041	Cabbage	AS20-044507-003	1.66	<b>0.031</b>
GTCS2-P042	Rhubarb	AS20-044508-003	2.18	<b>0.114</b>
GTCS2-P049	Cavello Nero Kale	AS20-043870-003	2.01	<b>0.016</b>
GTCS2-P050	Turnip	AS20-043871-003	1.66	<b>0.006</b>
GTCS2-P053	Potatoes	AS20-043874-003	2.04	<b>0.009</b>
GTCS2-P055	Runner Beans	AS20-043876-003	1.59	<b>0.003</b>
GTCS2-P057	Potatoes	AS20-043878-003	2.13	<b>0.031</b>
GTCS2-P062	Callaloo	AS20-044563-003	1.44	<b>0.116</b>
GTCS2-P064	Figs	AS20-044567-003	1.65	<b>0.005</b>
GTCS2-P065	Potatoes	AS20-044565-003	1.93	<b>0.007</b>
GTCS2-P068	Pumpkin	AS20-043865-003	1.93	<b>0.002</b>
GTCS2-P069	New Potatoes	AS20-043866-003	2.02	<b>0.005</b>
GTCS2-P072	Olives	AS20-043869-003	1.01	<b>0.007</b>
		Rec used [%]		113
		Reporting level		0.001



## Quality Control Procedures

In order to demonstrate adequate confidence in the reported results, each batch of samples analysed included a full reagent blank, the contribution from which was found to be negligible. For further confidence each batch of samples analysed included a reference material (FAPAS test material T0658 Cocoa Butter tested with fruit and vegetable samples for PAHs; SRM 1944 sediment tested with soil samples for PAHs; FAPAS test materials 07297 vegetable puree (fresh), 07323 vegetable puree (fresh) and NIST 1570 spinach (dry) for the analysis of lead in fruit and vegetables. Measured values for the reference materials can be found in the following tables.

### PAHs in Soils - SRM 1944 sediment

Batch	1186	1193	1193	1193	1194	1195	Certified Value	Uncertainty
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
naphthalene	0.61				0.78	0.77		
acenaphthylene	<0.67	0.84	<1.01	0.77	0.71	0.94		
acenaphthene	0.20	0.22	0.21	0.21	0.23	0.22		
fluorene	0.21	0.14	0.14	0.15	0.23	0.23		
phenanthrene	5.16	4.15	4.23	4.30	4.95	5.22	5.27	0.22
anthracene	1.20	1.20	1.28	1.15	1.20	1.43		
fluoranthene	5.73	4.77	4.69	4.85	4.12	5.05	8.92	0.32
benzo(c)fluorene	0.09	0.09	0.08	0.09	<0.00	<0.01		
pyrene	5.79	2.78	2.55	2.69	2.21	2.46	9.70	0.42
benzo(ghi)fluoranthene	1.16	0.85	0.87	1.02	0.92	0.92		
<b>benzo(a)anthracene</b>	<b>3.46</b>	<b>3.04</b>	<b>3.33</b>	<b>3.62</b>	<b>3.26</b>	<b>3.44</b>	<b>4.72</b>	<b>0.11</b>
benzo(b)naphtho	0.63	0.76	0.79	0.96	0.86	0.87		
cyclopenta(cd)pyrene	0.48	0.44	0.44	0.54	0.04	0.08		
<b>chrysene</b>	<b>2.30</b>	<b>2.95</b>	<b>2.86</b>	<b>2.86</b>	<b>2.51</b>	<b>2.22</b>	<b>4.86</b>	<b>0.10</b>
5-methylchrysene	<0.11	<0.14	<0.13	<0.13	<0.13	<0.10		
<b>benzo(b)fluoranthene</b>	<b>2.91</b>	<b>2.46</b>	<b>2.52</b>	<b>2.36</b>	<b>2.59</b>	<b>2.71</b>	<b>3.87</b>	<b>0.42</b>
benzo(j)fluoranthene	1.75	1.55	1.60	1.50	1.58	1.63	2.09	0.44
benzo(k)fluoranthene	1.38	1.33	1.37	1.26	1.35	1.53	2.30	0.20
benzo(e)pyrene	2.71	2.02	2.02	1.92	2.19	2.31	3.28	0.11
<b>benzo(a)pyrene</b>	<b>2.12</b>	<b>1.83</b>	<b>1.90</b>	<b>1.69</b>	<b>1.98</b>	<b>2.19</b>	<b>4.30</b>	<b>0.13</b>
indeno(123cd)pyrene	1.95	1.51	1.67	1.46	1.63	1.59	2.78	0.10
dibenzo(ah)anthracene	0.59	0.41	0.44	0.37	0.41	0.38	0.42	0.07
benzo(ghi)perylene	1.95	1.50	1.65	1.49	1.68	1.55	2.84	0.10
anthanthrene	0.20	0.16	0.16	0.19	0.24	0.23		
dibenzo(al)pyrene	0.30	0.19	0.19	0.18	0.24	0.23		
dibenzo(ae)pyrene	0.39	0.23	0.24	0.21	0.28	0.27		
dibenzo(ai)pyrene	0.10	0.06	0.06	0.06	0.16	0.13		
dibenzo(ah)pyrene	<0.07	<0.02	<0.02	0.02	0.02	0.02		
coronene	0.38	0.25	0.26	<0.24	0.27	0.22		
<b>PAH 4 SUM Upper</b>	<b>10.78</b>	<b>10.28</b>	<b>10.60</b>	<b>10.53</b>	<b>10.34</b>	<b>10.56</b>		
<b>PAH 4 SUM Lower</b>	<b>10.78</b>	<b>10.28</b>	<b>10.60</b>	<b>10.53</b>	<b>10.34</b>	<b>10.56</b>		

PAHs in Fruit and Vegetables – FAPAS T0658 Cocoa Butter

Compound	Assigned Value (µg/kg) From Consensus Data	Target Standard deviation σp µg/kg	Acceptable Range µg/kg	Batch # 1189	Batch # 1190	Batch # 1191	Batch # 1192	Batch # 1196
benz(a)anthracene	3.22	0.708	2.51-3.93	3.48	2.92	3.20	3.31	3.28
benzo[b]fluoranthene	2.22	0.488	1.73-2.71	2.24	2.40	2.16	2.18	2.26
benzo[a]pyrene	2.00	0.440	1.56-2.44	2.05	1.71	1.97	1.93	1.98
indeno[1,2,3-cd]pyrene	1.20	0.264	0.94-1.46	1.25	0.96	1.27	1.21	1.22
benzo-[g,h,i]perylene	1.55	0.341	1.21-1.89	1.48	1.38	1.46	1.39	1.48
chrysene	4.60	1.010	3.59-5.61	4.23	4.27	4.02	4.06	4.16
PAH4 (sum)	12.60	2.770	9.83-15.37	12.00	11.30	11.35	11.48	11.68

Lead in Fruit and Vegetables – FAPAS 07297 vegetable puree (fresh); 07323 vegetable puree (fresh); NIST 1570 spinach (dry)

Batch QC		Aliquot	208 Pb
		[g]	mg/kg
Vegetable puree (fresh)	FAPAS 07297	1.31	0.271
	Ref. value		0.308
	Bias [%]		-12
Vegetable puree (fresh)	FAPAS 07323	1.39	0.241
	Ref. value		0.256
	Bias [%]		-6
Spinach (dry)	NIST 1570	0.17	1.05
	Ref. value		1.2
	Bias [%]		-12

*This report has been prepared by FERA after exercise of all reasonable care and skill, but is provided without liability in its application and use.*

© 2021 Fera Science Limited



## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 30th September, 2020  
**Your reference :** 60595731  
**Our reference :** Test Report 19/5906 Batch 1 Schedule C  
**Location :** Grenfell Tower - Preliminary sampling  
**Date samples received :** 11th April, 2019  
**Status :** Final report  
**Issue :** 1

Eight samples were received for analysis on 11th April, 2019 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell Tower - Preliminary sampling  
**Contact:** David Dyson  
**EMT Job No:** 19/5906

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell Tower - Preliminary sampling  
**Contact:** David Dyson  
**EMT Job No:** 19/5906

**VOC Report :** Solid

EMT Sample No.	1-5	6-10	11-15	16-20	21-25						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS101	GTCS102	GTCS103	GTCS104	DUP01								
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	10/04/2019	10/04/2019	10/04/2019	10/04/2019	10/04/2019								
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam								
Batch Number	1	1	1	1	1						LOD/LOR	Units	Method No.
Date of Receipt	11/04/2019	11/04/2019	11/04/2019	11/04/2019	11/04/2019								
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	6	4	4	5	5						<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2						<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1						<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30						<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3						<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27						<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	88	90	91	89	86						<0	%	TM15/PM10



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell Tower - Preliminary sampling  
**Contact:** David Dyson  
**EMT Job No:** 19/5906

**VOC Report :**       **Solid**

[illegible]

**Client Name:** AECOM **Matrix :** Solid

**Reference:** 60595731

**Location:** Grenfell Tower - Preliminary sampling

**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.



## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 19/5906

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 19/5906

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 2nd October, 2020  
**Your reference :** 60595731  
**Our reference :** Test Report 19/9004 Batch 1 Schedule G  
**Location :** Grenfell  
**Date samples received :** 5th June, 2019  
**Status :** Final report  
**Issue :** 1

Twenty six samples were received for analysis on 5th June, 2019 of which fifteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	1-8	17-24	33-40	41-48	49-56	57-64	73-80	89-96	105-112	121-128	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-35A	GTCS 1-36 PRIMARY SAMPLE	GTCS 1-36 LAB DUPLICATE	GTCS 1-36 FIELD DUPLICATE	GTCS 1-36 LAB FIELD DUPLICATE	GTCS 1-33A	GTCS 1-34A	GTCS 1-38A	GTCS 1-37A	GTCS 1-42A			
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05			
COC No / misc Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/06/2019 11:25	04/06/2019 11:53	04/06/2019 11:53	04/06/2019 11:53	04/06/2019 11:53	04/06/2019 09:30	04/06/2019 10:30	04/06/2019 14:15	04/06/2019 13:30	04/06/2019 16:00			
Sample Type	Clayey Loam	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	6	19	6	6	4	5	7	36	50	7	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	7	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	93	85	92	90	84	90	84	86	80	79	<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

<b>COC No.</b>	<b>Depth</b>	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	Please see attached notes for all abbreviations and acronyms
----------------	--------------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	--



# Element Materials Technology

Client Name: AECOM  
Reference: 60595731  
Location: Grenfell  
Contact: David Dyson  
EMT Job No: 19/9004

VOC Report : Solid

EMT Sample No.	137-144	153-160	161-168	169-176	177						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-41 PRIMARY SAMPLE	GTCS 1-41 LAB DUPLICATE	GTCS 1-41 FIELD DUPLICATE	GTCS 1-41 LAB FIELD DUPLICATE	CRM639-30G VOCS								
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05									
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V								
Sample Date	04/06/2019 14:45	04/06/2019 14:45	04/06/2019 14:45	04/06/2019 14:45	05/06/2019								
Sample Type	Clayey Loam	Clay	Clay	Clay	Soil								
Batch Number	1	1	1	1	1								
Date of Receipt	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019						LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	144						<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	27	30	28	33	100						<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2						<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1						<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	114						<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	120						<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	62						<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30						<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	158						<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	192						<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	114						<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	161						<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	184						<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	103						<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	183						<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	31						<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	96						<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	92						<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	33						<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	31						<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	196						<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	141						<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	88						<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	60						<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	196						<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	198						<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	35						<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	100						<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	182						<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	91						<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	49						<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	182						<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	113						<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	91						<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	44						<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	41						<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	207						<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	64						<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	80						<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	134						<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	88	69	90	87	100						<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :**       **Solid**

[illegible]



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson

**Matrix : Solid**

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 19/9004

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 19/9004

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes



AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson

**Date :** 30th September, 2020

**Your reference :** 60595731

**Our reference :** Test Report 19/9004 Batch 2 Schedule G

**Location :** Grenfell

**Date samples received :** 6th June, 2019

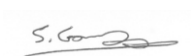
**Status :** Final report

**Issue :** 1

Fifty three samples were received for analysis on 6th June, 2019 of which thirty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Solids:** V=60g VOC jar. J=250g glass jar. T=plastic tub

Please see attached notes for all abbreviations and acronyms



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	181-188	197-204	213-220	229-236	237-244	261-268	277-284	293-300	310-317	318-325	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-43A	GTCS 1-44A	GTCS 1-45A	GTCS 1-47A	GTCS 1-48A	GTCS 1-49A	GTCS 1-40A	GTCS 1-39 PRIMARY SAMPLE	GTCS 1-39 LAB DUPLICATE	GTCS 1-39 FIELD DUPLICATE			
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	04/06/2019 16:00	04/06/2019 16:45	04/06/2019 16:45	04/06/2019 16:45			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	10	10	13	14	10	6	27	12	13	10	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	26	226	45	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	82	70	86	71	75	91	75	74	74	76	<0	%	TM15/PM10

Please include all sections of this report if it is reproduced



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

[illegible]

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	326-333	334-341	350-357	366-373	382-389	398-405	414-421	430-437	446-453	462-469	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-39 LAB FIELD DUPLICATE	GTCS 1-43A	GTCS 1-44A	GTCS 1-45A	GTCS 1-47A	GTCS 1-48A	GTCS 1-49A	GTCS 1-17A	GTCS 1-18 PRIMARY SAMPLE	GTCS 1-18 LAB DUPLICATE			
Depth	0.00-0.05	0.10-0.15	0.10-0.15	0.10-0.15	0.10-0.15	0.10-0.15	0.10-0.15	0.00-0.05	0.00-0.05	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/06/2019 16:45	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019	05/06/2019 10:40	05/06/2019 11:10	05/06/2019 11:10			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	10	6	<3	<3	5	<3	<3	9	26	14	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	9	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	12	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	6	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	16	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	78	87	97	89	87	91	94	79	82	83	<0	%	TM15/PM10

Please include all sections of this report if it is reproduced



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :       Solid**

[illegible]

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	470-477	478-485	486-493	502-509	510-517	518-525	526-533	542-549	558-565	574-581	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-18 FIELD DUPLICATE	GTCS 1-18 LAB FIELD DUPLICATE	GTCS 1-23 PRIMARY SAMPLE	GTCS 1-23 LAB DUPLICATE	GTCS 1-23 FIELD DUPLICATE	GTCS 1-23 LAB FIELD DUPLICATE	GTCS 1-24A	GTCS 1-19A	GTCS 1-20A	GTCS 1-21A			
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	05/06/2019 11:10	05/06/2019 11:10	05/06/2019 08:50	05/06/2019 08:50	05/06/2019 08:50	05/06/2019 08:50	05/06/2019 09:50	05/06/2019 14:45	05/06/2019 15:20	05/06/2019 12:30			
Sample Type	Clayey Loam	Clayey Loam	Clay	Clay	Clay	Clayey Loam	Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	11	19	16	18	11	34	7	12	21	7	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	3	3	<3	3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	68	75	70	70	78	71	85	82	73	88	<0	%	TM15/PM10

Please include all sections of this report if it is reproduced



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

[illegible]

VOC MS Continued													
Surrogate Recovery 4-Bromofluorobenzene	52	55	52	53	58	53	64	61	50	68	<0	%	TM15/PM10

# Element Materials Technology

Client Name: AECOM  
Reference: 60595731  
Location: Grenfell  
Contact: David Dyson  
EMT Job No: 19/9004

VOC Report : Solid

EMT Sample No.	590-597												
Sample ID	GTCS 1-22A												
Depth	0.00-0.05												
COC No / misc													
Containers	V J T												
Sample Date	05/06/2019 13:05												
Sample Type	Clayey Loam												
Batch Number	2												
Date of Receipt	06/06/2019												
											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6										<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	8										<3	ug/kg	TM15/PM10
Vinyl Chloride	<2										<2	ug/kg	TM15_A/PM10
Bromomethane	<1										<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6										<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3										<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6										<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3										<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30										<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3										<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6										<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7										<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4										<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5										<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5										<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3										<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5										<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5										<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5										<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4										<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3										<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3										<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3										<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5										<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3										<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5										<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3										<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
Styrene	<3										<3	ug/kg	TM15_A/PM10
Bromoform	<4										<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3										<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3										<3	ug/kg	TM15/PM10
Bromobenzene	<2										<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4										<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3										<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5										<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6										<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4										<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4										<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4										<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4										<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4										<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4										<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7										<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4										<4	ug/kg	TM15/PM10
Naphthalene	<27										<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7										<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	80										<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

QF-PM 3.1.4 v11



## Element Materials Technology

<b>Job number:</b>	19/9004
<b>Sample number:</b>	277
<b>Sample identity:</b>	GTCS 1-40A
<b>Sample depth:</b>	0.00-0.05
<b>Sample Type:</b>	Clayey Loam
<b>Units:</b>	ug/kg

**Method:** VOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	19/9004	<b>Method:</b>	VOC
<b>Sample number:</b>	293	<b>Matrix:</b>	Solid
<b>Sample identity:</b>	GTCS 1-39 PRIMARY SAMPLE		
<b>Sample depth:</b>	0.00-0.05		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	19/9004	<b>Method:</b>	<b>VOC</b>
<b>Sample number:</b>	310	<b>Matrix:</b>	<b>Solid</b>
<b>Sample identity:</b>	GTCS 1-39 LAB DUPLICATE		
<b>Sample depth:</b>	0.00-0.05		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]



## Element Materials Technology

<b>Job number:</b>	19/9004	<b>Method:</b>	<b>VOC</b>
<b>Sample number:</b>	318	<b>Matrix:</b>	<b>Solid</b>
<b>Sample identity:</b>	GTCS 1-39 FIELD DUPLICATE		
<b>Sample depth:</b>	0.00-0.05		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	19/9004	<b>Method:</b>	<b>VOC</b>
<b>Sample number:</b>	326	<b>Matrix:</b>	<b>Solid</b>
<b>Sample identity:</b>	GTCS 1-39 LAB FIELD DUPLIC		
<b>Sample depth:</b>	0.00-0.05		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

**Method:** VOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson

**Matrix : Solid**

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 19/9004

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 19/9004

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 30th September, 2020  
**Your reference :** 60595731  
**Our reference :** Test Report 19/9004 Batch 3 Schedule H  
**Location :** Grenfell  
**Date samples received :** 7th June, 2019  
**Status :** Final report  
**Issue :** 1

Fifty two samples were received for analysis on 7th June, 2019 of which twenty seven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	606-613	622-629	638-645	654-661	670-677	686-693	702-709	718-725	734-741	750-757	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-50A	GTCS 1-50A	GTCS 1-51A	GTCS 1-51A	GTCS 1-52A	GTCS 1-53A	GTCS 1-54A	GTCS 1-55A	GTCS 1-56A	GTCS 1-57A			
Depth	0.00-0.05	0.10-0.15	0.00-0.05	0.10-0.15	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	06/06/2019 14:15	06/06/2019 14:25	06/06/2019 09:40	06/06/2019 09:50	06/06/2019 10:45	06/06/2019 11:05	06/06/2019 11:25	06/06/2019 11:50	06/06/2019 12:25	06/06/2019 12:58			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	11	<3	4	<3	4	4	3	3	4	3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	6	<3	4	5	5	3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	83	86	89	91	86	90	91	87	88	87	<0	%	TM15/PM10

Please include all sections of this report if it is reproduced



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :       Solid**

[illegible]

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	766-773	782-789	798-805	806-813	830-837	846-853	862-869	878-885	894-901	910-917	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-58A	GTCS 1-59A	GTCS 1-25A	GTCS 1-26A	GTCS 1-27A	GTCS 1-28A	GTCS 1-46A	GTCS 1-46A	GTCS 1-05A	GTCS 1-06A			
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.10-0.15	0.00-0.05	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	06/06/2019 13:18	06/06/2019 13:45	05/06/2019 16:20	05/06/2019 16:55	05/06/2019 18:20	05/06/2019 17:30	05/06/2019 11:35	05/06/2019 11:45	06/06/2019	06/06/2019			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	5	9	6	9	5	7	12	16	8	6	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	8	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	41	<30	<30	<30	<30	<30	72	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	96	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	6	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	Styrene	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	Naphthalene	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	90	81	82	80	85	84	85	86	85	94	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms



# Element Materials Technology

Client Name: AECOM  
Reference: 60595731  
Location: Grenfell  
Contact: David Dyson  
EMT Job No: 19/9004

VOC Report : Solid

EMT Sample No.	926-933	942-949	958-965	966-973	974-981	982-989	998-1005				Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-07A	GTCS 1-08 PRIMARY SAMPLE	GTCS 1-08 LAB DUPLICATE	GTCS 1-08 FIELD DUPLICATE	GTCS 1-08 LAB FIELD DUPLICATE	GTCS 1-09A	GTCS 1-10A						
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05						
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019	06/06/2019						
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam						
Batch Number	3	3	3	3	3	3	3				LOD/LOR	Units	Method No.
Date of Receipt	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019	07/06/2019						
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6				<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	4	7	8	7	9	12	10				<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2				<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1				<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6				<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6				<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	38	<30	<30	46	<30	<30	<30				<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6				<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7				<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	4	<3	<3	<3				<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2				<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3				<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5				<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6				<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7				<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4				<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27	<27				<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7				<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	90	82	85	81	82	88	96				<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

Please see attached notes for all abbreviations and acronyms

QF-PM 3.1.4 v11

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

10 of 15

## Element Materials Technology

<b>Job number:</b>	19/9004
<b>Sample number:</b>	806
<b>Sample identity:</b>	GTCS 1-26A
<b>Sample depth:</b>	0.00-0.05
<b>Sample Type:</b>	Clayey Loam
<b>Units:</b>	ug/kg

**Method:** VOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson

**Matrix : Solid**

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 19/9004

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 19/9004

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 30th September, 2020  
**Your reference :** 60595731  
**Our reference :** Test Report 19/9004 Batch 4 Schedule H  
**Location :** Grenfell  
**Date samples received :** 8th June, 2019  
**Status :** Final report  
**Issue :** 1

Twenty seven samples were received for analysis on 8th June, 2019 of which sixteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	1015-1022	1031-1038	1047-1054	1055-1062	1063-1070	1071-1078	1095-1102	1111-1118	1119-1126	1127-1134	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-29A	GTCS 1-30 PRIMARY SAMPLE	GTCS 1-30 LAB DUPLICATE	GTCS 1-30 FIELD DUPLICATE	GTCS 1-30 LAB FIELD DUPLICATE	GTCS 1-11A	GTCS 1-12 PRIMARY SAMPLE	GTCS 1-12 LAB DUPLICATE	GTCS 1-12 FIELD DUPLICATE	GTCS 1-12 LAB FIELD DUPLICATE			
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05			
COC No / misc Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	06/06/2019 15:30	06/06/2019 14:35	06/06/2019 14:35	06/06/2019 14:35	06/06/2019 14:35	06/06/2019 17:00	06/06/2019 17:27	06/06/2019 17:27	06/06/2019 17:27	06/06/2019 17:27			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	4	4	4	4	4	4	4	4	4	4			
Date of Receipt	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	8	7	9	10	12	17	20	21	14	14	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	37	<30	<30	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	87	81	70	75	81	79	60	59	66	54	<0	%	TM15/PM10

Please include all sections of this report if it is reproduced

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

<b>COC No.</b>	<b>Depth</b>	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	Please see attached notes for all abbreviations and acronyms
----------------	--------------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	-----------	--



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :** Solid

EMT Sample No.	1135-1142	1151-1158	1167-1174	1183-1190	1199-1206	1215-1222					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-13A	GTCS 1-14A	GTCS 1-32A	GTCS 1-31A	GTCS 1-15A	GTCS 1-16A							
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	07/06/2019 09:00	07/06/2019 09:40	07/06/2019 10:45	07/06/2019 10:50	07/06/2019 09:10	07/06/2019 09:45							
Sample Type	Clayey Loam	Clayey Loam	Loam	Clayey Loam	Clay	Clay							
Batch Number	4	4	4	4	4	4							
Date of Receipt	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019					LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2					<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	5	5	7	12	5	11					<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2					<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1					<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	41	<30	<30	<30					<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7	<7					<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2					<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7					<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27	<27					<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7	<7					<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	86	88	85	66	74	87					<0	%	TM15/PM10

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson  
**EMT Job No:** 19/9004

**VOC Report :**           **Solid**

EMT Sample No.	1135-1142	1151-1158	1167-1174	1183-1190	1199-1206	1215-1222					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS 1-13A	GTCS 1-14A	GTCS 1-32A	GTCS 1-31A	GTCS 1-15A	GTCS 1-16A							
Depth	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05	0.00-0.05							
COC No / misc Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	07/06/2019 09:00	07/06/2019 09:40	07/06/2019 10:45	07/06/2019 10:50	07/06/2019 09:10	07/06/2019 09:45							
Sample Type	Clayey Loam	Clayey Loam	Loam	Clayey Loam	Clay	Clay					LOD/LOR	Units	Method No.
Batch Number	4	4	4	4	4	4							
Date of Receipt	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019	08/06/2019							
VOC MS Continued													
Surrogate Recovery 4-Bromofluorobenzene	77	75	76	61	71	73					<0	%	TM15/PM10

## Element Materials Technology

<b>Job number:</b>	19/9004	<b>Method:</b>	VOC
<b>Sample number:</b>	1127	<b>Matrix:</b>	Solid
<b>Sample identity:</b>	GTCS 1-12 LAB FIELD DUPLIC		
<b>Sample depth:</b>	0.00-0.05		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]



**Client Name:** AECOM  
**Reference:** 60595731  
**Location:** Grenfell  
**Contact:** David Dyson

**Matrix : Solid**

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 19/9004

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 19/9004

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 15th October, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/13239 Batch 1  
**Location :** Grenfell Stage 2  
**Date samples received :** 26th September, 2020  
**Status :** Final report  
**Issue :** 1

Nine samples were received for analysis on 26th September, 2020 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.  
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/13239

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/13239

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/13239

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 15th October, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/13239 Batch 2  
**Location :** Grenfell Stage 2  
**Date samples received :** 30th September, 2020  
**Status :** Final report  
**Issue :** 1

Nineteen samples were received for analysis on 30th September, 2020 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/13239

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/13239

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/13239

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes



AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 15th October, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/13239 Batch 3  
**Location :** Grenfell Stage 2  
**Date samples received :** 1st October, 2020  
**Status :** Final report  
**Issue :** 1

Seventeen samples were received for analysis on 1st October, 2020 of which ten were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/13239

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/13239

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/13239

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 18th November, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/13239 Batch 4  
**Location :** Grenfell Stage 2  
**Date samples received :** 2nd October, 2020  
**Status :** Final report  
**Issue :** 4

Fourteen samples were received for analysis on 2nd October, 2020 of which ten were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/13239

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/13239

**Report : Solid (Duplicate results)**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	201-204									Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-P012_SOIL											
Depth	0.20											
COC No / misc												
Containers	V J											
Sample Date	30/09/2020											
Sample Type	Sandy Loam											
Batch Number	4											
Date of Receipt	02/10/2020									LOD/LOR	Units	Method No.
Lead #M	14200AA									<5	mg/kg	TM30/PM15
		Our QA investigation didn't find any issues with this original higher lead result for sample GTCS2-P012, re-analysis gave a lower concentration with no evidence that either result is erroneous.										

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/13239

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution



EMT Job No: 20/13239

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 16th November, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 1 Schedule A  
**Location :** Grenfell Stage 2  
**Date samples received :** 24th October, 2020  
**Status :** Final report  
**Issue :** 1

Forty two samples were received for analysis on 24th October, 2020 of which twenty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced





Please see attached notes for all abbreviations and acronyms



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	1	GTCS2-S171A	0.00-0.20	5	04/11/2020	General Description (Bulk Analysis)	soil/stones
					04/11/2020	Asbestos Fibres	NAD
					04/11/2020	Asbestos ACM	NAD
					04/11/2020	Asbestos Type	NAD
					04/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S172A	0.00-0.20	15	04/11/2020	General Description (Bulk Analysis)	soil/stones
					04/11/2020	Asbestos Fibres	NAD
					04/11/2020	Asbestos ACM	NAD
					04/11/2020	Asbestos Type	NAD
					04/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S173A	0.00-0.20	25	04/11/2020	General Description (Bulk Analysis)	soil/stones
					04/11/2020	Asbestos Fibres	NAD
					04/11/2020	Asbestos ACM	NAD
					04/11/2020	Asbestos Type	NAD
					04/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S174A	0.00-0.20	35	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S175A	0.00-0.20	45	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S176A	0.00-0.20	55	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S177A	0.00-0.20	65	05/11/2020	General Description (Bulk Analysis)	soil/stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	1	GTCS2-S177A	0.00-0.20	65	05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S178A	0.00-0.20	75	05/11/2020	General Description (Bulk Analysis)	soil/stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S179A	0.00-0.20	85	05/11/2020	General Description (Bulk Analysis)	soil/stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S180A	0.00-0.20	95	05/11/2020	General Description (Bulk Analysis)	soil/stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S091A	0.00-0.02	105	05/11/2020	General Description (Bulk Analysis)	soil/stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S092A	0.00-0.02	115	05/11/2020	General Description (Bulk Analysis)	soil/stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S093A	0.00-0.02	125	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S094A	0.00-0.02	135	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S095A	0.00-0.02	145	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	1	GTCS2-S096A	0.00-0.02	155	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	Fibre Bundles



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	1	GTCS2-S096A	0.00-0.02	155	05/11/2020	<b>Asbestos ACM</b>	NAD
					05/11/2020	<b>Asbestos Type</b>	Chrysotile
					05/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
20/14697	1	GTCS2-S097A	0.00-0.02	165	05/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					05/11/2020	<b>Asbestos Fibres</b>	NAD
					05/11/2020	<b>Asbestos ACM</b>	NAD
					05/11/2020	<b>Asbestos Type</b>	NAD
					05/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	1	GTCS2-S098A	0.00-0.02	175	05/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					05/11/2020	<b>Asbestos Fibres</b>	NAD
					05/11/2020	<b>Asbestos ACM</b>	NAD
					05/11/2020	<b>Asbestos Type</b>	NAD
					05/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	1	GTCS2-S099A	0.00-0.02	185	05/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					05/11/2020	<b>Asbestos Fibres</b>	NAD
					05/11/2020	<b>Asbestos ACM</b>	NAD
					05/11/2020	<b>Asbestos Type</b>	NAD
					05/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	1	GTCS2-S100A	0.00-0.02	195	05/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					05/11/2020	<b>Asbestos Fibres</b>	NAD
					05/11/2020	<b>Asbestos ACM</b>	NAD
					05/11/2020	<b>Asbestos Type</b>	NAD
					05/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	1	GTCS2DUP11A	0.00-0.20	205	05/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					05/11/2020	<b>Asbestos Fibres</b>	NAD
					05/11/2020	<b>Asbestos ACM</b>	NAD
					05/11/2020	<b>Asbestos Type</b>	NAD
					05/11/2020	<b>Asbestos Level Screen</b>	NAD

**Matrix : Solid**

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 1 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 24th October, 2020  
**Status :** Final report  
**Issue :** 1

Forty two samples were received for analysis on 24th October, 2020 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	21-25	61-65	141-145	191-195							Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S173A	GTCS2-S177A	GTCS2-S095A	GTCS2-S100A									
Depth	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	22/10/2020	22/10/2020	22/10/2020	22/10/2020									
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clay									
Batch Number	1	1	1	1									
Date of Receipt	24/10/2020	24/10/2020	24/10/2020	24/10/2020									
Furans (Chlorinated)													
2378-TCDF*	2.69	2.15	3.53	3.49								ng/kg	Subcontracted
12378-PCDF*	1.46	ND	1.59	1.63								ng/kg	Subcontracted
23478-PCDF*	1.09	1.05	2.49	2.59								ng/kg	Subcontracted
123478-HxCDF*	2.74	2.67	3.52	3.65								ng/kg	Subcontracted
123678-HxCDF*	2.71	1.48	1.99	2.8								ng/kg	Subcontracted
234678-HxCDF*	2.16	2.01	3.9	3.15								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	36.6	26.9	48.1	38.4								ng/kg	Subcontracted
1234789-HpCDF*	2.55	1.39	2.66	2.87								ng/kg	Subcontracted
OCDF*	68.4	43.3	119	91.2								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	0.547	ND	0.513	1.32								ng/kg	Subcontracted
123478-HxCDD*	1.1	0.835	2.12	2.55								ng/kg	Subcontracted
123678-HxCDD*	2.76	2.32	8.17	10.2								ng/kg	Subcontracted
123789-HxCDD*	2.02	1.04	3.95	6.15								ng/kg	Subcontracted
1234678-HpCDD*	72.1	79.8	292	329								ng/kg	Subcontracted
OCDD*	682	735	3050	3470								ng/kg	Subcontracted
TEQ(1) (NATO)*	4.7	4	11.2	12.8								ng/kg	Subcontracted
TEQ(2) (NATO)*	4.37	3.64	10.9	12.5								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	1.4	1.3	0.9	1.6								ng/kg	Subcontracted
12378-PBDF*	0.7	0.9	1.3	0.9								ng/kg	Subcontracted
23478-PBDF*	0.8	0.6	0	0.8								ng/kg	Subcontracted
123478-HxBDF*	0.5	0.7	0.5	ND								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND								ng/kg	Subcontracted



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 16th November, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 2 Schedule A  
**Location :** Grenfell Stage 2  
**Date samples received :** 24th October, 2020  
**Status :** Final report  
**Issue :** 1

Thirty samples were received for analysis on 24th October, 2020 of which fifteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced







**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	2	GTCS2-S261A	0.00-0.02	215	05/11/2020	General Description (Bulk Analysis)	Soil/Stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S264A	0.00-0.02	225	05/11/2020	General Description (Bulk Analysis)	Soil/Stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S265A	0.00-0.05	235	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S266A	0.00-0.02	245	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S267A	0.00-0.02	250	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S268A	0.00-0.20	260	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S269A	0.00-0.20	270	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	2	GTCS2-S269A	0.00-0.20	270	05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S270A	0.00-0.20	280	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-DUP16A	0.00-0.20	295	05/11/2020	General Description (Bulk Analysis)	Soil/Stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S351A	0.00-0.02	305	05/11/2020	General Description (Bulk Analysis)	soil/stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S352A	0.00-0.02	315	05/11/2020	General Description (Bulk Analysis)	soil/stones
					05/11/2020	Asbestos Fibres	Fibre Bundles
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	Chrysotile
					05/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	2	GTCS2-S353A	0.00-0.02	325	05/11/2020	General Description (Bulk Analysis)	soil/stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S354A	0.00-0.02	335	05/11/2020	General Description (Bulk Analysis)	Soil/Stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-S355A	0.00-0.02	345	05/11/2020	General Description (Bulk Analysis)	soil.stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	2	GTCS2-DUP21A	0.00-0.02	355	05/11/2020	General Description (Bulk Analysis)	Soil/Stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD

**Matrix : Solid**

[illegible]

[illegible]

7 of 10



## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 2 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 24th October, 2020  
**Status :** Final report  
**Issue :** 1

Thirty samples were received for analysis on 24th October, 2020 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced



# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report :** Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	211-215	241-245	351-355									
Sample ID	GTCS2-S261A	GTCS2-S266A	GTCS2-DUP21A									
Depth	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	23/10/2020	23/10/2020	23/10/2020									
Sample Type	Clay	Clayey Loam	Clayey Loam									
Batch Number	2	2	2									
Date of Receipt	24/10/2020	24/10/2020	24/10/2020									
										LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms												
Furans (Chlorinated)												
2378-TCDF*	1.59	4.8	0.679								ng/kg	Subcontracted
12378-PCDF*	1.69	1.91	0.466								ng/kg	Subcontracted
23478-PCDF*	2.12	3.84	3.48								ng/kg	Subcontracted
123478-HxCDF*	1.99	3.27	1.57								ng/kg	Subcontracted
123678-HxCDF*	2.05	2.12	1.73								ng/kg	Subcontracted
234678-HxCDF*	1.81	2.74	1.47								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	19.7	16	16.2								ng/kg	Subcontracted
1234789-HpCDF*	1.64	0.546	0.987								ng/kg	Subcontracted
OCDF*	41.5	16.2	18.3								ng/kg	Subcontracted
Dioxins (Chlorinated)												
2378-TCDD*	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	0.389	0.546	ND								ng/kg	Subcontracted
123478-HxCDD*	0.656	0.479	0.553								ng/kg	Subcontracted
123678-HxCDD*	2.73	1.91	1.7								ng/kg	Subcontracted
123789-HxCDD*	1.15	1.01	ND								ng/kg	Subcontracted
1234678-HpCDD*	108	20.2	29								ng/kg	Subcontracted
OCDD*	952	99.2	220								ng/kg	Subcontracted
TEQ(1) (NATO)*	5	4.69	3.63								ng/kg	Subcontracted
TEQ(2) (NATO)*	4.82	4.41	3.24								ng/kg	Subcontracted
Furans (Brominated)												
2378-TBDF*	0.7	1.5	1.5								ng/kg	Subcontracted
12378-PBDF*	ND	0.7	1.00								ng/kg	Subcontracted
23478-PBDF*	ND	ND	0.70								ng/kg	Subcontracted
123478-HxBDF*	0.80	0.6	ND								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	0.5	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)												
2378-TBDD*	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND								ng/kg	Subcontracted

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 16th November, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 3 Schedule A  
**Location :** Grenfell Stage 2  
**Date samples received :** 27th October, 2020  
**Status :** Final report  
**Issue :** 1

Thirty six samples were received for analysis on 27th October, 2020 of which eighteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced

<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

Please see attached notes for all abbreviations and acronyms

<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

Please see attached notes for all abbreviations and acronyms

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	3	GTCS2-S262A	0.00-0.02	365	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S263A	0.00-0.02	375	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S356A	0.00-0.02	385	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S357A	0.00-0.02	395	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S358A	0.00-0.02	405	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S359A	0.00-0.02	415	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S360A	0.00-0.02	425	05/11/2020	General Description (Bulk Analysis)	Soil/stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	3	GTCS2-S360A	0.00-0.02	425	05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S035A	0.00-0.02	435	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	Fibre Bundles
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	Chrysotile
					05/11/2020	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
20/14697	3	GTCS2-S111A	0.00-0.02	445	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S112A	0.00-0.02	455	05/11/2020	General Description (Bulk Analysis)	Soil/Stone
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S113A	0.00-0.02	465	05/11/2020	General Description (Bulk Analysis)	Soil/Stones
					05/11/2020	Asbestos Fibres	NAD
					05/11/2020	Asbestos ACM	NAD
					05/11/2020	Asbestos Type	NAD
					05/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S115A	0.00-0.02	475	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S116A	0.00-0.02	485	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S117A	0.00-0.02	495	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S031A	0.00-0.02	505	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S032A	0.00-0.02	515	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	3	GTCS2-S032A	0.00-0.02	515	06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S033A	0.00-0.02	525	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	3	GTCS2-S034A	0.00-0.02	535	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD

**Matrix : Solid**

7 of 11

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 3 Schedule B 20/14697 Batch 3 Schedule C  
**Location :** Grenfell Stage 2  
**Date samples received :** 27th October, 2020  
**Status :** Final report  
**Issue :** 1

Thirty six samples were received for analysis on 27th October, 2020 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	421-425	431-435	451-455	491-495	531-535						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S360A	GTCS2-S035A	GTCS2-S112A	GTCS2-S117A	GTCS2-S034A								
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	23/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020								
Sample Type	Clay	Clayey Loam	Clayey Loam	Clay	Clayey Loam								
Batch Number	3	3	3	3	3						LOD/LOR	Units	Method No.
Date of Receipt	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020								
Total Organic Carbon	-	2.65	-	-	-						<0.02	%	TM21/PM89
Furans (Chlorinated)													
2378-TCDF*	2.33	-	3.99	5.31	9.17							ng/kg	Subcontracted
12378-PCDF*	1.16	-	1.79	1.43	3.18							ng/kg	Subcontracted
23478-PCDF*	2.46	-	1.5	5.02	8.79							ng/kg	Subcontracted
123478-HxCDF*	3.32	-	2.69	4.43	9.69							ng/kg	Subcontracted
123678-HxCDF*	2.27	-	2.19	4.78	6.33							ng/kg	Subcontracted
234678-HxCDF*	3.05	-	2.66	4.01	7.51							ng/kg	Subcontracted
123789-HxCDF*	ND	-	ND	0.272	ND							ng/kg	Subcontracted
1234678-HpCDF*	19.7	-	15.3	26.3	215							ng/kg	Subcontracted
1234789-HpCDF*	1.68	-	1.11	1.28	4.83							ng/kg	Subcontracted
OCDF*	22.4	-	31	39.3	256							ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
12378-PCDD*	ND	-	0.49	1.26	1.75							ng/kg	Subcontracted
123478-HxCDD*	0.764	-	0.507	1.42	2.59							ng/kg	Subcontracted
123678-HxCDD*	1.97	-	2.53	4.81	9.38							ng/kg	Subcontracted
123789-HxCDD*	0.95	-	1.35	1.71	3.39							ng/kg	Subcontracted
1234678-HpCDD*	47.5	-	55.7	56.7	167							ng/kg	Subcontracted
OCDD*	383	-	411	415	1550							ng/kg	Subcontracted
TEQ(1) (NATO)*	4.19	-	4.34	7.57	16.6							ng/kg	Subcontracted
TEQ(2) (NATO)*	3.84	-	3.84	7.18	15.9							ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.7	-	0.7	0.9	1.2							ng/kg	Subcontracted
12378-PBDF*	ND	-	0.9	ND	0.8							ng/kg	Subcontracted
23478-PBDF*	ND	-	ND	0.6	ND							ng/kg	Subcontracted
123478-HxBDF*	0.5	-	0.5	ND	0.7							ng/kg	Subcontracted
123678-HxBDF*	ND	-	ND	ND	ND							ng/kg	Subcontracted
234678-HxBDF*	ND	-	ND	ND	ND							ng/kg	Subcontracted
123789-HxBDF*	ND	-	ND	ND	ND							ng/kg	Subcontracted
1234678-HpBDF*	ND	-	ND	ND	ND							ng/kg	Subcontracted
1234789-HpBDF*	ND	-	ND	ND	ND							ng/kg	Subcontracted
OBDF*	ND	-	ND	ND	ND							ng/kg	Subcontracted

