

CoDa Structures

Consulting Civil & Structural Engineers
14 Springfield Court
GUISELEY
LS20 8FD

**PHASE 2 ENGINEERING & ENVIRONMENTAL
ASSESSMENT
FOR A RESIDENTIAL DEVELOPMENT AT THE
FORMER MOUNT VERNON HOSPITAL,
MOUNT VERNON ROAD, BARNSLEY**

**APPENDIX F
ARP & CODA STRUCTURES' ROTARY BOREHOLE LOGS**

Rotary Drilling Log

Borehole No.

RO1

Sheet 1 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 434984.17 - 404674.48

Hole Type RO

Location: Mount Vernon Road, Barnsley

Level: 150.30

Date 14/11/2018

Client: South West Yorkshire Partnership

Plant Used: Sollmec 400

Scale 1:75



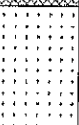
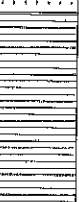



Hole Dia.:

Bit Used:

Flush: Air Flush

Rig Crew: GSS

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
					0.10	150.20		TARMAC (Drillers Description) MADE GROUND (Drillers Description)	1	
									2	
										3
										4
										5
							5.70	144.60		Brown SANDSTONE (Drillers Description)
					7.10	143.20		Brown MUDSTONE (Drillers Description)	7	
									8	
					9.30	141.00		Grey MUDSTONE (Drillers Description)	9	
									10	
					12.20	138.10		COAL (Drillers Description)	11	
									12	
					13.40	136.90		Grey MUDSTONE (Drillers Description)	13	
									14	
									15	

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: PW casing to 6m
 Remarks: Full Flush returns

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 434984.17 - 404674.48

Hole Type
RO

Location: Mount Vernon Road, Barnsley

Level: 150.30

Date
14/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale
1:75

Hole Dia.:

Bit Used:

Flush: Air Flush

Rig Crew: GSS

Logged
Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								Grey MUDSTONE (Drillers Description)	16
									17
									18
									19
									20
									21
									22
									23
									24
									25
				26.10	124.20		COAL (Drillers Description)	26	
				26.80	123.50		Grey MUDSTONE (Drillers Description)	27	
								28	
								29	
				30.00	120.30			30	

End of Borehole at 30.000m

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: PW casing to 6m
 Remarks: Full Flush returns

Rotary Drilling Log

Borehole No.

RO2

Sheet 1 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 435017.99 - 404692.64

Hole Type RO

Location: Mount Vernon Road, Barnsley

Level: 153.90

Date 16/11/2018

Client: South West Yorkshire Partnership

Plant Used: Sollmec 400

Scale 1:75

Hole Dia.:

Bit Used:

Flush: Air Mlst

Rig Crew: GSS Ltd

Logged Drillers

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10	153.80		TARMAC (Drillers Description)	1
								MADE GROUND (Drillers Description)	
					0.80	153.10		Brown SANDSTONE (Drillers Description)	
								3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	
								11	
								12	
					13.10	140.80		Grey MUDSTONE (Drillers Description)	13
								14	
								15	

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used.
 Remarks: Full Flush returns

Rotary Drilling Log

Borehole No. **RO2**
Sheet 2 of 2

Project Name: Mount Vernon Hospital	Project No. SWY/02	Co-ords: 435017.99 - 404692.64	Hole Type RO
Location: Mount Vernon Road, Barnsley		Level: 153.90	Date 16/11/2018
Client: South West Yorkshire Partnership		Plant Used: Soilmec 400	Scale 1:75
Hole Dia.:	Bit Used:	Flush: Air Mist	Rig Crew: GSS Ltd

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
Well							Grey MUDSTONE (Drillers Description)	16
					18.50	135.40	COAL (Drillers Description)	17
					19.50	134.40	Grey MUDSTONE (Drillers Description)	18
					21.00	132.90	End of Borehole at 21.000m	19
								20
								21
								22
								23
								24
								25
								26
								27
								28
								29
								30

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used.
 Remarks: Full Flush returns

Rotary Drilling Log

Borehole No.

RO3

Sheet 1 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 435027.26 - 404712.93

Hole Type

RO

Location: Mount Vernon Road, Barnsley

Level: 153.80

Date
14/11/2018

Client: South West Yorkshire Partnership

Plant Used: Sollmec 400

Scale
1:75

Hole Dia.:

Bit Used:

Flush: Air Flush

Rig Crew: GSS Ltd

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10	153.70		TARMAC (Drillers Description)	1
					0.80	153.00		MADE GROUND (Drillers Description)	
								Brown SANDSTONE (Drillers Description)	
								3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	
								11	
								12	
								13	
					13.70	140.10		Grey MUDSTONE (Drillers Description)	14
								15	

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Full flush returns



ARP Geotechnical
Limited

Rotary Drilling Log

Borehole No.

RO3

Sheet 2 of 2

Project Name: Mount Vernon Hospital

Project No.
SWY/02

Co-ords: 435027.26 - 404712.93

Hole Type
RO

Location: Mount Vernon Road, Barnsley

Level: 153.80

Date
14/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale
1:75

Hole Dia.:

Bit Used:

Flush: Air Flush

Rig Crew: GSS Ltd

Logged
Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Grey MUDSTONE (Drillers Description)	16	
					19.70	134.10	COAL (Drillers Description)	20	
					20.80	133.00	Grey MUDSTONE (Drillers Description)	21	
					22.00	131.80	End of Borehole at 22.000m	22	
								23	
								24	
								25	
								26	
								27	
								28	
								29	
								30	

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Full flush returns



ARP Geotechnical
Limited

Rotary Drilling Log

Borehole No. .

RO4

Sheet 2 of 2

Project Name: Mount Vernon Hospital

Project No.
SWY/02

Co-ords: 434977.46 - 404764.70

Hole Type
RO

Location: Mount Vernon Road, Barnsley

Level: 156.80

Date
16/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale
1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged
Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Grey MUDSTONE (Drillers Description)	16	
					19.60	137.20		17	
							Coal (Drillers Description)	18	
					20.60	136.20		19	
							Grey MUDSTONE (Drillers Description)	20	
								21	
					22.00	134.80		22	
							End of Borehole at 22.000m	23	
								24	
								25	
								26	
								27	
								28	
								29	
								30	

Groundwater: No groundwater Ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used.
 Remarks: Full Flush returns

Rotary Drilling Log

Borehole No.

RO5

Sheet 1 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 434941.76 - 404833.07

Hole Type

RO

Location: Mount Vernon Road, Barnsley

Level: 156.80

Date
14/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale
1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged
Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20	156.60		TOPSOIL (Drillers Description)	1
					0.80	156.00		MADE GROUND (Drillers Description)	
								Brown SANDSTONE (Drillers Description)	
								2	
								3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	
					10.10	146.70		Grey (Drillers Description)	11
								12	
								13	
								14	
								15	

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling artising and bentonite.
 Casing: No casing used
 Remarks: Full Flush returns



ARP Geotechnical
Limited

Rotary Drilling Log

Borehole No. .

RO5

Sheet 2 of 2

Project Name: Mount Vernon Hospital

Project No.
SWY/02

Co-ords: 434941.76 - 404833.07

Hole Type
RO

Location: Mount Vernon Road, Barnsley

Level: 156.80

Date
14/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale
1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged
Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Grey (Drillers Description)		16
					16.70	140.10			
					17.70	139.10	COAL (Drillers Description)		17
							Grey MUDSTONE (Drillers Description)		18
					19.00	137.80		End of Borehole at 19.000m	19
									20
									21
									22
									23
									24
									25
									26
									27
									28
									29
									30

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Full Flush returns

Rotary Drilling Log

Borehole No.

RO6

Sheet 1 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 434956.34 - 404783.88

Hole Type RO

Location: Mount Vernon Road, Bamsley

Level: 156.90

Date 14/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale 1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10	156.80		TARMAC (Drillers Description)	1
					1.10	155.80		MADE GROUND (Drillers Description)	
									3
									4
									5
									6
									7
									8
									9
					9.60	147.30		Grey MUDSTONE (Drillers Description)	10
									11
									12
									13
									14
									15

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Full Flush returns



ARP Geotechnical
Limited

Rotary Drilling Log

Borehole No. .