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	421-425	431-435	451-455	491-495	531-535								
Sample ID	GTCS2-S360A	GTCS2-S035A	GTCS2-S112A	GTCS2-S117A	GTCS2-S034A								
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	23/10/2020	26/10/2020	26/10/2020	26/10/2020	26/10/2020								
Sample Type	Clay	Clayey Loam	Clayey Loam	Clay	Clayey Loam								
Batch Number	3	3	3	3	3								
Date of Receipt	27/10/2020	27/10/2020	27/10/2020	27/10/2020	27/10/2020								
											LOD/LOR	Units	Method No.
Dioxins (Brominated)													
2378-TBDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
12378-PBDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
123478-HxBDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
123678-HxBDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
123789-HxBDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
1234678-HpBDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
OBDD*	ND	-	ND	ND	ND							ng/kg	Subcontracted
PCB-81*	1.35	-	1.14	3.22	3.18							ng/kg	Subcontracted
PCB-77*	45.1	-	21.3	65.9	92.8							ng/kg	Subcontracted
PCB-123*	18.8	-	5.98	14.1	9.71							ng/kg	Subcontracted
PCB-118*	1490	-	254	830	1300							ng/kg	Subcontracted
PCB-114*	26.5	-	4.03	16.9	24.4							ng/kg	Subcontracted
PCB-105*	667	-	122	475	609							ng/kg	Subcontracted
PCB-126*	10.9	-	2.51	15.4	15.8							ng/kg	Subcontracted
PCB-167*	110	-	18.8	71.1	155							ng/kg	Subcontracted
PCB-156*	283	-	43.7	176	272							ng/kg	Subcontracted
PCB-157*	81.4	-	11.6	43	110							ng/kg	Subcontracted
PCB-169*	0.615	-	0.666	2.17	2.14							ng/kg	Subcontracted
PCB-189*	20	-	5.64	14.3	63.5							ng/kg	Subcontracted

Please see attached notes for all abbreviations and acronyms



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 16th November, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 4 Schedule A 20/14697 Batch 4 Schedule C

**Location :** Grenfell Stage 2

**Date samples received :** 28th October, 2020

**Status :** Final report

**Issue :** 1

Forty eight samples were received for analysis on 28th October, 2020 of which twenty four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:****Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced





<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

Please see attached notes for all abbreviations and acronyms

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	741-745	751-755	761-765	771-775							Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S057A	GTCS2-S058A	GTCS2-S059A	GTCS2-S060A									
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	27/10/2020	27/10/2020	27/10/2020	27/10/2020									
Sample Type	Clayey Sand	Clayey Sand	Clay	Clayey Loam									
Batch Number	4	4	4	4							LOD/LOR	Units	Method No.
Date of Receipt	28/10/2020	28/10/2020	28/10/2020	28/10/2020									
Antimony	-	-	-	-							<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	44	69	138	118							<5	mg/kg	TM30/PM15
Lead	-	-	-	-							<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	0.07	<0.04							<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.08	0.13	<0.03							<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05							<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.06	0.21	0.48	0.08							<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	<0.04	0.11	0.16	<0.04							<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.21	0.65	1.21	0.13							<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.19	0.56	1.04	0.12							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.17	0.39	0.66	0.10							<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.19	0.38	0.77	0.12							<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene <sup>#M</sup>	0.51	0.84	1.61	0.23							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.23	0.46	0.80	0.12							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.23	0.39	0.68	0.09							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	<0.04	0.08	0.12	<0.04							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.24	0.39	0.73	0.10							<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.0	4.5	8.5	1.1							<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.37	0.60	1.16	0.17							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.14	0.24	0.45	0.06							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	92	93	93	94							<0	%	TM4/PM8
Natural Moisture Content	21.6	40.8	32.7	29.1							<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	1.67	-	-	-							<0.02	%	TM21/PM24
Sample Type	Clayey Sand	Clayey Sand	Clay	Clayey Loam							None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown							None		PM13/PM0
Other Items	stones	stones, vegetation	stones	stones, vegetation							None		PM13/PM0

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	4	GTCS2-S036A	0.00-0.02	545	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S037A	0.00-0.02	555	06/11/2020	General Description (Bulk Analysis)	Soil/Stone
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S038A	0.00-0.02	565	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S039A	0.00-0.02	575	06/11/2020	General Description (Bulk Analysis)	soil.stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S040A	0.00-0.02	585	06/11/2020	General Description (Bulk Analysis)	Soil/Stones
					06/11/2020	Asbestos Fibres	Fibre Bundles
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	Chrysotile
					06/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	4	GTCS2-S114A	0.00-0.02	595	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S118A	0.00-0.02	605	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	4	GTCS2-S118A	0.00-0.02	605	06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S119A	0.00-0.02	615	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S120A	0.00-0.02	625	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S071A	0.00-0.02	635	06/11/2020	General Description (Bulk Analysis)	Soil/Stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S072A	0.00-0.02	645	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S073A	0.00-0.02	655	06/11/2020	General Description (Bulk Analysis)	Soil/Stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S074A	0.00-0.02	665	06/11/2020	General Description (Bulk Analysis)	Soil/Stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S075A	0.00-0.02	675	06/11/2020	General Description (Bulk Analysis)	Soil/Stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S076A	0.00-0.02	685	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S077A	0.00-0.02	695	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	4	GTCS2-S077A	0.00-0.02	695	06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S078A	0.00-0.02	705	06/11/2020	General Description (Bulk Analysis)	soil.stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S079A	0.00-0.02	715	06/11/2020	General Description (Bulk Analysis)	soil.stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S080A	0.00-0.02	725	07/11/2020	General Description (Bulk Analysis)	Soil/Stone
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD
					07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S056A	0.00-0.02	735	07/11/2020	General Description (Bulk Analysis)	Soil/Stone
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD
					07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S057A	0.00-0.02	745	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S058A	0.00-0.02	755	06/11/2020	General Description (Bulk Analysis)	soil/stones
					06/11/2020	Asbestos Fibres	NAD
					06/11/2020	Asbestos ACM	NAD
					06/11/2020	Asbestos Type	NAD
					06/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S059A	0.00-0.02	765	07/11/2020	General Description (Bulk Analysis)	Soil/Stone
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD
					07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD
20/14697	4	GTCS2-S060A	0.00-0.02	775	07/11/2020	General Description (Bulk Analysis)	Soil/Stone
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD
					07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD

**Matrix : Solid**

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 4 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 28th October, 2020  
**Status :** Final report  
**Issue :** 1

Forty eight samples were received for analysis on 28th October, 2020 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	571-575	651-655	701-705	731-735									
Sample ID	GTCS2-S039A	GTCS2-S073A	GTCS2-S078A	GTCS2-S056A									
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	26/10/2020	27/10/2020	27/10/2020	27/10/2020									
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam									
Batch Number	4	4	4	4									
Date of Receipt	28/10/2020	28/10/2020	28/10/2020	28/10/2020									
Please see attached notes for all abbreviations and acronyms											LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	2.5	ND	ND	ND								ng/kg	Subcontracted
12378-PCDF*	1.93	ND	ND	1.13								ng/kg	Subcontracted
23478-PCDF*	3.69	1.5	ND	0.517								ng/kg	Subcontracted
123478-HxCDF*	3.17	1.78	2.58	2.18								ng/kg	Subcontracted
123678-HxCDF*	2.85	1.39	3.28	1.03								ng/kg	Subcontracted
234678-HxCDF*	3.22	1.43	3.41	1.12								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	68.9	37	26.6	15.4								ng/kg	Subcontracted
1234789-HpCDF*	3.8	0.688	1.68	1.02								ng/kg	Subcontracted
OCDF*	184	46.1	57.7	22.1								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	0.66	ND	ND	ND								ng/kg	Subcontracted
123478-HxCDD*	2.36	0.522	1.05	0.34								ng/kg	Subcontracted
123678-HxCDD*	16.8	1.47	2.9	1.87								ng/kg	Subcontracted
123789-HxCDD*	5.69	1.19	1.25	0.691								ng/kg	Subcontracted
1234678-HpCDD*	562	62.2	83.3	45.8								ng/kg	Subcontracted
OCDD*	6310	513	702	301								ng/kg	Subcontracted
TEQ(1) (NATO)*	19.2	3.56	4.14	2.33								ng/kg	Subcontracted
TEQ(2) (NATO)*	18.8	3.09	3.32	1.98								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.9	1.3	ND	1.2								ng/kg	Subcontracted
12378-PBDF*	0.6	1.0	0.6	0.6								ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	0.5								ng/kg	Subcontracted
123478-HxBDF*	ND	ND	0.8	ND								ng/kg	Subcontracted
123678-HxBDF*	0.7	0.7	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND								ng/kg	Subcontracted

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.



# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 11th November, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 5 Schedule A  
**Location :** Grenfell Stage 2  
**Date samples received :** 29th October, 2020  
**Status :** Final report  
**Issue :** 1

Thirty four samples were received for analysis on 29th October, 2020 of which seventeen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

QF-PM 3.1.2 v11

Please include all sections of this report if it is reproduced  
All solid results are expressed on a dry weight basis unless stated otherwise.

2 of 10



# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	881-885	891-895	901-905	911-915	921-925	931-935	941-945				Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S041A	GTCS2-S042A	GTCS2-S043A	GTCS2-S048A	GTCS2-S049A	GTCS2-S050A	GTCS2-DUP03A						
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02						
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T						
Sample Date	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020						
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam						
Batch Number	5	5	5	5	5	5	5						
Date of Receipt	29/10/2020	29/10/2020	29/10/2020	29/10/2020	29/10/2020	29/10/2020	29/10/2020				LOD/LOR	Units	Method No.
Antimony	-	-	-	-	-	2	-				<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	517	286	88	156	168	96	87				<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene <sup>#M</sup>	0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.34	0.11	<0.03	0.13	0.08	0.08	<0.03				<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05				<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04				<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.49	0.30	0.25	0.30	0.42	0.44	0.18				<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.18	0.09	0.07	0.09	0.11	0.18	<0.04				<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.81	0.93	0.84	0.87	0.95	1.28	0.56				<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.80	0.85	0.71	0.82	0.82	1.15	0.51				<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.87	0.50	0.42	0.45	0.45	0.67	0.34				<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	1.30	0.65	0.54	0.61	0.58	0.79	0.39				<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	2.69	1.30	1.00	1.23	1.07	1.86	0.79				<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	1.50	0.70	0.54	0.72	0.64	1.04	0.43				<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	1.18	0.56	0.39	0.52	0.44	0.88	0.31				<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.20	0.11	0.07	0.10	0.08	0.17	0.07				<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	1.17	0.54	0.37	0.53	0.45	0.87	0.33				<0.04	mg/kg	TM4/PM8
PAH 16 Total	13.6	6.6	5.2	6.4	6.1	9.4	3.9				<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.94	0.94	0.72	0.89	0.77	1.34	0.57				<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.75	0.36	0.28	0.34	0.30	0.52	0.22				<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	91	88	87	89	89	71	83				<0	%	TM4/PM8
Natural Moisture Content	53.5	85.1	68.7	44.4	41.3	29.4	63.9				<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-	-	-	1.64	-				<0.02	%	TM21/PM24
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam				None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown				None		PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation, brick	stones, vegetation				None		PM13/PM0

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	5	GTCS2-S051A	0.00-0.02	785	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S052A	0.00-0.02	795	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S053A	0.00-0.02	805	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S054A	0.00-0.02	815	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S055A	0.00-0.02	825	09/11/2020	General Description (Bulk Analysis)	soil.stones
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S062A	0.00-0.02	835	09/11/2020	General Description (Bulk Analysis)	soil.stones
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S063A	0.00-0.02	845	07/11/2020	General Description (Bulk Analysis)	Soil/Stone
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	5	GTCS2-S063A	0.00-0.02	845	07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S064A	0.00-0.02	855	07/11/2020	General Description (Bulk Analysis)	Soil/Stone
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD
					07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S065A	0.00-0.02	865	07/11/2020	General Description (Bulk Analysis)	soil.stones
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD
					07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-DUP04A	0.00-0.02	875	07/11/2020	General Description (Bulk Analysis)	Soil/Stone
					07/11/2020	Asbestos Fibres	NAD
					07/11/2020	Asbestos ACM	NAD
					07/11/2020	Asbestos Type	NAD
					07/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S041A	0.00-0.02	885	09/11/2020	General Description (Bulk Analysis)	soil.stones
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S042A	0.00-0.02	895	09/11/2020	General Description (Bulk Analysis)	soil.stones
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S043A	0.00-0.02	905	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S048A	0.00-0.02	915	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S049A	0.00-0.02	925	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	5	GTCS2-S050A	0.00-0.02	935	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD

AECOM  
60632092  
Grenfell Stage 2  
David Dyson

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.



# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 5 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 29th October, 2020  
**Status :** Final report  
**Issue :** 1

Thirty four samples were received for analysis on 29th October, 2020 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	781-785	831-835	931-935								Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S051A	GTCS2-S062A	GTCS2-S050A										
Depth	0.00-0.02	0.00-0.02	0.00-0.02										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	27/10/2020	28/10/2020	28/10/2020										
Sample Type	Clayey Loam	Clayey Loam	Clay										
Batch Number	5	5	5										
Date of Receipt	29/10/2020	29/10/2020	29/10/2020								LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	1.45	ND	4.32									ng/kg	Subcontracted
12378-PCDF*	0.516	0.803	1.37									ng/kg	Subcontracted
23478-PCDF*	ND	1.87	4.57									ng/kg	Subcontracted
123478-HxCDF*	1.87	1.73	5.11									ng/kg	Subcontracted
123678-HxCDF*	1.51	1.05	4.8									ng/kg	Subcontracted
234678-HxCDF*	1.25	ND	6.57									ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND									ng/kg	Subcontracted
1234678-HpCDF*	15	15.1	36.3									ng/kg	Subcontracted
1234789-HpCDF*	0.918	ND	2.6									ng/kg	Subcontracted
OCDF*	20.1	24.6	43.6									ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND									ng/kg	Subcontracted
12378-PCDD*	0.432	ND	1.55									ng/kg	Subcontracted
123478-HxCDD*	0.405	0.523	1.72									ng/kg	Subcontracted
123678-HxCDD*	2.06	1.74	5.18									ng/kg	Subcontracted
123789-HxCDD*	ND	0.59	3.58									ng/kg	Subcontracted
1234678-HpCDD*	37.9	57.3	303									ng/kg	Subcontracted
OCDD*	253	496	2520									ng/kg	Subcontracted
TEQ(1) (NATO)*	2.32	3.27	12.7									ng/kg	Subcontracted
TEQ(2) (NATO)*	1.91	2.78	12.2									ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.9	1.5	0.6									ng/kg	Subcontracted
12378-PBDF*	ND	0.7	1.00									ng/kg	Subcontracted
23478-PBDF*	0.5	0.5	ND									ng/kg	Subcontracted
123478-HxBDF*	ND	0.8	0.5									ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND									ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND									ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND									ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND									ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND									ng/kg	Subcontracted
OBDF*	ND	ND	ND									ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND									ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND									ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND									ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND									ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND									ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND									ng/kg	Subcontracted
OBDD*	ND	ND	ND									ng/kg	Subcontracted





**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes



AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 13th November, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 6 Schedule A  
**Location :** Grenfell Stage 2  
**Date samples received :** 30th October, 2020  
**Status :** Final report  
**Issue :** 1

Sixty two samples were received for analysis on 30th October, 2020 of which thirty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	951-955	961-965	971-975	981-985	991-995	1001-1005	1011-1015	1021-1025	1031-1035	1041-1045	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S044A	GTCS2-S045A	GTCS2-S046A	GTCS2-S047A	GTCS2-S061A	GTCS2-S066A	GTCS2-S067A	GTCS2-S068A	GTCS2-S069A	GTCS2-S070A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.20			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020	28/10/2020			
Sample Type	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clay			
Batch Number	6	6	6	6	6	6	6	6	6	6	LOD/LOR	Units	Method No.
Date of Receipt	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020			
Antimony	-	5	-	-	-	-	-	8	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	207	472	632	361	153	122	103	257	179	265	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	0.06	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.07	0.27	0.28	0.10	0.14	0.06	0.08	0.08	0.08	0.12	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	0.09	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.37	1.91	1.05	0.63	0.77	0.41	0.23	0.35	0.31	0.25	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.13	0.49	0.36	0.16	0.26	0.11	0.10	0.11	0.12	0.12	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.16	5.82	3.46	2.12	1.50	1.16	0.81	0.73	1.00	0.71	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.08	4.89	3.11	1.82	1.33	0.97	0.76	0.68	0.93	0.67	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.66	2.61	1.72	1.04	0.70	0.60	0.47	0.45	0.58	0.54	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.82	3.15	2.07	1.28	0.77	0.76	0.54	0.47	0.74	0.56	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	1.60	5.91	3.97	2.54	1.38	1.39	1.14	0.97	1.65	1.17	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.91	3.31	2.16	1.44	0.76	0.77	0.62	0.55	0.90	0.67	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.63	2.21	1.57	0.98	0.51	0.52	0.44	0.47	0.71	0.55	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.13	0.40	0.28	0.21	0.09	0.11	0.08	0.07	0.16	0.11	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.66	2.28	1.62	1.01	0.60	0.53	0.49	0.48	0.79	0.63	<0.04	mg/kg	TM4/PM8
PAH 16 Total	8.2	33.5	21.8	13.3	8.8	7.4	5.8	5.4	8.0	6.1	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.15	4.26	2.86	1.83	0.99	1.00	0.82	0.70	1.19	0.84	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.45	1.65	1.11	0.71	0.39	0.39	0.32	0.27	0.46	0.33	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	92	88	94	90	94	91	93	88	90	95	<0	%	TM4/PM8
Natural Moisture Content	46.6	49.2	37.7	42.5	35.4	40.3	62.2	41.2	29.8	37.2	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	7.21	7.06	-	-	-	13.31	4.62	-	-	<0.02	%	TM21/PM24
Sample Type	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones, loam, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones	stones, vegetation	stones		None	PM13/PM0

<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

Please see attached notes for all abbreviations and acronyms



**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	6	GTCS2-S044A	0.00-0.02	955	10/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S045A	0.00-0.02	965	10/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S046A	0.00-0.02	975	10/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S047A	0.00-0.02	985	10/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S061A	0.00-0.02	995	09/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					09/11/2020	<b>Asbestos Fibres</b>	NAD
					09/11/2020	<b>Asbestos ACM</b>	NAD
					09/11/2020	<b>Asbestos Type</b>	NAD
					09/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S066A	0.00-0.02	1005	10/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S067A	0.00-0.02	1015	10/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	6	GTCS2-S067A	0.00-0.02	1015	10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S068A	0.00-0.20	1025	10/11/2020	General Description (Bulk Analysis)	soil.stones
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S069A	0.00-0.20	1035	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S070A	0.00-0.20	1045	09/11/2020	General Description (Bulk Analysis)	Soil/Stone
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S301A	0.00-0.02	1055	10/11/2020	General Description (Bulk Analysis)	Soil/Stones
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S302A	0.00-0.02	1065	09/11/2020	General Description (Bulk Analysis)	soil.stones
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S303A	0.00-0.02	1075	10/11/2020	General Description (Bulk Analysis)	Soil/Stones
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S304A	0.00-0.02	1085	09/11/2020	General Description (Bulk Analysis)	soil.stones
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S305A	0.00-0.02	1095	10/11/2020	General Description (Bulk Analysis)	Soil/Stone
					10/11/2020	Asbestos Fibres	Fibre Bundles
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	Amosite
					10/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	6	GTCS2-S306A	0.00-0.02	1105	10/11/2020	General Description (Bulk Analysis)	Soil/Stone
					10/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	6	GTCS2-S306A	0.00-0.02	1105	10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S309A	0.00-0.02	1115	10/11/2020	General Description (Bulk Analysis)	Soil/Stone
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S310A	0.00-0.02	1125	10/11/2020	General Description (Bulk Analysis)	Soil/Stone
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-DUP18A	0.00-0.02	1135	10/11/2020	General Description (Bulk Analysis)	Soil/Stones
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S307A	0.00-0.02	1145	10/11/2020	General Description (Bulk Analysis)	soil.stones
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S016A	0.00-0.02	1155	09/11/2020	General Description (Bulk Analysis)	Soil/Stones
					09/11/2020	Asbestos Fibres	NAD
					09/11/2020	Asbestos ACM	NAD
					09/11/2020	Asbestos Type	NAD
					09/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S017A	0.00-0.02	1165	10/11/2020	General Description (Bulk Analysis)	soil.stones
					10/11/2020	Asbestos Fibres	Fibre Bundles
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	Amosite
					10/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	6	GTCS2-S018A	0.00-0.02	1175	10/11/2020	General Description (Bulk Analysis)	Soil/Stones
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD
20/14697	6	GTCS2-S019A	0.00-0.02	1185	10/11/2020	General Description (Bulk Analysis)	Soil/Stones
					10/11/2020	Asbestos Fibres	NAD
					10/11/2020	Asbestos ACM	NAD
					10/11/2020	Asbestos Type	NAD
					10/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	6	GTCS2-S020A	0.00-0.02	1195	10/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					10/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	Chrysotile
					10/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
20/14697	6	GTCS2-308A	0.00-0.02	1205	09/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					09/11/2020	<b>Asbestos Fibres</b>	NAD
					09/11/2020	<b>Asbestos ACM</b>	NAD
					09/11/2020	<b>Asbestos Type</b>	NAD
					09/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S011A	0.00-0.02	1215	09/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					09/11/2020	<b>Asbestos Fibres</b>	NAD
					09/11/2020	<b>Asbestos ACM</b>	NAD
					09/11/2020	<b>Asbestos Type</b>	NAD
					09/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S012A	0.00-0.02	1225	10/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S013A	0.00-0.02	1235	10/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S014A	0.00-0.02	1245	10/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	6	GTCS2-S015A	0.00-0.02	1255	10/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					10/11/2020	<b>Asbestos Fibres</b>	NAD
					10/11/2020	<b>Asbestos ACM</b>	NAD
					10/11/2020	<b>Asbestos Type</b>	NAD
					10/11/2020	<b>Asbestos Level Screen</b>	NAD

**Matrix : Solid**

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 Dilution

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 6 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 30th October, 2020  
**Status :** Final report  
**Issue :** 1

Sixty two samples were received for analysis on 30th October, 2020 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	961-965	1021-1025	1091-1095	1121-1125	1161-1165	1221-1225					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S045A	GTCS2-S068A	GTCS2-S305A	GTCS2-S310A	GTCS2-S017A	GTCS2-S012A							
Depth	0.00-0.02	0.00-0.20	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	28/10/2020	28/10/2020	29/10/2020	29/10/2020	29/10/2020	29/10/2020							
Sample Type	Clayey Loam	Clay	Clay	Clay	Clay	Clayey Loam							
Batch Number	6	6	6	6	6	6							
Date of Receipt	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020	30/10/2020					LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	8.12	15.4	13.7	10.1	10.3	7.63						ng/kg	Subcontracted
12378-PCDF*	4.34	3.62	4.89	1.74	1.66	1.61						ng/kg	Subcontracted
23478-PCDF*	7.09	9.8	12.1	ND	4.18	3.59						ng/kg	Subcontracted
123478-HxCDF*	7.15	14.3	13.2	5.3	2.05	2.45						ng/kg	Subcontracted
123678-HxCDF*	4.38	7.27	10.1	4.8	2.2	3.09						ng/kg	Subcontracted
234678-HxCDF*	4.17	11.1	15.5	4.06	2.08	2.34						ng/kg	Subcontracted
123789-HxCDF*	0.522	ND	1.32	ND	ND	ND						ng/kg	Subcontracted
1234678-HpCDF*	35.4	145	66.4	40.4	20.8	12.7						ng/kg	Subcontracted
1234789-HpCDF*	1.95	11.1	3.6	1.78	0.89	0.906						ng/kg	Subcontracted
OCDF*	32.5	472	46	55	27.1	11.2						ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
12378-PCDD*	1.58	3.48	2.68	0.981	0.768	0.517						ng/kg	Subcontracted
123478-HxCDD*	1.76	4.58	1.61	1.56	0.575	ND						ng/kg	Subcontracted
123678-HxCDD*	4.13	21.9	5.9	4.08	2.2	1.12						ng/kg	Subcontracted
123789-HxCDD*	3.59	7.9	3.7	2.56	0.596	1.42						ng/kg	Subcontracted
1234678-HpCDD*	50.5	712	90.5	107	63.8	25.3						ng/kg	Subcontracted
OCDD*	257	6490	611	1060	599	79.1						ng/kg	Subcontracted
TEQ(1) (NATO)*	9.41	31.2	16.9	7.11	6.45	4.81						ng/kg	Subcontracted
TEQ(2) (NATO)*	9.1	30.7	16.4	6.42	6.04	4.42						ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.90	1.4	1.30	0.7	1.00	0.7						ng/kg	Subcontracted
12378-PBDF*	ND	0.7	0.6	ND	0.7	nd						ng/kg	Subcontracted
23478-PBDF*	0.5	ND	ND	0.5	ND	0.5						ng/kg	Subcontracted
123478-HxBDF*	ND	ND	ND	ND	0.9	nd						ng/kg	Subcontracted
123678-HxBDF*	ND	ND	0.80	ND	ND	nd						ng/kg	Subcontracted
234678-HxBDF*	ND	ND	0	ND	ND	nd						ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
1234678-HpBDF*	ND	0.6	ND	ND	ND	nd						ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND	nd						ng/kg	Subcontracted

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

[illegible]



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 16th November, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 7 Schedule A  
**Location :** Grenfell Stage 2  
**Date samples received :** 31st October, 2020  
**Status :** Final report  
**Issue :** 1

Forty two samples were received for analysis on 31st October, 2020 of which twenty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced





<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

QF-PM 3.1.2 v11

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

3 of 12

Please see attached notes for all abbreviations and acronyms

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	7	GTCS2-S260A	0.00-0.02	1265	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S259A	0.00-0.02	1275	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S258A	0.00-0.02	1285	11/11/2020	General Description (Bulk Analysis)	Soil/Stone
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S257A	0.00-0.02	1295	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S256A	0.00-0.02	1305	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S251A	0.00-0.02	1315	11/11/2020	General Description (Bulk Analysis)	Soil/Stone
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S252A	0.00-0.02	1325	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	7	GTCS2-S252A	0.00-0.02	1325	11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S253A	0.00-0.02	1335	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S254A	0.00-0.02	1345	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S255A	0.00-0.02	1355	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S081A	0.00-0.02	1365	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S082A	0.00-0.02	1375	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S083A	0.00-0.02	1385	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S084A	0.00-0.02	1395	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	Fibre Bundles
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	Amosite
					11/11/2020	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
20/14697	7	GTCS2-S088A	0.00-0.02	1405	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S089A	0.00-0.02	1415	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	7	GTCS2-S089A	0.00-0.02	1415	11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S090A	0.00-0.02	1425	11/11/2020	General Description (Bulk Analysis)	Soil/Stone
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S085A	0.00-0.02	1435	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S086A	0.00-0.02	1445	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-S087A	0.00-0.02	1455	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	7	GTCS2-DUP05A	0.00-0.02	1465	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD

**Matrix : Solid**

[illegible]



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 7 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 31st October, 2020  
**Status :** Final report  
**Issue :** 1

Forty two samples were received for analysis on 31st October, 2020 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1301-1305	1311-1315	1391-1395	1411-1415							Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S256A	GTCS2-S251A	GTCS2-S084A	GTCS2-S089A									
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	30/10/2020	30/10/2020	30/10/2020	30/10/2020									
Sample Type	Clay	Clayey Loam	Clayey Loam	Clayey Loam									
Batch Number	7	7	7	7									
Date of Receipt	31/10/2020	31/10/2020	31/10/2020	31/10/2020									
Furans (Chlorinated)													
2378-TCDF*	3.18	4.38	3.58	3.22								ng/kg	Subcontracted
12378-PCDF*	2.08	2.89	ND	0.719								ng/kg	Subcontracted
23478-PCDF*	2.59	5.63	3.32	0.672								ng/kg	Subcontracted
123478-HxCDF*	3.2	1.93	3.21	ND								ng/kg	Subcontracted
123678-HxCDF*	3.74	2.03	1.64	0.765								ng/kg	Subcontracted
234678-HxCDF*	3.06	3.8	2.77	0.788								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	20	14.8	22	6.85								ng/kg	Subcontracted
1234789-HpCDF*	0.476	0.86	1.28	ND								ng/kg	Subcontracted
OCDF*	19.6	12.2	38.8	8.08								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	ND	1.28	ND	0.271								ng/kg	Subcontracted
123478-HxCDD*	0.99	1.35	0.874	ND								ng/kg	Subcontracted
123678-HxCDD*	1.92	2.99	2.49	ND								ng/kg	Subcontracted
123789-HxCDD*	1.66	2.22	1.14	ND								ng/kg	Subcontracted
1234678-HpCDD*	53.6	24.2	93.6	17.6								ng/kg	Subcontracted
OCDD*	570	93.3	847	112								ng/kg	Subcontracted
TEQ(1) (NATO)*	5.13	6.47	5.83	1.64								ng/kg	Subcontracted
TEQ(2) (NATO)*	4.51	5.98	5.29	1.35								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	1.4	0.8	0.9	0.6								ng/kg	Subcontracted
12378-PBDF*	0.7	ND	ND	ND								ng/kg	Subcontracted
23478-PBDF*	0.5	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDF*	0.5	0.5	ND	ND								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND								ng/kg	Subcontracted





**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	29th November, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 7 Schedule C 20/14697 Batch 7 Schedule D
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	31st October, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Forty two samples were received for analysis on 31st October, 2020 of which one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced



Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Note:**

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes



AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 16th November, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 8 Schedule A 20/14697 Batch 8 Schedule C

**Location :** Grenfell Stage 2

**Date samples received :** 3rd November, 2020

**Status :** Final report

**Issue :** 1

Forty six samples were received for analysis on 3rd November, 2020 of which twenty three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:****Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1471-1475	1481-1485	1496-1500	1506-1510	1516-1520	1526-1530	1536-1540	1546-1550	1556-1560	1566-1570	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S001A	GTCS2-S002A	GTCS2-S003A	GTCS2-S004A	GTCS2-S005A	GTCS2-S006A	GTCS2-S007A	GTCS2-S008A	GTCS2-S009A	GTCS2-S010A			
Depth	0.00-0.05	0.00-0.05	0.00-0.02	0.00-0.02	0.00-0.05	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.05	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	8	8	8	8	8	8	8	8	8	8			
Date of Receipt	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	LOD/LOR	Units	Method No.
Antimony	16	-	-	-	-	2	-	-	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	164	126	181	225	109	171	547	257	106	207	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	0.06	0.07	<0.04	0.11	<0.04	0.12	<0.04	0.08	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.13	0.09	0.23	0.21	0.22	0.29	<0.03	0.39	0.07	0.29	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	0.11	<0.04	<0.04	<0.04	0.08	<0.04	0.05	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.33	0.37	0.59	1.87	0.52	0.77	0.13	1.12	0.09	1.07	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.16	0.15	0.27	0.46	0.23	0.33	0.07	0.45	0.07	0.42	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.18	1.05	2.79	3.48	1.60	2.29	0.41	3.53	0.47	3.34	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.09	0.92	2.53	2.91	1.44	2.01	0.40	3.14	0.45	2.92	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.62	0.50	1.41	1.41	0.78	1.41	0.27	1.76	0.24	1.60	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.70	0.55	1.50	1.60	0.85	1.30	0.27	1.88	0.40	1.70	<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene <sup>#M</sup>	1.46	1.08	3.31	2.82	1.81	3.52	0.57	3.73	0.85	3.15	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.79	0.62	1.83	1.64	1.00	1.23	0.30	1.96	0.38	1.60	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.58	0.45	1.35	1.16	0.77	1.14	0.26	1.71	0.33	1.44	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.13	0.10	0.24	0.24	0.17	<0.04	<0.04	0.37	0.07	0.27	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.57	0.45	1.43	1.14	0.73	1.21	0.27	1.79	0.35	1.43	<0.04	mg/kg	TM4/PM8
PAH 16 Total	7.7	6.3	17.5	19.1	10.1	15.6	3.0	22.0	3.8	19.4	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.05	0.78	2.38	2.03	1.30	2.53	0.41	2.69	0.61	2.27	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.41	0.30	0.93	0.79	0.51	0.99	0.16	1.04	0.24	0.88	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	97	93	100	93	96	86	98	104	99	97	<0	%	TM4/PM8
Natural Moisture Content	26.9	26.0	44.0	42.6	16.2	42.5	41.9	31.4	73.4	35.8	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	3.73	3.72	-	-	-	6.02	-	-	-	-	<0.02	%	TM21/PM24
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation, sand	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation		None	PM13/PM0

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1576-1580	1586-1590	1596-1600	1606-1610	1616-1620	1626-1630	1636-1640	1646-1650	1656-1660	1666-1670	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP01A	GTCS2-S146A	GTCS2-S146A	GTCS2-S146A	GTCS2-S141A	GTCS2-S142A	GTCS2-S142A	GTCS2-S142A	GTCS2-S143A	GTCS2-S144A			
Depth	0.00-0.05	0.00-0.05	0.00-0.20	0.40-0.50	0.00-0.02	0.00-0.05	0.00-0.20	0.30-0.40	0.00-0.20	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020			
Sample Type	Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Clayey Loam	Sandy Loam	Clayey Loam	Loamy Sand	Clay			
Batch Number	8	8	8	8	8	8	8	8	8	8			
Date of Receipt	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	LOD/LOR	Units	Method No.
Antimony	3	-	-	-	1	-	-	-	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	122	51	50	32	43	38	34	33	40	33	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.15	<0.03	<0.03	<0.03	<0.03	<0.03	0.11	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.48	<0.03	<0.03	<0.03	0.05	<0.03	0.97	<0.03	0.09	<0.03	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.21	<0.04	<0.04	<0.04	<0.04	<0.04	0.24	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.60	0.12	0.05	<0.03	0.15	0.10	2.81	<0.03	0.28	0.13	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.41	0.10	0.04	<0.03	0.14	0.10	2.49	<0.03	0.23	0.12	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.81	0.10	<0.06	<0.06	0.14	0.10	1.72	<0.06	0.23	0.10	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.88	0.08	0.05	0.04	0.09	0.10	2.25	<0.02	0.18	0.10	<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene <sup>#M</sup>	1.75	0.18	0.11	0.10	0.23	0.21	4.10	<0.07	0.39	0.22	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.97	0.10	0.06	0.05	0.12	0.12	2.14	<0.04	0.19	0.12	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.72	0.10	0.06	0.05	0.11	0.08	1.43	<0.04	0.19	0.10	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.16	<0.04	<0.04	<0.04	<0.04	<0.04	0.43	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.70	0.10	0.06	0.05	0.12	0.10	1.46	<0.04	0.21	0.12	<0.04	mg/kg	TM4/PM8
PAH 16 Total	9.8	0.9	<0.6	<0.6	1.2	0.9	20.2	<0.6	2.0	1.0	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.26	0.13	0.08	0.07	0.17	0.15	2.95	<0.05	0.28	0.16	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.49	0.05	0.03	0.03	0.06	0.06	1.15	<0.02	0.11	0.06	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99	98	98	100	99	119	109	105	104	97	<0	%	TM4/PM8
Natural Moisture Content	49.9	67.8	20.8	26.9	54.1	65.3	39.1	27.8	75.3	46.5	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	4.22	-	-	-	9.04	-	-	-	-	-	<0.02	%	TM21/PM24
Sample Type	Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Clayey Loam	Sandy Loam	Clayey Loam	Loamy Sand	Clay		None	PM13/PM0
Sample Colour	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown		None	PM13/PM0
Other Items	clay, roots and stones	vegetation, roots and stones	roots and stones	roots and stones	roots, wood and stones	leaves, roots and stones	roots and stones	roots and stones	roots, vegetation, and stones	sand, wood, roots and stones		None	PM13/PM0

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1676-1680	1686-1690	1696-1700								Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S144A	GTCS2-S144A	GTCS2-S145A										
Depth	0.00-0.20	0.50-0.60	0.00-0.20										
COC No / misc													
Containers	V J T	V J T	V J T										
Sample Date	02/11/2020	02/11/2020	02/11/2020										
Sample Type	Loam	Clay	Clayey Loam										
Batch Number	8	8	8										
Date of Receipt	03/11/2020	03/11/2020	03/11/2020								LOD/LOR	Units	Method No.
Antimony	-	-	-								<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	27	25	56								<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04								<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03								<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05								<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04								<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	<0.03	<0.03	0.07								<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	<0.04	<0.04	<0.04								<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.09	<0.03	0.20								<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.09	<0.03	0.19								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.11	<0.06	0.16								<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.11	<0.02	0.16								<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	0.38	<0.07	0.36								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.20	<0.04	0.19								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.18	<0.04	0.17								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	<0.04	<0.04	<0.04								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.20	<0.04	0.19								<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.4	<0.6	1.7								<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.27	<0.05	0.26								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.11	<0.02	0.10								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	102	99	97								<0	%	TM4/PM8
Natural Moisture Content	51.1	31.5	44.8								<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-								<0.02	%	TM21/PM24
Sample Type	Loam	Clay	Clayey Loam									None	PM13/PM0
Sample Colour	Dark Brown	Dark Brown	Dark Brown									None	PM13/PM0
Other Items	stones	sand, stones and roots	stones, vegetation									None	PM13/PM0

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	8	GTCS2-S001A	0.00-0.05	1475	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S002A	0.00-0.05	1485	12/11/2020	General Description (Bulk Analysis)	Soil/Stone
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
					12/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S003A	0.00-0.02	1500	12/11/2020	General Description (Bulk Analysis)	Soil/Stone
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
					12/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S004A	0.00-0.02	1510	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S005A	0.00-0.05	1520	11/11/2020	General Description (Bulk Analysis)	soil.stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S006A	0.00-0.02	1530	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S007A	0.00-0.02	1540	11/11/2020	General Description (Bulk Analysis)	Soil/Stone
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	8	GTCS2-S007A	0.00-0.02	1540	11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S008A	0.00-0.02	1550	11/11/2020	General Description (Bulk Analysis)	Soil/Stone
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S009A	0.00-0.05	1560	11/11/2020	General Description (Bulk Analysis)	Soil/Stone
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
20/14697	8	GTCS2-S010A	0.00-0.02	1570	11/11/2020	General Description (Bulk Analysis)	Soil/Stone
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
20/14697	8	GTCS2-DUP01A	0.00-0.05	1580	12/11/2020	General Description (Bulk Analysis)	Soil/Stone
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
20/14697	8	GTCS2-S146A	0.00-0.05	1590	12/11/2020	General Description (Bulk Analysis)	Soil/Stones
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
20/14697	8	GTCS2-S146A	0.00-0.20	1600	12/11/2020	General Description (Bulk Analysis)	Soil/Stone
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
20/14697	8	GTCS2-S146A	0.40-0.50	1610	12/11/2020	General Description (Bulk Analysis)	soil/stones
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
20/14697	8	GTCS2-S141A	0.00-0.02	1620	12/11/2020	General Description (Bulk Analysis)	soil/stones
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
20/14697	8	GTCS2-S142A	0.00-0.05	1630	12/11/2020	General Description (Bulk Analysis)	soil/stones
					12/11/2020	Asbestos Fibres	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	8	GTCS2-S142A	0.00-0.05	1630	12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
					12/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S142A	0.00-0.20	1640	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S142A	0.30-0.40	1650	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S143A	0.00-0.20	1660	11/11/2020	General Description (Bulk Analysis)	Soil/Stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S144A	0.00-0.05	1670	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S144A	0.00-0.20	1680	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S144A	0.50-0.60	1690	11/11/2020	General Description (Bulk Analysis)	soil/stones
					11/11/2020	Asbestos Fibres	NAD
					11/11/2020	Asbestos ACM	NAD
					11/11/2020	Asbestos Type	NAD
					11/11/2020	Asbestos Level Screen	NAD
20/14697	8	GTCS2-S145A	0.00-0.20	1700	12/11/2020	General Description (Bulk Analysis)	soil/stones
					12/11/2020	Asbestos Fibres	NAD
					12/11/2020	Asbestos ACM	NAD
					12/11/2020	Asbestos Type	NAD
					12/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 8 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 3rd November, 2020  
**Status :** Final report  
**Issue :** 1

Forty six samples were received for analysis on 3rd November, 2020 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced



# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1471-1475	1526-1530	1576-1580	1616-1620									
Sample ID	GTCS2-S001A	GTCS2-S006A	GTCS2-DUP01A	GTCS2-S141A									
Depth	0.00-0.05	0.00-0.02	0.00-0.05	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	02/11/2020	02/11/2020	02/11/2020	02/11/2020									
Sample Type	Clayey Loam	Clayey Loam	Loam	Sandy Loam									
Batch Number	8	8	8	8									
Date of Receipt	03/11/2020	03/11/2020	03/11/2020	03/11/2020									
											LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms													
Furans (Chlorinated)													
2378-TCDF*	ND	2.5	3.62	3.39								ng/kg	Subcontracted
12378-PCDF*	0.535	0.991	ND	ND								ng/kg	Subcontracted
23478-PCDF*	ND	1	2.47	0.751								ng/kg	Subcontracted
123478-HxCDF*	1.1	2.08	2.1	0.821								ng/kg	Subcontracted
123678-HxCDF*	ND	1.1	ND	ND								ng/kg	Subcontracted
234678-HxCDF*	1.65	1.71	1.57	ND								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	12.2	14.3	15.4	13.2								ng/kg	Subcontracted
1234789-HpCDF*	0.526	0.623	0.699	ND								ng/kg	Subcontracted
OCDF*	13	19.6	16.7	22.6								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	0.527	0.713	0.551	0.755								ng/kg	Subcontracted
123478-HxCDD*	0.944	0.324	0.66	0.661								ng/kg	Subcontracted
123678-HxCDD*	0.609	1.4	1.7	1.35								ng/kg	Subcontracted
123789-HxCDD*	0.442	0.962	1.03	ND								ng/kg	Subcontracted
1234678-HpCDD*	26.7	44	30.7	70.9								ng/kg	Subcontracted
OCDD*	213	345	280	559								ng/kg	Subcontracted
TEQ(1) (NATO)*	1.91	3.12	3.85	3.22								ng/kg	Subcontracted
TEQ(2) (NATO)*	1.39	2.87	3.34	2.8								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.8	0.7	1.1	1.3								ng/kg	Subcontracted
12378-PBDF*	0.6	0.5	0.5	ND								ng/kg	Subcontracted
23478-PBDF*	0.9	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDF*	ND	0.6	0.7	0.5								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND								ng/kg	Subcontracted



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes



AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 18th November, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 9 Schedule A

**Location :** Grenfell Stage 2

**Date samples received :** 4th November, 2020

**Status :** Final report

**Issue :** 1

Sixty four samples were received for analysis on 4th November, 2020 of which thirty two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced

## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1706-1710	1716-1720	1726-1730	1736-1740	1746-1750	1756-1760	1766-1770	1776-1780	1786-1790	1796-1800	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S147A	GTCS2-S148A	GTCS2-S148A	GTCS2-S148A	GTCS2-S149A	GTCS2-S150A	GTCS2-S150A	GTCS2-S150A	GTCS2-DUP09A	GTCS2-DUP09A			
Depth	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.20			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	9	9	9	9	9	9	9	9	9	9	LOD/LOR	Units	Method No.
Date of Receipt	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Antimony	-	-	-	-	-	2	2	1	2	2	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	119	42	43	33	NDP	44	62	32	50	53	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	-	48	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.16	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	1.26	<0.03	<0.03	<0.03	0.12	0.08	0.08	<0.03	0.10	0.04	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.31	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	2.62	0.06	0.05	0.09	0.27	0.31	0.31	0.06	0.24	0.17	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	2.26	0.06	0.05	0.08	0.23	0.26	0.27	0.05	0.21	0.15	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	1.29	<0.06	<0.06	0.09	0.19	0.18	0.18	0.08	0.15	0.13	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	1.42	0.06	0.07	0.08	0.19	0.20	0.20	0.06	0.15	0.13	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	2.65	0.14	0.15	0.20	0.39	0.43	0.41	0.18	0.33	0.27	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	1.44	0.08	0.08	0.11	0.20	0.20	0.21	0.08	0.16	0.13	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.99	<0.04	<0.04	0.08	0.16	0.17	0.16	0.08	0.12	0.10	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.19	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.97	0.08	0.07	0.09	0.17	0.18	0.17	0.08	0.13	0.13	<0.04	mg/kg	TM4/PM8
PAH 16 Total	15.6	<0.6	<0.6	0.8	1.9	2.0	2.0	0.7	1.6	1.3	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.91	0.10	0.11	0.14	0.28	0.31	0.30	0.13	0.24	0.19	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.74	0.04	0.04	0.06	0.11	0.12	0.11	0.05	0.09	0.08	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	102	102	103	101	102	108	100	102	100	103	<0	%	TM4/PM8
Natural Moisture Content	61.6	55.1	65.5	31.8	44.7	53.6	41.2	25.6	48.4	39.9	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	9.96	-	-	-	-	7.37	5.63	3.39	7.51	5.68	<0.02	%	TM21/PM24
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam		None	PM13/PM0
Sample Colour	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, vegetation	stones	stones	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation, sand		None	PM13/PM0

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1806-1810	1816-1820	1826-1830	1836-1840	1846-1850	1856-1860	1866-1870	1876-1880	1886-1890	1896-1900	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP09A	GTCS2-S211A	GTCS2-S212A	GTCS2-S213A	GTCS2-S214A	GTCS2-S215A	GTCS2-S216A	GTCS2-S217A	GTCS2-S218A	GTCS2-S219A			
Depth	0.50-0.60	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	02/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clay	Clayey Loam	Sandy Loam			
Batch Number	9	9	9	9	9	9	9	9	9	9			
Date of Receipt	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	LOD/LOR	Units	Method No.
Antimony	<1	-	3	-	-	-	6	-	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	22	368	86	107	66	81	387	178	162	214	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	0.46	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.72	0.22	0.18	0.05	0.05	<0.03	0.05	0.04	0.09	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	<0.03	0.53	0.24	0.21	0.14	0.10	0.14	0.14	0.39	0.25	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	<0.04	0.27	0.29	0.20	0.06	0.06	<0.04	<0.04	0.10	0.11	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.04	1.37	1.24	1.08	0.39	0.30	0.40	0.38	1.11	0.77	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	<0.03	1.43	1.23	1.03	0.35	0.27	0.37	0.35	0.92	0.68	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	<0.06	0.90	0.73	0.58	0.24	0.21	0.24	0.23	0.54	0.47	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.06	1.11	0.84	0.69	0.29	0.26	0.26	0.26	0.60	0.45	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	0.12	3.26	1.70	1.40	0.58	0.52	0.52	0.52	1.06	0.78	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	<0.04	1.80	0.94	0.81	0.29	0.23	0.26	0.27	0.61	0.42	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.05	1.61	0.70	0.62	0.25	0.22	0.23	0.23	0.42	0.31	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	<0.04	0.25	0.14	0.11	0.05	<0.04	<0.04	<0.04	0.09	0.07	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.06	1.68	0.70	0.68	0.28	0.24	0.26	0.24	0.44	0.32	<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	15.4	9.0	7.6	3.0	2.5	2.7	2.7	6.3	4.7	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.09	2.35	1.22	1.01	0.42	0.37	0.37	0.37	0.76	0.56	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.03	0.91	0.48	0.39	0.16	0.15	0.15	0.15	0.30	0.22	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99	105	100	115	101	102	101	101	103	101	<0	%	TM4/PM8
Natural Moisture Content	23.5	47.7	39.7	41.7	25.3	28.8	52.9	52.6	45.5	24.4	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	2.51	-	5.40	-	-	-	5.59	5.94	-	-	<0.02	%	TM21/PM24
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clay	Clayey Loam	Sandy Loam	None		PM13/PM0
Sample Colour	Dark Brown	Medium Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	None		PM13/PM0
Other Items	stones, sand, vegetation	stones, vegetation	stones, sand, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	vegetation	None		PM13/PM0

## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1906-1910	1916-1920	1926-1930	1936-1940	1946-1950	1956-1960	1966-1970	1976-1980	1986-1990	1996-2000	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S220A	GTCS2-S243A	GTCS2-S244A	GTCS2-S245A	GTCS2-S246A	GTCS2-S247A	GTCS2-S241A	GTCS2-S248A	GTCS2-S249A	GTCS2-DUP015A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.15-0.35	0.40-0.60	0.40-0.60			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020			
Sample Type	Sandy Loam	Loamy Sand	Sandy Loam	Loamy Sand	Sandy Loam	Sand	Sandy Loam	Loamy Sand	Clayey Sand	Clayey Sand			
Batch Number	9	9	9	9	9	9	9	9	9	9			
Date of Receipt	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	LOD/LOR	Units	Method No.
Antimony	-	-	-	3	-	-	-	-	NDP	NDP	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	148	58	101	82	82	71	318	87	NDP	NDP	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	2	2	<1	mg/kg	TM30/PM62
Lead	-	-	-	-	-	-	-	-	74	74	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	0.05	0.06	<0.04	0.06	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.10	0.06	<0.03	0.22	0.09	0.16	0.25	0.17	0.25	0.16	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.13	<0.05	0.07	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	0.06	<0.04	0.04	0.18	<0.04	0.07	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.27	0.12	0.08	0.73	0.19	0.54	1.92	0.45	1.54	0.50	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.15	0.07	<0.04	0.36	0.10	0.21	0.59	0.23	0.50	0.25	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.83	0.40	0.24	1.96	0.87	1.45	3.02	1.22	3.39	1.55	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.76	0.34	0.20	1.69	1.03	1.32	2.61	1.08	2.79	1.31	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.63	0.22	0.19	0.91	0.45	0.73	1.37	0.59	1.53	0.77	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.51	0.25	0.17	1.00	0.53	0.84	1.71	0.67	1.76	0.87	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	1.03	0.54	0.38	2.00	1.08	1.59	3.04	1.37	3.13	1.67	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.56	0.30	0.20	1.10	0.62	0.90	1.62	0.77	1.70	0.93	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.45	0.25	0.16	0.83	0.52	0.63	1.17	0.60	1.24	0.68	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.12	0.06	<0.04	0.16	0.09	0.12	0.25	0.12	0.29	0.15	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.46	0.28	0.16	0.84	0.52	0.63	1.14	0.64	1.26	0.68	<0.04	mg/kg	TM4/PM8
PAH 16 Total	5.9	2.9	1.8	11.9	6.2	9.2	19.1	7.9	19.5	9.5	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.74	0.39	0.27	1.44	0.78	1.14	2.19	0.99	2.25	1.20	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.29	0.15	0.11	0.56	0.30	0.45	0.85	0.38	0.88	0.47	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	100	99	75	100	99	86	93	102	100	106	<0	%	TM4/PM8
Natural Moisture Content	65.8	37.7	56.8	23.3	44.5	11.9	39.4	33.1	21.2	20.9	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-	2.08	-	-	6.63	-	NDP	NDP	<0.02	%	TM21/PM24
Sample Type	Sandy Loam	Loamy Sand	Sandy Loam	Loamy Sand	Sandy Loam	Sand	Sandy Loam	Loamy Sand	Clayey Sand	Clayey Sand		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	vegetation and stones	vegetation	vegetation and stones	stones and vegetation	vegetation	stones and roots	stones and vegetation	stones and vegetation	stones	stones		None	PM13/PM0

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	9	GTCS2-S147A	0.00-0.20	1710	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S148A	0.00-0.02	1720	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S148A	0.00-0.20	1730	13/11/2020	General Description (Bulk Analysis)	soil.stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S148A	0.50-0.60	1740	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S149A	0.00-0.20	1750	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	Fibre Bundles
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	Amosite
					13/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	9	GTCS2-S150A	0.00-0.02	1760	13/11/2020	General Description (Bulk Analysis)	soil.stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S150A	0.00-0.20	1770	13/11/2020	General Description (Bulk Analysis)	soil.stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	9	GTCS2-S150A	0.00-0.20	1770	13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S150A	0.50-0.60	1780	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-DUP09A	0.00-0.02	1790	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
20/14697	9	GTCS2-DUP09A	0.00-0.20	1800	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
20/14697	9	GTCS2-DUP09A	0.50-0.60	1810	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
20/14697	9	GTCS2-S211A	0.00-0.02	1820	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
20/14697	9	GTCS2-S212A	0.00-0.20	1830	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
20/14697	9	GTCS2-S213A	0.00-0.20	1840	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
20/14697	9	GTCS2-S214A	0.00-0.20	1850	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
20/14697	9	GTCS2-S215A	0.00-0.20	1860	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	9	GTCS2-S215A	0.00-0.20	1860	13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S216A	0.00-0.02	1870	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S217A	0.00-0.02	1880	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S218A	0.00-0.02	1890	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S219A	0.00-0.02	1900	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S220A	0.00-0.02	1910	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S243A	0.00-0.02	1920	13/11/2020	General Description (Bulk Analysis)	Soil/Stone
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S244A	0.00-0.02	1930	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD
20/14697	9	GTCS2-S245A	0.00-0.02	1940	13/11/2020	General Description (Bulk Analysis)	Soil/Stones
					13/11/2020	Asbestos Fibres	NAD
					13/11/2020	Asbestos ACM	NAD
					13/11/2020	Asbestos Type	NAD
					13/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	9	GTCS2-S246A	0.00-0.02	1950	13/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					13/11/2020	<b>Asbestos Fibres</b>	NAD
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	NAD
					13/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	9	GTCS2-S247A	0.00-0.02	1960	13/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					13/11/2020	<b>Asbestos Fibres</b>	NAD
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	NAD
					13/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	9	GTCS2-S241A	0.00-0.02	1970	13/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					13/11/2020	<b>Asbestos Fibres</b>	NAD
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	NAD
					13/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	9	GTCS2-S248A	0.15-0.35	1980	13/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					13/11/2020	<b>Asbestos Fibres</b>	NAD
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	NAD
					13/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	9	GTCS2-S249A	0.40-0.60	1990	13/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					13/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	Chrysotile
					13/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
20/14697	9	GTCS2-DUP015A	0.40-0.60	2000	13/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					13/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	Chrysotile
					13/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
20/14697	9	GTCS2-S242A	0.00-0.02	2010	13/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					13/11/2020	<b>Asbestos Fibres</b>	NAD
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	NAD
					13/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	9	GTCS2-S250A	0.00-0.02	2020	13/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					13/11/2020	<b>Asbestos Fibres</b>	NAD
					13/11/2020	<b>Asbestos ACM</b>	NAD
					13/11/2020	<b>Asbestos Type</b>	NAD
					13/11/2020	<b>Asbestos Level Screen</b>	NAD

**Matrix : Solid**

QF-PM 3.1.7 v10 Please include all sections of this report if it is reproduced 10 of 14

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 9 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 4th November, 2020  
**Status :** Final report  
**Issue :** 1

Sixty four samples were received for analysis on 4th November, 2020 of which eleven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1756-1760	1766-1770	1776-1780	1786-1790	1796-1800	1806-1810	1826-1830	1866-1870	1936-1940	1986-1990	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S150A	GTCS2-S150A	GTCS2-S150A	GTCS2-DUP09A	GTCS2-DUP09A	GTCS2-DUP09A	GTCS2-S212A	GTCS2-S216A	GTCS2-S245A	GTCS2-S249A			
Depth	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.02	0.00-0.02	0.40-0.60			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	02/11/2020	03/11/2020	03/11/2020	03/11/2020	03/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Loamy Sand	Clayey Sand			
Batch Number	9	9	9	9	9	9	9	9	9	9	LOD/LOR	Units	Method No.
Date of Receipt	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Furans (Chlorinated)													
2378-TCDF*	3.32	2	2.92	2.71	5.79	4.18	3.95	7.33	7.52	2.04		ng/kg	Subcontracted
12378-PCDF*	ND	ND	ND	ND	0.686	ND	0.945	1.56	0.979	0.52		ng/kg	Subcontracted
23478-PCDF*	0.998	ND	0.535	ND	0.958	0.494	ND	2.78	2.54	1.67		ng/kg	Subcontracted
123478-HxCDF*	0.669	0.514	ND	0.934	0.681	0.631	1.55	1.98	2.04	2.15		ng/kg	Subcontracted
123678-HxCDF*	ND	ND	ND	0.622	ND	ND	2.06	1.55	1.92	1.26		ng/kg	Subcontracted
234678-HxCDF*	1.02	ND	0.513	0.975	1.35	0.674	2.14	3.2	1.18	1.81		ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpCDF*	13.9	13.5	10.2	13.3	13.3	12.7	21.1	30.9	20.4	16.8		ng/kg	Subcontracted
1234789-HpCDF*	0.369	ND	0.322	ND	0.763	0.509	1.1	1.91	0.66	0.713		ng/kg	Subcontracted
OCDF*	27.8	20.9	14.3	23.9	20	15.6	39.1	33.4	28.9	23.6		ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
12378-PCDD*	ND	ND	ND	ND	0.391	ND	ND	1.13	ND	ND		ng/kg	Subcontracted
123478-HxCDD*	0.554	ND	ND	ND	0.453	ND	ND	1.19	ND	0.643		ng/kg	Subcontracted
123678-HxCDD*	2.38	1.58	0.526	1.54	2.43	1.38	2.39	2.76	2.18	2.09		ng/kg	Subcontracted
123789-HxCDD*	2.89	0.613	ND	0.687	1.1	0.983	ND	1.62	0.827	0.488		ng/kg	Subcontracted
1234678-HpCDD*	80.2	79.2	67.8	72	115	83.3	91	65.1	57	61.6		ng/kg	Subcontracted
OCDD*	626	599	531	625	892	576	655	459	505	474		ng/kg	Subcontracted
TEQ(1) (NATO)*	3.71	2.88	2.43	2.97	4.41	3.15	3.76	5.94	4.64	3.7		ng/kg	Subcontracted
TEQ(2) (NATO)*	3.18	2.02	1.99	2.25	4.1	2.59	3.08	5.47	4.2	3.2		ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.7	0.7	0.8	0.5	ND	0.7	0.8	0.8	0.6	0.8		ng/kg	Subcontracted
12378-PBDF*	ND	ND	ND	0.7	0.6	ND	0.6	ND	ND	ND		ng/kg	Subcontracted
23478-PBDF*	0.5	ND	0.5	ND	ND	ND	0.5	ND	ND	ND		ng/kg	Subcontracted
123478-HxBDF*	ND	0.5	ND	0.5	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND	ND	ND	ND	0.7	ND	ND		ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

[illegible]

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

<b>EMT Sample No.</b>	1996-2000												
<b>Sample ID</b>	GTCS2-DUP015A												
<b>Depth</b>	0.40-0.60												
<b>COC No / misc</b>													
<b>Containers</b>	V J T												
<b>Sample Date</b>	03/11/2020												
<b>Sample Type</b>	Clayey Sand												
<b>Batch Number</b>	9												
<b>Date of Receipt</b>	04/11/2020												
											LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms													
Furans (Chlorinated)													
2378-TCDF*	2.87											ng/kg	Subcontracted
12378-PCDF*	3.54											ng/kg	Subcontracted
23478-PCDF*	22.7											ng/kg	Subcontracted
123478-HxCDF*	33											ng/kg	Subcontracted
123678-HxCDF*	13.4											ng/kg	Subcontracted
234678-HxCDF*	13.2											ng/kg	Subcontracted
123789-HxCDF*	2.93											ng/kg	Subcontracted
1234678-HpCDF*	32.5											ng/kg	Subcontracted
1234789-HpCDF*	8.86											ng/kg	Subcontracted
OCDF*	28.7											ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND											ng/kg	Subcontracted
12378-PCDD*	8.39											ng/kg	Subcontracted
123478-HxCDD*	2.68											ng/kg	Subcontracted
123678-HxCDD*	25.8											ng/kg	Subcontracted
123789-HxCDD*	15.8											ng/kg	Subcontracted
1234678-HpCDD*	103											ng/kg	Subcontracted
OCDD*	568											ng/kg	Subcontracted
TEQ(1) (NATO)*	29.1											ng/kg	Subcontracted
TEQ(2) (NATO)*	28.7											ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	ND											ng/kg	Subcontracted
12378-PBDF*	ND											ng/kg	Subcontracted
23478-PBDF*	ND											ng/kg	Subcontracted
123478-HxBDF*	ND											ng/kg	Subcontracted
123678-HxBDF*	ND											ng/kg	Subcontracted
234678-HxBDF*	ND											ng/kg	Subcontracted
123789-HxBDF*	ND											ng/kg	Subcontracted
1234678-HpBDF*	ND											ng/kg	Subcontracted
1234789-HpBDF*	ND											ng/kg	Subcontracted
OBDF*	ND											ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND											ng/kg	Subcontracted
12378-PBDD*	ND											ng/kg	Subcontracted
123478-HxBDD*	ND											ng/kg	Subcontracted
123678-HxBDD*	ND											ng/kg	Subcontracted
123789-HxBDD*	ND											ng/kg	Subcontracted
1234678-HpBDD*	ND											ng/kg	Subcontracted
OBDD*	ND											ng/kg	Subcontracted



Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

[illegible]

6 of 9

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	29th November, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 9 Schedule C 20/14697 Batch 9 Schedule D
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	4th November, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Sixty four samples were received for analysis on 4th November, 2020 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced



Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes



AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson

**Date :** 2nd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 10 Schedule A 20/14697 Batch 10 Schedule C

**Location :** Grenfell Stage 2

**Date samples received :** 5th November, 2020

**Status :** Final report

**Issue :** 1

Fifty samples were received for analysis on 5th November, 2020 of which twenty five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2026-2030	2036-2040	2046-2050	2056-2060	2066-2070	2076-2080	2086-2090	2096-2100	2106-2110	2116-2120	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S311A	GTCS2-S313A	GTCS2-S313A	GTCS2-S313A	GTCS2-S314A	GTCS2-S315A	GTCS2-S317A	GTCS2-S317A	GTCS2-S317A	GTCS2-S318A			
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.35-0.44	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
Aluminium	-	-	-	-	-	-	-	-	-	-	<50	mg/kg	TM30/PM15
Antimony	1	-	-	-	-	-	1	1	1	-	<1	mg/kg	TM30/PM15
Arsenic <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Barium <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Cadmium <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15
Chromium <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM15
Copper <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	45	146	469	NDP	21	52	19	18	29	32	<5	mg/kg	TM30/PM15
Mercury <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM15
Nickel <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM15
Selenium <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM15
Water Soluble Boron <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM32
Zinc <sup>#M</sup>	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM15
Aluminium	-	-	-	-	-	-	-	-	-	-	<50	mg/kg	TM30/PM62
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Barium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Beryllium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	544	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Vanadium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2026-2030	2036-2040	2046-2050	2056-2060	2066-2070	2076-2080	2086-2090	2096-2100	2106-2110	2116-2120	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S311A	GTCS2-S313A	GTCS2-S313A	GTCS2-S313A	GTCS2-S314A	GTCS2-S315A	GTCS2-S317A	GTCS2-S317A	GTCS2-S317A	GTCS2-S318A			
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.35-0.44	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Vinyl Chloride	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromomethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromochloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroform	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Benzene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromomethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromodichloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Toluene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromochloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Ethylbenzene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
m/p-Xylene #	-	-	-	-	-	-	-	-	-	-	<100	ug/kg	TM152/PM104
o-Xylene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Styrene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromoform	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Isopropylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2026-2030	2036-2040	2046-2050	2056-2060	2066-2070	2076-2080	2086-2090	2096-2100	2106-2110	2116-2120	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S311A	GTCS2-S313A	GTCS2-S313A	GTCS2-S313A	GTCS2-S314A	GTCS2-S315A	GTCS2-S317A	GTCS2-S317A	GTCS2-S317A	GTCS2-S318A			
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.35-0.44	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
n-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Naphthalene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	-	-	-	-	-	-	-	-	-	<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	-	-	-	-	<0	%	TM152/PM104
VOC TICs	-	-	-	-	-	-	-	-	-	-		None	TM15/PM10
SVOC TICs	-	-	-	-	-	-	-	-	-	-		None	TM16/PM8
PCB 28 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-	-	-	-	-	<35	ug/kg	TM17/PM8
Natural Moisture Content	30.2	48.7	20.6	21.6	31.7	56.4	37.4	23.7	22.1	43.8	<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	-	-	-	-	-	-	-	-	<0.3	mg/kg	TM38/PM20
Chromium III	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2026-2030	2036-2040	2046-2050	2056-2060	2066-2070	2076-2080	2086-2090	2096-2100	2106-2110	2116-2120	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S311A	GTCS2-S313A	GTCS2-S313A	GTCS2-S313A	GTCS2-S314A	GTCS2-S315A	GTCS2-S317A	GTCS2-S317A	GTCS2-S317A	GTCS2-S318A			
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.35-0.44	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
Total Organic Carbon #	4.12	-	-	-	-	-	2.96	2.15	1.30	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	<0.02	%	TM21/PM89
Thiocyanate	-	-	-	-	-	-	-	-	-	-	<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Methyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Ethyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Propyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Phenyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Methyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	-	-	-	-	-	-	-	-	-	<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones, vegetation	stones, loam, vegetation	stones, vegetation	stones, loam, vegetation	stones, sand, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation		None	PM13/PM0



## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2126-2130	2136-2140	2146-2147,2272-2278	2150-2153,2286-2290	2158-2162	2168-2176	2186-2190	2196-2200	2206-2210	2216-2220	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S319A	GTCS2-S320A	GTCS2-S383A	GTCS2-S386A	GTCS2-S387A	GTCS2-S388A	GTCS2-S389A	GTCS2-S389A	GTCS2-S389A	GTCS2-S390A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10	LOD/LOR	Units	Method No.
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020			
Aluminium	-	-	7906	NDP	-	6632	-	-	-	-	<50	mg/kg	TM30/PM15
Antimony	-	-	2	NDP	-	2	1	1	2	-	<1	mg/kg	TM30/PM15
Arsenic <sup>#M</sup>	-	-	6.5	NDP	-	6.3	-	-	-	-	<0.5	mg/kg	TM30/PM15
Barium <sup>#M</sup>	-	-	88	NDP	-	108	-	-	-	-	<1	mg/kg	TM30/PM15
Beryllium	-	-	0.7	NDP	-	0.6	-	-	-	-	<0.5	mg/kg	TM30/PM15
Cadmium <sup>#M</sup>	-	-	0.1	NDP	-	0.1	-	-	-	-	<0.1	mg/kg	TM30/PM15
Chromium <sup>#M</sup>	-	-	83.5	NDP	-	73.4	-	-	-	-	<0.5	mg/kg	TM30/PM15
Copper <sup>#M</sup>	-	-	23	NDP	-	101	-	-	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	37	23	56	NDP	47	35	27	29	46	34	<5	mg/kg	TM30/PM15
Mercury <sup>#M</sup>	-	-	<0.1	NDP	-	<0.1	-	-	-	-	<0.1	mg/kg	TM30/PM15
Nickel <sup>#M</sup>	-	-	12.3	NDP	-	10.7	-	-	-	-	<0.7	mg/kg	TM30/PM15
Selenium <sup>#M</sup>	-	-	<1	NDP	-	<1	-	-	-	-	<1	mg/kg	TM30/PM15
Vanadium	-	-	34	NDP	-	31	-	-	-	-	<1	mg/kg	TM30/PM15
Water Soluble Boron <sup>#M</sup>	-	-	2.0	NDP	-	1.6	-	-	-	-	<0.1	mg/kg	TM74/PM32
Zinc <sup>#M</sup>	-	-	83	NDP	-	93	-	-	-	-	<5	mg/kg	TM30/PM15
Aluminium	-	-	-	7583	-	-	-	-	-	-	<50	mg/kg	TM30/PM62
Antimony	-	-	-	3	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Arsenic	-	-	-	7.0	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Barium	-	-	-	104	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Beryllium	-	-	-	0.8	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium	-	-	-	25.9	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper	-	-	-	26	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	49	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel	-	-	-	11.2	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium	-	-	-	<1	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Vanadium	-	-	-	33	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron	-	-	-	2.0	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc	-	-	-	134	-	-	-	-	-	-	<5	mg/kg	TM30/PM62



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2126-2130	2136-2140	2146-2147,2272-2278	2150-2153,2286-2290	2158-2162	2168-2176	2186-2190	2196-2200	2206-2210	2216-2220	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S319A	GTCS2-S320A	GTCS2-S383A	GTCS2-S386A	GTCS2-S387A	GTCS2-S388A	GTCS2-S389A	GTCS2-S389A	GTCS2-S389A	GTCS2-S390A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Chloromethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Vinyl Chloride	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Bromomethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Bromochloromethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroform	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Benzene #	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromomethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Bromodichloromethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Toluene #	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromochloromethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Chlorobenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Ethylbenzene #	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
m/p-Xylene #	-	-	<100	<100	-	<100	-	-	-	-	<100	ug/kg	TM152/PM104
o-Xylene #	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Styrene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Bromoform	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Isopropylbenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Bromobenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2126-2130	2136-2140	2146-2147, 2272-2278	2150-2153, 2286-2290	2158-2162	2168-2176	2186-2190	2196-2200	2206-2210	2216-2220	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S319A	GTCS2-S320A	GTCS2-S383A	GTCS2-S386A	GTCS2-S387A	GTCS2-S388A	GTCS2-S389A	GTCS2-S389A	GTCS2-S389A	GTCS2-S390A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.50-0.60	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
n-Butylbenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Naphthalene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	-	<50	<50	-	<50	-	-	-	-	<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	-	99	109	-	120	-	-	-	-	<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	-	96	105	-	119	-	-	-	-	<0	%	TM152/PM104
VOC TICs	-	-	ND	ND	-	ND	-	-	-	-		None	TM15/PM10
SVOC TICs	-	-	See Attached	See Attached	-	See Attached	-	-	-	-		None	TM16/PM8
PCB 28 #	-	-	<5	<5	-	<5	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	<5	<5	-	<5	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	<5	<5	-	<5	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	-	<5	<5	-	<5	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	<5	<5	-	<5	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	<5	<5	-	<5	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	<5	<5	-	<5	-	-	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	<35	<35	-	<35	-	-	-	-	<35	ug/kg	TM17/PM8
Natural Moisture Content	32.9	42.4	37.8	31.6	34.5	18.9	30.9	24.0	21.4	52.6	<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	<0.3	<0.3	-	<0.3	-	-	-	-	<0.3	mg/kg	TM38/PM20
Chromium III	-	-	83.5	NDP	-	73.4	-	-	-	-	<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	25.9	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	<0.5	<0.5	-	<0.5	-	-	-	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	0.8	0.9	-	<0.5	-	-	-	-	<0.5	mg/kg	TM89/PM45

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2126-2130	2136-2140	2146-2147,2272-2278	2150-2153,2286-2290	2158-2162	2168-2176	2186-2190	2196-2200	2206-2210	2216-2220	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S319A	GTCS2-S320A	GTCS2-S383A	GTCS2-S386A	GTCS2-S387A	GTCS2-S388A	GTCS2-S389A	GTCS2-S389A	GTCS2-S389A	GTCS2-S390A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
Total Organic Carbon #	-	-	3.51	NDP	-	3.31	4.10	1.94	1.72	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	2.92	-	-	-	-	-	-	<0.02	%	TM21/PM89
Thiocyanate	-	-	1.0	0.9	-	<0.6	-	-	-	-	<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	-	122	140	-	124	-	-	-	-	<0	%	TM192/PM0
Methyl Isocyanate-d	-	-	107	120	-	112	-	-	-	-	<0	%	TM192/PM0
Ethyl Isocyanate-d	-	-	105	117	-	110	-	-	-	-	<0	%	TM192/PM0
Propyl Isocyanate-d	-	-	112	121	-	118	-	-	-	-	<0	%	TM192/PM0
Phenyl Isocyanate-d	-	-	109	113	-	106	-	-	-	-	<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	-	109	107	-	106	-	-	-	-	<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	-	122	110	-	114	-	-	-	-	<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	-	109	112	-	108	-	-	-	-	<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	-	102	101	-	104	-	-	-	-	<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	-	102	98	-	104	-	-	-	-	<0	%	TM192/PM0
Methyl Isocyanate	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	-	<500	<500	-	<500	-	-	-	-	<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	-	<250	<250	-	<250	-	-	-	-	<250	ug/kg	TM192/PM0
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation, sand	stones, vegetation, sand	stones, vegetation		None	PM13/PM0

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2226-2230	2238	2242-2246	2252-2256	2262-2266						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP24A	BLANK 1	GTCS2-DUP19A	GTCS2-DUP19A	GTCS2-DUP19A								
Depth	0.00-0.02		0.00-0.02	0.00-0.20	0.50-0.60								
COC No / misc													
Containers	V J T	V	V J T	V J T	V J T								
Sample Date	04/11/2020	<>	04/11/2020	04/11/2020	04/11/2020								
Sample Type	Clayey Loam	Soil	Clay	Clay	Clay								
Batch Number	10	10	10	10	10						LOD/LOR	Units	Method No.
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020								
Aluminium	-	-	-	-	-						<50	mg/kg	TM30/PM15
Antimony	-	-	-	-	-						<1	mg/kg	TM30/PM15
Arsenic <sup>#M</sup>	-	-	-	-	-						<0.5	mg/kg	TM30/PM15
Barium <sup>#M</sup>	-	-	-	-	-						<1	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-						<0.5	mg/kg	TM30/PM15
Cadmium <sup>#M</sup>	-	-	-	-	-						<0.1	mg/kg	TM30/PM15
Chromium <sup>#M</sup>	-	-	-	-	-						<0.5	mg/kg	TM30/PM15
Copper <sup>#M</sup>	-	-	-	-	-						<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	35	-	207	405	NDP						<5	mg/kg	TM30/PM15
Mercury <sup>#M</sup>	-	-	-	-	-						<0.1	mg/kg	TM30/PM15
Nickel <sup>#M</sup>	-	-	-	-	-						<0.7	mg/kg	TM30/PM15
Selenium <sup>#M</sup>	-	-	-	-	-						<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-						<1	mg/kg	TM30/PM15
Water Soluble Boron <sup>#M</sup>	-	-	-	-	-						<0.1	mg/kg	TM74/PM32
Zinc <sup>#M</sup>	-	-	-	-	-						<5	mg/kg	TM30/PM15
Aluminium	-	-	-	-	-						<50	mg/kg	TM30/PM62
Antimony	-	-	-	-	-						<1	mg/kg	TM30/PM62
Arsenic	-	-	-	-	-						<0.5	mg/kg	TM30/PM62
Barium	-	-	-	-	-						<1	mg/kg	TM30/PM62
Beryllium	-	-	-	-	-						<0.5	mg/kg	TM30/PM62
Cadmium	-	-	-	-	-						<0.1	mg/kg	TM30/PM62
Chromium	-	-	-	-	-						<0.5	mg/kg	TM30/PM62
Copper	-	-	-	-	-						<1	mg/kg	TM30/PM62
Lead	-	-	-	-	452						<5	mg/kg	TM30/PM62
Mercury	-	-	-	-	-						<0.1	mg/kg	TM30/PM62
Nickel	-	-	-	-	-						<0.7	mg/kg	TM30/PM62
Selenium	-	-	-	-	-						<1	mg/kg	TM30/PM62
Vanadium	-	-	-	-	-						<1	mg/kg	TM30/PM62
Water Soluble Boron	-	-	-	-	-						<0.1	mg/kg	TM74/PM61
Zinc	-	-	-	-	-						<5	mg/kg	TM30/PM62

QF-PM 3.1.2 v11

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

13 of 35



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2226-2230	2238	2242-2246	2252-2256	2262-2266								
Sample ID	GTCS2-DUP24A	BLANK 1	GTCS2-DUP19A	GTCS2-DUP19A	GTCS2-DUP19A								
Depth	0.00-0.02		0.00-0.02	0.00-0.20	0.50-0.60								
COC No / misc													
Containers	V J T	V	V J T	V J T	V J T								
Sample Date	04/11/2020	<>	04/11/2020	04/11/2020	04/11/2020								
Sample Type	Clayey Loam	Soil	Clay	Clay	Clay								
Batch Number	10	10	10	10	10								
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020								
											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Chloromethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Vinyl Chloride	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Bromomethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Chloroethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	<50	-	-	-						<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Bromochloromethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Chloroform	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Benzene #	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Dibromomethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Bromodichloromethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Toluene #	-	<50	-	-	-						<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Dibromochloromethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Chlorobenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Ethylbenzene #	-	<50	-	-	-						<50	ug/kg	TM152/PM104
m/p-Xylene #	-	<100	-	-	-						<100	ug/kg	TM152/PM104
o-Xylene #	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Styrene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Bromoform	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Isopropylbenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Bromobenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	<50	-	-	-						<50	ug/kg	TM152/PM104

Please see attached notes for all abbreviations and acronyms

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2226-2230	2238	2242-2246	2252-2256	2262-2266						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP24A	BLANK 1	GTCS2-DUP19A	GTCS2-DUP19A	GTCS2-DUP19A								
Depth	0.00-0.02		0.00-0.02	0.00-0.20	0.50-0.60								
COC No / misc													
Containers	V J T	V	V J T	V J T	V J T								
Sample Date	04/11/2020	<>	04/11/2020	04/11/2020	04/11/2020								
Sample Type	Clayey Loam	Soil	Clay	Clay	Clay								
Batch Number	10	10	10	10	10								
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020						LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
n-Butylbenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Naphthalene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	<50	-	-	-						<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	115	-	-	-						<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	124	-	-	-						<0	%	TM152/PM104
VOC TICs	-	-	-	-	-							None	TM15/PM10
SVOC TICs	-	-	-	-	-							None	TM16/PM8
PCB 28 #	-	-	-	-	-						<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-						<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-						<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-						<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-						<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-						<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-						<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-						<35	ug/kg	TM17/PM8
Natural Moisture Content	54.1	<0.1	51.1	27.6	19.6						<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	-	-	-						<0.3	mg/kg	TM38/PM20
Chromium III	-	-	-	-	-						<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	-	-						<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	-	-	-						<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	-	-	-						<0.5	mg/kg	TM89/PM45

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2226-2230	2238	2242-2246	2252-2256	2262-2266						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP24A	BLANK 1	GTCS2-DUP19A	GTCS2-DUP19A	GTCS2-DUP19A								
Depth	0.00-0.02		0.00-0.02	0.00-0.20	0.50-0.60								
COC No / misc													
Containers	V J T	V	V J T	V J T	V J T								
Sample Date	04/11/2020	<>	04/11/2020	04/11/2020	04/11/2020								
Sample Type	Clayey Loam	Soil	Clay	Clay	Clay								
Batch Number	10	10	10	10	10								
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020						LOD/LOR	Units	Method No.
Total Organic Carbon #	-	-	-	-	-						<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-						<0.02	%	TM21/PM89
Thiocyanate	-	-	-	-	-						<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	-	-	-	-						<0	%	TM192/PM0
Methyl Isocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
Ethyl Isocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
Propyl Isocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
Phenyl Isocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	-	-	-	-						<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	-	-	-	-						<0	%	TM192/PM0
Methyl Isocyanate	-	-	-	-	-						<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	-	-	-	-						<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	-	-	-	-						<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	-	-	-	-						<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	-	-	-	-						<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	-	-	-	-						<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	-	-	-	-						<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	-	-	-	-						<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	-	-	-	-						<250	ug/kg	TM192/PM0
Sample Type	Clayey Loam	-	Clay	Clay	Clay							None	PM13/PM0
Sample Colour	Medium Brown	-	Medium Brown	Medium Brown	Medium Brown							None	PM13/PM0
Other Items	stones, vegetation	-	stones, vegetation	stones, brick, vegetation	stones, chalk, brick, vegetation							None	PM13/PM0

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

SVOC Report : Solid

EMT Sample No.	2146-2147,2272-2276	2150-2153,2286-2290	2168-2176									
Sample ID	GTCS2-S383A	GTCS2-S386A	GTCS2-S388A									
Depth	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	04/11/2020	04/11/2020	04/11/2020									
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam									
Batch Number	10	10	10									
Date of Receipt	05/11/2020	05/11/2020	05/11/2020									
	LOD/LOR	Units	Method No.									
SVOC MS												
<b>Phenols</b>												
2-Chlorophenol <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenol <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
<b>PAHs</b>												
2-Chloronaphthalene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylnaphthalene <sup>#M</sup>	<10	22	<10							<10	ug/kg	TM16/PM8
<b>Phthalates</b>												
Bis(2-ethylhexyl) phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Dimethyl phthalate <sup>#M</sup>	<100	<100	<100							<100	ug/kg	TM16/PM8
<b>Other SVOCs</b>												
1,2-Dichlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10							<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10							<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Bromophenylphenylether <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10							<10	ug/kg	TM16/PM8
Carbazole	23	62	<10							<10	ug/kg	TM16/PM8
Dibenzofuran <sup>#M</sup>	<10	97	<10							<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorobutadiene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10							<10	ug/kg	TM16/PM8
Isophorone <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
Nitrobenzene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	124	126	124							<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	125	130	138 <sup>SV</sup>							<0	%	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

VOC Report : Solid

EMT Sample No.	2146-2147,2272-2276	2150-2153,2286-2290	2168-2176									
Sample ID	GTCS2-S383A	GTCS2-S386A	GTCS2-S388A									
Depth	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	04/11/2020	04/11/2020	04/11/2020									
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam									
Batch Number	10	10	10									
Date of Receipt	05/11/2020	05/11/2020	05/11/2020									
VOC MS												
Dichlorodifluoromethane	<2	<2	<2							<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6							<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	11	8	8							<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2							<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1							<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6							<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6							<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30							<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6							<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7							<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4							<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4							<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3							<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4							<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2							<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3							<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3							<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3							<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5							<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6							<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7							<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4							<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27							<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7							<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	83	74	84							<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Please see attached notes for all abbreviations and acronyms

## Element Materials Technology

**Job number:** 20/14697 **Method:** SVOC  
**Sample number:** 2151 **Matrix:** Solid  
**Sample identity:** GTCS2-S386A  
**Sample depth:** 0.00-0.02  
**Sample Type:** Clayey Loam  
**Units:** ug/kg

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
2245-38-7	Naphthalene, 1,6,7-trimethyl-	9.286	96	236
829-26-5	Naphthalene, 2,3,6-trimethyl-	9.471	94	296
100-03-8	Benzenesulfonic acid, 4-chloro-	9.624	89	138
629-50-5	Tridecane	9.675	90	265
3218-36-8	[1,1'-Biphenyl]-4-carboxaldehyde	9.757	86	321
7320-53-8	Dibenzofuran, 4-methyl-	9.827	92	307
1730-37-6	9H-Fluorene, 1-methyl-	10.183	91	447
132-65-0	Dibenzothiophene	10.409	93	505
77581-11-4	2,9-Dimethyl-2,3,4,5,6,7-hexahydro-1H-2-benzazonine	10.863	90	387
2531-84-2	Phenanthrene, 2-methyl-	11.100	96	1099
949-41-7	1H-Cyclopropa[l]phenanthrene, 1a,9b-dihydro-	11.149	96	634
203-64-5	4H-Cyclopenta[def]phenanthrene	11.179	94	1554
612-94-2	Naphthalene, 2-phenyl-	11.376	91	1126
52251-71-5	Anthracene, 2-ethyl-	11.566	92	488
1576-67-6	Phenanthrene, 3,6-dimethyl-	11.709	80	438
23707-65-5	Anthracene, 9-(2-propenyl)-	11.852	83	537
243-42-5	Benzo[b]naphtho[2,3-d]furan	12.139	96	924
1210-12-4	9-Anthracenecarbonitrile	12.190	93	417
2381-21-7	Pyrene, 1-methyl-	12.358	96	1566
238-84-6	11H-Benzo[a]fluorene	12.459	93	2165
112-95-8	Eicosane	12.856	95	625
64401-21-4	Pyrene, 1,3-dimethyl-	13.033	80	859
479-79-8	11H-Benzo[a]fluoren-11-one	13.083	87	358
239-35-0	Benzo[b]naphtho[2,1-d]thiophene	13.257	98	1345
239-01-0	11H-Benzo[a]carbazole	13.543	81	963
544-76-3	Hexadecane	13.810	95	1278
3351-28-8	Chrysene, 1-methyl-	14.181	96	929
593-45-3	Octadecane	14.267	86	1109
629-78-7	Heptadecane	14.685	93	1981
192-97-2	Benzo[e]pyrene	15.264	96	2890



## Element Materials Technology

<b>Job number:</b>	20/14697	<b>Method:</b>	SVOC
<b>Sample number:</b>	2151	<b>Matrix:</b>	Solid
<b>Sample identity:</b>	GTCS2-S386A		
<b>Sample depth:</b>	0.00-0.02		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	20/14697	<b>Method:</b>	SVOC
<b>Sample number:</b>	2171	<b>Matrix:</b>	Solid
<b>Sample identity:</b>	GTCS2-S388A		
<b>Sample depth:</b>	0.00-0.02		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	20/14697	<b>Method:</b>	<b>SVOC</b>
<b>Sample number:</b>	2275	<b>Matrix:</b>	<b>Solid</b>
<b>Sample identity:</b>	GTCS2-S383A		
<b>Sample depth:</b>	0.00-0.02		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	10	GTCS2-S311A	0.00-0.02	2030	17/11/2020	General Description (Bulk Analysis)	Soil/Stones
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S313A	0.00-0.02	2040	17/11/2020	General Description (Bulk Analysis)	Soil/Stones
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S313A	0.00-0.20	2050	17/11/2020	General Description (Bulk Analysis)	Soil/Stones
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S313A	0.50-0.60	2060	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	Fibre Bundles
					16/11/2020	Asbestos ACM	ACM Debris
					16/11/2020	Asbestos Type	Chrysotile
					16/11/2020	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
20/14697	10	GTCS2-S314A	0.00-0.02	2070	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S315A	0.00-0.02	2080	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S317A	0.00-0.02	2090	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	10	GTCS2-S317A	0.00-0.02	2090	16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S317A	0.00-0.20	2100	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S317A	0.35-0.44	2110	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S318A	0.00-0.02	2120	17/11/2020	General Description (Bulk Analysis)	Soil/Stones
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S319A	0.00-0.02	2130	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S320A	0.00-0.02	2140	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S387A	0.00-0.02	2162	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S388A	0.00-0.02	2174	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Synthetic/MMMF	Present
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S389A	0.00-0.02	2190	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	10	GTCS2-S389A	0.00-0.20	2200	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	10	GTCS2-S389A	0.50-0.60	2210	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	10	GTCS2-S390A	0.00-0.02	2220	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	10	GTCS2-DUP24A	0.00-0.02	2230	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos ACM (2)</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Type (2)</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	10	GTCS2-DUP19A	0.00-0.02	2246	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos ACM (2)</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Type (2)</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	10	GTCS2-DUP19A	0.00-0.20	2256	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos ACM (2)</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Type (2)</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	10	GTCS2-DUP19A	0.50-0.60	2266	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	Chrysotile
					16/11/2020	<b>Asbestos Level Screen</b>	Asbestos level cannot be determined from Screen. Quantification required.
20/14697	10	GTCS2-S383A	0.00-0.02	2278	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Synthetic/MMMF</b>	Present

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	10	GTCS2-S383A	0.00-0.02	2278	16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	10	GTCS2-S386A	0.00-0.02	2290	16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Synthetic/MMMF	Present
					16/11/2020	Asbestos Fibres	Fibre Bundles
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	Chrysotile
					16/11/2020	Asbestos Level Screen	less than 0.1%



**Matrix : Solid**

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM10	In-house semi-quantitative method for contamination composition within the SVOC carbon range by GCMS, including allylated naphthalene series for forensic investigation with presence/absence of biomarkers.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	No
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993 (comparabl	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis	Yes		AR	Yes
TM192	Isocyanates by LCMS	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	NONE	No Method Code			AR	Yes



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	8th December, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 10 Schedule B 20/14697 Batch 10 Schedule D
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	5th November, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Fifty samples were received for analysis on 5th November, 2020 of which twelve were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**

A handwritten signature in black ink, appearing to read 'S. Gomery'.