RO6

Sheet 2 of 2

Project Name: Mount Vernon Hospital		Project No. SWY/02	Co-ords: 434956.34 - 404783.88	Hole Type RO
Location: Mount Vernon Road, Barnsley		Level: 156.90		Date 14/11/2018
Client: South West Yorkshire Partnership		Plant Used: Sol/mec 400		Scale 1:75
Hole Dia.:	Bit Used:	Flush: Air flush	Rig Crew: GSS Ltd	Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					17.40	139.50		Grey MUDSTONE (Drillers Description)	16
					18.50	138.40		COAL (Drillers Description)	17
									19
									20
									21
									22
									23
									24
									25
									26
									27
									28
									29
					30.00	126.90		End of Borehole at 30.000m	30

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Full Flush returns

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 435018.10 - 404749.93

Hole Type RO

Location: Mount Vernon Road, Barnsley

Level: 154.40

Date 16/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale 1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10	154.30		TARMAC (Drillers Description)	1
								MADE GROUND (Drillers Description)	
					1.40	153.00		Brown SANDSTONE (Drillers Description)	
									3
									4
									5
									6
									7
									8
									9
									10
									11
									12
									13
					13.40	141.00		Grey MUDSTONE (Drillers Description)	14
									15

Groundwater: No groundwater Ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Poor flush recovery from 8m.

Rotary Drilling Log

Borehole No.

RO7

Sheet 2 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 435018.10 - 404749.93

Hole Type RO

Location: Mount Vernon Road, Barnsley

Level: 154.40

Date 16/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmecc 400

Scale 1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
[Pattern]							[Pattern]	Grey MUDSTONE (Drillers Description)	16
					19.60	134.80	[Pattern]	COAL (Drillers Description)	17
					20.60	133.80	[Pattern]	Grey MUDSTONE (Drillers Description)	18
					22.00	132.40	[Pattern]	End of Borehole at 22.000m	19
									20
									21
									22
									23
									24
									25
									26
									27
									28
									29
									30

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Poor flush recovery from 8m.

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 435034.53 - 404788.36

Hole Type RO

Location: Mount Vernon Road, Barnsley

Level: 153.60

Date 16/11/2018

Client: South West Yorkshire Partnership

Plant Used: Sollmec 400

Scale 1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20	153.40		TOPSOIL (Drillers Description)	1
								MADE GROUND (Drillers Description)	
					1.30	152.30		Brown SANDSTONE (Drillers Description)	
								3	
								4	
								5	
								6	
								7	
								8	
								9	
								10	
								11	
								12	
								13	
								14	
					14.70	138.90		Grey MUDSTONE (Drillers Description)	15

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Pull Flush returns

Rotary Drilling Log

Borehole No.:

RO8

Sheet 2 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 435034.53 - 404788.36

Hole Type RO

Location: Mount Vernon Road, Barnsley

Level: 153.60

Date 16/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale 1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rtg Crew: GSS Ltd

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Grey MUDSTONE (Drillers Description)		
					21.30	132.30	COAL (Drillers Description)	16	
					22.30	131.30	Grey MUDSTONE (Drillers Description)	17	
					24.00	129.60	End of Borehole at 24.000m	18	
								19	
								20	
								21	
								22	
								23	
								24	
								25	
								26	
								27	
								28	
								29	
								30	

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Full Flush returns

Rotary Drilling Log

Borehole No.

RO9

Sheet 1 of 2

Project Name: Mount Vernon Hospital

Project No. SWY/02

Co-ords: 435010.82 - 404665.28

Hole Type RO

Location: Mount Vernon Road, Barnsley

Level: 149.80

Date 15/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale 1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.10	149.70	TARMAC (Drillers Description) MADE GROUND (Drillers Description)		1
					5.80	144.00	Brown SANDSTONE (Drillers Description)		6
					9.70	140.10	Grey MUDSTONE (Drillers Description)		10
					13.70	136.10	COAL		14
					14.70	135.10	Grey MUDSTONE (Drillers Description)		15

Groundwater: No groundwater ingress observed.
 Backfill: Backfilled with drilling arisings and bentonite.
 Casing: No casing used
 Remarks: Full Flush returns



ARP Geotechnical
Limited

Rotary Drilling Log

Borehole No:

RO9

Sheet 2 of 2

Project Name: Mount Vernon Hospital

Project No.
SWY/02

Co-ords: 435010.82 - 404665.28

Hole Type
RO

Location: Mount Vernon Road, Barnsley

Level: 149.80

Date
16/11/2018

Client: South West Yorkshire Partnership

Plant Used: Soilmec 400

Scale
1:75

Hole Dia.:

Bit Used:

Flush: Air flush

Rig Crew: GSS Ltd

Logged
Driller

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Grey MUDSTONE (Drillers Description)		
					20.00	129.80			
							End of Borehole at 20.000m		

Groundwater: No groundwater Ingress observed.