**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2026-2030	2086-2090	2096-2100	2106-2110	2146-2147,2272-2278	2150-2153,2286-2290	2168-2176	2186-2190	2196-2200	2206-2210	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S311A	GTCS2-S317A	GTCS2-S317A	GTCS2-S317A	GTCS2-S383A	GTCS2-S386A	GTCS2-S388A	GTCS2-S389A	GTCS2-S389A	GTCS2-S389A			
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.35-0.44	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	ND	ND	0.939	ND	ND	4.66	3.92	ND	ND	ND		ng/kg	Subcontracted
12378-PCDF*	ND	ND	ND	ND	ND	ND	ND	0.915	ND	ND		ng/kg	Subcontracted
23478-PCDF*	0.834	ND	ND	ND	1.5	ND	1.47	0.555	ND	ND		ng/kg	Subcontracted
123478-HxCDF*	0.877	ND	ND	ND	1.27	1.31	1.58	ND	ND	ND		ng/kg	Subcontracted
123678-HxCDF*	1.37	ND	ND	ND	1.33	2.11	1.07	1.18	ND	ND		ng/kg	Subcontracted
234678-HxCDF*	1	ND	ND	ND	1.41	1.53	1.94	0.697	ND	0.865		ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpCDF*	7.35	4.01	2.9	3.72	9.02	9.94	9.44	6.27	5.75	7.68		ng/kg	Subcontracted
1234789-HpCDF*	0.523	ND	ND	ND	0.5	0.694	0.474	ND	ND	0.434		ng/kg	Subcontracted
OCDF*	8.37	5	4.29	6.84	10.1	14.3	7.16	7.17	7.35	12.8		ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
12378-PCDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123478-HxCDD*	ND	ND	ND	ND	0.26	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123678-HxCDD*	ND	ND	0.477	ND	1.21	0.745	1.08	0.905	0.401	ND		ng/kg	Subcontracted
123789-HxCDD*	0.312	ND	ND	ND	0.75	0.663	ND	ND	0.863	ND		ng/kg	Subcontracted
1234678-HpCDD*	31.4	29	16.8	33	44.3	43.4	30.8	25.6	37.8	36.2		ng/kg	Subcontracted
OCDD*	196	157	104	236	262	283	196	163	203	224		ng/kg	Subcontracted
TEQ(1) (NATO)*	1.77	0.87	0.762	0.968	2.52	2.62	2.8	1.46	1.13	1.19		ng/kg	Subcontracted
TEQ(2) (NATO)*	1.37	0.492	0.447	0.61	2.18	1.94	2.3	1.09	0.772	0.766		ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	ND	0.7	0.8	0.7	0.8	ND	ND	ND	ND	0.8		ng/kg	Subcontracted
12378-PBDF*	ND	ND	0.5	ND	0.6	ND	ND	ND	ND	ND		ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	nd	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123478-HxBDF*	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted

## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2026-2030	2086-2090	2096-2100	2106-2110	2146-2147,2272-2278	2150-2153,2286-2290	2168-2176	2186-2190	2196-2200	2206-2210	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S311A	GTCS2-S317A	GTCS2-S317A	GTCS2-S317A	GTCS2-S383A	GTCS2-S386A	GTCS2-S388A	GTCS2-S389A	GTCS2-S389A	GTCS2-S389A			
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.35-0.44	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020	04/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	LOD/LOR	Units	Method No.
PCB-81*	0.424	ND	ND	ND	ND	1.66	0.983	ND	ND	0.402		ng/kg	Subcontracted
PCB-77*	13.9	5.07	1.92	6.94	18.9	39.7	30.7	12.5	6.78	10.6		ng/kg	Subcontracted
PCB-123*	2.31	1.95	0.782	0.82	5.2	11	11.4	3.6	2.09	1.66		ng/kg	Subcontracted
PCB-118*	238	117	55.1	91.8	326	953	792	281	103	181		ng/kg	Subcontracted
PCB-114*	2.89	1.47	1.25	ND	4.79	14.3	9.44	3.45	0.648	2.68		ng/kg	Subcontracted
PCB-105*	111	52.9	27.4	42.7	147	425	356	131	48.8	84.1		ng/kg	Subcontracted
PCB-126*	1.32	0.868	0.864	ND	0.824	2.65	2.54	1.68	ND	ND		ng/kg	Subcontracted
PCB-167*	21.5	8.11	5.43	21.3	20.4	46.3	51.9	21.3	11.9	16.2		ng/kg	Subcontracted
PCB-156*	49.2	18.5	13.2	41.2	50.5	124	130	54.2	23.9	33.4		ng/kg	Subcontracted
PCB-157*	13.8	5.3	3.04	6.58	13.5	32.7	33.6	14.3	5.54	10.1		ng/kg	Subcontracted
PCB-169*	0.244	ND	ND	ND	ND	ND	0.294	ND	ND	0.138		ng/kg	Subcontracted
PCB-189*	4.84	2.38	1.78	20.9	4.66	6.92	8.35	3.64	3.17	4.25		ng/kg	Subcontracted
Isocyanic Acid	-	-	-	-	<500 <sub>AA</sub>	<500 <sub>AA</sub>	<500 <sub>AA</sub>	-	-	-	<250	ug/kg	TM192/PM0
2,2',4,4',6-pentabromodiphenyl ether (BDE-100)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',3,4,4',5'-hexabromodiphenyl ether (BDE-138)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',4,4',5,5'-hexabromodiphenyl ether (BDE-153)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',4,4',5,6'-hexabromodiphenyl ether (BDE-154)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',4-tribromodiphenyl ether (BDE-17)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',3,4,4',5',6'-heptabromodiphenyl ether (BDE-183)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,4,4'-tribromodiphenyl ether (BDE-28)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',4,4'-tetrabromodiphenyl ether (BDE-47)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,3',4,4'-tetrabromodiphenyl ether (BDE-66)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',3,4,4'-pentabromodiphenyl ether (BDE-85)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
2,2',4,4',5-pentabromodiphenyl ether (BDE-99)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
hexabromocyclododecane (1,2,5,6,9,10-)*	-	-	-	-	<0.10	<0.10	<0.10	-	-	-		mg/kg	Subcontracted
tetrabromobisphenol A*	-	-	-	-	<0.50	<0.50	<0.50	-	-	-		mg/kg	Subcontracted
tris(1-chloro-2-propyl)phosphate TCP*	-	-	-	-	0.23	0.69	0.85	-	-	-		mg/kg	Subcontracted
tris(2-ethylhexyl) phosphate*	-	-	-	-	<0.50	<0.50	<0.50	-	-	-		mg/kg	Subcontracted

**Note:**

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

QF-PM 3.1.15 v10

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 Dilution

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
TM192	Isocyanates by LCMS	PM0	No preparation is required.			AR	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 3rd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 11 Schedule A

**Location :** Grenfell Stage 2

**Date samples received :** 6th November, 2020

**Status :** Final report

**Issue :** 1

Seventy samples were received for analysis on 6th November, 2020 of which thirty five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:****Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced





## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2496-2500	2506-2510	2516-2520	2526-2530	2536-2540	2546-2550	2556-2560	2566-2570	2576-2580	2586-2590	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S192A	GTCS2-S193A	GTCS2-S193A	GTCS2-S193A	GTCS2-S194A	GTCS2-S195A	GTCS2-S195A	GTCS2-S195A	GTCS2-S196A	GTCS2-S197A			
Depth	0.00-0.02	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020			
Sample Type	Clay	Clayey Loam	Clay	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clay			
Batch Number	11	11	11	11	11	11	11	11	11	11			
Date of Receipt	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	LOD/LOR	Units	Method No.
Antimony	-	-	-	-	-	3	NDP	4	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	308	173	443	NDP	538	155	NDP	404	314	293	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	3	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	500	-	-	206	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	0.58	0.07	<0.04	<0.04	0.07	0.08	0.09	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.16	0.12	0.15	3.06	0.19	0.11	0.08	0.37	0.17	0.32	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	1.00	0.09	<0.05	<0.05	0.10	<0.05	0.09	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	0.96	0.09	<0.04	<0.04	0.11	0.06	0.12	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.43	0.19	0.55	11.77	1.41	0.52	0.43	2.07	1.12	1.71	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.21	0.12	0.22	4.78	0.47	0.16	0.13	0.81	0.33	0.72	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.48	0.66	1.81	27.69	3.58	1.07	1.12	5.80	3.52	4.87	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.35	0.59	1.59	25.58	3.08	0.94	0.99	4.89	2.96	4.07	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.65	0.33	0.78	11.52	1.45	0.45	0.50	2.20	1.71	2.28	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.84	0.38	0.92	12.41	1.72	0.55	0.56	2.40	2.06	2.64	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	1.85	0.89	1.77	26.57	3.11	1.07	1.09	4.75	4.17	5.42	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.98	0.49	0.96	15.93	1.66	0.57	0.59	2.65	2.30	2.90	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.93	0.47	0.84	12.89	1.39	0.53	0.53	2.24	1.82	2.40	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.18	0.12	0.21	2.98	0.34	0.14	0.11	0.51	0.28	0.46	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	1.04	0.52	0.88	12.82	1.41	0.53	0.48	2.20	1.71	2.62	<0.04	mg/kg	TM4/PM8
PAH 16 Total	10.1	4.9	10.7	170.5	20.1	6.6	6.6	31.2	22.3	30.7	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.33	0.64	1.27	19.13	2.24	0.77	0.78	3.42	3.00	3.90	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.52	0.25	0.50	7.44	0.87	0.30	0.31	1.33	1.17	1.52	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	106	111	104	104	101	118	104	108	86	92	<0	%	TM4/PM8
Natural Moisture Content	48.0	74.5	21.2	20.5	46.8	78.0	59.8	41.8	57.2	54.1	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-	-	-	12.47	NDP	6.15	5.87	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-	-	9.07	-	-	-	<0.02	%	TM21/PM89
Sample Type	Clay	Clayey Loam	Clay	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clay	None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	None		PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, brick	stones, brick	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	None		PM13/PM0

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2596-2600	2606-2610	2616-2620	2626-2630	2636-2640						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S197A	GTCS2-S197A	GTCS2-S198A	GTCS2-S200A	GTCS2-S273A								
Depth	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.02	0.00-0.02								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020								
Sample Type	Clay	Clay	Clayey Loam	Clayey Loam	Clayey Loam								
Batch Number	11	11	11	11	11								
Date of Receipt	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020						LOD/LOR	Units	Method No.
Antimony	-	-	-	3	-						<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	NDP	443	194	110	997						<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-						<1	mg/kg	TM30/PM62
Lead	428	-	-	-	-						<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	0.18	<0.04	<0.04	<0.04	<0.04						<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.64	0.18	0.17	0.08	0.16						<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	0.15	<0.05	<0.05	<0.05	<0.05						<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	0.19	0.05	<0.04	<0.04	<0.04						<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	2.42	0.78	0.31	0.19	0.66						<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	1.11	0.33	0.20	0.08	0.23						<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	7.30	2.21	1.32	0.53	2.12						<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	6.40	2.01	1.26	0.50	1.94						<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	3.58	1.21	0.89	0.31	1.12						<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	4.43	1.23	0.93	0.33	1.12						<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	8.96	2.55	2.04	0.67	2.47						<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	4.71	1.42	1.15	0.39	1.30						<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	4.34	1.20	0.93	0.31	1.20						<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.88	0.24	0.20	0.06	0.23						<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	4.62	1.23	1.02	0.34	1.27						<0.04	mg/kg	TM4/PM8
PAH 16 Total	49.9	14.6	10.4	3.8	13.8						<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	6.45	1.84	1.47	0.48	1.78						<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	2.51	0.71	0.57	0.19	0.69						<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	98	92	97	100	110						<0	%	TM4/PM8
Natural Moisture Content	28.0	19.6	41.4	55.9	45.9						<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-	4.88	7.50						<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-						<0.02	%	TM21/PM89
Sample Type	Clay	Clay	Clayey Loam	Clayey Loam	Clayey Loam							None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown							None	PM13/PM0
Other Items	stones, chalk, vegetation	stones, brick	stones, vegetation	stones, vegetation	stones, vegetation							None	PM13/PM0



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	11	GTCS2-S385A	0.00-0.02	2300	17/11/2020	General Description (Bulk Analysis)	soil.stones
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S385A	0.00-0.20	2310	17/11/2020	General Description (Bulk Analysis)	soil.stones
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S385A	0.50-0.60	2320	17/11/2020	General Description (Bulk Analysis)	soil.stones
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S316A	0.00-0.02	2330	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S312A	0.00-0.02	2340	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-DUP12A	0.00-0.05	2350	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-DUP12A	0.00-0.20	2360	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	11	GTCS2-DUP12A	0.00-0.20	2360	16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-DUP12A	0.50-0.60	2370	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	Fibre Bundles
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	Chrysotile
					16/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	11	GTCS2-S271A	0.00-0.02	2380	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
20/14697	11	GTCS2-S272A	0.00-0.02	2390	16/11/2020	Asbestos Level Screen	NAD
					16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
20/14697	11	GTCS2-S274A	0.00-0.02	2400	16/11/2020	Asbestos Level Screen	NAD
					16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
20/14697	11	GTCS2-S275A	0.00-0.02	2410	16/11/2020	Asbestos Level Screen	NAD
					16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
20/14697	11	GTCS2-S276A	0.00-0.20	2420	16/11/2020	Asbestos Level Screen	NAD
					16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
20/14697	11	GTCS2-S277A	0.00-0.20	2430	16/11/2020	Asbestos Level Screen	NAD
					16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
20/14697	11	GTCS2-S278A	0.00-0.20	2440	16/11/2020	Asbestos Level Screen	NAD
					16/11/2020	General Description (Bulk Analysis)	Soil/Stone
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
20/14697	11	GTCS2-S279A	0.00-0.02	2450	16/11/2020	Asbestos Level Screen	NAD
					16/11/2020	General Description (Bulk Analysis)	Soil/Stone

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	11	GTCS2-S279A	0.00-0.02	2450	16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S280A	0.00-0.05	2460	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	Fibre Bundles
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	Chrysotile
					16/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	11	GTCS2-S191A	0.00-0.05	2470	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S191A	0.00-0.20	2480	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S191A	0.50-0.60	2490	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	Fibre Bundles
					16/11/2020	Asbestos Fibres (2)	Fibre Bundles
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos ACM (2)	NAD
					16/11/2020	Asbestos Type	Chrysotile
					16/11/2020	Asbestos Type (2)	Crocidolite
					16/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	11	GTCS2-S192A	0.00-0.02	2500	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S193A	0.00-0.05	2510	16/11/2020	General Description (Bulk Analysis)	soil.stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S193A	0.00-0.20	2520	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	NAD
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	NAD
					16/11/2020	Asbestos Level Screen	NAD
20/14697	11	GTCS2-S193A	0.50-0.60	2530	16/11/2020	General Description (Bulk Analysis)	Soil/Stones
					16/11/2020	Asbestos Fibres	Fibre Bundles
					16/11/2020	Asbestos ACM	NAD
					16/11/2020	Asbestos Type	Amosite

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	11	GTCS2-S193A	0.50-0.60	2530	16/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
20/14697	11	GTCS2-S194A	0.00-0.20	2540	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	11	GTCS2-S195A	0.00-0.02	2550	16/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	11	GTCS2-S195A	0.00-0.20	2560	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	Chrysotile
					16/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
20/14697	11	GTCS2-S195A	0.50-0.60	2570	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	11	GTCS2-S196A	0.00-0.02	2580	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	11	GTCS2-S197A	0.00-0.02	2590	16/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	11	GTCS2-S197A	0.00-0.20	2600	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	Amosite
					16/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
20/14697	11	GTCS2-S197A	0.50-0.60	2610	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD
					16/11/2020	<b>Asbestos Type</b>	NAD
					16/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	11	GTCS2-S198A	0.00-0.02	2620	16/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					16/11/2020	<b>Asbestos Fibres</b>	NAD
					16/11/2020	<b>Asbestos ACM</b>	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

**Matrix : Solid**

[illegible]

[illegible]

12 of 16



## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	8th December, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 11 Schedule B 20/14697 Batch 11 Schedule C
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	6th November, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Seventy samples were received for analysis on 6th November, 2020 of which eleven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2386-2390	2426-2430	2546-2550	2556-2560	2566-2570	2626-2630							
Sample ID	GTCS2-S272A	GTCS2-S277A	GTCS2-S195A	GTCS2-S195A	GTCS2-S195A	GTCS2-S200A							
Depth	0.00-0.02	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020	05/11/2020							
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam							
Batch Number	11	11	11	11	11	11							
Date of Receipt	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020							
Please see attached notes for all abbreviations and acronyms											LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	ND	ND	ND	1.85	8	0.794						ng/kg	Subcontracted
12378-PCDF*	3.71	0.296	ND	3	6.3	0.812						ng/kg	Subcontracted
23478-PCDF*	5.19	0.421	ND	4.51	13.6	1.77						ng/kg	Subcontracted
123478-HxCDF*	5.9	0.478	4.81	6.68	14.6	2.57						ng/kg	Subcontracted
123678-HxCDF*	5.39	0.409	3.66	6.03	14.1	0.699						ng/kg	Subcontracted
234678-HxCDF*	5.51	0.796	3.91	6.98	12.5	1.55						ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND	1.4	ND						ng/kg	Subcontracted
1234678-HpCDF*	39	10.4	44.4	53.9	61.6	12.6						ng/kg	Subcontracted
1234789-HpCDF*	1.64	ND	3.17	2.79	4.24	0.846						ng/kg	Subcontracted
OCDF*	33.6	16.4	96	87	37.3	12.9						ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
12378-PCDD*	ND	ND	ND	0.95	1.36	ND						ng/kg	Subcontracted
123478-HxCDD*	ND	0.304	1.8	2.17	3.25	ND						ng/kg	Subcontracted
123678-HxCDD*	2.84	1.13	7.15	8.91	9.61	0.971						ng/kg	Subcontracted
123789-HxCDD*	1.61	0.666	2.8	2.97	6.15	1.02						ng/kg	Subcontracted
1234678-HpCDD*	68.3	43.4	216	232	123	29.5						ng/kg	Subcontracted
OCDD*	478	420	1710	1760	548	198						ng/kg	Subcontracted
TEQ(1) (NATO)*	7.14	1.86	7.7	11.5	17.6	2.69						ng/kg	Subcontracted
TEQ(2) (NATO)*	6.5	1.58	6.85	11.2	17.2	2.32						ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	1.2	0.6	0.9	0.8	0.7	ND						ng/kg	Subcontracted
12378-PBDF*	0.7	ND	ND	0.6	ND	ND						ng/kg	Subcontracted
23478-PBDF*	ND	ND	0.5	ND	ND	ND						ng/kg	Subcontracted
123478-HxBDF*	ND	ND	ND	0.5	ND	ND						ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted

QF-PM 3.1.2 v11

Please include all sections of this report if it is reproduced  
All solid results are expressed on a dry weight basis unless stated otherwise.

3 of 8



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	11	GTCS2-DUP12A	0.50-0.60	2370	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
20/14697	11	GTCS2-S280A	0.00-0.05	2460	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
20/14697	11	GTCS2-S191A	0.50-0.60	2490	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	0.002 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	0.002 (mass %)
20/14697	11	GTCS2-S193A	0.50-0.60	2530	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
20/14697	11	GTCS2-S195A	0.00-0.20	2560	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
20/14697	11	GTCS2-S197A	0.00-0.20	2600	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	0.001 (mass %)

[illegible]

5 of 8

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson  
**Date :** 3rd December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 12 Schedule A  
**Location :** Grenfell Stage 2  
**Date samples received :** 7th November, 2020  
**Status :** Final report  
**Issue :** 1

Fifty samples were received for analysis on 7th November, 2020 of which twenty four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced





# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2746-2750	2756-2760	2766-2770	2776-2780	2786-2790	2796-2800	2806-2810	2816-2820	2826-2830	2836,2838-2840	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S101A	GTCS2-S102A	GTCS2-S103A	GTCS2-S104A	GTCS2-S105A	GTCS2-S106A	GTCS2-S107A	GTCS2-S108A	GTCS2-S109A	GTCS2-S110A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020	06/11/2020			
Sample Type	Clayey Loam	Clay	Clay	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	12	12	12	12	12	12	12	12	12	12			
Date of Receipt	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	07/11/2020	LOD/LOR	Units	Method No.
Antimony	4	-	-	-	-	4	-	-	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	168	NDP	142	129	88	150	310	349	777	497	<5	mg/kg	TM30/PM15
Lead	-	118	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.12	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.06	<0.03	<0.03	0.05	<0.03	0.13	<0.03	0.17	0.12	0.16	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.39	0.16	0.14	0.21	0.12	0.20	0.08	0.57	0.48	0.45	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.10	<0.04	0.05	0.06	<0.04	0.13	<0.04	0.19	0.11	0.15	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.00	0.40	0.36	0.40	0.38	1.08	0.20	1.60	1.37	1.28	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.82	0.34	0.31	0.33	0.33	1.02	0.17	1.40	1.20	1.13	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.54	0.23	0.26	0.21	0.20	0.69	0.12	0.67	0.73	0.55	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.61	0.27	0.27	0.27	0.24	0.82	0.13	0.95	0.87	0.80	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	1.17	0.57	0.56	0.50	0.40	1.48	0.22	1.59	1.71	1.41	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.62	0.30	0.31	0.27	0.21	0.85	0.12	0.83	0.91	0.74	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.48	0.27	0.26	0.21	0.16	0.54	0.11	0.64	0.77	0.55	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.08	<0.04	0.05	<0.04	<0.04	0.12	<0.04	0.11	0.12	0.10	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.51	0.27	0.27	0.22	0.18	0.59	0.12	0.70	0.73	0.65	<0.04	mg/kg	TM4/PM8
PAH 16 Total	6.4	2.8	2.8	2.7	2.2	7.7	1.3	9.4	9.2	8.0	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.84	0.41	0.40	0.36	0.29	1.07	0.16	1.14	1.23	1.02	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.33	0.16	0.16	0.14	0.11	0.41	0.06	0.45	0.48	0.39	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	81	75	74	75	88	89	84	85	77	86	<0	%	TM4/PM8
Natural Moisture Content	40.9	29.7	27.7	28.6	30.6	34.8	31.7	58.8	38.3	45.0	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	7.98	NDP	-	-	-	4.51	-	-	-	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	5.96	-	-	-	-	-	-	-	-	<0.02	%	TM21/PM89
Sample Type	Clayey Loam	Clay	Clay	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	None		PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, loam, vegetation	stones, chalk, vegetation	stones, vegetation	stones, vegetation	stones, vegetation, brick	stones, vegetation	stones, vegetation	stones, vegetation	None		PM13/PM0

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2846-2850	2866-2870	2876-2880	2886-2890							Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP17A	GTCS2-S199A	GTCS2-S199A	GTCS2-S199A									
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	06/11/2020	06/11/2020	06/11/2020	06/11/2020									
Sample Type	Clayey Loam	Clay	Clayey Loam	Clayey Sand									
Batch Number	12	12	12	12							LOD/LOR	Units	Method No.
Date of Receipt	07/11/2020	07/11/2020	07/11/2020	07/11/2020									
Antimony	-	-	-	-							<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	425	82	100	NDP							<5	mg/kg	TM30/PM15
Lead	-	-	-	293							<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	0.85	2.77 <sup>AA</sup>							<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.17	0.31	0.80	2.18 <sup>AA</sup>							<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	0.08	2.35	3.75 <sup>AA</sup>							<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	0.06	2.32	3.02 <sup>AA</sup>							<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.50	0.97	16.30	42.86 <sup>AA</sup>							<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.20	0.44	5.35	11.92 <sup>AA</sup>							<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.47	3.06	18.75	68.09 <sup>AA</sup>							<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.28	2.75	14.79	55.78 <sup>AA</sup>							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.64	1.51	6.52	23.62 <sup>AA</sup>							<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.89	1.87	7.48	28.22 <sup>AA</sup>							<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene <sup>#M</sup>	1.57	3.62	12.25	44.54 <sup>AA</sup>							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.85	2.10	7.21	25.36 <sup>AA</sup>							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.67	1.52	4.84	17.13 <sup>AA</sup>							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.13	0.24	0.87	2.77 <sup>AA</sup>							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.74	1.62	4.88	17.59 <sup>AA</sup>							<0.04	mg/kg	TM4/PM8
PAH 16 Total	9.1	20.2	105.6	349.6 <sup>AA</sup>							<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.13	2.61	8.82	32.07 <sup>AA</sup>							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.44	1.01	3.43	12.47 <sup>AA</sup>							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	82	86	85	82 <sup>AA</sup>							<0	%	TM4/PM8
Natural Moisture Content	41.7	56.9	24.5	14.9							<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-	-							<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-							<0.02	%	TM21/PM89
Sample Type	Clayey Loam	Clay	Clayey Loam	Clayey Sand							None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown							None		PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, vegetation	stones, chalk, brick							None		PM13/PM0

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	12	GTCS2-S281A	0.00-0.02	2650	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S282A	0.00-0.02	2660	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S283A	0.00-0.05	2670	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S284A	0.00-0.02	2680	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S285A	0.00-0.02	2690	18/11/2020	General Description (Bulk Analysis)	Stones/Soil
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S286A	0.00-0.02	2700	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S287A	0.00-0.02	2710	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	12	GTCS2-S287A	0.00-0.02	2710	18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S288A	0.00-0.02	2720	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S289A	0.00-0.02	2730	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S290A	0.00-0.02	2740	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S101A	0.00-0.02	2750	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S102A	0.00-0.02	2760	18/11/2020	General Description (Bulk Analysis)	soil.stones
					18/11/2020	Asbestos Fibres	Fibre Bundles
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	Chrysotile
					18/11/2020	Asbestos Level Screen	less than 0.1%
20/14697	12	GTCS2-S103A	0.00-0.02	2770	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos Fibres (2)	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos ACM (2)	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Type (2)	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S104A	0.00-0.02	2780	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos Fibres (2)	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos ACM (2)	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Type (2)	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S105A	0.00-0.02	2790	18/11/2020	General Description (Bulk Analysis)	soil.stones
					18/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	12	GTCS2-S105A	0.00-0.02	2790	18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S106A	0.00-0.02	2800	18/11/2020	General Description (Bulk Analysis)	soil.stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S107A	0.00-0.02	2810	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S108A	0.00-0.02	2820	17/11/2020	General Description (Bulk Analysis)	Soil/Stone
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S109A	0.00-0.02	2830	17/11/2020	General Description (Bulk Analysis)	Soil/Stone
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S110A	0.00-0.02	2840	17/11/2020	General Description (Bulk Analysis)	Soil/Stone
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-DUP17A	0.00-0.02	2850	17/11/2020	General Description (Bulk Analysis)	Soil/Stone
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S199A	0.00-0.02	2870	17/11/2020	General Description (Bulk Analysis)	Soil/Stone
					17/11/2020	Asbestos Fibres	NAD
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	NAD
					17/11/2020	Asbestos Level Screen	NAD
20/14697	12	GTCS2-S199A	0.00-0.20	2880	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	12	GTCSS2-S199A	0.50-0.60	2890	17/11/2020	General Description (Bulk Analysis)	soil/stones
					17/11/2020	Asbestos Fibres	Fibre Bundles
					17/11/2020	Asbestos ACM	NAD
					17/11/2020	Asbestos Type	Chrysotile
					17/11/2020	Asbestos Level Screen	less than 0.1%

**Matrix : Solid**

9 of 14



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	8th December, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 12 Schedule C 20/14697 Batch 12 Schedule B
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	7th November, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Fifty samples were received for analysis on 7th November, 2020 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2666-2670	2716-2720	2746-2750	2796-2800							Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S283A	GTCS2-S288A	GTCS2-S101A	GTCS2-S106A									
Depth	0.00-0.05	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	06/11/2020	06/11/2020	06/11/2020	06/11/2020									
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam									
Batch Number	12	12	12	12							LOD/LOR	Units	Method No.
Date of Receipt	07/11/2020	07/11/2020	07/11/2020	07/11/2020									
Furans (Chlorinated)													
2378-TCDF*	ND	2	4.62	ND								ng/kg	Subcontracted
12378-PCDF*	1.45	0.888	1.44	1.8								ng/kg	Subcontracted
23478-PCDF*	2.11	1.74	2.82	1.04								ng/kg	Subcontracted
123478-HxCDF*	4.8	2.6	3.78	4.07								ng/kg	Subcontracted
123678-HxCDF*	4.47	1.33	2.68	2.28								ng/kg	Subcontracted
234678-HxCDF*	7.94	2.14	4.19	2.62								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	0.506	ND								ng/kg	Subcontracted
1234678-HpCDF*	158	34.4	74.3	58.3								ng/kg	Subcontracted
1234789-HpCDF*	9.65	2.13	5.44	3.93								ng/kg	Subcontracted
OCDF*	404	60.5	154	122								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	1.82	ND	1.28	1.12								ng/kg	Subcontracted
123478-HxCDD*	8.08	1.55	1.83	2.06								ng/kg	Subcontracted
123678-HxCDD*	52.4	7.95	15.3	10.1								ng/kg	Subcontracted
123789-HxCDD*	12.6	3.07	7.68	4.14								ng/kg	Subcontracted
1234678-HpCDD*	1440	229	690	307								ng/kg	Subcontracted
OCDD*	13400	2070	6630	2720								ng/kg	Subcontracted
TEQ(1) (NATO)*	41.3	8.05	20.9	10.5								ng/kg	Subcontracted
TEQ(2) (NATO)*	41	7.77	20.7	10.2								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.7	0.7	ND	ND								ng/kg	Subcontracted
12378-PBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDF*	0.5	0.5	ND	ND								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
QBDD*	ND	ND	ND	ND								ng/kg	Subcontracted





**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 3rd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 13 Schedule A

**Location :** Grenfell Stage 2

**Date samples received :** 10th November, 2020

**Status :** Final report

**Issue :** 1

Forty two samples were received for analysis on 10th November, 2020 of which twenty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:****Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2896-2900	2906-2910	2916-2920	2926-2930	2936-2940	2946-2950	2956-2960	2966-2970	2976-2980	2986-2990	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S231A	GTCS2-S232A	GTCS2-S233A	GTCS2-S234A	GTCS2-S235A	GTCS2-S236A	GTCS2-S237A	GTCS2-S238A	GTCS2-S239A	GTCS2-S240A			
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.05	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clayey Loam	Clay	Clay	Clay			
Batch Number	13	13	13	13	13	13	13	13	13	13			
Date of Receipt	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	LOD/LOR	Units	Method No.
Antimony	-	-	-	6	-	-	-	-	7	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	249	36	51	257	358	421	33	29	407	997	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	0.09	<0.04	<0.04	0.16	0.13	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.06	<0.03	<0.03	0.08	0.18	0.51	<0.03	<0.03	0.28	0.43	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	0.08	0.22	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	<0.04	0.11	0.17	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.10	<0.03	0.04	0.38	0.74	1.43	0.04	<0.03	1.66	2.59	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.06	<0.04	<0.04	0.12	0.28	0.60	<0.04	<0.04	0.63	0.87	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.32	0.04	0.08	0.93	2.31	4.66	0.15	0.05	3.78	6.48	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.28	0.04	0.07	0.76	2.04	4.07	0.13	0.04	3.28	5.64	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.19	<0.06	<0.06	0.61	0.96	2.25	0.11	<0.06	1.61	2.46	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.25	0.05	0.05	0.52	1.27	2.76	0.13	0.05	1.93	3.46	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	0.51	0.11	0.13	1.20	2.38	5.46	0.25	0.10	3.54	6.83	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.26	0.05	0.07	0.59	1.33	3.01	0.12	0.05	1.93	3.77	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.21	0.05	0.07	0.50	0.95	2.25	0.11	0.05	1.36	2.78	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	<0.04	<0.04	<0.04	0.12	0.19	0.42	<0.04	<0.04	0.28	0.59	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.22	0.07	0.08	0.56	0.95	2.28	0.11	0.05	1.39	2.85	<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.5	<0.6	<0.6	6.4	13.6	29.9	1.2	<0.6	22.0	39.3	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.37	0.08	0.09	0.86	1.71	3.93	0.18	0.07	2.55	4.92	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.14	0.03	0.04	0.34	0.67	1.53	0.07	0.03	0.99	1.91	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	84	85	86	86	79	82	86	85	85	84	<0	%	TM4/PM8
Natural Moisture Content	38.4	35.3	33.6	51.7	47.9	31.0	32.1	25.6	25.1	44.6	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-	6.33	-	-	-	-	5.62	6.11	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	<0.02	%	TM21/PM89
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clayey Loam	Clay	Clay	Clay	None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	None		PM13/PM0
Other Items	stones	stones, vegetation	stones, loam	stones, vegetation	stones, vegetation	stones	stones, vegetation, sand	stones	stones, vegetation	stones, vegetation	None		PM13/PM0

## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2996-3000	3006-3010	3016-3020	3026-3030	3036-3040	3046-3050	3056-3060	3066-3070	3076-3080	3086-3090	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S331A	GTCS2-S332A	GTCS2-S333A	GTCS2-S334A	GTCS2-S335A	GTCS2-S336A	GTCS2-S337A	GTCS2-S338A	GTCS2-S339A	GTCS2-S340A			
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.05	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020	09/11/2020			
Sample Type	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam			
Batch Number	13	13	13	13	13	13	13	13	13	13			
Date of Receipt	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	LOD/LOR	Units	Method No.
Antimony	-	-	NDP	-	-	-	-	4	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	292	NDP	NDP	337	268	324	227	213	133	313	<5	mg/kg	TM30/PM15
Antimony	-	-	5	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	304	369	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.10	0.09	0.08	0.13	0.13	0.12	0.10	0.28	0.06	0.15	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	0.08	<0.04	0.06	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.46	0.28	0.35	0.39	0.60	0.41	0.36	1.26	0.23	0.67	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.13	0.12	0.12	0.17	0.24	0.19	0.15	0.44	0.08	0.15	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.18	0.85	0.84	1.15	2.04	1.16	1.24	2.95	0.63	1.24	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.07	0.76	0.76	1.02	1.82	1.03	1.09	2.32	0.52	1.02	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.46	0.44	0.43	0.57	1.16	0.49	0.50	1.46	0.38	0.66	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.64	0.53	0.53	0.69	0.96	0.60	0.63	1.37	0.39	0.66	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	1.29	1.08	1.00	1.36	1.87	1.35	1.23	2.78	0.72	1.26	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.64	0.59	0.52	0.77	1.06	0.73	0.67	1.50	0.39	0.67	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.49	0.46	0.41	0.57	0.73	0.59	0.54	1.19	0.31	0.52	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.09	0.08	0.10	0.13	0.16	0.12	0.12	0.18	<0.04	0.08	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.51	0.47	0.44	0.65	0.79	0.63	0.54	1.07	0.31	0.52	<0.04	mg/kg	TM4/PM8
PAH 16 Total	7.1	5.8	5.6	7.6	11.6	7.4	7.2	16.9	4.0	7.7	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.93	0.78	0.72	0.98	1.35	0.97	0.89	2.00	0.52	0.91	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.36	0.30	0.28	0.38	0.52	0.38	0.34	0.78	0.20	0.35	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	87	85	84	84	85	84	85	90	83	83	<0	%	TM4/PM8
Natural Moisture Content	28.6	28.3	29.4	43.4	33.6	33.2	45.9	41.3	56.4	39.5	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	NDP	-	-	-	-	6.44	5.50	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	3.78	-	-	-	-	-	-	-	<0.02	%	TM21/PM89
Sample Type	Clay	Clayey Loam	Clay	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	None		PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	None		PM13/PM0

Please see attached notes for all abbreviations and acronyms

**Note:**

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

[illegible]

**Matrix : Solid**

6 of 11

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	8th December, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 13 Schedule B 20/14697 Batch 13 Schedule C
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	10th November, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Forty two samples were received for analysis on 10th November, 2020 of which twenty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	2926-2930	2976-2980	3016-3020	3066-3070							Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S234A	GTCS2-S239A	GTCS2-S333A	GTCS2-S338A									
Depth	0.00-0.05	0.00-0.02	0.00-0.20	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	09/11/2020	09/11/2020	09/11/2020	09/11/2020									
Sample Type	Clay	Clay	Clay	Clayey Loam									
Batch Number	13	13	13	13									
Date of Receipt	10/11/2020	10/11/2020	10/11/2020	10/11/2020							LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	2.04	6.78	3.29	ND								ng/kg	Subcontracted
12378-PCDF*	2.28	4.21	2.75	2.24								ng/kg	Subcontracted
23478-PCDF*	2.58	5.39	4.11	3.03								ng/kg	Subcontracted
123478-HxCDF*	2.52	6.21	4.67	3.86								ng/kg	Subcontracted
123678-HxCDF*	2.41	5.57	4.52	3.56								ng/kg	Subcontracted
234678-HxCDF*	2.98	5.52	4.13	4.34								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	32.6	56	85.5	66.9								ng/kg	Subcontracted
1234789-HpCDF*	2.71	2.23	5.08	3.61								ng/kg	Subcontracted
OCDF*	51	58.7	283	86.1								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	3.28	1.35	1.89	20.3								ng/kg	Subcontracted
123478-HxCDD*	8.23	2.01	2.67	14.5								ng/kg	Subcontracted
123678-HxCDD*	15.8	7.44	16.4	55.5								ng/kg	Subcontracted
123789-HxCDD*	17.4	4.34	6.17	53.5								ng/kg	Subcontracted
1234678-HpCDD*	596	170	724	1260								ng/kg	Subcontracted
OCDD*	4580	1290	7540	7740								ng/kg	Subcontracted
TEQ(1) (NATO)*	19.4	11.4	23.6	47.2								ng/kg	Subcontracted
TEQ(2) (NATO)*	19.1	11	23.3	46.4								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	1.2	ND	ND	ND								ng/kg	Subcontracted
12378-PBDF*	0.7	ND	ND	ND								ng/kg	Subcontracted
23478-PBDF*	0.5	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND								ng/kg	Subcontracted

QF-PM 3.1.2 v11

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

3 of 10

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	13	GTCS2-S231A	0.00-0.20	2900	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S232A	0.00-0.20	2910	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S233A	0.00-0.20	2920	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S234A	0.00-0.05	2930	18/11/2020	General Description (Bulk Analysis)	soil.stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S235A	0.00-0.02	2940	18/11/2020	General Description (Bulk Analysis)	soil.stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S236A	0.00-0.20	2950	18/11/2020	General Description (Bulk Analysis)	soil.stonessss
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S237A	0.00-0.20	2960	18/11/2020	General Description (Bulk Analysis)	soil/stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	13	GTCS2-S237A	0.00-0.20	2960	18/11/2020	<b>Asbestos Type</b>	NAD
					18/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	13	GTCS2-S238A	0.00-0.20	2970	18/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					18/11/2020	<b>Asbestos Fibres</b>	NAD
					18/11/2020	<b>Asbestos ACM</b>	NAD
					18/11/2020	<b>Asbestos Type</b>	NAD
					18/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	13	GTCS2-S239A	0.00-0.02	2980	18/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					18/11/2020	<b>Asbestos Fibres</b>	NAD
					18/11/2020	<b>Asbestos ACM</b>	NAD
					18/11/2020	<b>Asbestos Type</b>	NAD
					18/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	13	GTCS2-S240A	0.00-0.02	2990	18/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					18/11/2020	<b>Asbestos Fibres</b>	NAD
					18/11/2020	<b>Asbestos ACM</b>	NAD
					18/11/2020	<b>Asbestos Type</b>	NAD
					18/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	13	GTCS2-S331A	0.00-0.20	3000	18/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					18/11/2020	<b>Asbestos Fibres</b>	NAD
					18/11/2020	<b>Asbestos ACM</b>	NAD
					18/11/2020	<b>Asbestos Type</b>	NAD
					18/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	13	GTCS2-S332A	0.00-0.20	3010	18/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					18/11/2020	<b>Asbestos Fibres</b>	NAD
					18/11/2020	<b>Asbestos ACM</b>	ACM Debris
					18/11/2020	<b>Asbestos Type</b>	Chrysotile
					18/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
					04/12/2020	<b>Total ACM Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					04/12/2020	<b>Total Detailed Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					04/12/2020	<b>Total Gravimetric Quantification (ACM + Detailed) (% Asb)</b>	<0.001 (mass %)
					07/12/2020	<b>Asbestos PCOM Quantification (Fibres)</b>	<0.001 (mass %)
					07/12/2020	<b>Asbestos Gravimetric &amp; PCOM Total</b>	<0.001 (mass %)
20/14697	13	GTCS2-S333A	0.00-0.20	3020	18/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					18/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					18/11/2020	<b>Asbestos Fibres (2)</b>	Fibre Bundles
					18/11/2020	<b>Asbestos ACM</b>	NAD
					18/11/2020	<b>Asbestos ACM (2)</b>	NAD
					18/11/2020	<b>Asbestos Type</b>	Chrysotile
					18/11/2020	<b>Asbestos Type (2)</b>	Amosite
					18/11/2020	<b>Asbestos Level Screen</b>	Asbestos level cannot be determined from Screen. Quantification required.
					04/12/2020	<b>Total ACM Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					04/12/2020	<b>Total Detailed Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					04/12/2020	<b>Total Gravimetric Quantification (ACM + Detailed) (% Asb)</b>	<0.001 (mass %)
					07/12/2020	<b>Asbestos PCOM Quantification (Fibres)</b>	<0.001 (mass %)
					07/12/2020	<b>Asbestos Gravimetric &amp; PCOM Total</b>	<0.001 (mass %)

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	13	GTCS2-S334A	0.00-0.02	3030	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S335A	0.00-0.05	3040	18/11/2020	General Description (Bulk Analysis)	Soil/Stone
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S336A	0.00-0.02	3050	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S337A	0.00-0.02	3060	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S339A	0.00-0.02	3080	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-S340A	0.00-0.02	3090	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD
20/14697	13	GTCS2-DUP20A	0.00-0.02	3100	18/11/2020	General Description (Bulk Analysis)	Soil/Stones
					18/11/2020	Asbestos Fibres	NAD
					18/11/2020	Asbestos ACM	NAD
					18/11/2020	Asbestos Type	NAD
					18/11/2020	Asbestos Level Screen	NAD

[illegible]

7 of 10

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson

**Date :** 3rd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 14 Schedule A 20/14697 Batch 14 Schedule D

**Location :** Grenfell Stage 2

**Date samples received :** 11th November, 2020

**Status :** Final report

**Issue :** 1

Forty six samples were received for analysis on 11th November, 2020 of which twenty two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**  
Senior Project Manager

Please include all sections of this report if it is reproduced



## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3106-3110	3116-3120	3126-3130	3136-3140	3146-3150	3156-3160	3166-3170	3176-3180	3186-3190	3196-3200	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S121A	GTCS2-S122A	GTCS2-S123A	GTCS2-S124A	GTCS2-S125A	GTCS2-S126A	GTCS2-S127A	GTCS2-S128A	GTCS2-S129A	GTCS2-S130A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020			
Sample Type	Clayey Sand	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clay	Clay	Clayey Loam			
Batch Number	14	14	14	14	14	14	14	14	14	14			
Date of Receipt	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	LOD/LOR	Units	Method No.
Antimony	-	-	4	-	-	-	-	3	-	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	59	123	192	33	20	31	21	211	366	25	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	0.07	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.07	0.12	<0.03	<0.03	<0.03	<0.03	<0.03	0.08	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.10	0.46	0.66	<0.03	0.32	<0.03	<0.03	0.20	0.54	<0.03	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	<0.04	0.12	0.21	<0.04	0.06	<0.04	<0.04	0.05	0.18	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.23	1.39	1.93	0.05	0.33	<0.03	<0.03	0.56	2.02	<0.03	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.19	1.23	1.70	0.05	0.24	<0.03	<0.03	0.46	1.88	<0.03	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.13	0.81	1.13	0.08	0.19	<0.06	<0.06	0.41	1.04	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.13	0.85	1.18	0.04	0.19	<0.02	<0.02	0.31	0.99	0.04	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	0.26	1.99	2.80	0.12	0.29	<0.07	<0.07	0.60	2.04	0.10	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.14	1.12	1.49	0.06	0.14	<0.04	<0.04	0.34	1.19	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.11	0.85	1.14	<0.04	0.10	<0.04	<0.04	0.24	0.85	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	<0.04	0.16	0.23	<0.04	<0.04	<0.04	<0.04	<0.04	0.13	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.12	0.85	1.07	<0.04	0.10	<0.04	<0.04	0.23	0.76	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.4	9.9	13.7	<0.6	2.0	<0.6	<0.6	3.4	11.7	<0.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.19	1.43	2.02	0.09	0.21	<0.05	<0.05	0.43	1.47	0.07	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.07	0.56	0.78	0.03	0.08	<0.02	<0.02	0.17	0.57	0.03	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	82	78	78	84	81	83	83	82	84	81	<0	%	TM4/PM8
Natural Moisture Content	18.9	44.9	34.0	29.4	26.7	31.1	23.4	35.5	18.2	25.6	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	5.60	3.57	-	-	-	3.04	-	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	<0.02	%	TM21/PM89
Sample Type	Clayey Sand	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clay	Clay	Clayey Loam	None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	None		PM13/PM0
Other Items	stones	stones, vegetation, chalk	stones, vegetation	stones, vegetation	stones, vegetation, sand	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation, chalk	stones, vegetation	None		PM13/PM0

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3206-3210	3216-3220	3226-3230	3236-3240	3246-3250	3256-3260	3266-3270	3276-3280	3286-3290	3296-3300	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S341A	GTCS2-S342A	GTCS2-S343A	GTCS2-S344A	GTCS2-S345A	GTCS2-S346A	GTCS2-S347A	GTCS2-S348A	GTCS2-S349A	GTCS2-S350A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020	10/11/2020			
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam			
Batch Number	14	14	14	14	14	14	14	14	14	14			
Date of Receipt	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	LOD/LOR	Units	Method No.
Antimony	-	-	-	4	-	-	-	-	NDP	-	<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	360	145	357	319	395	153	272	133	NDP	125	<5	mg/kg	TM30/PM15
Antimony	-	-	-	-	-	-	-	-	4	-	<1	mg/kg	TM30/PM62
Lead	-	-	-	-	-	-	-	-	331	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	0.08	<0.04	0.18	0.06	0.11	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.19	0.06	0.26	0.20	0.26	<0.03	0.07	0.06	0.07	0.04	<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	0.08	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.50	0.78	0.77	0.35	1.00	0.17	0.19	0.24	0.35	0.14	<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.16	0.18	0.23	0.15	0.36	0.09	0.07	0.08	0.11	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.46	1.58	1.82	1.19	2.76	0.54	0.53	0.63	0.91	0.37	<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.29	1.24	1.61	1.08	2.38	0.48	0.47	0.54	0.80	0.33	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.75	0.72	1.03	0.72	1.36	0.34	0.39	0.39	0.50	0.24	<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.82	0.71	1.04	0.85	1.53	0.37	0.33	0.43	0.52	0.26	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	1.85	1.39	2.39	1.78	2.93	0.71	0.81	0.85	1.00	0.52	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.99	0.74	1.32	0.94	1.62	0.40	0.43	0.46	0.54	0.28	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.83	0.55	1.01	0.79	1.27	0.30	0.39	0.35	0.41	0.21	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.14	0.10	0.18	0.15	0.23	0.09	0.08	0.07	0.09	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.85	0.50	1.04	0.91	1.30	0.31	0.40	0.39	0.44	0.26	<0.04	mg/kg	TM4/PM8
PAH 16 Total	9.9	8.6	13.0	9.2	17.1	3.8	4.2	4.5	5.7	2.7	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.33	1.00	1.72	1.28	2.11	0.51	0.58	0.61	0.72	0.37	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.52	0.39	0.67	0.50	0.82	0.20	0.23	0.24	0.28	0.15	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	83	83	84	84	85	82	76	81	80	80	<0	%	TM4/PM8
Natural Moisture Content	56.9	47.8	62.8	52.3	54.4	41.8	33.0	39.0	24.8	41.8	<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-	-	6.78	-	-	-	-	NDP	4.30	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-	-	-	-	2.78	-	<0.02	%	TM21/PM89
Sample Type	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clayey Loam	Clay	Clayey Loam	None		PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	None		PM13/PM0
Other Items	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	stones, vegetation	None		PM13/PM0

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3316-3320	3326-3330											
Sample ID	GTCS2-S382A	GTCS2-S384A											
Depth	0.00-0.02	0.00-0.02											
COC No / misc													
Containers	V J T	V J T											
Sample Date	10/11/2020	10/11/2020											
Sample Type	Clayey Loam	Clayey Loam											
Batch Number	14	14											
Date of Receipt	11/11/2020	11/11/2020											
											Please see attached notes for all abbreviations and acronyms		
											LOD/LOR	Units	Method No.
Antimony	-	-									<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	39	45									<5	mg/kg	TM30/PM15
Antimony	-	-									<1	mg/kg	TM30/PM62
Lead	-	-									<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05									<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	<0.03	0.10									<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.13	0.27									<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.11	0.26									<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.11	0.19									<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.08	0.19									<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	0.17	0.35									<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.08	0.19									<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.06	0.13									<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.06	0.16									<0.04	mg/kg	TM4/PM8
PAH 16 Total	0.8	1.8									<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.12	0.25									<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.05	0.10									<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	87	88									<0	%	TM4/PM8
Natural Moisture Content	56.3	43.8									<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-	-									<0.02	%	TM21/PM24
Total Organic Carbon	-	-									<0.02	%	TM21/PM89
Sample Type	Clayey Loam	Clayey Loam										None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown										None	PM13/PM0
Other Items	stones, vegetation	stones, vegetation										None	PM13/PM0

**Matrix : Solid**

5 of 9

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	8th December, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 14 Schedule C 20/14697 Batch 14 Schedule B
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	11th November, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Forty six samples were received for analysis on 11th November, 2020 of which twenty two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**

A handwritten signature in black ink, appearing to read 'S. Gomery'.

**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report :** Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3126-3130	3176-3180	3236-3240	3286-3290									
Sample ID	GTCS2-S123A	GTCS2-S128A	GTCS2-S344A	GTCS2-S349A									
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	10/11/2020	10/11/2020	10/11/2020	10/11/2020									
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay									
Batch Number	14	14	14	14									
Date of Receipt	11/11/2020	11/11/2020	11/11/2020	11/11/2020									
Please see attached notes for all abbreviations and acronyms											LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	ND	1.73	3.48	ND								ng/kg	Subcontracted
12378-PCDF*	1.19	ND	ND	ND								ng/kg	Subcontracted
23478-PCDF*	2.72	2.57	4.48	4.25								ng/kg	Subcontracted
123478-HxCDF*	2.96	3.98	6.62	4.08								ng/kg	Subcontracted
123678-HxCDF*	2.71	2.84	4.45	2.3								ng/kg	Subcontracted
234678-HxCDF*	4.09	2.19	5.52	4.19								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	47.8	19.1	76.4	33.3								ng/kg	Subcontracted
1234789-HpCDF*	2.19	1.3	3.82	1.81								ng/kg	Subcontracted
OCDF*	61.8	12.1	124	43								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	ND	ND	ND	0.743								ng/kg	Subcontracted
123478-HxCDD*	ND	ND	1.81	1.15								ng/kg	Subcontracted
123678-HxCDD*	5.66	0.905	6.9	2.91								ng/kg	Subcontracted
123789-HxCDD*	ND	ND	2.78	2.14								ng/kg	Subcontracted
1234678-HpCDD*	161	27.4	257	92								ng/kg	Subcontracted
OCDD*	1130	153	2180	674								ng/kg	Subcontracted
TEQ(1) (NATO)*	6.9	3.54	11.6	6.5								ng/kg	Subcontracted
TEQ(2) (NATO)*	6.27	3.09	11.1	6.16								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.7	ND	ND	ND								ng/kg	Subcontracted
12378-PBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND								ng/kg	Subcontracted



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	14	GTCS2-S121A	0.00-0.02	3110	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	14	GTCS2-S122A	0.00-0.02	3120	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	14	GTCS2-S123A	0.00-0.02	3130	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	14	GTCS2-S124A	0.00-0.02	3140	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	14	GTCS2-S125A	0.00-0.02	3150	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	14	GTCS2-S126A	0.00-0.02	3160	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	14	GTCS2-S127A	0.00-0.02	3170	19/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	14	GTCS2-S127A	0.00-0.02	3170	19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S128A	0.00-0.02	3180	19/11/2020	General Description (Bulk Analysis)	soil.stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S129A	0.00-0.02	3190	19/11/2020	General Description (Bulk Analysis)	soil.stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S130A	0.00-0.05	3200	19/11/2020	General Description (Bulk Analysis)	Soil/Stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S341A	0.00-0.02	3210	19/11/2020	General Description (Bulk Analysis)	Soil/Stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S342A	0.00-0.02	3220	19/11/2020	General Description (Bulk Analysis)	Soil/Stone
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S343A	0.00-0.02	3230	19/11/2020	General Description (Bulk Analysis)	Soil/Stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S344A	0.00-0.02	3240	19/11/2020	General Description (Bulk Analysis)	Soil/Stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S345A	0.00-0.02	3250	19/11/2020	General Description (Bulk Analysis)	Soil/Stone
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S346A	0.00-0.02	3260	19/11/2020	General Description (Bulk Analysis)	Soil/Stone
					19/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	14	GTCS2-S346A	0.00-0.02	3260	19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S347A	0.00-0.02	3270	19/11/2020	General Description (Bulk Analysis)	Soil/Stone
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S348A	0.00-0.02	3280	19/11/2020	General Description (Bulk Analysis)	soil.stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos Fibres (2)	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos ACM (2)	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Type (2)	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S349A	0.00-0.02	3290	19/11/2020	General Description (Bulk Analysis)	soil.stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	Asbestos Insulating Board Debris
					19/11/2020	Asbestos Type	Amosite
					19/11/2020	Asbestos Level Screen	Asbestos level cannot be determined from Screen. Quantification required.
					04/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					04/12/2020	Total Detailed Gravimetric Quantification (% Asb)	0.151 (mass %)
					04/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.151 (mass %)
					07/12/2020	Asbestos PCOM Quantification (Fibres)	0.002 (mass %)
					07/12/2020	Asbestos Gravimetric & PCOM Total	0.153 (mass %)
20/14697	14	GTCS2-S350A	0.00-0.02	3300	19/11/2020	General Description (Bulk Analysis)	Soil/Stone
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S382A	0.00-0.02	3320	19/11/2020	General Description (Bulk Analysis)	Soil/Stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD
20/14697	14	GTCS2-S384A	0.00-0.02	3330	19/11/2020	General Description (Bulk Analysis)	Soil/Stones
					19/11/2020	Asbestos Fibres	NAD
					19/11/2020	Asbestos ACM	NAD
					19/11/2020	Asbestos Type	NAD
					19/11/2020	Asbestos Level Screen	NAD



[illegible]

7 of 10

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson

**Date :** 29th November, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 15 Schedule A 20/14697 Batch 15 Schedule C 20/14697 I

**Location :** Grenfell Stage 2

**Date samples received :** 12th November, 2020

**Status :** Final report

**Issue :** 1

Fifty one samples were received for analysis on 12th November, 2020 of which twenty six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced







## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3336-3340	3346-3350	3356-3360	3366-3370	3376-3380	3386-3390	3396-3400	3406-3410	3416-3420	3426-3430	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S161A	GTCS2-S162A	GTCS2-S163A	GTCS2-S164A	GTCS2-S165A	GTCS2-S166A	GTCS2-S167A	GTCS2-S168A	GTCS2-S169A	GTCS2-S170A			
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020			
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam			
Batch Number	15	15	15	15	15	15	15	15	15	15			
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Vinyl Chloride	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromomethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromochloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroform	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Benzene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromomethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromodichloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Toluene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromochloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Ethylbenzene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
m/p-Xylene #	-	-	-	-	-	-	-	-	-	-	<100	ug/kg	TM152/PM104
o-Xylene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Styrene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromoform	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Isopropylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3336-3340	3346-3350	3356-3360	3366-3370	3376-3380	3386-3390	3396-3400	3406-3410	3416-3420	3426-3430	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S161A	GTCS2-S162A	GTCS2-S163A	GTCS2-S164A	GTCS2-S165A	GTCS2-S166A	GTCS2-S167A	GTCS2-S168A	GTCS2-S169A	GTCS2-S170A			
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020			
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam			
Batch Number	15	15	15	15	15	15	15	15	15	15			
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
n-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Naphthalene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	-	-	-	-	-	-	-	-	-	<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	-	-	-	-	<0	%	TM152/PM104
VOC TICs	-	-	-	-	-	-	-	-	-	-		None	TM15/PM10
SVOC TICs	-	-	-	-	-	-	-	-	-	-		None	TM16/PM8
SVOC Forensic Scan	-	-	-	-	-	-	-	-	-	-			TM10/PM8
PCB 28 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-	-	-	-	-	<35	ug/kg	TM17/PM8
Natural Moisture Content	28.7	41.3	34.8	12.3	35.2	28.1	20.0	29.0	30.5	28.1	<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	-	-	-	-	-	-	-	-	<0.3	mg/kg	TM38/PM20
Chromium III	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3336-3340	3346-3350	3356-3360	3366-3370	3376-3380	3386-3390	3396-3400	3406-3410	3416-3420	3426-3430	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S161A	GTCS2-S162A	GTCS2-S163A	GTCS2-S164A	GTCS2-S165A	GTCS2-S166A	GTCS2-S167A	GTCS2-S168A	GTCS2-S169A	GTCS2-S170A			
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020			
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam			
Batch Number	15	15	15	15	15	15	15	15	15	15			
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	LOD/LOR	Units	Method No.
Total Organic Carbon #	-	5.99	5.60	-	-	NDP	-	-	-	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-	7.50	-	-	-	-	<0.02	%	TM21/PM89
Thiocyanate	-	-	-	-	-	-	-	-	-	-	<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Methyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Ethyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Propyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Phenyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Isocyanic Acid	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Methyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	-	-	-	-	-	-	-	-	-	<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stoneas and roots	stones and vegetation	stones and roots	stones and roots	stones and roots	stones and roots	stones and roots	stones	stones and roots	stones and roots		None	PM13/PM0





# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3436-3440	3446-3450	3456-3460	3466-3470	3476-3480	3486-3490	3496-3500	3506-3510	3516-3520	3526-3530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S221A	GTCS2-S222A	GTCS2-S223A	GTCS2-S224A	GTCS2-S225A	GTCS2-S226A	GTCS2-S227A	GTCS2-S228A	GTCS2-S229A	GTCS2-S230A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020			
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam			
Batch Number	15	15	15	15	15	15	15	15	15	15			
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Vinyl Chloride	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromomethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromochloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chloroform	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Benzene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromomethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromodichloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Toluene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Dibromochloromethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Chlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Ethylbenzene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
m/p-Xylene #	-	-	-	-	-	-	-	-	-	-	<100	ug/kg	TM152/PM104
o-Xylene #	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Styrene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromoform	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Isopropylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Bromobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3436-3440	3446-3450	3456-3460	3466-3470	3476-3480	3486-3490	3496-3500	3506-3510	3516-3520	3526-3530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S221A	GTCS2-S222A	GTCS2-S223A	GTCS2-S224A	GTCS2-S225A	GTCS2-S226A	GTCS2-S227A	GTCS2-S228A	GTCS2-S229A	GTCS2-S230A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020			
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam			
Batch Number	15	15	15	15	15	15	15	15	15	15			
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
n-Butylbenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Naphthalene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	-	-	-	-	-	-	-	-	-	<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	-	-	-	-	<0	%	TM152/PM104
VOC TICs	-	-	-	-	-	-	-	-	-	-		None	TM15/PM10
SVOC TICs	-	-	-	-	-	-	-	-	-	-		None	TM16/PM8
SVOC Forensic Scan	-	-	-	-	-	-	-	-	-	-			TM10/PM8
PCB 28 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-	-	-	-	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-	-	-	-	-	<35	ug/kg	TM17/PM8
Natural Moisture Content	24.6	29.3	47.8	82.1	42.9	31.5	29.2	30.5	41.8	83.4	<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	-	-	-	-	-	-	-	-	<0.3	mg/kg	TM38/PM20
Chromium III	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM89/PM45

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3436-3440	3446-3450	3456-3460	3466-3470	3476-3480	3486-3490	3496-3500	3506-3510	3516-3520	3526-3530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S221A	GTCS2-S222A	GTCS2-S223A	GTCS2-S224A	GTCS2-S225A	GTCS2-S226A	GTCS2-S227A	GTCS2-S228A	GTCS2-S229A	GTCS2-S230A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020			
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam			
Batch Number	15	15	15	15	15	15	15	15	15	15			
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	LOD/LOR	Units	Method No.
Total Organic Carbon #	-	-	10.25	-	-	-	-	3.97	5.89	-	<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	-	-	-	-	-	-	-	<0.02	%	TM21/PM89
Thiocyanate	-	-	-	-	-	-	-	-	-	-	<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Methyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Ethyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Propyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Phenyl Isocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	-	-	-	-	-	-	-	-	-	<0	%	TM192/PM0
Isocyanic Acid	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Methyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	-	-	-	-	-	-	-	-	-	<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	-	-	-	-	-	-	-	-	-	<250	ug/kg	TM192/PM0
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Sandy Loam	Sandy Loam		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Dark Brown	Dark Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones and vegetation	stones and roots	stones and vegetation	stones and vegetation	stones and roots	stones and roots	stones	stones and roots	stones and vegetation	stones adn vegetation		None	PM13/PM0



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3536-3540	3546-3554	3564-3572	3582-3590	3600	3601					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP14A	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A	AECOM 10/11/20 BLANK 1	AECOM 10/11/20 BLANK 2							
Depth	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V	V							
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020							
Sample Type	Clayey Loam	Sandy Loam	Sandy Loam	Clay	Soil	Soil							
Batch Number	15	15	15	15	15	15					LOD/LOR	Units	Method No.
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020							
Aluminium	-	6688	11650	NDP	-	-					<50	mg/kg	TM30/PM15
Antimony	2	2	2	NDP	-	-					<1	mg/kg	TM30/PM15
Arsenic <sup>#M</sup>	-	5.8	8.4	NDP	-	-					<0.5	mg/kg	TM30/PM15
Barium <sup>#M</sup>	-	76	100	NDP	-	-					<1	mg/kg	TM30/PM15
Beryllium	-	0.7	0.9	NDP	-	-					<0.5	mg/kg	TM30/PM15
Cadmium <sup>#M</sup>	-	0.1	0.1	NDP	-	-					<0.1	mg/kg	TM30/PM15
Chromium <sup>#M</sup>	-	69.0	91.0	NDP	-	-					<0.5	mg/kg	TM30/PM15
Copper <sup>#M</sup>	-	24	24	NDP	-	-					<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	121	55	55	NDP	-	-					<5	mg/kg	TM30/PM15
Mercury <sup>#M</sup>	-	<0.1	<0.1	NDP	-	-					<0.1	mg/kg	TM30/PM15
Nickel <sup>#M</sup>	-	13.5	16.9	NDP	-	-					<0.7	mg/kg	TM30/PM15
Selenium <sup>#M</sup>	-	<1	<1	NDP	-	-					<1	mg/kg	TM30/PM15
Vanadium	-	31	38	NDP	-	-					<1	mg/kg	TM30/PM15
Water Soluble Boron <sup>#M</sup>	-	2.7	1.8	NDP	-	-					<0.1	mg/kg	TM74/PM32
Zinc <sup>#M</sup>	-	86	84	NDP	-	-					<5	mg/kg	TM30/PM15
Aluminium	-	-	-	10610	-	-					<50	mg/kg	TM30/PM62
Antimony	-	-	-	4	-	-					<1	mg/kg	TM30/PM62
Arsenic	-	-	-	15.9	-	-					<0.5	mg/kg	TM30/PM62
Barium	-	-	-	234	-	-					<1	mg/kg	TM30/PM62
Beryllium	-	-	-	1.1	-	-					<0.5	mg/kg	TM30/PM62
Cadmium	-	-	-	0.2	-	-					<0.1	mg/kg	TM30/PM62
Chromium	-	-	-	25.1	-	-					<0.5	mg/kg	TM30/PM62
Copper	-	-	-	28	-	-					<1	mg/kg	TM30/PM62
Lead	-	-	-	168	-	-					<5	mg/kg	TM30/PM62
Mercury	-	-	-	<0.1	-	-					<0.1	mg/kg	TM30/PM62
Nickel	-	-	-	21.8	-	-					<0.7	mg/kg	TM30/PM62
Selenium	-	-	-	<1	-	-					<1	mg/kg	TM30/PM62
Vanadium	-	-	-	48	-	-					<1	mg/kg	TM30/PM62
Water Soluble Boron	-	-	-	1.1	-	-					<0.1	mg/kg	TM74/PM61
Zinc	-	-	-	132	-	-					<5	mg/kg	TM30/PM62

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report :** Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3536-3540	3546-3554	3564-3572	3582-3590	3600	3601							
Sample ID	GTCS2-DUP14A	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A	AECOM 10/11/20 BLANK 1	AECOM 10/11/20 BLANK 2							
Depth	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V	V							
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020							
Sample Type	Clayey Loam	Sandy Loam	Sandy Loam	Clay	Soil	Soil							
Batch Number	15	15	15	15	15	15							
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020							
											LOD/LOR	Units	Method No.
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	0.05	-	-					<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.09	0.06	0.06	0.15	-	-					<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	0.07	-	-					<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	0.10	-	-					<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.44	0.51	0.19	0.88	-	-					<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.12	0.15	0.06	0.33	-	-					<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	1.31	0.96	0.58	2.46	-	-					<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	1.14	0.82	0.52	2.09	-	-					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.66	0.51	0.42	1.37	-	-					<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.69	0.51	0.35	1.31	-	-					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	1.37	1.00	0.79	2.64	-	-					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.74	0.57	0.41	1.51	-	-					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.58	0.44	0.36	1.09	-	-					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.10	0.08	0.06	0.21	-	-					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.60	0.42	0.35	1.04	-	-					<0.04	mg/kg	TM4/PM8
Coronene	-	0.10	0.08	0.18	-	-					<0.04	mg/kg	TM4/PM8
PAH 16 Total	7.8	-	-	-	-	-					<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	6.13	4.23	15.48	-	-					<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.99	0.72	0.57	1.90	-	-					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.38	0.28	0.22	0.74	-	-					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	76	80	80	79	-	-					<0	%	TM4/PM8

Please see attached notes for all abbreviations and acronyms

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3536-3540	3546-3554	3564-3572	3582-3590	3600	3601					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP14A	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A	AECOM 10/11/20 BLANK 1	AECOM 10/11/20 BLANK 2							
Depth	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V	V							
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020							
Sample Type	Clayey Loam	Sandy Loam	Sandy Loam	Clay	Soil	Soil							
Batch Number	15	15	15	15	15	15							
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020					LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Chloromethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Vinyl Chloride	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Bromomethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Chloroethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Bromochloromethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Chloroform	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Benzene #	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Dibromomethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Bromodichloromethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Toluene #	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Dibromochloromethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Chlorobenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Ethylbenzene #	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
m/p-Xylene #	-	<100	<100	<100	<100	<100					<100	ug/kg	TM152/PM104
o-Xylene #	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Styrene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Bromoform	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Isopropylbenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Bromobenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3536-3540	3546-3554	3564-3572	3582-3590	3600	3601					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP14A	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A	AECOM 10/11/20 BLANK 1	AECOM 10/11/20 BLANK 2							
Depth	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V	V							
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020							
Sample Type	Clayey Loam	Sandy Loam	Sandy Loam	Clay	Soil	Soil							
Batch Number	15	15	15	15	15	15							
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020					LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
n-Butylbenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Naphthalene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	<50	<50	<50	<50	<50					<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	105	91	92	94	92					<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	104	90	93	95	93					<0	%	TM152/PM104
VOC TICs	-	ND	ND	ND	-	-						None	TM15/PM10
SVOC TICs	-	See Attached	See Attached	See Attached	-	-						None	TM16/PM8
SVOC Forensic Scan	-	Pending	Pending	Pending	-	-							TM10/PM8
PCB 28 #	-	<5	<5	<5	-	-					<5	ug/kg	TM17/PM8
PCB 52 #	-	<5	<5	<5	-	-					<5	ug/kg	TM17/PM8
PCB 101 #	-	<5	<5	<5	-	-					<5	ug/kg	TM17/PM8
PCB 118 #	-	<5	<5	<5	-	-					<5	ug/kg	TM17/PM8
PCB 138 #	-	<5	<5	<5	-	-					<5	ug/kg	TM17/PM8
PCB 153 #	-	<5	<5	<5	-	-					<5	ug/kg	TM17/PM8
PCB 180 #	-	<5	<5	<5	-	-					<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	<35	<35	<35	-	-					<35	ug/kg	TM17/PM8
Natural Moisture Content	29.4	39.0	20.8	22.4	<0.1	<0.1					<0.1	%	PM4/PM0
Hexavalent Chromium #	-	<0.3	<0.3	<0.3	-	-					<0.3	mg/kg	TM38/PM20
Chromium III	-	69.0	91.0	NDP	-	-					<0.5	mg/kg	NONE/NONE
Chromium III	-	-	-	25.1	-	-					<0.5	mg/kg	NONE/NONE
Free Cyanide	-	<0.5	<0.5	<0.5	-	-					<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	<0.5	<0.5	<0.5	-	-					<0.5	mg/kg	TM89/PM45

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3536-3540	3546-3554	3564-3572	3582-3590	3600	3601					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP14A	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A	AECOM 10/11/20 BLANK 1	AECOM 10/11/20 BLANK 2							
Depth	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V	V							
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020							
Sample Type	Clayey Loam	Sandy Loam	Sandy Loam	Clay	Soil	Soil							
Batch Number	15	15	15	15	15	15							
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020					LOD/LOR	Units	Method No.
Total Organic Carbon #	3.50	4.16	2.14	NDP	-	-					<0.02	%	TM21/PM24
Total Organic Carbon	-	-	-	1.21	-	-					<0.02	%	TM21/PM89
Thiocyanate	-	<0.6	<0.6	<0.6	-	-					<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	133	77	117	-	-					<0	%	TM192/PM0
Methyl Isocyanate-d	-	111	74	111	-	-					<0	%	TM192/PM0
Ethyl Isocyanate-d	-	112	75	114	-	-					<0	%	TM192/PM0
Propyl Isocyanate-d	-	114	70	113	-	-					<0	%	TM192/PM0
Phenyl Isocyanate-d	-	109	55	114	-	-					<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	108	48	105	-	-					<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	117	24	114	-	-					<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	110	46	110	-	-					<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	101	50	99	-	-					<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	115	45	109	-	-					<0	%	TM192/PM0
Isocyanic Acid	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
Methyl Isocyanate	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	<500	<500	<500	-	-					<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	<250	<250	<250	-	-					<250	ug/kg	TM192/PM0
Sample Type	Clayey Loam	Sandy Loam	Sandy Loam	Clay	-	-						None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	-	-						None	PM13/PM0
Other Items	stones and roots	stones and vegetation	stones and roots	stones and sand	-	-						None	PM13/PM0

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

SVOC Report : Solid

EMT Sample No.	3546-3554	3564-3572	3582-3590									
Sample ID	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A									
Depth	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	11/11/2020	11/11/2020	11/11/2020									
Sample Type	Sandy Loam	Sandy Loam	Clay									
Batch Number	15	15	15									
Date of Receipt	12/11/2020	12/11/2020	12/11/2020									
										LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms												
SVOC MS												
Phenols												
2-Chlorophenol <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenol <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
PAHs												
2-Chloronaphthalene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylnaphthalene <sup>#M</sup>	<10	<10	13							<10	ug/kg	TM16/PM8
Phthalates												
Bis(2-ethylhexyl) phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100							<100	ug/kg	TM16/PM8
Dimethyl phthalate <sup>#M</sup>	<100	<100	<100							<100	ug/kg	TM16/PM8
Other SVOCs												
1,2-Dichlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10							<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10							<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Bromophenylphenylether <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10							<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10							<10	ug/kg	TM16/PM8
Carbazole	<10	14	32							<10	ug/kg	TM16/PM8
Dibenzofuran <sup>#M</sup>	<10	<10	23							<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorobutadiene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10							<10	ug/kg	TM16/PM8
Isophorone <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
Nitrobenzene <sup>#M</sup>	<10	<10	<10							<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	112	113	117							<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	112	117	117							<0	%	TM16/PM8

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**VOC Report :** Solid

EMT Sample No.	3546-3554	3564-3572	3582-3590									
Sample ID	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A									
Depth	0.00-0.02	0.00-0.20	0.50-0.60									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	11/11/2020	11/11/2020	11/11/2020									
Sample Type	Sandy Loam	Sandy Loam	Clay									
Batch Number	15	15	15									
Date of Receipt	12/11/2020	12/11/2020	12/11/2020									
	LOD/LOR	Units	Method No.									
VOC MS												
Dichlorodifluoromethane	<2	ug/kg	TM15/PM10	<2								
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	ug/kg	TM15/PM10	<6								
Chloromethane <sup>#</sup>	8	ug/kg	TM15/PM10	<3								
Vinyl Chloride	<2	ug/kg	TM15_A/PM10	<2								
Bromomethane	<1	ug/kg	TM15/PM10	<1								
Chloroethane <sup>#M</sup>	<6	ug/kg	TM15/PM10	<6								
Trichlorofluoromethane <sup>#M</sup>	<3	ug/kg	TM15/PM10	<3								
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	ug/kg	TM15/PM10	<6								
Carbon Disulphide <sup>#</sup>	<3	ug/kg	TM15/PM10	<3								
Dichloromethane (DCM) <sup>#</sup>	<30	ug/kg	TM15/PM10	<30								
trans-1-2-Dichloroethene <sup>#</sup>	<3	ug/kg	TM15/PM10	<3								
1,1-Dichloroethane <sup>#M</sup>	<6	ug/kg	TM15/PM10	<6								
cis-1-2-Dichloroethene <sup>#M</sup>	<7	ug/kg	TM15/PM10	<7								
2,2-Dichloropropane	<4	ug/kg	TM15/PM10	<4								
Bromochloromethane <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
Chloroform <sup>#M</sup>	<5	ug/kg	TM15/PM10	<5								
1,1,1-Trichloroethane <sup>#M</sup>	<5	ug/kg	TM15/PM10	<5								
1,1-Dichloropropene <sup>#</sup>	<3	ug/kg	TM15/PM10	<3								
Carbon tetrachloride <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
1,2-Dichloroethane <sup>#M</sup>	<5	ug/kg	TM15/PM10	<5								
Benzene <sup>#M</sup>	<5	ug/kg	TM15/PM10	<5								
Trichloroethene (TCE) <sup>#M</sup>	<5	ug/kg	TM15/PM10	<5								
1,2-Dichloropropane <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
Dibromomethane <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
Bromodichloromethane <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
cis-1-3-Dichloropropene	<4	ug/kg	TM15/PM10	<4								
Toluene <sup>#M</sup>	<3	ug/kg	TM15/PM10	<3								
trans-1-3-Dichloropropene	<3	ug/kg	TM15/PM10	<3								
1,1,2-Trichloroethane <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
Tetrachloroethene (PCE) <sup>#</sup>	<3	ug/kg	TM15/PM10	<3								
1,3-Dichloropropane <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
Dibromochloromethane <sup>#M</sup>	<5	ug/kg	TM15/PM10	<5								
1,2-Dibromoethane <sup>#</sup>	<3	ug/kg	TM15/PM10	<3								
Chlorobenzene <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	ug/kg	TM15/PM10	<5								
Ethylbenzene <sup>#M</sup>	<3	ug/kg	TM15/PM10	<3								
m/p-Xylene <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
o-Xylene <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
Styrene	<3	ug/kg	TM15_A/PM10	<3								
Bromoform	<4	ug/kg	TM15/PM10	<4								
Isopropylbenzene <sup>#</sup>	<3	ug/kg	TM15/PM10	<3								
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	ug/kg	TM15/PM10	<3								
Bromobenzene	<2	ug/kg	TM15/PM10	<2								
1,2,3-Trichloropropane <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
Propylbenzene <sup>#</sup>	<4	ug/kg	TM15/PM10	<4								
2-Chlorotoluene	<3	ug/kg	TM15/PM10	<3								
1,3,5-Trimethylbenzene <sup>#</sup>	<3	ug/kg	TM15/PM10	<3								
4-Chlorotoluene	<3	ug/kg	TM15/PM10	<3								
tert-Butylbenzene <sup>#</sup>	<5	ug/kg	TM15/PM10	<5								
1,2,4-Trimethylbenzene <sup>#</sup>	<6	ug/kg	TM15/PM10	<6								
sec-Butylbenzene <sup>#</sup>	<4	ug/kg	TM15/PM10	<4								
4-Isopropyltoluene <sup>#</sup>	<4	ug/kg	TM15/PM10	<4								
1,3-Dichlorobenzene <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
1,4-Dichlorobenzene <sup>#</sup>	<4	ug/kg	TM15/PM10	<4								
n-Butylbenzene <sup>#</sup>	<4	ug/kg	TM15/PM10	<4								
1,2-Dichlorobenzene <sup>#M</sup>	<4	ug/kg	TM15/PM10	<4								
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	ug/kg	TM15/PM10	<4								
1,2,4-Trichlorobenzene <sup>#</sup>	<7	ug/kg	TM15/PM10	<7								
Hexachlorobutadiene	<4	ug/kg	TM15/PM10	<4								
Naphthalene	<27	ug/kg	TM15/PM10	<27								
1,2,3-Trichlorobenzene <sup>#</sup>	<7	ug/kg	TM15/PM10	<7								
Surrogate Recovery Toluene D8	86	%	TM15/PM10	<0								

Please see attached notes for all abbreviations and acronyms





[illegible]

## Element Materials Technology

**Method:** SVOC

**Matrix: Solid**

**Sample depth:** 0.00-0.02

**Sample Type:** Sandy Loam

Units: ug/kg

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

**Method:** SVOC

**Matrix: Solid**

**Sample depth:** 0.50-0.60

**Sample Type:** Clay

Units: ug/kg

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

**Matrix : Solid**

QF-PM 3.1.7 v10 Please include all sections of this report if it is reproduced 24 of 30

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM10	In-house semi-quantitative method for contamination composition within the SVOC carbon range by GCMS, including allylated naphthalene series for forensic investigation with presence/absence of biomarkers.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	No
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993 (comparabl	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis	Yes		AR	Yes
TM192	Isocyanates by LCMS	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
NONE	No Method Code	NONE	No Method Code			AR	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	8th December, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 15 Schedule B 20/14697 Batch 15 Schedule D
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	12th November, 2020
<b>Status :</b>	Final report
<b>Issue :</b>	1

Fifty one samples were received for analysis on 12th November, 2020 of which twenty four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3346-3350	3386-3390	3456-3460	3506-3510	3536-3540	3546-3554	3564-3572	3582-3590			Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S162A	GTCS2-S166A	GTCS2-S223A	GTCS2-S228A	GTCS2-DUP14A	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A					
Depth	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020					
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Clayey Loam	Sandy Loam	Sandy Loam	Clay					
Batch Number	15	15	15	15	15	15	15	15			LOD/LOR	Units	Method No.
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020					
Furans (Chlorinated)													
2378-TCDF*	0.999	14.1	2.54	2.15	1.79	ND	ND	1.36				ng/kg	Subcontracted
12378-PCDF*	ND	15.5	1.71	0.794	0.656	ND	ND	1.31				ng/kg	Subcontracted
23478-PCDF*	ND	28	2	ND	1.73	ND	1.19	2.5				ng/kg	Subcontracted
123478-HxCDF*	0.72	19.5	3.14	2.21	ND	1.74	1.13	2.65				ng/kg	Subcontracted
123678-HxCDF*	0.847	16.6	2.6	1.34	ND	ND	ND	1.85				ng/kg	Subcontracted
234678-HxCDF*	0.887	21.6	2.62	0.841	ND	1.47	1.44	2.04				ng/kg	Subcontracted
123789-HxCDF*	ND	0.694	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
1234678-HpCDF*	14.9	125	33.5	13.9	8.06	17	14.5	16.7				ng/kg	Subcontracted
1234789-HpCDF*	0.818	3.1	2.57	0.837	ND	0.929	1.83	0.783				ng/kg	Subcontracted
OCDF*	29.6	62.6	65	18.8	15.1	22.9	29.6	15.7				ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
12378-PCDD*	ND	8.19	ND	ND	0.467	ND	ND	ND				ng/kg	Subcontracted
123478-HxCDD*	0.607	6.58	1.11	0.661	0.583	ND	ND	0.362				ng/kg	Subcontracted
123678-HxCDD*	2.08	10.9	4.8	1.12	ND	1.87	2.37	1.98				ng/kg	Subcontracted
123789-HxCDD*	0.98	7.52	2.36	0.641	ND	1.2	ND	0.968				ng/kg	Subcontracted
1234678-HpCDD*	73.3	81.9	222	30.8	26.8	76.5	77.9	44.7				ng/kg	Subcontracted
OCDD*	540	424	1660	232	310	462	492	429				ng/kg	Subcontracted
TEQ(1) (NATO)*	2.55	32	7.62	2.03	2.37	2.57	3.08	3.83				ng/kg	Subcontracted
TEQ(2) (NATO)*	2.17	31.2	7.3	1.64	2.04	2.06	2.55	3.5				ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.6	ND	1.0	0.9	ND	ND	0.7	ND				ng/kg	Subcontracted
12378-PBDF*	ND	ND	0.6	0.5	ND	ND	ND	ND				ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
123478-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
123678-HxBDF*	ND	ND	0.5	ND	ND	ND	ND	ND				ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND	ND	ND	ND				ng/kg	Subcontracted

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3346-3350	3386-3390	3456-3460	3506-3510	3536-3540	3546-3554	3564-3572	3582-3590			Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S162A	GTCS2-S166A	GTCS2-S223A	GTCS2-S228A	GTCS2-DUP14A	GTCS2-S381A	GTCS2-S381A	GTCS2-S381A					
Depth	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020	11/11/2020					
Sample Type	Sandy Loam	Sandy Loam	Sandy Loam	Loam	Clayey Loam	Sandy Loam	Sandy Loam	Clay					
Batch Number	15	15	15	15	15	15	15	15					
Date of Receipt	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020	12/11/2020			LOD/LOR	Units	Method No.
PCB-81*	0.7	5.07	4.09	0.652	0.485	0.368	1.19	0.71				ng/kg	Subcontracted
PCB-77*	16.1	42.7	107	10.6	16.9	20.5	12	14.4				ng/kg	Subcontracted
PCB-123*	2.31	3.6	10.8	2.41	2.91	3.14	3.55	1.13				ng/kg	Subcontracted
PCB-118*	211	437	861	106	155	247	156	118				ng/kg	Subcontracted
PCB-114*	3.96	6.79	14.4	2.24	4.1	4.21	3.66	2.22				ng/kg	Subcontracted
PCB-105*	94.9	232	416	54.2	81.5	118	80.9	52.6				ng/kg	Subcontracted
PCB-126*	2.12	22.5	11.9	1.32	0.792	2.48	2.4	2.52				ng/kg	Subcontracted
PCB-167*	17.3	68.6	79.2	11.9	12.8	18.2	16.6	15.3				ng/kg	Subcontracted
PCB-156*	40.8	146	179	24.7	30	44.5	39.1	28.1				ng/kg	Subcontracted
PCB-157*	10.1	49.9	56.4	7.89	9.17	11.6	10.2	11.4				ng/kg	Subcontracted
PCB-169*	ND	6.95	1.07	0.428	0.823	ND	0.359	0.271				ng/kg	Subcontracted
PCB-189*	5.62	30.1	18.5	4.42	4.2	5.18	4.75	8.15				ng/kg	Subcontracted
2,2',4,4',6-pentabromodiphenyl ether (BDE-100)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',3,4,4',5'-hexabromodiphenyl ether (BDE-138)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',4,4',5,5'-hexabromodiphenyl ether (BDE-153)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',4,4',5,6'-hexabromodiphenyl ether (BDE-154)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',4-tribromodiphenyl ether (BDE-17)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',3,4,4',5',6'-heptabromodiphenyl ether (BDE-183)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,4,4'-tribromodiphenyl ether (BDE-28)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',4,4'-tetrabromodiphenyl ether (BDE-47)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,3',4,4'-tetrabromodiphenyl ether (BDE-66)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',3,4,4'-pentabromodiphenyl ether (BDE-85)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
2,2',4,4',5-pentabromodiphenyl ether (BDE-99)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
hexabromocyclododecane (1,2,5,6,9,10-)*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
tetrabromobisphenol A*	-	-	-	-	-	<0.50	<0.50	<0.50				mg/kg	Subcontracted
tris(1-chloro-2-propyl)phosphate TCP*P*	-	-	-	-	-	<0.10	<0.10	<0.10				mg/kg	Subcontracted
tris(2-ethylhexyl) phosphate*	-	-	-	-	-	<0.50	<0.50	<0.50				mg/kg	Subcontracted