Backfill: Backfilled with drilling arisings and bentonite.

Casing: No casing used

Remarks: Full Flush returns

						Site		Borehole Number		
Machine : BERETTA T44			Casing Diameter		Ground Level (mOD)		MOUNT VERNON HOSPITAL, MOUNT VERNON ROAD, BARNSELY, SOUTH YORKSHIRE		R10	
Flush : AIR							Client		Job Number	
Core Dia: NONE mm							ORION HOMES LIMITED			
Method : ROTARY OPEN HOLE			Location		Dates		Engineer		Sheet	
			AS PLAN		14/09/2020		CODA STRUCTURES LIMITED		1/2	
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					Open holling (100mm dia) GL to 30.00m		(0.40) 0.40	MADE GROUND: stone and hardcore fill.		
							(2.10)	Medium strong brown SANDSTONE.		
							2.50	Weak to medium strong greyish brown SANDSTONE.		
							(2.70)			
							5.20	Weak to medium strong grey MUDSTONE/SILTSTONE.		
							(7.80)			
							13.00	COAL (intact).		
							(0.80) 13.80	Grey MUDSTONE.		
							(3.00)			
							16.80	Brownish grey SILTSTONE.		
							(0.80) 17.60	Grey MUDSTONE.		

Remarks Descriptions based upon foreman drillers records of flush returns. Foreman driller recorded no voids or loss of flush returns. On completion backfilled with arlsings and grout.	Scale (approx)	Logged By
	1:100	DS/SJ
	Figure No.	