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	15	GTCS2-S161A	0.00-0.20	3340	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S162A	0.00-0.20	3350	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S163A	0.00-0.20	3360	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S164A	0.00-0.20	3370	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos ACM (2)</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Type (2)</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S165A	0.00-0.20	3380	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos ACM (2)</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Type (2)</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S166A	0.00-0.20	3390	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					19/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					19/11/2020	<b>Asbestos Fibres (2)</b>	Fibre Bundles

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	15	GTCS2-S166A	0.00-0.20	3390	19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos ACM (2)</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	Crocidolite
					19/11/2020	<b>Asbestos Type (2)</b>	Chrysotile
					19/11/2020	<b>Asbestos Level Screen</b>	Asbestos level cannot be determined from Screen. Quantification required.
					04/12/2020	<b>Total ACM Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					04/12/2020	<b>Total Detailed Gravimetric Quantification (% Asb)</b>	0.009 (mass %)
					04/12/2020	<b>Total Gravimetric Quantification (ACM + Detailed) (% Asb)</b>	0.009 (mass %)
					07/12/2020	<b>Asbestos PCOM Quantification (Fibres)</b>	<0.001 (mass %)
					07/12/2020	<b>Asbestos Gravimetric &amp; PCOM Total</b>	0.009 (mass %)
20/14697	15	GTCS2-S167A	0.00-0.20	3400	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos ACM (2)</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Type (2)</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S168A	0.00-0.20	3410	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos ACM (2)</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Type (2)</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S169A	0.00-0.20	3420	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos ACM (2)</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Type (2)</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S170A	0.00-0.20	3430	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos ACM (2)</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Type (2)</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S221A	0.00-0.02	3440	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos ACM (2)</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	15	GTCS2-S221A	0.00-0.02	3440	20/11/2020	Asbestos Type (2)	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S222A	0.00-0.02	3450	20/11/2020	General Description (Bulk Analysis)	Soil/Stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S223A	0.00-0.02	3460	20/11/2020	General Description (Bulk Analysis)	Soil/Stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S224A	0.00-0.02	3470	20/11/2020	General Description (Bulk Analysis)	Soil/Stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S225A	0.00-0.02	3480	20/11/2020	General Description (Bulk Analysis)	Soil/Stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S226A	0.00-0.20	3490	20/11/2020	General Description (Bulk Analysis)	soil.stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S227A	0.00-0.20	3500	20/11/2020	General Description (Bulk Analysis)	soil.stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S228A	0.00-0.20	3510	20/11/2020	General Description (Bulk Analysis)	Soil/Stone
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos Fibres (2)	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos ACM (2)	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Type (2)	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	15	GTCS2-S229A	0.00-0.02	3520	20/11/2020	General Description (Bulk Analysis)	Soil/Stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	15	GTCS2-S230A	0.00-0.02	3530	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos Fibres (2)</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos ACM (2)</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Type (2)</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-DUP14A	0.00-0.20	3540	19/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					19/11/2020	<b>Asbestos Fibres</b>	NAD
					19/11/2020	<b>Asbestos ACM</b>	NAD
					19/11/2020	<b>Asbestos Type</b>	NAD
					19/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S381A	0.00-0.02	3552	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S381A	0.00-0.20	3570	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	15	GTCS2-S381A	0.50-0.60	3588	20/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					20/11/2020	<b>Synthetic/MMMF</b>	Present
					20/11/2020	<b>Asbestos Fibres</b>	Fibre Bundles
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	Chrysotile
					20/11/2020	<b>Asbestos Level Screen</b>	Asbestos level cannot be determined from Screen. Quantification required.
					07/12/2020	<b>Total ACM Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					07/12/2020	<b>Total Detailed Gravimetric Quantification (% Asb)</b>	0.115 (mass %)
					07/12/2020	<b>Total Gravimetric Quantification (ACM + Detailed) (% Asb)</b>	0.115 (mass %)
					08/12/2020	<b>Asbestos PCOM Quantification (Fibres)</b>	<0.001 (mass %)
					08/12/2020	<b>Asbestos Gravimetric &amp; PCOM Total</b>	0.115 (mass %)

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson

**Date :** 29th November, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 16 Schedule A 20/14697 Batch 16 Schedule C

**Location :** Grenfell Stage 2

**Date samples received :** 13th November, 2020

**Status :** Final report

**Issue :** 1

Forty two samples were received for analysis on 13th November, 2020 of which twenty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**  
Project Manager

Please include all sections of this report if it is reproduced







# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3804-3808												
Sample ID	GTCS2-SDUP13A												
Depth	0.00-0.02												
COC No / misc													
Containers	V J T												
Sample Date	12/11/2020												
Sample Type	Clay												
Batch Number	16												
Date of Receipt	13/11/2020												
											Please see attached notes for all abbreviations and acronyms		
											LOD/LOR	Units	Method No.
Antimony	-										<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	338										<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene <sup>#M</sup>	0.07										<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.19										<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05										<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04										<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	1.04										<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.35										<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	3.31										<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	2.83										<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	1.62										<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	1.74										<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene <sup>#M</sup>	3.46										<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	1.88										<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	1.47										<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.23										<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	1.46										<0.04	mg/kg	TM4/PM8
PAH 16 Total	19.7										<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.49										<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.97										<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	86										<0	%	TM4/PM8
Natural Moisture Content	45.9										<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	-										<0.02	%	TM21/PM24
Sample Type	Clay											None	PM13/PM0
Sample Colour	Dark Brown											None	PM13/PM0
Other Items	rocks, vegetation, loose stones											None	PM13/PM0

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	16	GTCS2-S321A	0.00-0.02	3608	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	16	GTCS2-S322A	0.00-0.02	3618	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	16	GTCS2-S323A	0.00-0.02	3628	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	16	GTCS2-S324A	0.00-0.02	3638	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD
					20/11/2020	<b>Asbestos Type</b>	NAD
					20/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	16	GTCS2-S325A	0.00-0.02	3648	21/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					21/11/2020	<b>Asbestos Fibres</b>	NAD
					21/11/2020	<b>Asbestos ACM</b>	NAD
					21/11/2020	<b>Asbestos Type</b>	NAD
					21/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	16	GTCS2-S326A	0.00-0.02	3658	21/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					21/11/2020	<b>Asbestos Fibres</b>	NAD
					21/11/2020	<b>Asbestos ACM</b>	NAD
					21/11/2020	<b>Asbestos Type</b>	NAD
					21/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	16	GTCS2-S327A	0.00-0.02	3668	20/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					20/11/2020	<b>Asbestos Fibres</b>	NAD
					20/11/2020	<b>Asbestos ACM</b>	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	16	GTCS2-S327A	0.00-0.02	3668	20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S328A	0.00-0.02	3678	21/11/2020	General Description (Bulk Analysis)	soil.stones
					21/11/2020	Asbestos Fibres	NAD
					21/11/2020	Asbestos ACM	NAD
					21/11/2020	Asbestos Type	NAD
					21/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S329A	0.00-0.02	3688	21/11/2020	General Description (Bulk Analysis)	soil.stones
					21/11/2020	Asbestos Fibres	NAD
					21/11/2020	Asbestos ACM	NAD
					21/11/2020	Asbestos Type	NAD
					21/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S330A	0.00-0.02	3698	20/11/2020	General Description (Bulk Analysis)	Soil/Stone
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S201A	0.00-0.20	3708	20/11/2020	General Description (Bulk Analysis)	Soil/Stone
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S202A	0.00-0.05	3718	20/11/2020	General Description (Bulk Analysis)	Soil/Stone
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S203A	0.00-0.20	3728	20/11/2020	General Description (Bulk Analysis)	Soil/Stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S204A	0.00-0.20	3738	20/11/2020	General Description (Bulk Analysis)	Soil/Stones
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S205A	0.00-0.20	3748	20/11/2020	General Description (Bulk Analysis)	Soil/Stone
					20/11/2020	Asbestos Fibres	NAD
					20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S206A	0.00-0.02	3758	20/11/2020	General Description (Bulk Analysis)	Soil/Stone
					20/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	16	GTCS2-S206A	0.00-0.02	3758	20/11/2020	Asbestos ACM	NAD
					20/11/2020	Asbestos Type	NAD
					20/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S207A	0.00-0.02	3768	21/11/2020	General Description (Bulk Analysis)	soil.stones
					21/11/2020	Asbestos Fibres	NAD
					21/11/2020	Asbestos ACM	NAD
					21/11/2020	Asbestos Type	NAD
					21/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S208A	0.00-0.02	3778	21/11/2020	General Description (Bulk Analysis)	soil.stones
					21/11/2020	Asbestos Fibres	NAD
					21/11/2020	Asbestos ACM	NAD
					21/11/2020	Asbestos Type	NAD
					21/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S209A	0.00-0.02	3788	21/11/2020	General Description (Bulk Analysis)	soil.stones
					21/11/2020	Asbestos Fibres	NAD
					21/11/2020	Asbestos ACM	NAD
					21/11/2020	Asbestos Type	NAD
					21/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-S210A	0.00-0.02	3798	21/11/2020	General Description (Bulk Analysis)	soil.stones
					21/11/2020	Asbestos Fibres	NAD
					21/11/2020	Asbestos ACM	NAD
					21/11/2020	Asbestos Type	NAD
					21/11/2020	Asbestos Level Screen	NAD
20/14697	16	GTCS2-SDUP13A	0.00-0.02	3808	21/11/2020	General Description (Bulk Analysis)	soil.stones
					21/11/2020	Asbestos Fibres	NAD
					21/11/2020	Asbestos ACM	NAD
					21/11/2020	Asbestos Type	NAD
					21/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 16 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 13th November, 2020  
**Status :** Final report  
**Issue :** 1

Forty two samples were received for analysis on 13th November, 2020 of which four were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3614-3618	3664-3668	3704-3708	3744-3748									
Sample ID	GTCS2-S322A	GTCS2-S327A	GTCS2-S201A	GTCS2-S205A									
Depth	0.00-0.02	0.00-0.02	0.00-0.20	0.00-0.20									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	12/11/2020	12/11/2020	12/11/2020	12/11/2020									
Sample Type	Clay	Clay	Clay	Clayey Loam									
Batch Number	16	16	16	16									
Date of Receipt	13/11/2020	13/11/2020	13/11/2020	13/11/2020									
											LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms													
Furans (Chlorinated)													
2378-TCDF*	3.38	2.63	1.55	ND								ng/kg	Subcontracted
12378-PCDF*	2.84	2.64	3.32	0.496								ng/kg	Subcontracted
23478-PCDF*	3.34	5.93	2.92	1.74								ng/kg	Subcontracted
123478-HxCDF*	5.39	6.64	3.6	ND								ng/kg	Subcontracted
123678-HxCDF*	3.51	4.79	2.68	ND								ng/kg	Subcontracted
234678-HxCDF*	3.35	5.38	2.56	0.977								ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpCDF*	38.2	55.6	31.5	18.2								ng/kg	Subcontracted
1234789-HpCDF*	1.13	1.94	1.36	0.363								ng/kg	Subcontracted
OCDF*	35.4	56.7	40	33.1								ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PCDD*	1.57	1.56	ND	0.639								ng/kg	Subcontracted
123478-HxCDD*	1.39	1.39	0.635	0.321								ng/kg	Subcontracted
123678-HxCDD*	4.39	3.67	2.45	1.69								ng/kg	Subcontracted
123789-HxCDD*	2.16	2.07	1.47	1.13								ng/kg	Subcontracted
1234678-HpCDD*	65.5	82.7	60.3	73.2								ng/kg	Subcontracted
OCDD*	491	635	450	572								ng/kg	Subcontracted
TEQ(1) (NATO)*	6.74	9.06	4.85	3.43								ng/kg	Subcontracted
TEQ(2) (NATO)*	6.53	8.63	4.54	3.15								ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.80	ND	0.80	0.7								ng/kg	Subcontracted
12378-PBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
23478-PBDF*	0.60	ND	ND	0.5								ng/kg	Subcontracted
123478-HxBDF*	0.50	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND								ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND								ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND								ng/kg	Subcontracted

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes



AECOM

9th Floor Reception

Sunley House

4 Bedford Park

Croydon

CR0 2AP



**Attention :** David Dyson

**Date :** 3rd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 17 Schedule A 20/14697 Batch 17 Schedule C

**Location :** Grenfell Stage 2

**Date samples received :** 14th November, 2020

**Status :** Final report

**Issue :** 1

Fifty two samples were received for analysis on 14th November, 2020 of which twenty six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced

<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

Please see attached notes for all abbreviations and acronyms

<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

Please see attached notes for all abbreviations and acronyms

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4009-4013	4019-4023	4029-4033	4039-4043	4049-4053	4059-4063					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S156A	GTCS2-S157A	GTCS2-S158A	GTCS2-S159A	GTCS2-S160A	GTCS2-DUP10A							
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	13/11/2020	13/11/2020	13/11/2020	13/11/2020	13/11/2020	13/11/2020							
Sample Type	Clay	Clay	Clayey Loam	Clay	Clayey Loam	Clay							
Batch Number	17	17	17	17	17	17							
Date of Receipt	14/11/2020	14/11/2020	14/11/2020	14/11/2020	14/11/2020	14/11/2020					LOD/LOR	Units	Method No.
Antimony	2	-	-	-	-	-					<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	87	137	NDP	90	172	118					<5	mg/kg	TM30/PM15
Lead	-	-	133	-	-	-					<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<0.03	0.04					<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05					<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.07	<0.03	<0.03	<0.03	<0.03	0.06					<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	0.06					<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	0.17	0.07	0.14	0.11	0.18	0.25					<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	0.15	0.07	0.13	0.08	0.16	0.22					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	0.13	0.09	0.13	0.13	0.18	0.26					<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	0.12	0.07	0.09	0.08	0.16	0.22					<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene <sup>#M</sup>	0.30	0.16	0.22	0.19	0.41	0.58					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	0.18	0.09	0.13	0.11	0.21	0.29					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	0.15	0.07	0.09	0.11	0.18	0.25					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	0.17	0.09	0.11	0.11	0.20	0.25					<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.4	0.7	1.0	0.9	1.7	2.5					<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.22	0.12	0.16	0.14	0.30	0.42					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.08	0.04	0.06	0.05	0.11	0.16					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	83	88	86	102	85	87					<0	%	TM4/PM8
Natural Moisture Content	65.4	47.5	79.7	111.2	62.7	45.8					<0.1	%	PM4/PM0
Total Organic Carbon <sup>#</sup>	10.24	6.03	-	-	-	6.14					<0.02	%	TM21/PM24
Sample Type	Clay	Clay	Clayey Loam	Clay	Clayey Loam	Clay					None		PM13/PM0
Sample Colour	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Dark Brown					None		PM13/PM0
Other Items	sand, stones	sand, stones	stones, vefetation	stones loam	rooots	stones					None		PM13/PM0

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	17	GTCS2-S181A	0.00-0.02	3818	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S182A	0.00-0.05	3828	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S182A	0.00-0.20	3838	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S182A	0.50-0.60	3848	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S183A	0.00-0.02	3858	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos Fibres (2)	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos ACM (2)	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Type (2)	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S184A	0.00-0.05	3868	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	17	GTCS2-S184A	0.00-0.20	3878	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S184A	0.50-0.60	3888	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S185A	0.00-0.02	3898	24/11/2020	General Description (Bulk Analysis)	soil.stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S186A	0.00-0.05	3908	24/11/2020	General Description (Bulk Analysis)	soil.stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S186A	0.00-0.20	3918	24/11/2020	General Description (Bulk Analysis)	soil.stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S186A	0.50-0.60	3928	24/11/2020	General Description (Bulk Analysis)	soil.stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S187A	0.00-0.02	3938	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S188A	0.00-0.05	3948	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos Fibres (2)	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos ACM (2)	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Type (2)	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S188A	0.00-0.20	3958	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	17	GTCS2-S188A	0.00-0.20	3958	24/11/2020	Asbestos Fibres (2)	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos ACM (2)	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Type (2)	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S188A	0.50-0.60	3968	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S189A	0.00-0.02	3978	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S190A	0.00-0.05	3988	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S190A	0.00-0.20	3998	24/11/2020	General Description (Bulk Analysis)	Soil/Stone
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S190A	0.50-0.60	4008	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S156A	0.00-0.20	4013	24/11/2020	General Description (Bulk Analysis)	Soil/Stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S157A	0.00-0.20	4023	24/11/2020	General Description (Bulk Analysis)	soil.stones
					24/11/2020	Asbestos Fibres	NAD
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	NAD
					24/11/2020	Asbestos Level Screen	NAD
20/14697	17	GTCS2-S158A	0.00-0.20	4033	24/11/2020	General Description (Bulk Analysis)	soil.stones
					24/11/2020	Asbestos Fibres	Fibre Bundles
					24/11/2020	Asbestos ACM	NAD
					24/11/2020	Asbestos Type	Chrysotile

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	17	GTCS2-S158A	0.00-0.20	4033	24/11/2020	<b>Asbestos Level Screen</b>	less than 0.1%
					01/12/2020	<b>Total ACM Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					01/12/2020	<b>Total Detailed Gravimetric Quantification (% Asb)</b>	<0.001 (mass %)
					01/12/2020	<b>Total Gravimetric Quantification (ACM + Detailed) (% Asb)</b>	<0.001 (mass %)
					02/12/2020	<b>Asbestos PCOM Quantification (Fibres)</b>	<0.001 (mass %)
					02/12/2020	<b>Asbestos Gravimetric &amp; PCOM Total</b>	<0.001 (mass %)
20/14697	17	GTCS2-S159A	0.00-0.20	4043	24/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					24/11/2020	<b>Asbestos Fibres</b>	NAD
					24/11/2020	<b>Asbestos ACM</b>	NAD
					24/11/2020	<b>Asbestos Type</b>	NAD
					24/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	17	GTCS2-S160A	0.00-0.20	4053	24/11/2020	<b>General Description (Bulk Analysis)</b>	soil.stones
					24/11/2020	<b>Asbestos Fibres</b>	NAD
					24/11/2020	<b>Asbestos ACM</b>	NAD
					24/11/2020	<b>Asbestos Type</b>	NAD
					24/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	17	GTCS2-DUP10A	0.00-0.20	4063	24/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stone
					24/11/2020	<b>Asbestos Fibres</b>	NAD
					24/11/2020	<b>Asbestos ACM</b>	NAD
					24/11/2020	<b>Asbestos Type</b>	NAD
					24/11/2020	<b>Asbestos Level Screen</b>	NAD



**Matrix : Solid**

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 17 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 14th November, 2020  
**Status :** Final report  
**Issue :** 1

Fifty two samples were received for analysis on 14th November, 2020 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	3864-3868	3874-3878	3884-3888	3974-3978	4009-4013								
Sample ID	GTCS2-S184A	GTCS2-S184A	GTCS2-S184A	GTCS2-S189A	GTCS2-S156A								
Depth	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.02	0.00-0.20								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	13/11/2020	13/11/2020	13/11/2020	13/11/2020	13/11/2020								
Sample Type	Clay	Clay	Clay	Clay	Clay								
Batch Number	17	17	17	17	17								
Date of Receipt	14/11/2020	14/11/2020	14/11/2020	14/11/2020	14/11/2020								
											LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms													
Furans (Chlorinated)													
2378-TCDF*	16.1	38.4	4.57	9.07	ND							ng/kg	Subcontracted
12378-PCDF*	17.1	21.5	4.28	10.1	ND							ng/kg	Subcontracted
23478-PCDF*	26	42.1	5.68	16.5	0.695							ng/kg	Subcontracted
123478-HxCDF*	22.1	28.6	5.74	13.1	1.76							ng/kg	Subcontracted
123678-HxCDF*	22.1	26.3	5.93	12.3	1.6							ng/kg	Subcontracted
234678-HxCDF*	22.2	26.5	5.99	10.1	1.78							ng/kg	Subcontracted
123789-HxCDF*	1.61	2.41	1.45	0.729	ND							ng/kg	Subcontracted
1234678-HpCDF*	80.6	91.8	16.2	50.9	22.3							ng/kg	Subcontracted
1234789-HpCDF*	7.67	9.02	1.53	3.64	0.951							ng/kg	Subcontracted
OCDF*	49.1	68	8.49	43.3	46.1							ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	1.37	2.89	ND	ND	ND							ng/kg	Subcontracted
12378-PCDD*	8.21	6.71	1.17	2.69	ND							ng/kg	Subcontracted
123478-HxCDD*	8.41	10.8	2.17	3.73	0.802							ng/kg	Subcontracted
123678-HxCDD*	28.4	41.8	6.98	14	3.05							ng/kg	Subcontracted
123789-HxCDD*	20	25.9	3.68	7.5	2.48							ng/kg	Subcontracted
1234678-HpCDD*	319	493	52.9	134	124							ng/kg	Subcontracted
OCDD*	1160	2000	133	1260	911							ng/kg	Subcontracted
TEQ(1) (NATO)*	38.7	56.5	8.33	20.7	4.25							ng/kg	Subcontracted
TEQ(2) (NATO)*	38.7	56.5	8.14	20.4	3.93							ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.7	ND	0.80	ND	ND							ng/kg	Subcontracted
12378-PBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123478-HxBDF*	0.50	ND	ND	ND	ND							ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted





**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



**Attention :** David Dyson

**Date :** 29th November, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 18 Schedule A 20/14697 Batch 18 Schedule C

**Location :** Grenfell Stage 2

**Date samples received :** 17th November, 2020

**Status :** Final report

**Issue :** 1

Forty two samples were received for analysis on 17th November, 2020 of which twenty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**  
Project Manager

Please include all sections of this report if it is reproduced









**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	18	GTCS2-S371A	0.00-0.02	4078	25/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					25/11/2020	<b>Asbestos Fibres</b>	NAD
					25/11/2020	<b>Asbestos ACM</b>	NAD
					25/11/2020	<b>Asbestos Type</b>	NAD
					25/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	18	GTCS2-S372A	0.00-0.02	4088	25/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					25/11/2020	<b>Asbestos Fibres</b>	NAD
					25/11/2020	<b>Asbestos ACM</b>	NAD
					25/11/2020	<b>Asbestos Type</b>	NAD
					25/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	18	GTCS2-S373A	0.00-0.02	4098	25/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					25/11/2020	<b>Asbestos Fibres</b>	NAD
					25/11/2020	<b>Asbestos ACM</b>	NAD
					25/11/2020	<b>Asbestos Type</b>	NAD
					25/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	18	GTCS2-S374A	0.00-0.02	4108	25/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					25/11/2020	<b>Asbestos Fibres</b>	NAD
					25/11/2020	<b>Asbestos ACM</b>	NAD
					25/11/2020	<b>Asbestos Type</b>	NAD
					25/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	18	GTCS2-S375A	0.00-0.02	4118	25/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					25/11/2020	<b>Asbestos Fibres</b>	NAD
					25/11/2020	<b>Asbestos ACM</b>	NAD
					25/11/2020	<b>Asbestos Type</b>	NAD
					25/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	18	GTCS2-S376A	0.00-0.02	4128	25/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					25/11/2020	<b>Asbestos Fibres</b>	NAD
					25/11/2020	<b>Asbestos ACM</b>	NAD
					25/11/2020	<b>Asbestos Type</b>	NAD
					25/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	18	GTCS2-S377A	0.00-0.02	4138	25/11/2020	<b>General Description (Bulk Analysis)</b>	soil/stones
					25/11/2020	<b>Asbestos Fibres</b>	NAD
					25/11/2020	<b>Asbestos ACM</b>	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	18	GTCS2-S377A	0.00-0.02	4138	25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S378A	0.00-0.02	4148	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S379A	0.00-0.02	4158	25/11/2020	General Description (Bulk Analysis)	soil/stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S380A	0.00-0.02	4168	25/11/2020	General Description (Bulk Analysis)	soil/stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S291A	0.00-0.02	4178	25/11/2020	General Description (Bulk Analysis)	soil.stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S292A	0.00-0.02	4188	25/11/2020	General Description (Bulk Analysis)	soil.stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S293A	0.00-0.02	4198	25/11/2020	General Description (Bulk Analysis)	soil.stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S294A	0.00-0.02	4208	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S295A	0.00-0.02	4218	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S296A	0.00-0.02	4228	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	18	GTCS2-S296A	0.00-0.02	4228	25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S297A	0.00-0.02	4238	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S298A	0.00-0.02	4248	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S299A	0.00-0.02	4258	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-S300A	0.00-0.02	4268	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD
20/14697	18	GTCS2-DUP23A	0.00-0.02	4278	25/11/2020	General Description (Bulk Analysis)	Soil/Stones
					25/11/2020	Asbestos Fibres	NAD
					25/11/2020	Asbestos ACM	NAD
					25/11/2020	Asbestos Type	NAD
					25/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	



AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 8th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 18 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 17th November, 2020  
**Status :** Final report  
**Issue :** 1

Forty two samples were received for analysis on 17th November, 2020 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4084-4088	4134-4138	4204-4208	4254-4258	4274-4278								
Sample ID	GTCS2-S372A	GTCS2-S377A	GTCS2-S294A	GTCS2-S299A	GTCS2-DUP23A								
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	16/11/2020	16/11/2020	16/11/2020	16/11/2020	16/11/2020								
Sample Type	Clayey Loam	Clay	Clay	Clay	Clayey Loam								
Batch Number	18	18	18	18	18								
Date of Receipt	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020								
Please see attached notes for all abbreviations and acronyms											LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	8.27	4.84	ND	ND	3.2							ng/kg	Subcontracted
12378-PCDF*	5.87	2.31	3.22	1.89	1.72							ng/kg	Subcontracted
23478-PCDF*	7.71	3.59	6.03	4.71	3.85							ng/kg	Subcontracted
123478-HxCDF*	7.91	3.11	5.8	5.11	3.27							ng/kg	Subcontracted
123678-HxCDF*	7.63	1.52	5.62	4.64	2.79							ng/kg	Subcontracted
234678-HxCDF*	6.63	2.78	5.75	4.52	2.51							ng/kg	Subcontracted
123789-HxCDF*	ND	ND	0.571	ND	ND							ng/kg	Subcontracted
1234678-HpCDF*	32.7	19.2	27.1	20	15.2							ng/kg	Subcontracted
1234789-HpCDF*	2.5	0.971	2.05	1.23	0.979							ng/kg	Subcontracted
OCDF*	30.1	16.4	19.4	13.6	11.2							ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
12378-PCDD*	1.78	ND	ND	1.01	ND							ng/kg	Subcontracted
123478-HxCDD*	2.45	0.928	1.09	1.32	1.26							ng/kg	Subcontracted
123678-HxCDD*	5.89	2.11	5.48	5.36	2.31							ng/kg	Subcontracted
123789-HxCDD*	3.57	1.81	2.77	4.1	1.66							ng/kg	Subcontracted
1234678-HpCDD*	158	22.3	47.8	66.1	24.9							ng/kg	Subcontracted
OCDD*	1080	78.5	139	207	74.8							ng/kg	Subcontracted
TEQ(1) (NATO)*	12.9	4.6	7.75	7.02	4.69							ng/kg	Subcontracted
TEQ(2) (NATO)*	12.3	4.14	6.81	6.55	4.21							ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	0.90	0.60	1.00	ND	0.80							ng/kg	Subcontracted
12378-PBDF*	ND	ND	0.70	ND	0.50							ng/kg	Subcontracted
23478-PBDF*	0.50	ND	0.60	ND	ND							ng/kg	Subcontracted
123478-HxBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123678-HxBDF*	ND	ND	0.50	ND	ND							ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND							ng/kg	Subcontracted

QF-PM 3.1.2 v11

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

3 of 7

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 3rd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 19 Schedule A

**Location :** Grenfell Stage 2

**Date samples received :** 18th November, 2020

**Status :** Final report

**Issue :** 1

Forty four samples were received for analysis on 18th November, 2020 of which twenty three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:****Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced





## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4284-4292	4302-4306	4312-4316	4322-4326	4332-4340	4350-4354	4360-4364	4370-4374	4380-4388	4398-4402	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S131A	GTCS2-S132A	GTCS2-S132A	GTCS2-S132A	GTCS2-S133A	GTCS2-S134A	GTCS2-S134A	GTCS2-S134A	GTCS2-S135A	GTCS2-S136A			
Depth	0.00-0.20	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Chloromethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Vinyl Chloride	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Bromomethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Chloroethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Trichlorofluoromethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
2,2-Dichloropropane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Bromochloromethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Chloroform	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,1-Dichloropropene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Carbon tetrachloride	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dichloroethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Benzene #	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dichloropropane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Dibromomethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Bromodichloromethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Toluene #	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,3-Dichloropropane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Dibromochloromethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dibromoethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Chlorobenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Ethylbenzene #	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
m/p-Xylene #	<100	-	-	-	<100	-	-	-	<100	-	<100	ug/kg	TM152/PM104
o-Xylene #	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Styrene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Bromoform	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Isopropylbenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Bromobenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4284-4292	4302-4306	4312-4316	4322-4326	4332-4340	4350-4354	4360-4364	4370-4374	4380-4388	4398-4402	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S131A	GTCS2-S132A	GTCS2-S132A	GTCS2-S132A	GTCS2-S133A	GTCS2-S134A	GTCS2-S134A	GTCS2-S134A	GTCS2-S135A	GTCS2-S136A			
Depth	0.00-0.20	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
2-Chlorotoluene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
4-Chlorotoluene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
tert-Butylbenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
sec-Butylbenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
4-Isopropyltoluene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
n-Butylbenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Hexachlorobutadiene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Naphthalene	<50	-	-	-	133	-	-	-	<50	-	<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	<50	-	-	-	<50	-	-	-	<50	-	<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	93	-	-	-	88	-	-	-	91	-	<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	84	-	-	-	78	-	-	-	82	-	<0	%	TM152/PM104
VOC TICs	ND	-	-	-	ND	-	-	-	ND	-		None	TM15/PM10
SVOC TICs	See Attached	-	-	-	See Attached	-	-	-	See Attached	-		None	TM16/PM8
PCB 28 #	<5	-	-	-	<5	-	-	-	<5 <sup>SV</sup>	-	<5	ug/kg	TM17/PM8
PCB 52 #	<5	-	-	-	<5	-	-	-	<5 <sup>SV</sup>	-	<5	ug/kg	TM17/PM8
PCB 101 #	<5	-	-	-	<5	-	-	-	<5 <sup>SV</sup>	-	<5	ug/kg	TM17/PM8
PCB 118 #	<5	-	-	-	<5	-	-	-	<5 <sup>SV</sup>	-	<5	ug/kg	TM17/PM8
PCB 138 #	<5	-	-	-	<5	-	-	-	<5 <sup>SV</sup>	-	<5	ug/kg	TM17/PM8
PCB 153 #	<5	-	-	-	<5	-	-	-	<5 <sup>SV</sup>	-	<5	ug/kg	TM17/PM8
PCB 180 #	<5	-	-	-	<5	-	-	-	<5 <sup>SV</sup>	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35	-	-	-	<35	-	-	-	<35 <sup>SV</sup>	-	<35	ug/kg	TM17/PM8
Natural Moisture Content	45.3	34.6	36.1	35.5	34.7	42.3	39.3	37.9	42.5	26.4	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	-	-	-	<0.3	-	-	-	<0.3	-	<0.3	mg/kg	TM38/PM20
Chromium III	74.0	-	-	-	85.0	-	-	-	79.8	-	<0.5	mg/kg	NONE/NONE
Free Cyanide	<0.5	-	-	-	<0.5	-	-	-	<0.5	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	-	-	-	<0.5	-	-	-	<0.5	-	<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	6.14	-	-	-	5.66	-	-	-	6.51	-	<0.02	%	TM21/PM24

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4284-4292	4302-4306	4312-4316	4322-4326	4332-4340	4350-4354	4360-4364	4370-4374	4380-4388	4398-4402	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S131A	GTCS2-S132A	GTCS2-S132A	GTCS2-S132A	GTCS2-S133A	GTCS2-S134A	GTCS2-S134A	GTCS2-S134A	GTCS2-S135A	GTCS2-S136A			
Depth	0.00-0.20	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
Thiocyanate	1.0	-	-	-	<0.6	-	-	-	<0.6	-	<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	113	-	-	-	96	-	-	-	101	-	<0	%	TM192/PM0
Methyl Isocyanate-d	102	-	-	-	96	-	-	-	91	-	<0	%	TM192/PM0
Ethyl Isocyanate-d	103	-	-	-	97	-	-	-	90	-	<0	%	TM192/PM0
Propyl Isocyanate-d	102	-	-	-	95	-	-	-	90	-	<0	%	TM192/PM0
Phenyl Isocyanate-d	98	-	-	-	92	-	-	-	70	-	<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	89	-	-	-	65	-	-	-	72	-	<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	89	-	-	-	48	-	-	-	52	-	<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	95	-	-	-	62	-	-	-	76	-	<0	%	TM192/PM0
Isophorone Diisocyanate-d	83	-	-	-	58	-	-	-	75	-	<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	98	-	-	-	63	-	-	-	70	-	<0	%	TM192/PM0
Isocyanic Acid	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
Methyl Isocyanate	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
Ethyl Isocyanate	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
Propyl Isocyanate	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
Phenyl Isocyanate	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	<500	-	-	-	<500	-	-	-	<500	-	<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	<250	-	-	-	<250	-	-	-	<250	-	<250	ug/kg	TM192/PM0
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Dark Brown	Medium Brown	Medium Brown	Dark Brown	Dark Brown		None	PM13/PM0
Other Items	stones and vegetation	stones and vegetation	stones and vegetation	stones and vegetation	stones and vegetation	vegetation	stones and vegetation	none	stones and vegetation	stones and vegetation		None	PM13/PM0



# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4408-4412	4418-4422	4428-4436	4446-4450	4456-4460	4466-4470	4476-4480	4486-4494	4504-4512	4522-4530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S136A	GTCS2-S136A	GTCS2-S137A	GTCS2-S138A	GTCS2-S138A	GTCS2-S138A	GTCS2-S139A	GTCS2-S140A	GTCS2-S140A	GTCS2-S140A			
Depth	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05	0.00-0.20	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Chloromethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Vinyl Chloride	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Bromomethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Chloroethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Bromochloromethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Chloroform	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Benzene #	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Dibromomethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Bromodichloromethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Toluene #	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Dibromochloromethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Chlorobenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Ethylbenzene #	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
m/p-Xylene #	-	-	<100	-	-	-	-	<100	<100	<100	<100	ug/kg	TM152/PM104
o-Xylene #	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Styrene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Bromoform	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Isopropylbenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Bromobenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4408-4412	4418-4422	4428-4436	4446-4450	4456-4460	4466-4470	4476-4480	4486-4494	4504-4512	4522-4530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S136A	GTCS2-S136A	GTCS2-S137A	GTCS2-S138A	GTCS2-S138A	GTCS2-S138A	GTCS2-S139A	GTCS2-S140A	GTCS2-S140A	GTCS2-S140A			
Depth	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05	0.00-0.20	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
n-Butylbenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Naphthalene	-	-	71	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	-	<50	-	-	-	-	<50	<50	<50	<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	-	95	-	-	-	-	94	89	84	<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	-	85	-	-	-	-	85	81	77	<0	%	TM152/PM104
VOC TICs	-	-	ND	-	-	-	-	ND	ND	ND		None	TM15/PM10
SVOC TICs	-	-	See Attached	-	-	-	-	See Attached	See Attached	ND		None	TM16/PM8
PCB 28 #	-	-	<5	-	-	-	-	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 52 #	-	-	<5	-	-	-	-	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 101 #	-	-	<5	-	-	-	-	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 118 #	-	-	<5	-	-	-	-	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 138 #	-	-	<5	-	-	-	-	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 153 #	-	-	<5	-	-	-	-	<5	<5	<5	<5	ug/kg	TM17/PM8
PCB 180 #	-	-	<5	-	-	-	-	<5	<5	<5	<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	<35	-	-	-	-	<35	<35	<35	<35	ug/kg	TM17/PM8
Natural Moisture Content	31.6	28.8	30.9	16.5	29.3	40.7	38.5	32.8	36.0	37.0	<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	<0.3	-	-	-	-	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	-	-	87.6	-	-	-	-	95.5	77.5	78.3	<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	<0.5	-	-	-	-	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	<0.5	-	-	-	-	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	-	3.55	4.52	4.57	3.13	-	5.23	5.66	2.11	<0.02	%	TM21/PM24

## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4408-4412	4418-4422	4428-4436	4446-4450	4456-4460	4466-4470	4476-4480	4486-4494	4504-4512	4522-4530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S136A	GTCS2-S136A	GTCS2-S137A	GTCS2-S138A	GTCS2-S138A	GTCS2-S138A	GTCS2-S139A	GTCS2-S140A	GTCS2-S140A	GTCS2-S140A			
Depth	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.20	0.00-0.05	0.00-0.20	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
Thiocyanate	-	-	<0.6	-	-	-	-	<0.6	<0.6	<0.6	<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	-	54 <sup>SV</sup>	-	-	-	-	109	118	81	<0	%	TM192/PM0
Methyl Isocyanate-d	-	-	56 <sup>SV</sup>	-	-	-	-	110	108	97	<0	%	TM192/PM0
Ethyl Isocyanate-d	-	-	54 <sup>SV</sup>	-	-	-	-	110	109	98	<0	%	TM192/PM0
Propyl Isocyanate-d	-	-	53 <sup>SV</sup>	-	-	-	-	111	109	96	<0	%	TM192/PM0
Phenyl Isocyanate-d	-	-	48 <sup>SV</sup>	-	-	-	-	102	99	91	<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	-	17 <sup>SV</sup>	-	-	-	-	107	108	97	<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	-	4 <sup>SV</sup>	-	-	-	-	104	103	94	<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	-	10 <sup>SV</sup>	-	-	-	-	119	116	105	<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	-	8 <sup>SV</sup>	-	-	-	-	111	110	101	<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	-	11 <sup>SV</sup>	-	-	-	-	113	110	103	<0	%	TM192/PM0
Isocyanic Acid	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
Methyl Isocyanate	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	-	<500 <sup>SV</sup>	-	-	-	-	<500	<500	<500	<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	-	<250 <sup>SV</sup>	-	-	-	-	<250	<250	<250	<250	ug/kg	TM192/PM0
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Medium Brown		None	PM13/PM0
Other Items	stones and vegetation	stones	stones	stones and sand	stones and vegetation	stones and vegetation	stones and vegetation	stones and vegetation	stones and vegetation	stones and vegetation		None	PM13/PM0



# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4540-4546	4556	4557										
Sample ID	GTCS2-DUP08A	BLANK 1	BLANK 2										
Depth	0.00-0.20												
COC No / misc													
Containers	V J T	V	V										
Sample Date	17/11/2020	<>	<>										
Sample Type	Clay	Soil	Soil										
Batch Number	19	19	19										
Date of Receipt	18/11/2020	18/11/2020	18/11/2020										
Please see attached notes for all abbreviations and acronyms													
											LOD/LOR	Units	Method No.
Aluminium	19500	-	-								<50	mg/kg	TM30/PM15
Antimony	4	-	-								<1	mg/kg	TM30/PM15
Arsenic <sup>#M</sup>	17.8	-	-								<0.5	mg/kg	TM30/PM15
Barium <sup>#M</sup>	155	-	-								<1	mg/kg	TM30/PM15
Beryllium	1.6	-	-								<0.5	mg/kg	TM30/PM15
Cadmium <sup>#M</sup>	0.5	-	-								<0.1	mg/kg	TM30/PM15
Chromium <sup>#M</sup>	85.0	-	-								<0.5	mg/kg	TM30/PM15
Copper <sup>#M</sup>	80	-	-								<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	214	-	-								<5	mg/kg	TM30/PM15
Mercury <sup>#M</sup>	1.0	-	-								<0.1	mg/kg	TM30/PM15
Nickel <sup>#M</sup>	26.7	-	-								<0.7	mg/kg	TM30/PM15
Selenium <sup>#M</sup>	1	-	-								<1	mg/kg	TM30/PM15
Vanadium	74	-	-								<1	mg/kg	TM30/PM15
Water Soluble Boron <sup>#M</sup>	2.8	-	-								<0.1	mg/kg	TM74/PM32
Zinc <sup>#M</sup>	189	-	-								<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene <sup>#M</sup>	0.26 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.11 <sup>SV</sup>	-	-								<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	0.20 <sup>SV</sup>	-	-								<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	0.18 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	2.66 <sup>SV</sup>	-	-								<0.03	mg/kg	TM4/PM8
Anthracene #	0.62 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	5.67 <sup>SV</sup>	-	-								<0.03	mg/kg	TM4/PM8
Pyrene #	4.72 <sup>SV</sup>	-	-								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	2.60 <sup>SV</sup>	-	-								<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	2.89 <sup>SV</sup>	-	-								<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene <sup>#M</sup>	5.14 <sup>SV</sup>	-	-								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	2.92 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	2.06 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.36 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	2.01 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
Coronene	0.37 <sup>SV</sup>	-	-								<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	-	-								<0.6	mg/kg	TM4/PM8
PAH 17 Total	32.77 <sup>SV</sup>	-	-								<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	3.70	-	-								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	1.44	-	-								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	66 <sup>SV</sup>	-	-								<0	%	TM4/PM8

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4540-4546	4556	4557								Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP08A	BLANK 1	BLANK 2										
Depth	0.00-0.20												
COC No / misc													
Containers	V J T	V	V										
Sample Date	17/11/2020	<>	<>										
Sample Type	Clay	Soil	Soil										
Batch Number	19	19	19										
Date of Receipt	18/11/2020	18/11/2020	18/11/2020										
VOC MS													
Dichlorodifluoromethane	-	<50	<50								<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	<50	<50								<50	ug/kg	TM152/PM104
Chloromethane	-	<50	<50								<50	ug/kg	TM152/PM104
Vinyl Chloride	-	<50	<50								<50	ug/kg	TM152/PM104
Bromomethane	-	<50	<50								<50	ug/kg	TM152/PM104
Chloroethane	-	<50	<50								<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	<50	<50								<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	<50	<50								<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	<50	<50								<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	<50	<50								<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	<50	<50								<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	<50	<50								<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	<50	<50								<50	ug/kg	TM152/PM104
Bromochloromethane	-	<50	<50								<50	ug/kg	TM152/PM104
Chloroform	-	<50	<50								<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	<50	<50								<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	<50	<50								<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	<50	<50								<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	<50	<50								<50	ug/kg	TM152/PM104
Benzene #	-	<50	<50								<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	<50	<50								<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	<50	<50								<50	ug/kg	TM152/PM104
Dibromomethane	-	<50	<50								<50	ug/kg	TM152/PM104
Bromodichloromethane	-	<50	<50								<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	<50	<50								<50	ug/kg	TM152/PM104
Toluene #	-	<50	<50								<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	<50	<50								<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	<50	<50								<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	<50	<50								<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	<50	<50								<50	ug/kg	TM152/PM104
Dibromochloromethane	-	<50	<50								<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	<50	<50								<50	ug/kg	TM152/PM104
Chlorobenzene	-	<50	<50								<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	<50	<50								<50	ug/kg	TM152/PM104
Ethylbenzene #	-	<50	<50								<50	ug/kg	TM152/PM104
m/p-Xylene #	-	<100	<100								<100	ug/kg	TM152/PM104
o-Xylene #	-	<50	<50								<50	ug/kg	TM152/PM104
Styrene	-	<50	<50								<50	ug/kg	TM152/PM104
Bromoform	-	<50	<50								<50	ug/kg	TM152/PM104
Isopropylbenzene	-	<50	<50								<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	<50	<50								<50	ug/kg	TM152/PM104
Bromobenzene	-	<50	<50								<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	<50	<50								<50	ug/kg	TM152/PM104

# Element Materials Technology

Client Name: AECOM  
 Reference: 60632092  
 Location: Grenfell Stage 2  
 Contact: David Dyson  
 EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4540-4546	4556	4557								Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP08A	BLANK 1	BLANK 2										
Depth	0.00-0.20												
COC No / misc													
Containers	V J T	V	V										
Sample Date	17/11/2020	<>	<>										
Sample Type	Clay	Soil	Soil										
Batch Number	19	19	19										
Date of Receipt	18/11/2020	18/11/2020	18/11/2020								LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	<50	<50								<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	<50	<50								<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	<50	<50								<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	<50	<50								<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	<50	<50								<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	<50	<50								<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	<50	<50								<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	<50	<50								<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	<50	<50								<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	<50	<50								<50	ug/kg	TM152/PM104
n-Butylbenzene	-	<50	<50								<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	<50	<50								<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	<50	<50								<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	<50	<50								<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	<50	<50								<50	ug/kg	TM152/PM104
Naphthalene	-	<50	<50								<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	<50	<50								<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	97	95								<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	88	87								<0	%	TM152/PM104
VOC TICs	ND	-	-									None	TM15/PM10
SVOC TICs	See Attached	-	-									None	TM16/PM8
PCB 28 #	<5	-	-								<5	ug/kg	TM17/PM8
PCB 52 #	<5	-	-								<5	ug/kg	TM17/PM8
PCB 101 #	<5	-	-								<5	ug/kg	TM17/PM8
PCB 118 #	<5	-	-								<5	ug/kg	TM17/PM8
PCB 138 #	<5	-	-								<5	ug/kg	TM17/PM8
PCB 153 #	<5	-	-								<5	ug/kg	TM17/PM8
PCB 180 #	<5	-	-								<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35	-	-								<35	ug/kg	TM17/PM8
Natural Moisture Content	31.5	<0.1	<0.1								<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	-	-								<0.3	mg/kg	TM38/PM20
Chromium III	85.0	-	-								<0.5	mg/kg	NONE/NONE
Free Cyanide	<0.5	-	-								<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	-	-								<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	3.63	-	-								<0.02	%	TM21/PM24

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4540-4546	4556	4557										
Sample ID	GTCS2-DUP08A	BLANK 1	BLANK 2										
Depth	0.00-0.20												
COC No / misc													
Containers	V J T	V	V										
Sample Date	17/11/2020	<>	<>										
Sample Type	Clay	Soil	Soil										
Batch Number	19	19	19										
Date of Receipt	18/11/2020	18/11/2020	18/11/2020										
Please see attached notes for all abbreviations and acronyms											LOD/LOR	Units	Method No.
Thiocyanate	<0.6	-	-								<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	72	-	-								<0	%	TM192/PM0
Methyl Isocyanate-d	108	-	-								<0	%	TM192/PM0
Ethyl Isocyanate-d	109	-	-								<0	%	TM192/PM0
Propyl Isocyanate-d	112	-	-								<0	%	TM192/PM0
Phenyl Isocyanate-d	113	-	-								<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	109	-	-								<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	119	-	-								<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	119	-	-								<0	%	TM192/PM0
Isophorone Diisocyanate-d	112	-	-								<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	121	-	-								<0	%	TM192/PM0
Isocyanic Acid	<250	-	-								<250	ug/kg	TM192/PM0
Methyl Isocyanate	<250	-	-								<250	ug/kg	TM192/PM0
Ethyl Isocyanate	<250	-	-								<250	ug/kg	TM192/PM0
Propyl Isocyanate	<250	-	-								<250	ug/kg	TM192/PM0
Phenyl Isocyanate	<250	-	-								<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	<250	-	-								<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	<250	-	-								<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	<250	-	-								<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	<500	-	-								<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	<250	-	-								<250	ug/kg	TM192/PM0
Sample Type	Clay	-	-									None	PM13/PM0
Sample Colour	Medium Brown	-	-									None	PM13/PM0
Other Items	roots	-	-									None	PM13/PM0

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**SVOC Report :** Solid

EMT Sample No.	4284-4292	4332-4340	4380-4388	4428-4436	4486-4494	4504-4512	4522-4530	4540-4546			Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S131A	GTCS2-S133A	GTCS2-S135A	GTCS2-S137A	GTCS2-S140A	GTCS2-S140A	GTCS2-S140A	GTCS2-DUP08A					
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.05	0.00-0.20	0.50	0.00-0.20					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020					
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay					
Batch Number	19	19	19	19	19	19	19	19					
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020			LOD/LOR	Units	Method No.
SVOC MS													
<b>Phenols</b>													
2-Chlorophenol <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2,4-Dichlorophenol <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	15	19	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
4-Methylphenol	<10	38	38	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Phenol <sup>#M</sup>	<10	26	31	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
<b>PAHs</b>													
2-Chloronaphthalene <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2-Methylnaphthalene <sup>#M</sup>	<10	39	288	<10	21	<10	<10	<10			<10	ug/kg	TM16/PM8
<b>Phthalates</b>													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100			<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100			<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100			<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100			<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100			<100	ug/kg	TM16/PM8
Dimethyl phthalate <sup>#M</sup>	<100	<100	<100	<100	<100	<100	<100	<100			<100	ug/kg	TM16/PM8
<b>Other SVOCs</b>													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
4-Bromophenylphenylether <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Carbazole	39	155	295	59	66	39	18	67			<10	ug/kg	TM16/PM8
Dibenzofuran <sup>#M</sup>	15	50	154	18	33	15	<10	20			<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Hexachlorobutadiene <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Isophorone <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Nitrobenzene <sup>#M</sup>	<10	<10	<10	<10	<10	<10	<10	<10			<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	100	111	102	103	118	121	95	99			<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	94	109	103	96	113	114	98	94			<0	%	TM16/PM8





## Element Materials Technology

<b>Job number:</b>	20/14697
<b>Sample number:</b>	4287
<b>Sample identity:</b>	GTCS2-S131A
<b>Sample depth:</b>	0.00-0.20
<b>Sample Type:</b>	Clay
<b>Units:</b>	ug/kg

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]



## Element Materials Technology

**Job number:** 20/14697      **Method:** SVOC  
**Sample number:** 4335      **Matrix:** Solid  
**Sample identity:** GTCS2-S133A  
**Sample depth:** 0.00-0.20  
**Sample Type:** Clay  
**Units:** ug/kg

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
829-26-5	Naphthalene, 2,3,6-trimethyl-	9.258	90	186
6574-36-3	Cyclobuta[1",2"-3,4:3",4"]dicyclobuta[1,2:1',2']dibenzene, 4b,4c,8b,8c-tetrahydro-	10.664	95	504
2531-84-2	Phenanthrene, 2-methyl-	10.873	95	581
832-69-9	Phenanthrene, 1-methyl-	10.895	96	754
610-48-0	Anthracene, 1-methyl-	10.939	96	335
613-12-7	Anthracene, 2-methyl-	11.005	95	762
84-65-1	9,10-Anthracenedione	11.126	90	325
612-94-2	Naphthalene, 2-phenyl-	11.170	93	547
3674-66-6	Phenanthrene, 2,5-dimethyl-	11.400	90	585
58718-43-7	1,6-Dimethylphenazine	11.737	83	717
18374-76-0	(3S,5R,8S)-3,8-Dimethyl-5-(prop-1-en-2-yl)-2,3,5,6,7,8-hexahydroazulen-1(4H)-one	11.914	95	737
313-80-4	Naphtho(2,1,8-def)quinoline	11.965	93	527
200-23-7	Benzo[k]xanthene	11.981	95	665
243-42-5	Benzo[b]naphtho[2,3-d]furan	12.091	93	558
33543-31-6	Fluoranthene, 2-methyl-	12.125	96	897
2381-21-7	Pyrene, 1-methyl-	12.234	90	1984
243-17-4	11H-Benzo[b]fluorene	12.310	95	616
3442-78-2	Pyrene, 2-methyl-	12.361	95	811
19346-86-2	p-Benzoquinone, 2-hydroxy-5-(phenylthio)-	12.395	95	929
1000332-58-9	4-((2-Methylphenyl)diazanyl)-1H-pyrazole-3,5-diamine	12.462	93	496
7018-84-0	2-Methyldiphenylsulfone	12.546	91	651
479-79-8	11H-Benzo[a]fluoren-11-one	12.825	95	885
227-86-1	Anthra(1,2-b)thiophene	12.997	96	769
25732-74-5	Cyclopenta(cd)pyrene, 3,4-dihydro-	13.492	91	1265
239-01-0	11H-Benzo[a]carbazole	13.558	95	357
2541-69-7	Benz[a]anthracene, 7-methyl-	13.921	90	893
3351-28-8	Chrysene, 1-methyl-	13.954	96	536
1482-93-5	Cyclohexane, hexaethylidene-	14.020	90	834
4731-53-7	Trioctylphosphine	14.967	90	488
192-97-2	Benzo[e]pyrene	15.011	97	3863

## Element Materials Technology

**Job number:** 20/14697      **Method:** SVOC  
**Sample number:** 4383      **Matrix:** Solid  
**Sample identity:** GTCS2-S135A  
**Sample depth:** 0.00-0.20  
**Sample Type:** Clay  
**Units:** ug/kg

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

CAS No.	Tentative Compound Identification	Retention Time (minutes)	% Match	Concentration
264-09-5	Benzocycloheptatriene	7.539	83	152
575-41-7	Naphthalene, 1,3-dimethyl-	8.254	90	180
571-61-9	Naphthalene, 1,5-dimethyl-	8.332	96	234
582-16-1	Naphthalene, 2,7-dimethyl-	8.437	97	269
829-26-5	Naphthalene, 2,3,6-trimethyl-	9.180	96	212
118-79-6	Phenol, 2,4,6-tribromo-	9.584	99	596
1430-97-3	9H-Fluorene, 2-methyl-	9.947	96	262
1730-37-6	9H-Fluorene, 1-methyl-	9.981	90	254
486-25-9	9H-Fluoren-9-one	10.082	86	477
132-65-0	Dibenzothiophene	10.202	81	372
262-89-5	Dibenzo[a,e]cyclooctene	10.664	89	577
832-69-9	Phenanthrene, 1-methyl-	10.873	96	1358
613-12-7	Anthracene, 2-methyl-	10.895	96	1810
949-41-7	1H-Cyclopropa[1]phenanthrene, 1a,9b-dihydro-	10.940	96	673
84-65-1	9,10-Anthracenedione	11.116	93	751
612-94-2	Naphthalene, 2-phenyl-	11.171	91	1803
52251-71-5	Anthracene, 2-ethyl-	11.282	92	409
781-43-1	9,10-Dimethylanthracene	11.358	94	1055
1576-67-6	Phenanthrene, 3,6-dimethyl-	11.400	95	933
3674-66-6	Phenanthrene, 2,5-dimethyl-	11.476	94	1751
2789-88-0	di-p-Tolylacetylene	11.510	93	1036
205-39-0	Benzo(b)naphtho(1,2-d)furan	11.914	93	688
243-42-5	Benzo[b]naphtho[2,3-d]furan	11.982	94	1064
2381-21-7	Pyrene, 1-methyl-	12.125	96	1680
33543-31-6	Fluoranthene, 2-methyl-	12.226	94	2803
3353-12-6	Pyrene, 4-methyl-	12.471	96	1318
479-79-8	11H-Benzo[a]fluoren-11-one	12.825	93	1226
227-86-1	Anthra(1,2-b)thiophene	12.997	93	1739
239-01-0	11H-Benzo[a]carbazole	13.559	91	1807
1705-85-7	Chrysene, 6-methyl-	13.911	97	1763

## Element Materials Technology

**Method:** SVOC

**Matrix:** Solid

**Sample depth:** 0.00-0.20

**Sample Type:** Clay

Units: ug/kg

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	20/14697	<b>Method:</b>	SVOC
<b>Sample number:</b>	4431	<b>Matrix:</b>	Solid
<b>Sample identity:</b>	GTCS2-S137A		
<b>Sample depth:</b>	0.00-0.20		
<b>Sample Type:</b>	Clay		
<b>Units:</b>	ug/kg		

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

**Method:** SVOC

**Matrix:** Solid

**Sample depth:** 0.00-0.20

**Sample Type:** Clay

Units: ug/kg

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	20/14697	<b>Method:</b>	SVOC
<b>Sample number:</b>	4543	<b>Matrix:</b>	Solid
<b>Sample identity:</b>	GTCS2-DUP08A		
<b>Sample depth:</b>	0.00-0.20		
<b>Sample Type:</b>	Clay		
<b>Units:</b>	ug/kg		

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	19	GTCS2-S131A	0.00-0.20	4290	27/11/2020	General Description (Bulk Analysis)	Soil/Stone
					27/11/2020	Synthetic/MMMF	Absent
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S132A	0.00-0.05	4306	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S132A	0.00-0.20	4316	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S132A	0.50-0.60	4326	26/11/2020	General Description (Bulk Analysis)	Soil/Stones
					26/11/2020	Asbestos Fibres	NAD
					26/11/2020	Asbestos ACM	NAD
					26/11/2020	Asbestos Type	NAD
					26/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S133A	0.00-0.20	4338	26/11/2020	General Description (Bulk Analysis)	soil/stone
					26/11/2020	Asbestos Fibres	NAD
					26/11/2020	Asbestos ACM	NAD
					26/11/2020	Asbestos Type	NAD
					26/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S134A	0.00-0.05	4354	26/11/2020	General Description (Bulk Analysis)	Soil/Stones
					26/11/2020	Asbestos Fibres	NAD
					26/11/2020	Asbestos ACM	NAD
					26/11/2020	Asbestos Type	NAD
					26/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S134A	0.00-0.20	4364	26/11/2020	General Description (Bulk Analysis)	soil/stones
					26/11/2020	Asbestos Fibres	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	19	GTCS2-S134A	0.00-0.20	4364	26/11/2020	Asbestos ACM	NAD
					26/11/2020	Asbestos Type	NAD
					26/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S134A	0.50-0.60	4374	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S135A	0.00-0.20	4386	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S136A	0.00-0.05	4402	26/11/2020	General Description (Bulk Analysis)	Soil/Stones
					26/11/2020	Asbestos Fibres	NAD
					26/11/2020	Asbestos ACM	NAD
					26/11/2020	Asbestos Type	NAD
					26/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S136A	0.00-0.20	4412	26/11/2020	General Description (Bulk Analysis)	Soil/Stones
					26/11/2020	Asbestos Fibres	NAD
					26/11/2020	Asbestos ACM	NAD
					26/11/2020	Asbestos Type	NAD
					26/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S136A	0.50-0.60	4422	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S137A	0.00-0.20	4434	27/11/2020	General Description (Bulk Analysis)	Soil/stone
					27/11/2020	Synthetic/MMMF	Absent
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
20/14697	19	GTCS2-S138A	0.00-0.02	4450	27/11/2020	General Description (Bulk Analysis)	Soil/Stone
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	19	GTCS2-S138A	0.00-0.20	4460	27/11/2020	General Description (Bulk Analysis)	soil/stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD



**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM10	In-house semi-quantitative method for contamination composition within the SVOC carbon range by GCMS, including allylated naphthalene series for forensic investigation with presence/absence of biomarkers.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	No
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993 (comparabl	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis	Yes		AR	Yes
TM192	Isocyanates by LCMS	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes



AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 10th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 19 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 18th November, 2020  
**Status :** Final report  
**Issue :** 1

Forty four samples were received for analysis on 18th November, 2020 of which eleven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4284-4292	4332-4340	4380-4388	4428-4436	4446-4450	4456-4460	4466-4470	4486-4494	4504-4512	4522-4530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S131A	GTCS2-S133A	GTCS2-S135A	GTCS2-S137A	GTCS2-S138A	GTCS2-S138A	GTCS2-S138A	GTCS2-S140A	GTCS2-S140A	GTCS2-S140A			
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.05	0.00-0.20	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	6.61	9.95	6.71	8.89	8.23	6.58	8.39	8.14	4.37	ND		ng/kg	Subcontracted
12378-PCDF*	3.3	10.2	3.52	5.02	4.47	3.66	ND	6.06	5.52	4.19		ng/kg	Subcontracted
23478-PCDF*	5.25	16.2	6.79	8.37	7.56	6.24	6.53	9.03	6.99	4.93		ng/kg	Subcontracted
123478-HxCDF*	5.13	14.8	6.48	6.78	7.67	6.68	7.62	9.2	6.07	4.18		ng/kg	Subcontracted
123678-HxCDF*	3.25	12.2	4.81	6.32	5.65	6.99	2.87	7.24	5.12	2.95		ng/kg	Subcontracted
234678-HxCDF*	4.64	9.07	5.1	6.64	5.05	7.08	2.43	7.2	5.51	4.4		ng/kg	Subcontracted
123789-HxCDF*	ND	1.13	ND	0.327	ND	0.384	ND	0.728	ND	ND		ng/kg	Subcontracted
1234678-HpCDF*	43.7	46.5	44.5	44.6	40.7	41.7	29.2	38.8	32.2	17.2		ng/kg	Subcontracted
1234789-HpCDF*	1.74	3.77	1.83	1.9	1.51	2.15	2.27	2.37	1.61	0.969		ng/kg	Subcontracted
OCDF*	59.2	47.2	46.2	33.5	31.8	34.8	22.5	33.3	25.5	7.78		ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
12378-PCDD*	ND	6.74	ND	2.05	ND	2.49	ND	3.31	2.26	1.5		ng/kg	Subcontracted
123478-HxCDD*	2.42	6.1	2.37	2.23	2.27	2.57	0.967	3.98	2.49	1.92		ng/kg	Subcontracted
123678-HxCDD*	7.85	19.7	4.81	7.47	6.43	6.39	5.71	8.26	6.75	3.97		ng/kg	Subcontracted
123789-HxCDD*	3.74	12.7	3.01	4.46	4.06	4.34	3.26	7.57	4.04	2.48		ng/kg	Subcontracted
1234678-HpCDD*	150	113	62	77.4	71.4	84.8	55.7	76.3	55.6	23.9		ng/kg	Subcontracted
OCDD*	1180	595	343	514	435	570	257	503	306	54.5		ng/kg	Subcontracted
TEQ(1) (NATO)*	9.93	23.4	9.02	11.9	10.3	10.9	8.76	13.7	10	6.35		ng/kg	Subcontracted
TEQ(2) (NATO)*	9.34	22.8	8.37	11.6	9.54	10.5	7.54	13.4	9.56	5.9		ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	1.20	0.90	0.80	0.50	ND	0.80	1.30	ND	0.90	ND		ng/kg	Subcontracted
12378-PBDF*	0.80	0.60	0.50	ND	ND	ND	0.80	ND	0.70	ND		ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123478-HxBDF*	0.50	ND	ND	ND	ND	ND	0.60	ND	ND	ND		ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ng/kg	Subcontracted

## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4284-4292	4332-4340	4380-4388	4428-4436	4446-4450	4456-4460	4466-4470	4486-4494	4504-4512	4522-4530	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S131A	GTCS2-S133A	GTCS2-S135A	GTCS2-S137A	GTCS2-S138A	GTCS2-S138A	GTCS2-S138A	GTCS2-S140A	GTCS2-S140A	GTCS2-S140A			
Depth	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.20	0.50-0.60	0.00-0.05	0.00-0.20	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Sample Type	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay	Clay			
Batch Number	19	19	19	19	19	19	19	19	19	19			
Date of Receipt	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	LOD/LOR	Units	Method No.
PCB-81*	2.07	4.52	1.7	9.13	1.18	2.94	3.3	2.82	1.39	0.572		ng/kg	Subcontracted
PCB-77*	38.1	93.1	42.7	169	63.8	68.4	79.3	37.8	26.3	8.7		ng/kg	Subcontracted
PCB-123*	15.9	9.46	21.6	17.9	5.73	7.47	8.35	12	11.8	3.98		ng/kg	Subcontracted
PCB-118*	661	578	2240	824	570	597	566	579	463	95		ng/kg	Subcontracted
PCB-114*	7.02	7.85	43.7	13.5	9.01	10.1	7.63	6.67	5.66	1.95		ng/kg	Subcontracted
PCB-105*	352	294	899	509	305	319	300	310	251	54.3		ng/kg	Subcontracted
PCB-126*	8.49	11.2	7.86	14.3	9.64	11.5	8.41	12.7	9.13	6.67		ng/kg	Subcontracted
PCB-167*	56.8	54	172	68.1	56.7	60.2	49.4	52.8	46.9	8		ng/kg	Subcontracted
PCB-156*	134	124	481	162	128	139	111	130	116	17.8		ng/kg	Subcontracted
PCB-157*	36.4	30.4	113	43.8	39.7	39.4	30.3	35	29.7	5.31		ng/kg	Subcontracted
PCB-169*	1.55	2.09	1.5	2.53	1.91	2.36	1.74	2.24	1.52	ND		ng/kg	Subcontracted
PCB-189*	11.3	14.5	28.4	19.5	16.2	16.8	13.3	13.3	12.2	3.04		ng/kg	Subcontracted
2,2',4,4',6-pentabromodiphenyl ether (BDE-100)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',3,4,4',5'-hexabromodiphenyl ether (BDE-138)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',4,4',5,5'-hexabromodiphenyl ether (BDE-153)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',4,4',5,6'-hexabromodiphenyl ether (BDE-154)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',4-tribromodiphenyl ether (BDE-17)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',3,4,4',5',6'-heptabromodiphenyl ether (BDE-183)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,4,4'-tribromodiphenyl ether (BDE-28)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',4,4'-tetrabromodiphenyl ether (BDE-47)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,3',4,4'-tetrabromodiphenyl ether (BDE-66)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',3,4,4'-pentabromodiphenyl ether (BDE-85)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
2,2',4,4',5-pentabromodiphenyl ether (BDE-99)*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
hexabromocyclododecane (1,2,5,6,9,10)-*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
tetrabromobisphenol A*	<0.50	<0.50	<0.50	<0.50	-	-	-	<0.50	<0.50	<0.50		mg/kg	Subcontracted
tris(1-chloro-2-propyl)phosphate TCP*P*	<0.10	<0.10	<0.10	<0.10	-	-	-	<0.10	<0.10	<0.10		mg/kg	Subcontracted
tris(2-ethylhexyl) phosphate*	<0.50	<0.50	<0.50	<0.50	-	-	-	<0.50	<0.50	<0.50		mg/kg	Subcontracted

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

<b>EMT Sample No.</b>	4540-4546												
<b>Sample ID</b>	GTCS2-DUP08A												
<b>Depth</b>	0.00-0.20												
<b>COC No / misc</b>													
<b>Containers</b>	V J T												
<b>Sample Date</b>	17/11/2020												
<b>Sample Type</b>	Clay												
<b>Batch Number</b>	19												
<b>Date of Receipt</b>	18/11/2020												
											LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms													
Furans (Chlorinated)													
2378-TCDF*	4.74											ng/kg	Subcontracted
12378-PCDF*	5.53											ng/kg	Subcontracted
23478-PCDF*	8.96											ng/kg	Subcontracted
123478-HxCDF*	7.7											ng/kg	Subcontracted
123678-HxCDF*	5.73											ng/kg	Subcontracted
234678-HxCDF*	5.55											ng/kg	Subcontracted
123789-HxCDF*	0.713											ng/kg	Subcontracted
1234678-HpCDF*	38.8											ng/kg	Subcontracted
1234789-HpCDF*	1.82											ng/kg	Subcontracted
OCDF*	30.2											ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND											ng/kg	Subcontracted
12378-PCDD*	1.83											ng/kg	Subcontracted
123478-HxCDD*	2.2											ng/kg	Subcontracted
123678-HxCDD*	5.94											ng/kg	Subcontracted
123789-HxCDD*	4.42											ng/kg	Subcontracted
1234678-HpCDD*	74.8											ng/kg	Subcontracted
OCDD*	478											ng/kg	Subcontracted
TEQ(1) (NATO)*	11.4											ng/kg	Subcontracted
TEQ(2) (NATO)*	11											ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	1.00											ng/kg	Subcontracted
12378-PBDF*	0.90											ng/kg	Subcontracted
23478-PBDF*	ND											ng/kg	Subcontracted
123478-HxBDF*	0.60											ng/kg	Subcontracted
123678-HxBDF*	ND											ng/kg	Subcontracted
234678-HxBDF*	ND											ng/kg	Subcontracted
123789-HxBDF*	ND											ng/kg	Subcontracted
1234678-HpBDF*	ND											ng/kg	Subcontracted
1234789-HpBDF*	ND											ng/kg	Subcontracted
OBDF*	ND											ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND											ng/kg	Subcontracted
12378-PBDD*	ND											ng/kg	Subcontracted
123478-HxBDD*	ND											ng/kg	Subcontracted
123678-HxBDD*	ND											ng/kg	Subcontracted
123789-HxBDD*	ND											ng/kg	Subcontracted
1234678-HpBDD*	ND											ng/kg	Subcontracted
OBDD*	ND											ng/kg	Subcontracted



[illegible]

6 of 9

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 3rd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 20 Schedule A

**Location :** Grenfell Stage 2

**Date samples received :** 19th November, 2020

**Status :** Final report

**Issue :** 1

Thirty two samples were received for analysis on 19th November, 2020 of which sixteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:****Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced

**Solids:** V=60g VOC jar. J=250g glass jar. T=plastic tub

Please see attached notes for all abbreviations and acronyms

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4558-4566	4576-4580	4586-4594	4604-4608	4614-4622	4632-4636	4642-4650	4660-4664	4670-4678	4688-4692	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S361A	GTCS2-S362A	GTCS2-S363A	GTCS2-S364A	GTCS2-S365A	GTCS2-S366A	GTCS2-S367A	GTCS2-S368A	GTCS2-S369A	GTCS2-S370A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020			
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Sandy Loam	Clay	Clayey Loam	Clay	Loam	Clay			
Batch Number	20	20	20	20	20	20	20	20	20	20			
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Chloromethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Vinyl Chloride	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Bromomethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Chloroethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Trichlorofluoromethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,1-Dichloroethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
2,2-Dichloropropane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Bromochloromethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Chloroform	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,1-Dichloropropene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Carbon tetrachloride	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dichloroethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Benzene #	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dichloropropane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Dibromomethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Bromodichloromethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Toluene #	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,3-Dichloropropane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Dibromochloromethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dibromoethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Chlorobenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Ethylbenzene #	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
m/p-Xylene #	<100	-	<100	-	<100	-	<100	-	<100	-	<100	ug/kg	TM152/PM104
o-Xylene #	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Styrene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Bromoform	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Isopropylbenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Bromobenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4558-4566	4576-4580	4586-4594	4604-4608	4614-4622	4632-4636	4642-4650	4660-4664	4670-4678	4688-4692	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S361A	GTCS2-S362A	GTCS2-S363A	GTCS2-S364A	GTCS2-S365A	GTCS2-S366A	GTCS2-S367A	GTCS2-S368A	GTCS2-S369A	GTCS2-S370A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020			
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Sandy Loam	Clay	Clayey Loam	Clay	Loam	Clay			
Batch Number	20	20	20	20	20	20	20	20	20	20			
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
2-Chlorotoluene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
4-Chlorotoluene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
tert-Butylbenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
sec-Butylbenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
4-Isopropyltoluene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
n-Butylbenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Hexachlorobutadiene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Naphthalene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	<50	-	<50	-	<50	-	<50	-	<50	-	<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	95	-	86	-	96	-	93	-	107	-	<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	84	-	78	-	86	-	83	-	94	-	<0	%	TM152/PM104
VOC TICs	ND	-	ND	-	ND	-	ND	-	ND	-		None	TM15/PM10
SVOC TICs	See Attached	-	See Attached	-	See Attached	-	See Attached	-	See Attached	-		None	TM16/PM8
PCB 28 #	<5	-	<5	-	<5	-	<5	-	<5	-	<5	ug/kg	TM17/PM8
PCB 52 #	<5	-	<5	-	<5	-	<5	-	<5	-	<5	ug/kg	TM17/PM8
PCB 101 #	<5	-	<5	-	<5	-	<5	-	<5	-	<5	ug/kg	TM17/PM8
PCB 118 #	<5	-	<5	-	<5	-	<5	-	<5	-	<5	ug/kg	TM17/PM8
PCB 138 #	<5	-	<5	-	<5	-	<5	-	<5	-	<5	ug/kg	TM17/PM8
PCB 153 #	<5	-	<5	-	<5	-	<5	-	<5	-	<5	ug/kg	TM17/PM8
PCB 180 #	<5	-	<5	-	<5	-	<5	-	<5	-	<5	ug/kg	TM17/PM8
Total 7 PCBs #	<35	-	<35	-	<35	-	<35	-	<35	-	<35	ug/kg	TM17/PM8
Natural Moisture Content	52.0	47.1	53.1	43.7	33.4	40.0	47.3	43.1	61.0	37.8	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	-	<0.3	-	<0.3	-	<0.3	-	<0.3	-	<0.3	mg/kg	TM38/PM20
Chromium III	58.5	-	65.2	-	76.3	-	61.5	-	58.2	-	<0.5	mg/kg	NONE/NONE
Free Cyanide	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	-	<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	7.72	-	5.42	-	3.38	-	7.47	-	15.16	-	<0.02	%	TM21/PM24

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4558-4566	4576-4580	4586-4594	4604-4608	4614-4622	4632-4636	4642-4650	4660-4664	4670-4678	4688-4692	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S361A	GTCS2-S362A	GTCS2-S363A	GTCS2-S364A	GTCS2-S365A	GTCS2-S366A	GTCS2-S367A	GTCS2-S368A	GTCS2-S369A	GTCS2-S370A			
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020			
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Sandy Loam	Clay	Clayey Loam	Clay	Loam	Clay			
Batch Number	20	20	20	20	20	20	20	20	20	20	LOD/LOR	Units	Method No.
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020			
Thiocyanate	3.8	-	2.4	-	<0.6	-	1.9	-	1.9	-	<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	85	-	108	-	122	-	109	-	126	-	<0	%	TM192/PM0
Methyl Isocyanate-d	106	-	92	-	105	-	108	-	110	-	<0	%	TM192/PM0
Ethyl Isocyanate-d	105	-	93	-	108	-	110	-	112	-	<0	%	TM192/PM0
Propyl Isocyanate-d	107	-	91	-	108	-	110	-	112	-	<0	%	TM192/PM0
Phenyl Isocyanate-d	99	-	86	-	107	-	111	-	106	-	<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	110	-	61	-	94	-	109	-	109	-	<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	114	-	48	-	88	-	115	-	107	-	<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	122	-	51	-	91	-	115	-	113	-	<0	%	TM192/PM0
Isophorone Diisocyanate-d	117	-	47	-	87	-	109	-	106	-	<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	114	-	50	-	89	-	115	-	105	-	<0	%	TM192/PM0
Isocyanic Acid	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
Methyl Isocyanate	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
Ethyl Isocyanate	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
Propyl Isocyanate	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
Phenyl Isocyanate	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	<500	-	<500	-	<500	-	<500	-	<500	-	<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	<250	-	<250	-	<250	-	<250	-	<250	-	<250	ug/kg	TM192/PM0
Sample Type	Clayey Loam	Clay	Clayey Loam	Clay	Sandy Loam	Clay	Clayey Loam	Clay	Loam	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	vegetation	stones and vegetation	stones and vegetation	stones and vegetation	vegetation	stones and vegetation	vegetation	stones and vegetation	vegetation	vegetation		None	PM13/PM0

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4698-4702	4708-4712	4718-4722	4728-4732	4738-4742	4748-4752					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP22A	GTCS2-S151A	GTCS2-S152A	GTCS2-S153A	GTCS2-S154A	GTCS2-S155A							
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020							
Sample Type	Clay	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam							
Batch Number	20	20	20	20	20	20							
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020					LOD/LOR	Units	Method No.
Aluminium	-	-	-	-	-	-					<50	mg/kg	TM30/PM15
Antimony	-	2	-	-	-	-					<1	mg/kg	TM30/PM15
Arsenic <sup>#M</sup>	-	-	-	-	-	-					<0.5	mg/kg	TM30/PM15
Barium <sup>#M</sup>	-	-	-	-	-	-					<1	mg/kg	TM30/PM15
Beryllium	-	-	-	-	-	-					<0.5	mg/kg	TM30/PM15
Cadmium <sup>#M</sup>	-	-	-	-	-	-					<0.1	mg/kg	TM30/PM15
Chromium <sup>#M</sup>	-	-	-	-	-	-					<0.5	mg/kg	TM30/PM15
Copper <sup>#M</sup>	-	-	-	-	-	-					<1	mg/kg	TM30/PM15
Lead <sup>#M</sup>	123	77	56	51	55	56					<5	mg/kg	TM30/PM15
Mercury <sup>#M</sup>	-	-	-	-	-	-					<0.1	mg/kg	TM30/PM15
Nickel <sup>#M</sup>	-	-	-	-	-	-					<0.7	mg/kg	TM30/PM15
Selenium <sup>#M</sup>	-	-	-	-	-	-					<1	mg/kg	TM30/PM15
Vanadium	-	-	-	-	-	-					<1	mg/kg	TM30/PM15
Water Soluble Boron <sup>#M</sup>	-	-	-	-	-	-					<0.1	mg/kg	TM74/PM32
Zinc <sup>#M</sup>	-	-	-	-	-	-					<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene <sup>#M</sup>	<0.04 <sup>SV</sup>	<0.04	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.21 <sup>SV</sup>	0.25	<0.03	<0.03	0.07	<0.03					<0.03	mg/kg	TM4/PM8
Acenaphthene <sup>#M</sup>	0.08 <sup>SV</sup>	<0.05	<0.05	<0.05	<0.05	<0.05					<0.05	mg/kg	TM4/PM8
Fluorene <sup>#M</sup>	0.07 <sup>SV</sup>	0.07	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Phenanthrene <sup>#M</sup>	0.95 <sup>SV</sup>	1.02	0.10	<0.03	<0.03	<0.03					<0.03	mg/kg	TM4/PM8
Anthracene <sup>#</sup>	0.32 <sup>SV</sup>	0.46	<0.04	<0.04	0.06	<0.04					<0.04	mg/kg	TM4/PM8
Fluoranthene <sup>#M</sup>	2.93 <sup>SV</sup>	2.42	0.31	0.13	0.09	0.10					<0.03	mg/kg	TM4/PM8
Pyrene <sup>#</sup>	2.53 <sup>SV</sup>	1.88	0.27	0.13	0.07	0.09					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene <sup>#</sup>	1.50 <sup>SV</sup>	1.01	0.19	<0.06	0.12	<0.06					<0.06	mg/kg	TM4/PM8
Chrysene <sup>#M</sup>	1.49 <sup>SV</sup>	0.88	0.17	0.09	0.13	0.09					<0.02	mg/kg	TM4/PM8
Benzo(k)fluoranthene <sup>#M</sup>	3.16 <sup>SV</sup>	1.69	0.38	0.25	1.19	0.25					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene <sup>#</sup>	1.73 <sup>SV</sup>	0.91	0.19	0.13	0.69	0.10					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene	1.45 <sup>SV</sup>	0.70	0.17	0.15	1.02	0.13					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene <sup>#</sup>	0.27 <sup>SV</sup>	0.13	<0.04	<0.04	0.19	<0.04					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene <sup>#</sup>	1.27 <sup>SV</sup>	0.63	0.17	0.13	0.97	0.15					<0.04	mg/kg	TM4/PM8
Coronene	-	-	-	-	-	-					<0.04	mg/kg	TM4/PM8
PAH 16 Total	18.0 <sup>SV</sup>	12.1	2.0	1.0	4.6	0.9					<0.6	mg/kg	TM4/PM8
PAH 17 Total	-	-	-	-	-	-					<0.64	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.28	1.22	0.27	0.18	0.86	0.18					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.88	0.47	0.11	0.07	0.33	0.07					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	62 <sup>SV</sup>	70	75	75	73	74					<0	%	TM4/PM8

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4698-4702	4708-4712	4718-4722	4728-4732	4738-4742	4748-4752					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP22A	GTCS2-S151A	GTCS2-S152A	GTCS2-S153A	GTCS2-S154A	GTCS2-S155A							
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020							
Sample Type	Clay	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam							
Batch Number	20	20	20	20	20	20					LOD/LOR	Units	Method No.
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020							
VOC MS													
Dichlorodifluoromethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Methyl Tertiary Butyl Ether	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Chloromethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Vinyl Chloride	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Bromomethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Chloroethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Trichlorofluoromethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,1-Dichloroethene (1,1 DCE)	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Dichloromethane (DCM)	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
trans-1-2-Dichloroethene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,1-Dichloroethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
cis-1-2-Dichloroethene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
2,2-Dichloropropane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Bromochloromethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Chloroform	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,1,1-Trichloroethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,1-Dichloropropene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Carbon tetrachloride	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2-Dichloroethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Benzene #	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Trichloroethene (TCE)	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2-Dichloropropane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Dibromomethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Bromodichloromethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
cis-1-3-Dichloropropene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Toluene #	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
trans-1-3-Dichloropropene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,1,2-Trichloroethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Tetrachloroethene (PCE)	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,3-Dichloropropane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Dibromochloromethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2-Dibromoethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Chlorobenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,1,1,2-Tetrachloroethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Ethylbenzene #	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
m/p-Xylene #	-	-	-	-	-	-					<100	ug/kg	TM152/PM104
o-Xylene #	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Styrene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Bromoform	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Isopropylbenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Bromobenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2,3-Trichloropropane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4698-4702	4708-4712	4718-4722	4728-4732	4738-4742	4748-4752					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP22A	GTCS2-S151A	GTCS2-S152A	GTCS2-S153A	GTCS2-S154A	GTCS2-S155A							
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020							
Sample Type	Clay	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam							
Batch Number	20	20	20	20	20	20							
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020					LOD/LOR	Units	Method No.
VOC MS Continued													
Propylbenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
2-Chlorotoluene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,3,5-Trimethylbenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
4-Chlorotoluene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
tert-Butylbenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2,4-Trimethylbenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
sec-Butylbenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
4-Isopropyltoluene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,3-Dichlorobenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,4-Dichlorobenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
n-Butylbenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2-Dichlorobenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2,4-Trichlorobenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Hexachlorobutadiene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Naphthalene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
1,2,3-Trichlorobenzene	-	-	-	-	-	-					<50	ug/kg	TM152/PM104
Surrogate Recovery Toluene D8	-	-	-	-	-	-					<0	%	TM152/PM104
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-					<0	%	TM152/PM104
VOC TICs	-	-	-	-	-	-						None	TM15/PM10
SVOC TICs	-	-	-	-	-	-						None	TM16/PM8
PCB 28 #	-	-	-	-	-	-					<5	ug/kg	TM17/PM8
PCB 52 #	-	-	-	-	-	-					<5	ug/kg	TM17/PM8
PCB 101 #	-	-	-	-	-	-					<5	ug/kg	TM17/PM8
PCB 118 #	-	-	-	-	-	-					<5	ug/kg	TM17/PM8
PCB 138 #	-	-	-	-	-	-					<5	ug/kg	TM17/PM8
PCB 153 #	-	-	-	-	-	-					<5	ug/kg	TM17/PM8
PCB 180 #	-	-	-	-	-	-					<5	ug/kg	TM17/PM8
Total 7 PCBs #	-	-	-	-	-	-					<35	ug/kg	TM17/PM8
Natural Moisture Content	34.0	40.0	71.4	81.3	46.4	48.7					<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	-	-	-	-					<0.3	mg/kg	TM38/PM20
Chromium III	-	-	-	-	-	-					<0.5	mg/kg	NONE/NONE
Free Cyanide	-	-	-	-	-	-					<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	-	-	-	-					<0.5	mg/kg	TM89/PM45
Total Organic Carbon #	-	5.82	9.30	-	-	-					<0.02	%	TM21/PM24

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4698-4702	4708-4712	4718-4722	4728-4732	4738-4742	4748-4752					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-DUP22A	GTCS2-S151A	GTCS2-S152A	GTCS2-S153A	GTCS2-S154A	GTCS2-S155A							
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020							
Sample Type	Clay	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam							
Batch Number	20	20	20	20	20	20							
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020					LOD/LOR	Units	Method No.
Thiocyanate	-	-	-	-	-	-					<0.6	mg/kg	TM107/PM45
Isocyanic Acid-d	-	-	-	-	-	-					<0	%	TM192/PM0
Methyl Isocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
Ethyl Isocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
Propyl Isocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
Phenyl Isocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
Hexamethylene Diisocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
2,4-Toluene Diisocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
2,6-Toluene Diisocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
Isophorone Diisocyanate-d	-	-	-	-	-	-					<0	%	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)-d	-	-	-	-	-	-					<0	%	TM192/PM0
Isocyanic Acid	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
Methyl Isocyanate	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
Ethyl Isocyanate	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
Propyl Isocyanate	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
Phenyl Isocyanate	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
Hexamethylene Diisocyanate	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
2,4-Toluene Diisocyanate	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
2,6-Toluene Diisocyanate	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
Isophorone Diisocyanate	-	-	-	-	-	-					<500	ug/kg	TM192/PM0
4,4-Methylene-bis(phenyl-isocyanate)	-	-	-	-	-	-					<250	ug/kg	TM192/PM0
Sample Type	Clay	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam	Sandy Loam						None	PM13/PM0
Sample Colour	Medium Brown	Dark Brown	Dark Brown	Dark Brown	Medium Brown	Dark Brown						None	PM13/PM0
Other Items	sand and vegetation	vegetation and stones	vegetation	vegetation	roots	stones and vegetation						None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**VOC Report :** Solid

EMT Sample No.	4558-4566	4586-4594	4614-4622	4642-4650	4670-4678						Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S361A	GTCS2-S363A	GTCS2-S365A	GTCS2-S367A	GTCS2-S369A								
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020								
Sample Type	Clayey Loam	Clayey Loam	Sandy Loam	Clayey Loam	Loam								
Batch Number	20	20	20	20	20						LOD/LOR	Units	Method No.
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020								
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Chloromethane <sup>#</sup>	27	31	11	24	24						<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2						<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1						<1	ug/kg	TM15/PM10
Chloroethane <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Trichlorofluoromethane <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Carbon Disulphide <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Dichloromethane (DCM) <sup>#</sup>	<30	<30	<30	<30	<30						<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethane <sup>#M</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene <sup>#M</sup>	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromochloromethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Chloroform <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1-Dichloropropene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Carbon tetrachloride <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Benzene <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Trichloroethene (TCE) <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromomethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromodichloromethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Toluene <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3-Dichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromochloromethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dibromoethane <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Chlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane <sup>#M</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Ethylbenzene <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
m/p-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
o-Xylene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3						<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Isopropylbenzene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane <sup>#M</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Propylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene <sup>#</sup>	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
tert-Butylbenzene <sup>#</sup>	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene <sup>#</sup>	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
sec-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
4-Isopropyltoluene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
n-Butylbenzene <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene <sup>#M</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane <sup>#</sup>	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	<27	<27						<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene <sup>#</sup>	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	94	94	105	92	89						<0	%	TM15/PM10



## Element Materials Technology

<b>Job number:</b>	20/14697	<b>Method:</b>	SVOC
<b>Sample number:</b>	4561	<b>Matrix:</b>	Solid
<b>Sample identity:</b>	GTCS2-S361A		
<b>Sample depth:</b>	0.00-0.02		
<b>Sample Type:</b>	Clayey Loam		
<b>Units:</b>	ug/kg		

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	20/14697
<b>Sample number:</b>	4589
<b>Sample identity:</b>	GTCS2-S363A
<b>Sample depth:</b>	0.00-0.02
<b>Sample Type:</b>	Clayey Loam
<b>Units:</b>	ug/kg

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]



## Element Materials Technology

<b>Job number:</b>	20/14697
<b>Sample number:</b>	4645
<b>Sample identity:</b>	GTCS2-S367A
<b>Sample depth:</b>	0.00-0.02
<b>Sample Type:</b>	Clayey Loam
<b>Units:</b>	ug/kg

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

## Element Materials Technology

<b>Job number:</b>	20/14697
<b>Sample number:</b>	4673
<b>Sample identity:</b>	GTCS2-S369A
<b>Sample depth:</b>	0.00-0.02
<b>Sample Type:</b>	Loam
<b>Units:</b>	ug/kg

**Method:** SVOC  
**Matrix:** Solid

**Note:** Only samples with TICs (if requested) are reported. If TICs were requested but no compounds found they are not reported.