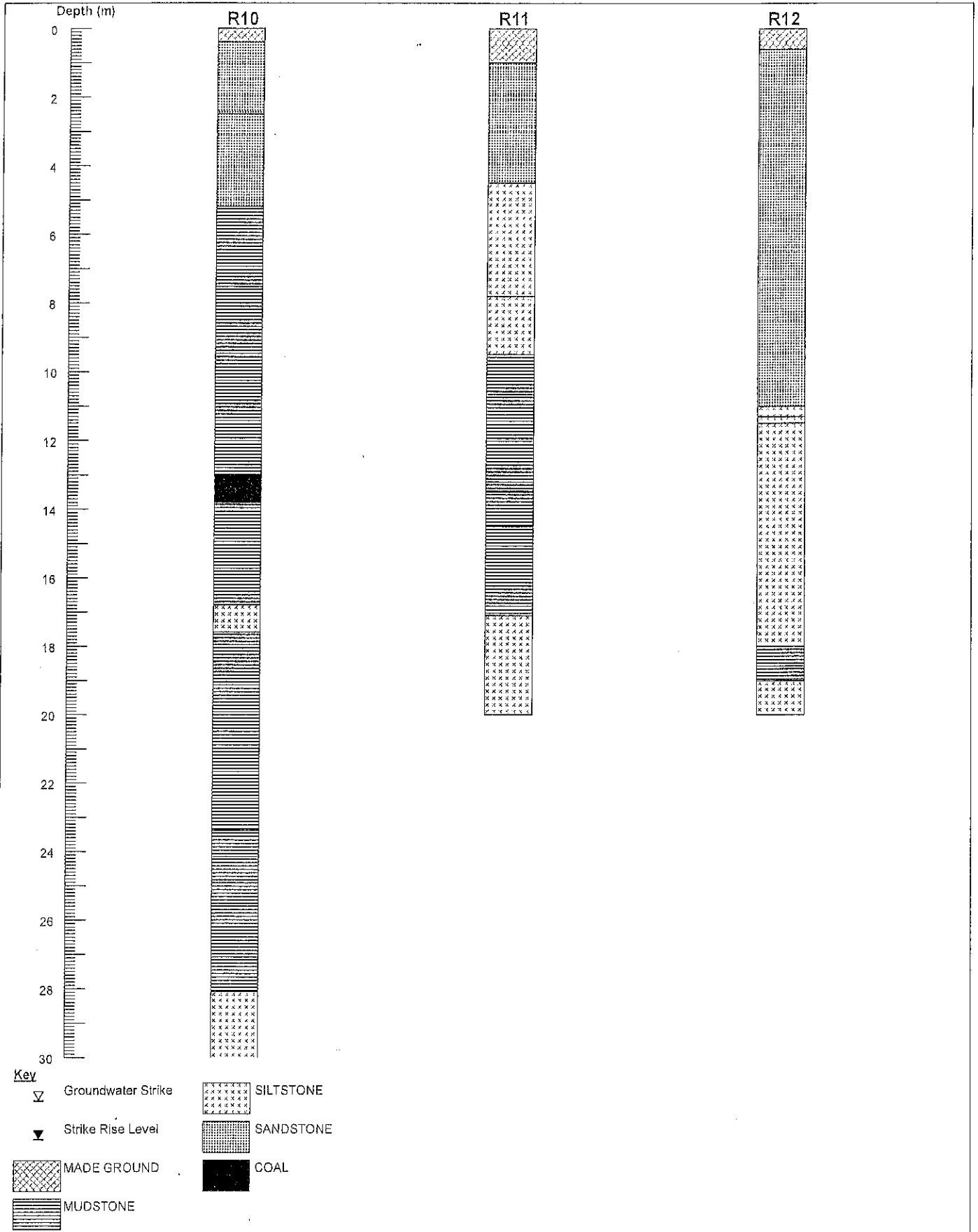
							Site MOUNT VERNON HOSPITAL, MOUNT VERNON ROAD, BARNSELY, SOUTH YORKSHIRE		Borehole Number R10	
Machine : BERETTA T44 Flush : AIR Core Dia: NONE mm Method : ROTARY OPEN HOLE			Casing Diameter			Ground Level (mOD)		Client ORION HOMES LIMITED		Job Number
			Location AS PLAN			Dates 14/09/2020		Engineer CODA STRUCTURES LIMITED		Sheet 2/2
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
							5.80	Grey MUDSTONE.		
							23.40	Dark grey MUDSTONE/SILTSTONE.		
							4.70			
							 at 27.40m : 0.05m lense of coal		
							28.10	Light grey SILTSTONE/MUDSTONE.		
							1.90			
							30.00	Complete at 30.00m		
Remarks									Scale (approx) 1:100	Logged By DS/SJ
									Figure No.	

							Site		Borehole Number		
Machine : BERETTA T44			Casing Diameter			Ground Level (mOD)		Client		Job Number	
Flush : AIR			Location AS PLAN			Dates 14/09/2020		Engineer		Sheet	
Core Dia: NONE mm						CODA STRUCTURES LIMITED		1/1			
Method : ROTARY OPEN HOLE											
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	
					Open boring (100mm dia) GL to 20.00m		(1.00)	MADE GROUND: loose stone hardcore.			
							1.00	Weak to medium strong brownish grey SANDSTONE.			
							(3.50)				
							4.50	Weak brown SILTSTONE.			
							(3.30)				
							7.80	Weak to medium strong greyish brown SILTSTONE/MUDSTONE.			
							(1.70)				
							9.50	Grey MUDSTONE.			
							(4.00)				
							13.50	Dark grey MUDSTONE/COAL.			
						(1.00)					
						14.50	Grey MUDSTONE.				
						(2.60)					
						17.10	Brownish grey SILTSTONE.				
						(2.90)					
						20.00					

Remarks
 Descriptions based upon foreman drillers records of flush returns.
 Foreman driller recorded no voids or loss of flush returns.
 On completion backfilled with arisings and grout.

Scale (approx) 1:100
 Logged By DS/SJ
 Figure No.