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	20	GTCS2-S361A	0.00-0.02	4564	30/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					30/11/2020	<b>Synthetic/MMMF</b>	Absent
					30/11/2020	<b>Asbestos Fibres</b>	NAD
					30/11/2020	<b>Asbestos ACM</b>	NAD
					30/11/2020	<b>Asbestos Type</b>	NAD
					30/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	20	GTCS2-S362A	0.00-0.02	4580	27/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					27/11/2020	<b>Asbestos Fibres</b>	NAD
					27/11/2020	<b>Asbestos ACM</b>	NAD
					27/11/2020	<b>Asbestos Type</b>	NAD
					27/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	20	GTCS2-S363A	0.00-0.02	4592	27/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					27/11/2020	<b>Synthetic/MMMF</b>	Absent
					27/11/2020	<b>Asbestos Fibres</b>	NAD
					27/11/2020	<b>Asbestos ACM</b>	NAD
					27/11/2020	<b>Asbestos Type</b>	NAD
					27/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	20	GTCS2-S364A	0.00-0.02	4608	27/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					27/11/2020	<b>Asbestos Fibres</b>	NAD
					27/11/2020	<b>Asbestos ACM</b>	NAD
					27/11/2020	<b>Asbestos Type</b>	NAD
					27/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	20	GTCS2-S365A	0.00-0.02	4620	27/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					27/11/2020	<b>Synthetic/MMMF</b>	Absent
					27/11/2020	<b>Asbestos Fibres</b>	NAD
					27/11/2020	<b>Asbestos ACM</b>	NAD
					27/11/2020	<b>Asbestos Type</b>	NAD
					27/11/2020	<b>Asbestos Level Screen</b>	NAD
20/14697	20	GTCS2-S366A	0.00-0.02	4636	27/11/2020	<b>General Description (Bulk Analysis)</b>	Soil/Stones
					27/11/2020	<b>Asbestos Fibres</b>	NAD
					27/11/2020	<b>Asbestos ACM</b>	NAD
					27/11/2020	<b>Asbestos Type</b>	NAD
					27/11/2020	<b>Asbestos Level Screen</b>	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	20	GTCS2-S367A	0.00-0.02	4648	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Synthetic/MMMF	Absent
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-S368A	0.00-0.02	4664	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-S369A	0.00-0.02	4676	27/11/2020	General Description (Bulk Analysis)	soil/stones
					27/11/2020	Synthetic/MMMF	Absent
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-S370A	0.00-0.02	4692	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-DUP22A	0.00-0.02	4702	27/11/2020	General Description (Bulk Analysis)	soil/stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-S151A	0.00-0.02	4712	27/11/2020	General Description (Bulk Analysis)	soil/stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-S152A	0.00-0.02	4722	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-S153A	0.00-0.02	4732	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCS2-S154A	0.00-0.02	4742	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	20	GTCSS2-S154A	0.00-0.02	4742	27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	20	GTCSS2-S155A	0.00-0.02	4752	27/11/2020	General Description (Bulk Analysis)	soil/stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range



EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM10	In-house semi-quantitative method for contamination composition within the SVOC carbon range by GCMS, including allylated naphthalene series for forensic investigation with presence/absence of biomarkers.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	No
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM17	Modified US EPA method 8270D v5:2014. Determination of specific Polychlorinated Biphenyl congeners by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993 (comparabl	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM107	Determination of Sulphide/Thiocyanate by Skalar Continuous Flow Analyser	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis			AR	Yes
TM152	Modified USEPA 8260B v2:1996. Quantitative determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS on methanol preserved samples	PM104	Modified USEPA method 5021A v2:2014. Preparation of solid samples preserved in methanol for GC-MS Headspace analysis	Yes		AR	Yes
TM192	Isocyanates by LCMS	PM0	No preparation is required.			AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 10th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 20 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 19th November, 2020  
**Status :** Final report  
**Issue :** 1

Thirty two samples were received for analysis on 19th November, 2020 of which six were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4558-4566	4586-4594	4614-4622	4642-4650	4670-4678	4708-4712					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S361A	GTCS2-S363A	GTCS2-S365A	GTCS2-S367A	GTCS2-S369A	GTCS2-S151A							
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020							
Sample Type	Clayey Loam	Clayey Loam	Sandy Loam	Clayey Loam	Loam	Sandy Loam							
Batch Number	20	20	20	20	20	20							
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020					LOD/LOR	Units	Method No.
Furans (Chlorinated)													
2378-TCDF*	ND	ND	ND	16	ND	ND						ng/kg	Subcontracted
12378-PCDF*	ND	2.73	1.08	6.68	6.86	ND						ng/kg	Subcontracted
23478-PCDF*	2.02	3.93	ND	13.7	10.8	ND						ng/kg	Subcontracted
123478-HxCDF*	2.24	6.69	1.76	12	10.5	0.833						ng/kg	Subcontracted
123678-HxCDF*	1.27	5.09	1.18	9.42	9.91	0.581						ng/kg	Subcontracted
234678-HxCDF*	1.53	4.29	1.05	9.3	9.71	ND						ng/kg	Subcontracted
123789-HxCDF*	ND	ND	ND	1.25	0.675	ND						ng/kg	Subcontracted
1234678-HpCDF*	9.53	21.5	7.1	53	34.4	18.3						ng/kg	Subcontracted
1234789-HpCDF*	ND	1.62	0.564	3.38	2.95	0.773						ng/kg	Subcontracted
OCDF*	8.31	14.4	7.31	22.1	22.6	37						ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
12378-PCDD*	ND	ND	ND	3.49	ND	ND						ng/kg	Subcontracted
123478-HxCDD*	ND	1.23	ND	2.73	1.97	ND						ng/kg	Subcontracted
123678-HxCDD*	1.15	4.43	1.7	12.9	11.2	3.51						ng/kg	Subcontracted
123789-HxCDD*	ND	2.2	1.15	7.07	5.98	1.88						ng/kg	Subcontracted
1234678-HpCDD*	18.4	44.7	30.7	111	79.6	198						ng/kg	Subcontracted
OCDD*	83.8	116	154	228	185	1200						ng/kg	Subcontracted
TEQ(1) (NATO)*	2.66	6.13	1.85	18.7	13.3	4.63						ng/kg	Subcontracted
TEQ(2) (NATO)*	2	5.3	1.28	17.9	12.1	4.09						ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	1.10	0.70	0.70	ND	1.20	0.50						ng/kg	Subcontracted
12378-PBDF*	0.60	0.90	ND	ND	ND	ND						ng/kg	Subcontracted
23478-PBDF*	ND	ND	ND	ND	0.80	0.70						ng/kg	Subcontracted
123478-HxBDF*	ND	0.50	ND	ND	ND	ND						ng/kg	Subcontracted
123678-HxBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
234678-HxBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123789-HxBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
1234678-HpBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
1234789-HpBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
OBDF*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
12378-PBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123478-HxBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123678-HxBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
123789-HxBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
1234678-HpBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted
OBDD*	ND	ND	ND	ND	ND	ND						ng/kg	Subcontracted

## Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4558-4566	4586-4594	4614-4622	4642-4650	4670-4678	4708-4712					Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S361A	GTCS2-S363A	GTCS2-S365A	GTCS2-S367A	GTCS2-S369A	GTCS2-S151A							
Depth	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02	0.00-0.02							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020	18/11/2020							
Sample Type	Clayey Loam	Clayey Loam	Sandy Loam	Clayey Loam	Loam	Sandy Loam							
Batch Number	20	20	20	20	20	20							
Date of Receipt	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020	19/11/2020					LOD/LOR	Units	Method No.
PCB-81*	ND	1.44	ND	4.3	1.45	0.459						ng/kg	Subcontracted
PCB-77*	15.8	30.1	13.9	65	36.2	18						ng/kg	Subcontracted
PCB-123*	6.16	16.3	3.07	17.7	9.33	3.33						ng/kg	Subcontracted
PCB-118*	232	653	142	647	368	227						ng/kg	Subcontracted
PCB-114*	2.88	14.6	1.97	6.64	6.63	5.09						ng/kg	Subcontracted
PCB-105*	108	299	67.4	316	175	123						ng/kg	Subcontracted
PCB-126*	3.07	6.56	1.36	13.6	10.3	0.932						ng/kg	Subcontracted
PCB-167*	20.8	44.2	13.7	40.3	34.3	27.9						ng/kg	Subcontracted
PCB-156*	49.1	119	30.6	99.3	81	66.5						ng/kg	Subcontracted
PCB-157*	12.2	27.6	9.52	24.1	21.1	14.7						ng/kg	Subcontracted
PCB-169*	ND	0.959	0.155	3.43	2.5	ND						ng/kg	Subcontracted
PCB-189*	5.4	9.99	4.02	11.1	10.6	8.61						ng/kg	Subcontracted
2,2',4,4',6-pentabromodiphenyl ether (BDE-100)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',3,4,4',5'-hexabromodiphenyl ether (BDE-138)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',4,4',5,5'-hexabromodiphenyl ether (BDE-153)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',4,4',5,6'-hexabromodiphenyl ether (BDE-154)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',4-tribromodiphenyl ether (BDE-17)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',3,4,4',5',6'-heptabromodiphenyl ether (BDE-183)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,4,4'-tribromodiphenyl ether (BDE-28)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',4,4'-tetrabromodiphenyl ether (BDE-47)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,3',4,4'-tetrabromodiphenyl ether (BDE-66)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',3,4,4'-pentabromodiphenyl ether (BDE-85)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
2,2',4,4',5-pentabromodiphenyl ether (BDE-99)*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
hexabromocyclododecane (1,2,5,6,9,10)-*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
tetrabromobisphenol A*	<0.50	<0.50	<0.50	<0.50	<0.50	-						mg/kg	Subcontracted
tris(1-chloro-2-propyl)phosphate TCP*P*	<0.10	<0.10	<0.10	<0.10	<0.10	-						mg/kg	Subcontracted
tris(2-ethylhexyl) phosphate*	<0.50	<0.50	<0.50	<0.50	<0.50	-						mg/kg	Subcontracted

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes
Subcontracted	See attached subcontractor report for accreditation status and provider.					AR	Yes

AECOM

9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 3rd December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 21 Schedule A

**Location :** Grenfell Stage 2

**Date samples received :** 20th November, 2020

**Status :** Final report

**Issue :** 1

Twenty two samples were received for analysis on 20th November, 2020 of which eleven were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:****Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced

<b>Client Name:</b>	AECOM	<b>Report :</b>	<b>Solid</b>
<b>Reference:</b>	60632092		
<b>Location:</b>	Grenfell Stage 2	<b>Solids:</b>	V=60g VOC jar, J=250g glass jar, T=plastic tub
<b>Contact:</b>	David Dyson		
<b>EMT Job No:</b>	20/14697		

Please see attached notes for all abbreviations and acronyms

QF-PM 3.1.2 v11

Please include all sections of this report if it is reproduced

All solid results are expressed on a dry weight basis unless stated otherwise.

3 of 9

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	21	GTCS2-S021A	0.00-0.02	4762	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S022A	0.00-0.02	4772	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S023A	0.00-0.02	4782	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S024A	0.00-0.02	4792	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S025A	0.00-0.02	4802	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S026A	0.00-0.02	4812	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S027A	0.00-0.02	4822	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	21	GTCS2-S027A	0.00-0.02	4822	28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S028A	0.00-0.02	4832	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S029A	0.00-0.02	4842	27/11/2020	General Description (Bulk Analysis)	Soil/Stones
					27/11/2020	Asbestos Fibres	NAD
					27/11/2020	Asbestos ACM	NAD
					27/11/2020	Asbestos Type	NAD
					27/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-S030A	0.00-0.02	4852	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD
20/14697	21	GTCS2-DUP02A	0.00-0.02	4862	28/11/2020	General Description (Bulk Analysis)	Soil/Stones
					28/11/2020	Asbestos Fibres	NAD
					28/11/2020	Asbestos ACM	NAD
					28/11/2020	Asbestos Type	NAD
					28/11/2020	Asbestos Level Screen	NAD

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.



## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO <sub>2</sub> generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.	Yes		AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 First edition (2006)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 10th December, 2020  
**Your reference :** 60632092  
**Our reference :** Test Report 20/14697 Batch 21 Schedule B  
**Location :** Grenfell Stage 2  
**Date samples received :** 20th November, 2020  
**Status :** Final report  
**Issue :** 1

Twenty two samples were received for analysis on 20th November, 2020 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Simon Gomery BSc**

**Project Manager**

Please include all sections of this report if it is reproduced

# Element Materials Technology

Client Name: AECOM  
Reference: 60632092  
Location: Grenfell Stage 2  
Contact: David Dyson  
EMT Job No: 20/14697

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4778-4782	4828-4832											
Sample ID	GTCS2-S023A	GTCS2-S028A											
Depth	0.00-0.02	0.00-0.02											
COC No / misc													
Containers	V J T	V J T											
Sample Date	19/11/2020	19/11/2020											
Sample Type	Clay	Clay											
Batch Number	21	21											
Date of Receipt	20/11/2020	20/11/2020											
											LOD/LOR	Units	Method No.
Please see attached notes for all abbreviations and acronyms													
Furans (Chlorinated)													
2378-TCDF*	10.4	1.19										ng/kg	Subcontracted
12378-PCDF*	6.9	ND										ng/kg	Subcontracted
23478-PCDF*	9.61	ND										ng/kg	Subcontracted
123478-HxCDF*	4.53	1.89										ng/kg	Subcontracted
123678-HxCDF*	5.93	1.34										ng/kg	Subcontracted
234678-HxCDF*	5.62	0.982										ng/kg	Subcontracted
123789-HxCDF*	ND	ND										ng/kg	Subcontracted
1234678-HpCDF*	74	14.2										ng/kg	Subcontracted
1234789-HpCDF*	2.8	ND										ng/kg	Subcontracted
OCDF*	76.7	16.2										ng/kg	Subcontracted
Dioxins (Chlorinated)													
2378-TCDD*	ND	ND										ng/kg	Subcontracted
12378-PCDD*	ND	ND										ng/kg	Subcontracted
123478-HxCDD*	2.04	ND										ng/kg	Subcontracted
123678-HxCDD*	5.94	ND										ng/kg	Subcontracted
123789-HxCDD*	2.89	1.62										ng/kg	Subcontracted
1234678-HpCDD*	82.2	26.7										ng/kg	Subcontracted
OCDD*	494	246										ng/kg	Subcontracted
TEQ(1) (NATO)*	11.8	1.92										ng/kg	Subcontracted
TEQ(2) (NATO)*	11.1	1.37										ng/kg	Subcontracted
Furans (Brominated)													
2378-TBDF*	ND	0.70										ng/kg	Subcontracted
12378-PBDF*	ND	0.50										ng/kg	Subcontracted
23478-PBDF*	ND	0.60										ng/kg	Subcontracted
123478-HxBDF*	ND	ND										ng/kg	Subcontracted
123678-HxBDF*	ND	ND										ng/kg	Subcontracted
234678-HxBDF*	ND	ND										ng/kg	Subcontracted
123789-HxBDF*	ND	ND										ng/kg	Subcontracted
1234678-HpBDF*	ND	ND										ng/kg	Subcontracted
1234789-HpBDF*	ND	ND										ng/kg	Subcontracted
OBDF*	ND	ND										ng/kg	Subcontracted
Dioxins (Brominated)													
2378-TBDD*	ND	ND										ng/kg	Subcontracted
12378-PBDD*	ND	ND										ng/kg	Subcontracted
123478-HxBDD*	ND	ND										ng/kg	Subcontracted
123678-HxBDD*	ND	ND										ng/kg	Subcontracted
123789-HxBDD*	ND	ND										ng/kg	Subcontracted
1234678-HpBDD*	ND	ND										ng/kg	Subcontracted
OBDD*	ND	ND										ng/kg	Subcontracted

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced



**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
Subcontracted	See attached subcontractor report for accreditation status and provider.						Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP



<b>Attention :</b>	David Dyson
<b>Date :</b>	29th November, 2020
<b>Your reference :</b>	60632092
<b>Our reference :</b>	Test Report 20/14697 Batch 1 Schedule C 20/14697 Batch 2 Schedule C 20/14697 Bal
<b>Location :</b>	Grenfell Stage 2
<b>Date samples received :</b>	
<b>Status :</b>	Final report
<b>Issue :</b>	1

**Authorised By:**



**Simon Gomery BSc**  
Project Manager

Please include all sections of this report if it is reproduced

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	1	GTCS2-S096A	0.00-0.02	155	20/11/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					20/11/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					20/11/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					20/11/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					20/11/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
20/14697	2	GTCS2-S352A	0.00-0.02	315	20/11/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					20/11/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					20/11/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					20/11/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					20/11/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
20/14697	3	GTCS2-S035A	0.00-0.02	435	20/11/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					20/11/2020	Total Detailed Gravimetric Quantification (% Asb)	0.005 (mass %)
					20/11/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.005 (mass %)
					20/11/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					20/11/2020	Asbestos Gravimetric & PCOM Total	0.005 (mass %)
20/14697	4	GTCS2-S040A	0.00-0.02	585	20/11/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					20/11/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					20/11/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					20/11/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					20/11/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes



AECOM

9th Floor Reception

Sunley House

4 Bedford Park

Croydon

CR0 2AP



**Attention :** David Dyson

**Date :** 4th December, 2020

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 6 Schedule C 20/14697 Batch 6 Schedule D

**Location :** Grenfell Stage 2

**Date samples received :** 30th October, 2020

**Status :** Final report

**Issue :** 1

Sixty two samples were received for analysis on 30th October, 2020 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

**Authorised By:**



**Paul Boden BSc**

Senior Project Manager

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Note:**

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level less than 0.1%, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Date Of Analysis	Analysis	Result
20/14697	6	GTCS2-S305A	0.00-0.02	1095	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	0.001 (mass %)
20/14697	6	GTCS2-S017A	0.00-0.02	1165	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
20/14697	6	GTCS2-S020A	0.00-0.02	1195	03/12/2020	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					03/12/2020	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					03/12/2020	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					03/12/2020	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

## NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

### SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

### WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

### DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

### SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

### DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

### BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

### NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified BS 7755-3:1995, ISO10694:1995 Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection. Organic Matter (SOM) calculated as per EA MCERTS Chemical Testing of Soil, March 2012 v4.	PM89	Preparation of positive asbestos samples for Eltra analysis			AD	Yes
TM131	Quantification of Asbestos Fibres and ACM based on HSG248 First edition:2006, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes

## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report



AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson  
**Date :** 16th February, 2021  
**Your reference :** 60632092  
**Our reference :** Test Report 20/13239 Batch 1 Schedule D 20/13239 Batch 4 Schedule H 20/14697 Bal  
**Location :** Grenfell Stage 2  
**Date samples received :**  
**Status :** Final report  
**Issue :** 1

**Authorised By:**



**Simon Gomery BSc**  
Project Manager

Please include all sections of this report if it is reproduced

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.



# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/13239 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Please include all sections of this report if it is reproduced

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution

## HWOL ACRONYMS AND OPERATORS USED

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

EMT Job No: 20/13239 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry); WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.				Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry); WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP	PM15/PM124	please refer to PM15/PM124 for method details				Yes
TM171	Operation and analysis of metals by Thermo Fisher iCAPQc ICP-MS	PM124	UBM Unified BARGE bioaccessibility extraction of soil, in vitro method for simulating human digestive procedure using synthetic digestive fluids, carried out on the <250um fraction of the sample.				Yes

AECOM  
9th Floor Reception  
Sunley House  
4 Bedford Park  
Croydon  
CR0 2AP

**Attention :** David Dyson

**Date :** 16th February, 2021

**Your reference :** 60632092

**Our reference :** Test Report 20/14697 Batch 2 Schedule F 20/14697 Batch 11 Schedule E 20/14697 B:

**Location :** Grenfell Stage 2

**Date samples received :**

**Status :** Final report

**Issue :** 1

**Authorised By:**



**Simon Gomery BSc**  
Project Manager

Please include all sections of this report if it is reproduced

# Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	211-215	2316-2320	2876-2880	4214-4218	4332-4340	4408-4412	4576-4580	4848-4852	4868	4871	Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S261A	GTCS2-S385A	GTCS2-S199A	GTCS2-S295A	GTCS2-S133A	GTCS2-S136A	GTCS2-S362A	GTCS2-S030A	GTCS2-S017A (ASB +ve)	GTCS2-DUP12A (ASB +ve)			
Depth	0.00-0.02	0.50-0.60	0.00-0.20	0.00-0.02	0.00-0.20	0.00-0.20	0.00-0.02	0.00-0.02	0.00-0.02	0.50-0.60			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	J	J			
Sample Date	23/10/2020	04/11/2020	06/11/2020	16/11/2020	17/11/2020	17/11/2020	18/11/2020	19/11/2020	29/10/2020	05/11/2020			
Sample Type	Clay	Clayey Sand	Clayey Loam	Clayey Loam	Clay	Clay	Clay	Clay	Soil	Soil			
Batch Number	2	11	12	18	19	19	20	21	22	22			
Date of Receipt	24/10/2020	06/11/2020	07/11/2020	17/11/2020	18/11/2020	18/11/2020	19/11/2020	20/11/2020	29/10/2020	29/10/2020	LOD/LOR	Units	Method No.
FOREhST PAH													
Naphthalene (250um)	<0.15	<0.15	<0.15	0.19	0.20	0.32	0.23	<0.15	<0.15	0.50	<0.15	mg/kg	TM4/PM128
Naphthalene FOREhST	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	0.26	<0.15	mg/kg	TM4/PM128
BAF Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	52.0	<0.1	%	TM4/PM128
Acenaphthylene (250um)	0.49	0.25	0.35	1.17	0.67	1.08	1.18	0.44	0.63	3.00	<0.15	mg/kg	TM4/PM128
Acenaphthylene FOREhST	0.22	<0.15	<0.15	0.16	0.28	0.27	0.33	0.20	0.27	1.11	<0.15	mg/kg	TM4/PM128
BAF Acenaphthylene	44.9	NA	NA	13.7	41.8	25.0	28.0	45.5	42.9	36.7	<0.1	%	TM4/PM128
Acenaphthene (250um)	<0.15	0.16	0.15	0.18	0.23	0.34	0.22	0.17	<0.15	0.85	<0.15	mg/kg	TM4/PM128
Acenaphthene FOREhST	<0.15	<0.15	<0.15	<0.15	<0.15	0.21	0.18	<0.15	<0.15	0.68	<0.15	mg/kg	TM4/PM128
BAF Acenaphthene	NA	NA	NA	NA	NA	61.8	81.8	NA	NA	80.0	<0.1	%	TM4/PM128
Fluorene (250um)	<0.15	<0.15	<0.15	0.20	0.22	0.36	0.22	0.17	<0.15	0.83	<0.15	mg/kg	TM4/PM128
Fluorene FOREhST	<0.15	<0.15	<0.15	<0.15	<0.15	0.15	<0.15	<0.15	<0.15	0.43	<0.15	mg/kg	TM4/PM128
BAF Fluorene	NA	NA	NA	NA	NA	41.7	NA	NA	NA	51.8	<0.1	%	TM4/PM128
Phenanthrene (250um)	1.24	1.98	2.32	3.00	4.54	6.83	4.14	3.61	1.83	8.55	<0.15	mg/kg	TM4/PM128
Phenanthrene FOREhST	0.79	0.93	0.95	0.95	2.47	2.48	1.30	2.26	0.96	5.18	<0.15	mg/kg	TM4/PM128
BAF Phenanthrene	63.7	47.0	41.0	31.7	54.4	36.3	31.4	62.6	52.5	60.6	<0.1	%	TM4/PM128
Anthracene (250um)	0.67	0.68	0.75	1.72	1.31	2.01	1.78	1.13	0.79	4.63	<0.15	mg/kg	TM4/PM128
Anthracene FOREhST	0.41	0.33	0.29	0.37	0.61	0.65	0.67	0.57	0.39	2.40	<0.15	mg/kg	TM4/PM128
BAF Anthracene	61.2	48.5	38.7	21.5	46.6	32.3	37.6	50.4	49.4	51.8	<0.1	%	TM4/PM128
Fluoranthene (250um)	4.56	4.47	5.46	12.39	13.99	20.64	16.10	12.15	6.08	26.29	<0.15	mg/kg	TM4/PM128
Fluoranthene FOREhST	2.97	2.31	2.21	4.17	7.52	7.83	6.63	6.79	2.94	14.76	<0.15	mg/kg	TM4/PM128
BAF Fluoranthene	65.1	51.7	40.5	33.7	53.8	37.9	41.2	55.9	48.4	56.1	<0.1	%	TM4/PM128
Pyrene (250um)	4.10	3.87	4.64	11.20	11.70	17.05	14.03	10.00	5.19	22.83	<0.15	mg/kg	TM4/PM128
Pyrene FOREhST	2.58	2.07	1.92	3.84	6.13	6.87	6.04	5.45	2.46	12.56	<0.15	mg/kg	TM4/PM128
BAF Pyrene	62.9	53.5	41.4	34.3	52.4	40.3	43.1	54.5	47.4	55.0	<0.1	%	TM4/PM128
Benzo(a)anthracene (250um)	2.24	2.43	2.86	6.38	7.01	9.09	8.76	4.46	2.89	11.04	<0.15	mg/kg	TM4/PM128
Benzo(a)anthracene FOREhST	1.71	1.21	1.17	2.46	4.11	3.39	4.25	3.29	1.65	7.93	<0.15	mg/kg	TM4/PM128
BAF Benzo(a)anthracene	76.3	49.8	40.9	38.6	58.6	37.3	48.5	73.8	57.1	71.8	<0.1	%	TM4/PM128
Chrysene (250um)	2.86	2.48	2.91	6.51	7.48	10.63	9.20	5.89	3.55	13.59	<0.15	mg/kg	TM4/PM128
Chrysene FOREhST	1.70	1.10	0.96	1.89	3.63	3.95	3.18	3.05	1.64	7.12	<0.15	mg/kg	TM4/PM128
BAF Chrysene	59.4	44.4	33.0	29.0	48.5	37.2	34.6	51.8	46.2	52.4	<0.1	%	TM4/PM128
Benzo(bk)fluoranthene (250um)	6.35	4.84	5.56	13.25	14.46	21.26	18.81	11.08	6.92	29.55	<0.15	mg/kg	TM4/PM128
Benzo(bk)fluoranthene FOREhST	3.40	2.05	1.80	3.38	6.59	6.79	6.35	5.03	3.00	13.26	<0.15	mg/kg	TM4/PM128
BAF Benzo(bk)fluoranthene	53.5	42.4	32.4	25.5	45.6	31.9	33.8	45.4	43.4	44.9	<0.1	%	TM4/PM128
Benzo(a)pyrene (250um)	3.64	2.65	3.09	7.43	7.98	12.09	10.48	5.95	3.63	17.79	<0.15	mg/kg	TM4/PM128
Benzo(a)pyrene FOREhST	1.60	0.90	0.79	1.60	3.30	3.21	2.84	2.19	1.38	7.00	<0.15	mg/kg	TM4/PM128
BAF Benzo(a)pyrene	44.0	34.0	25.6	21.5	41.4	26.6	27.1	36.8	38.0	39.3	<0.1	%	TM4/PM128
Indeno(123cd)pyrene (250um)	2.85	2.16	2.11	5.22	6.00	9.32	7.59	4.53	2.92	14.15	<0.15	mg/kg	TM4/PM128
Indeno(123cd)pyrene FOREhST	1.14	0.58	0.53	0.81	2.21	2.01	1.78	1.32	1.12	4.74	<0.15	mg/kg	TM4/PM128
BAF Indeno(123cd)pyrene	40.0	26.9	25.1	15.5	36.8	21.6	23.5	29.1	38.3	33.5	<0.1	%	TM4/PM128
Dibenzo(ah)anthracene (250um)	0.49	0.25	0.23	0.61	0.73	1.02	0.97	0.84	0.56	2.30	<0.15	mg/kg	TM4/PM128
Dibenzo(ah)anthracene FOREhST	0.47	0.17	<0.15	0.26	0.50	0.53	0.46	0.45	0.39	1.05	<0.15	mg/kg	TM4/PM128
BAF Dibenzo(ah)anthracene	95.9	68.0	NA	42.6	68.5	52.0	47.4	53.6	69.6	45.7	<0.1	%	TM4/PM128
Benzo(ghi)perylene (250um)	2.63	1.97	2.13	4.51	5.43	8.57	6.76	4.12	2.76	14.46	<0.15	mg/kg	TM4/PM128

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

**Report : Solid**

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	4873	4874									Please see attached notes for all abbreviations and acronyms		
Sample ID	GTCS2-S193A (ASB +ve)	GTCS2-S199A (ASB +ve)											
Depth	0.50-0.60	0.50-0.60											
COC No / misc													
Containers	J	J											
Sample Date	05/11/2020	06/11/2020											
Sample Type	Soil	Soil											
Batch Number	22	22											
Date of Receipt	29/10/2020	29/10/2020											
FOREhST PAH													
Naphthalene (250um)	0.43	0.54									<0.15	mg/kg	TM4/PM128
Naphthalene FOREhST	0.25	0.31									<0.15	mg/kg	TM4/PM128
BAF Naphthalene	58.1	57.4									<0.1	%	TM4/PM128
Acenaphthylene (250um)	2.40	2.95									<0.15	mg/kg	TM4/PM128
Acenaphthylene FOREhST	1.15	0.85									<0.15	mg/kg	TM4/PM128
BAF Acenaphthylene	47.9	28.8									<0.1	%	TM4/PM128
Acenaphthene (250um)	0.60	1.63									<0.15	mg/kg	TM4/PM128
Acenaphthene FOREhST	0.48	1.35									<0.15	mg/kg	TM4/PM128
BAF Acenaphthene	80.0	82.8									<0.1	%	TM4/PM128
Fluorene (250um)	0.55	1.48									<0.15	mg/kg	TM4/PM128
Fluorene FOREhST	0.27	0.89									<0.15	mg/kg	TM4/PM128
BAF Fluorene	49.1	60.1									<0.1	%	TM4/PM128
Phenanthrene (250um)	7.07	18.49									<0.15	mg/kg	TM4/PM128
Phenanthrene FOREhST	4.50	12.51									<0.15	mg/kg	TM4/PM128
BAF Phenanthrene	63.6	67.7									<0.1	%	TM4/PM128
Anthracene (250um)	3.55	7.53									<0.15	mg/kg	TM4/PM128
Anthracene FOREhST	2.23	4.30									<0.15	mg/kg	TM4/PM128
BAF Anthracene	62.8	57.1									<0.1	%	TM4/PM128
Fluoranthene (250um)	21.80	51.34									<0.15	mg/kg	TM4/PM128
Fluoranthene FOREhST	14.72	29.73									<0.15	mg/kg	TM4/PM128
BAF Fluoranthene	67.5	57.9									<0.1	%	TM4/PM128
Pyrene (250um)	18.36	43.88									<0.15	mg/kg	TM4/PM128
Pyrene FOREhST	12.19	24.52									<0.15	mg/kg	TM4/PM128
BAF Pyrene	66.4	55.9									<0.1	%	TM4/PM128
Benzo(a)anthracene (250um)	9.11	20.08									<0.15	mg/kg	TM4/PM128
Benzo(a)anthracene FOREhST	7.66	12.95									<0.15	mg/kg	TM4/PM128
BAF Benzo(a)anthracene	84.1	64.5									<0.1	%	TM4/PM128
Chrysene (250um)	11.72	23.15									<0.15	mg/kg	TM4/PM128
Chrysene FOREhST	7.94	11.57									<0.15	mg/kg	TM4/PM128
BAF Chrysene	67.7	50.0									<0.1	%	TM4/PM128
Benzo(bk)fluoranthene (250um)	25.27	47.30									<0.15	mg/kg	TM4/PM128
Benzo(bk)fluoranthene FOREhST	13.61	18.30									<0.15	mg/kg	TM4/PM128
BAF Benzo(bk)fluoranthene	53.9	38.7									<0.1	%	TM4/PM128
Benzo(a)pyrene (250um)	14.67	27.40									<0.15	mg/kg	TM4/PM128
Benzo(a)pyrene FOREhST	7.04	9.25									<0.15	mg/kg	TM4/PM128
BAF Benzo(a)pyrene	48.0	33.8									<0.1	%	TM4/PM128
Indeno(123cd)pyrene (250um)	11.44	18.43									<0.15	mg/kg	TM4/PM128
Indeno(123cd)pyrene FOREhST	4.35	5.04									<0.15	mg/kg	TM4/PM128
BAF Indeno(123cd)pyrene	38.0	27.3									<0.1	%	TM4/PM128
Dibenzo(ah)anthracene (250um)	1.94	2.93									<0.15	mg/kg	TM4/PM128
Dibenzo(ah)anthracene FOREhST	0.84	0.83									<0.15	mg/kg	TM4/PM128
BAF Dibenzo(ah)anthracene	43.3	28.3									<0.1	%	TM4/PM128
Benzo(ghi)perylene (250um)	12.07	19.39									<0.15	mg/kg	TM4/PM128



## Element Materials Technology

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson  
**EMT Job No:** 20/14697

Report : Solid

**Solids:** V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

**Client Name:** AECOM  
**Reference:** 60632092  
**Location:** Grenfell Stage 2  
**Contact:** David Dyson

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

# NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 20/14697

## SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

## WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

## DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

## SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

## DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

## BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

## NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

**REPORTS FROM THE SOUTH AFRICA LABORATORY**

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

**Measurement Uncertainty**

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

**ABBREVIATIONS and ACRONYMS USED**

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher, this result is not accredited.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

## HWOL ACRONYMS AND OPERATORS USED



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

EMT Job No: 20/14697

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM128	Preparation of soils for FOREhST in-vitro bioaccessibility extraction of soil in a fed state system and preparation of total PAHs both carried out on the <250um fraction of the sample.			AD	Yes

## Appendix K – Laboratory Information

- Sampling Chains of Custody (Fera and Element)
- Fera PAH Uncertainty Data (provided by Fera)
- Comparison of Fera and Element Data
- Laboratory Certificates
  - Fera certificates
  - Element Stage 1 re-issued data including carbon disulphide
  - Element lead in root zone soil certificates
  - Element soil certificates batches 1 – 21
  - Element bioaccessibility certificates
- Data Validation Summary Report

		<b>Field Procedure No. FP26</b> <b>FIELD SAMPLING AND LABORATORY</b> <b>QUALITY ASSURANCE AND QUALITY</b> <b>CONTROL PROCEDURES</b>		Version 2: May 2018	
				Page 1 of 1	
<b>DATA VALIDATION SUMMARY REPORT</b>					
<b>Site name:</b>	Grenfell Tower Stage 2 Investigation		<b>Samples collected by:</b>	Fraser Keith, Giacomo Ciavatti, Emma Toms, Ian Muir, Beverly Okeke, Jamie Charles, Katie Bruce, David Dyson, Christopher Arkwright, Mary Tsiropoulou	
<b>Project number:</b>	60632092				
<b>Project Manager:</b>	David Dyson				
<b>Matrix type:</b>	Soil Crops		<b>Analytical data checked by:</b>	Robert Eaton, David Dyson	
<b>Primary samples:</b>	475 soil samples 35 crop samples		Date	12/02/2021	
<b>Laboratories used:</b>	Element (+ subcontracts to RPS and Marchwood) Fera		Signed		
<b>Lab batch reference (s):</b>	Main batch references: 20-14697 B1; 20-14697 B2; 20-14697 B3; 20-14697 B4; 20-14697 B5; 20-14697 B6; 20-14697 B7; 20-14697 B8; 20-14697 B9; 20-14697 B10; 20-14697 B11; 20-14697 B12; 20-14697 B13; 20-14697 B14; 20-14697 B15; 20-14697 B16; 20-14697 B17; 20-14697 B18; 20-14697 B19; 20-14697 B20; 20-14697 B21		<b>Project Manager:</b>	David Dyson	
			Date	12/02/2021	
			Signed		
<b>General Issues</b>	<b>Task Name</b>	<b>Errors (Y/N)</b>	<b>Comments</b>	<b>Completed by</b>	
1	Deliverables checked against chain of custody	N	AECOM reviewed and requested minor edits to some sample depth discrepancies between Field COC and digital Lab COC.	RE	
2	Sample IDs reviewed	N	AECOM requested minor edits to ID reporting for some samples	RE	
3	Sample temperature on receipt checked	N	Samples were received at lab at temperatures between 4.4degC and 13.6degC. Temperatures considered suitable for subsequent testing and samples not deviating for laboratory accreditation purposes.	RE	
4	Holding times acceptable (including subcontracted analyses)	N	No deviating or non-conforming samples reported by lab	RE	
5	Unit consistency reviewed	N	Units checked	RE	
6	Check LOD / MDL are as expected.	N	as expected	RE	
7	Are the results accredited?	N	Most accredited, some not, but as expected	RE	
8	Do the results fit with previous concentration trends?	N	Visual review and review of averages where appropriate suggest current results are not considered to be unusual with respect to the previous samples	RE	
9	Comparison of data to visual/ olfactory evidence	N	The visual / olfactory evidence and chemical data are considered consistent. The visual / olfactory field records of potential contamination identify mainly ash, charcoal, tarmac, and metal fragments. These observed materials would not necessarily elicit notable elevations in chemical concentrations.	RE	



		Field Procedure No. FP26 FIELD SAMPLING AND LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES		Version 2: May 2018
		Page 1 of 1		
<b>DATA VALIDATION SUMMARY REPORT</b>				
Specific Issues	Task Name	Errors (Y/N)	Comments	Completed by
10	Duplicate samples identified	N	Duplicate samples IDs correctly labelled and no obvious data inconsistencies with parent samples.	RE
11	Duplicate frequency appropriate (1 in 20 samples)	N	25 main duplicates in total against 475 main samples soil samples; better than 1 in 20	RE
12	RPD assessment acceptable	N	The assessment of the RPDs for sample duplicates identifies the RPDs as acceptable. A number of RPDs had values elevated above indicative thresholds, discussed further in main report	RE
13	Trip blanks results acceptable	N	Trip blanks for methanol preservative VOC method were all <DL	DD
14	Field & Equipment/Rinsate blank results acceptable	N/A		
15	Laboratory blank acceptable	N	Lab duplicate identified no issues	RE
16	Surrogate laboratory data acceptable	N - though see comments for minor non-conformances	Initial review identifies 33 of 1064 laboratory sample records noted a surrogate recovery with a surrogate Variation of >30% or being outside of the lab LCL or UCL calibration range. A secondary check identified no samples below the requirement for a manual data check of 30% recovery and all are above the unacceptable data range of <10% recovery.  Of these 33 the majority of entries relate to Surrogate Recovery % with 8 associated with the recovery of 4-Bromofluorobenzene, and one each associated with Toluene-d8 and p-Terphenyl-d14. In the case of Bromofluorobenzene these relate to testing method TM15, with each sample having testing under TM152 which is within the acceptable range. The p-Terphenyl-d14 entry is reported at >100%, suggesting potential over-reporting of concentrations rather than under-reporting.	RE
17	AQC data acceptable	N	No AQC failures reported by the laboratory	RE
18	Matrix spike (and Matrix Spike duplicate) data acceptable (optional)	N	No Matrix Spikes identified across the 1064 samples	RE
19	Relevant data added to table footnotes & any deviation issues identified	N	No deviating / non-conforming samples identified. Summary of DVSR findings presented in TN15 report text	RE
Specific Issues	Task Name	Errors (Y/N)	Comments	Completed by
20	10% minimum check of tabulated laboratory data against lab certificates	N	Checks completed and data OK	RE
21	Tabulated field data (e.g. water quality parameters) checked for input errors	N	Field notes checked	DD, ET, KB
<b>Other Observations</b>				
<b>Approvals</b>				
The data set is considered appropriate for reporting		N	All data considered appropriate for reporting	Assessor DD
The data set is considered appropriate for reporting with the identified issue		N	Occasional RPDs and surrogate recoveries outside indicative ranges indicate occasional heterogeneity of soils.	Assessor DD