						Site MOUNT VERNON HOSPITAL, MOUNT VERNON ROAD, BARNSELY, SOUTH YORKSHIRE		Borehole Number R12		
Machine : BERETTA T44 Flush : AIR Core Dia : NONE mm Method : ROTARY OPEN HOLE			Casing Diameter		Ground Level (mOD)		Client ORION HOMES LIMITED		Job Number	
			Location AS PLAN		Dates 14/09/2020		Engineer CODA STRUCTURES LIMITED		Sheet 1/1	
Depth (m)	TCR (%)	SCR (%)	RQD (%)	FI	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					Open boring (100mm dia) GL to 20.00m		(0.60) 0.60	MADE GROUND: loose stone hardcore. Weak orangish brown SANDSTONE.		
							(10.40) below 7.10m : some clay in sandstone		
							11.00 (0.30)	Weak brown SILTSTONE/MUDSTONE.		
							11.30 11.50	Weak brownish grey SILTSTONE/MUDSTONE. Weak to medium strong grey SILTSTONE/MUDSTONE.		
							(6.50)			
							18.00 (1.00)	Dark grey MUDSTONE.		
							19.00 (1.00)	Grey SILTSTONE/MUDSTONE.		
							20.00			
Remarks Descriptions based upon foreman drillers records of flush returns. Foreman driller recorded no voids or loss of flush returns. On completion backfilled with arisings and grout.									Scale (approx) 1:100	Logged By DS/SJ
									Figure No. R12006	



Nominal Section

Site MOUNT VERNON HOSPITAL, MOUNT VERNON ROAD, BARNSELEY, SOUTH YORKSHIRE	Date Drawn 02/10/2020	Date Checked 05/10/2020	Sheet 1/1	Job Number
	Client ORION HOMES LIMITED	Drawn By SJ	Checked By CAM	Scale 1:150[V]

CoDa Structures

Consulting Civil & Structural Engineers
14 Springfield Court
GUISELEY
LS20 8FD

**PHASE 2 ENGINEERING & ENVIRONMENTAL
ASSESSMENT**

**FOR A RESIDENTIAL DEVELOPMENT AT THE
FORMER MOUNT VERNON HOSPITAL,
MOUNT VERNON ROAD, BARNSELY**

APPENDIX G**ARP & CODA STRUCTURES' CHEMICAL TEST RESULTS**



Final Report

Report No.: 20-20550-1
Initial Date of Issue: 15-Aug-2020
Client: CoDA Structures
Client Address: 14 Springfield Court
Guiseley
Leeds
LS20 8FD
Contact(s): Jon Lawrence
Project: 7861 Mount Vernon Road
Quotation No.: **Date Received:** 06-Aug-2020
Order No.: **Date Instructed:** 06-Aug-2020
No. of Samples: 20
Turnaround (Wkdays): 5 **Results Due:** 12-Aug-2020
Date Approved: 15-Aug-2020

Approved By:

Details: Glynn Harvey, Technical Manager

Results - Soil

Project: 7861 Mount Vernon Road

Client: CoDA Structures	Chemtest Job No.		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550						
	Chemtest Sample ID:	Client Sample Ref:	1043884	TP2	1043885	TP3	1043886	TP4	1043887	TP4	1043888	TP5	1043889	TP8	1043890	TP10	1043891	TP11	1043892				
Order No.:	Client Sample ID:	Client Sample Ref:	354	SOIL	341	SOIL	357	SOIL	358	SOIL	363	SOIL	370	SOIL	377	SOIL	388	SOIL	390				
	Sample Type:	Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL				
	Top Depth (m):	Top Depth (m):	0.35	0.60	0.75	0.60	0.80	0.80	0.80	0.50	1.80	1.60	1.60	1.60	0.25	0.60	0.60	0.60	0.60				
	Asbestos Lab:	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY				
Determinand	Accred	SOP	Units	LOD	Accred	SOP	Units	LOD	Accred	SOP	Units	LOD	Accred	SOP	Units	LOD	Accred	SOP	Units	LOD			
ACM Type	U	2192		N/A	U	2192	%	0.001		U	2192	%	0.001		U	2192	%	0.001		U	2192	%	0.001
Asbestos Identification	U	2192	%	0.001	U	2192	%	0.001		U	2192	%	0.001		U	2192	%	0.001		U	2192	%	0.001
ACM Detection Stage	U	2192		N/A	U	2192		N/A		U	2192		N/A		U	2192		N/A		U	2192		N/A
Moisture	N	2030	%	0.020	N	2030	%	0.020	8.1	N	2030	%	0.020	13	N	2030	%	0.020	6.0	N	2030	%	0.020
pH	U	2010		4.0	U	2010		4.0	[A] 10.3	U	2010		4.0	[A] 8.6	U	2010		4.0	[A] 8.6	U	2010		4.0
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40	U	2120	mg/kg	0.40	0.52	U	2120	mg/kg	0.40	< 0.40	U	2120	mg/kg	0.40	< 0.40	U	2120	mg/kg	0.40
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010	U	2120	g/l	0.010	0.14	U	2120	g/l	0.010	0.014	U	2120	g/l	0.010	< 0.010	U	2120	g/l	0.010
Arsenic	U	2450	mg/kg	1.0	U	2450	mg/kg	1.0	12	U	2450	mg/kg	1.0	6.6	U	2450	mg/kg	1.0	2.6	U	2450	mg/kg	1.0
Cadmium	U	2450	mg/kg	0.10	U	2450	mg/kg	0.10	0.14	U	2450	mg/kg	0.10	< 0.10	U	2450	mg/kg	0.10	< 0.10	U	2450	mg/kg	0.10
Chromium	U	2450	mg/kg	0.50	U	2450	mg/kg	0.50	36	U	2450	mg/kg	0.50	7.7	U	2450	mg/kg	0.50	19	U	2450	mg/kg	0.50
Copper	U	2450	mg/kg	0.50	U	2450	mg/kg	0.50	14	U	2450	mg/kg	0.50	13	U	2450	mg/kg	0.50	17	U	2450	mg/kg	0.50
Mercury	U	2450	mg/kg	0.10	U	2450	mg/kg	0.10	< 0.10	U	2450	mg/kg	0.10	< 0.10	U	2450	mg/kg	0.10	< 0.10	U	2450	mg/kg	0.10
Nickel	U	2450	mg/kg	0.50	U	2450	mg/kg	0.50	20	U	2450	mg/kg	0.50	13	U	2450	mg/kg	0.50	27	U	2450	mg/kg	0.50
Lead	U	2450	mg/kg	0.50	U	2450	mg/kg	0.50	15	U	2450	mg/kg	0.50	18	U	2450	mg/kg	0.50	24	U	2450	mg/kg	0.50
Selenium	U	2450	mg/kg	0.20	U	2450	mg/kg	0.20	< 0.20	U	2450	mg/kg	0.20	0.24	U	2450	mg/kg	0.20	0.60	U	2450	mg/kg	0.20
Zinc	U	2450	mg/kg	0.50	U	2450	mg/kg	0.50	31	U	2450	mg/kg	0.50	26	U	2450	mg/kg	0.50	27	U	2450	mg/kg	0.50
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0	N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0	N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0
Aliphatic TPH >C8-C10	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0	N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0	N	2680	mg/kg	5.0		N	2680	mg/kg	5.0		N	2680	mg/kg	5.0		N	2680	mg/kg	5.0
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0	N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0	N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0		N	2680	mg/kg	1.0
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Aromatic TPH >C35-C44	U	2680	mg/kg	1.0	U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0		U	2680	mg/kg	1.0
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0	N	2680	mg/kg	5.0		N	2680	mg/kg	5.0		N	2680	mg/kg	5.0		N	2680	mg/kg	5.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0	N	2680	mg/kg	10.0		N	2680	mg/kg	10.0		N	2680	mg/kg	10.0		N	2680	mg/kg	10.0
Naphthalene	U	2700	mg/kg	0.10	U	2700	mg/kg	0.10	[A] < 0.10	U	2700	mg/kg	0.10	[A] < 0.10	U	2700	mg/kg	0.10	[A] < 0.10	U	2700	mg/kg	0.10
Acenaphthylene	U	2700	mg/kg	0.10	U	2700	mg/kg	0.10	[A] < 0.10	U	2700	mg/kg	0.10	[A] < 0.10	U	2700	mg/kg	0.10	[A] < 0.10	U	2700	mg/kg	0.10

Results - Soil

Project: 7861 Mount Vernon Road

Client: CoDA Structures	Chemtest Job No.		Chemtest Sample ID:		Client Sample Ref:		Sample Type:		Top Depth (m):		Asbestos Lab:	
	20-20550	1043884	20-20550	1043884	20-20550	TP2	354	SOIL	0.35	COVENTRY	20-20550	1043884
Quotation No.:	Chemtest Job No.		Chemtest Sample ID:		Client Sample Ref:		Sample Type:		Top Depth (m):		Asbestos Lab:	
Order No.:	20-20550	1043884	20-20550	1043884	20-20550	TP2	354	SOIL	0.35	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP3	341	SOIL	0.75	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP4	357	SOIL	0.60	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP4	358	SOIL	0.80	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP5	363	SOIL	0.50	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP5	365	SOIL	1.80	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP8	370	SOIL	1.60	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP10	377	SOIL	0.25	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP11	388	SOIL	0.60	COVENTRY	20-20550	1043884
	20-20550	1043884	20-20550	1043884	20-20550	TP14	390	SOIL	0.60	COVENTRY	20-20550	1043884
Determinand	Accred	SOP	Units	LOD	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550
2-Methylphenol	U	2790	mg/kg	0.50								
Bis(2-Chloroisopropyl)Ether	U	2790	mg/kg	0.50								
Hexachloroethane	N	2790	mg/kg	0.50								
N-Nitrosodi-n-propylamine	U	2790	mg/kg	0.50								
4-Methylphenol	U	2790	mg/kg	0.50								
Nitrobenzene	U	2790	mg/kg	0.50								
Isophorone	U	2790	mg/kg	0.50								
2-Nitrophenol	N	2790	mg/kg	0.50								
2,4-Dimethylphenol	N	2790	mg/kg	0.50								
Bis(2-Chloroethoxy)Methane	U	2790	mg/kg	0.50								
2,4-Dichlorophenol	U	2790	mg/kg	0.50								
1,2,4-Trichlorobenzene	U	2790	mg/kg	0.50								
Naphthalene	U	2790	mg/kg	0.50								
4-Chloroaniline	N	2790	mg/kg	0.50								
Hexachlorobutadiene	U	2790	mg/kg	0.50								
4-Chloro-3-Methylphenol	U	2790	mg/kg	0.50								
2-Methylnaphthalene	U	2790	mg/kg	0.50								
4-Nitrophenol	N	2790	mg/kg	0.50								
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50								
2,4,6-Trichlorophenol	U	2790	mg/kg	0.50								
2,4,5-Trichlorophenol	U	2790	mg/kg	0.50								
2-Chloronaphthalene	U	2790	mg/kg	0.50								
2-Nitroaniline	U	2790	mg/kg	0.50								
Acenaphthylene	U	2790	mg/kg	0.50								
Dimethylphthalate	U	2790	mg/kg	0.50								
2,6-Dinitrotoluene	U	2790	mg/kg	0.50								
Acenaphthene	U	2790	mg/kg	0.50								
3-Nitroaniline	N	2790	mg/kg	0.50								
Dibenzofuran	U	2790	mg/kg	0.50								
4-Chlorophenylphenylether	U	2790	mg/kg	0.50								
2,4-Dinitrotoluene	U	2790	mg/kg	0.50								
Fluorene	U	2790	mg/kg	0.50								
Diethyl Phthalate	U	2790	mg/kg	0.50								
4-Nitroaniline	U	2790	mg/kg	0.50								
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50								
Azobenzene	U	2790	mg/kg	0.50								
4-Bromophenylphenyl Ether	U	2790	mg/kg	0.50								
Hexachlorobenzene	U	2790	mg/kg	0.50								
Pentachlorophenol	N	2790	mg/kg	0.50								

Results - Soil

Project: 7861 Mount Vernon Road

Client: CoDA Structures	Chemtest Job No.:		Chemtest Sample ID.:		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		
	Quotation No.:	Order No.:	Client Sample Ref.:	Client Sample ID.:	TP14	TP16	TP17	TP17	TP17	TP17	TP17	TP17	TP17	TP17	TP17	TP17	TP17	TP17	TP17
Determinand	Accred.	SOP	Units	LOD	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550
ACM Type	U	2192		N/A															
Asbestos Identification	U	2192	%	0.001															
ACM Detection Stage	U	2192		N/A															
Moisture	N	2030	%	0.020															
pH	U	2010		4.0															
Boron (Hot Water Soluble)	U	2120	mg/kg	0.40															
Sulphate (2:1 Water Soluble) as SO4	U	2120	g/l	0.010															
Arsenic	U	2450	mg/kg	1.0															
Cadmium	U	2450	mg/kg	0.10															
Chromium	U	2450	mg/kg	1.0															
Copper	U	2450	mg/kg	0.50															
Mercury	U	2450	mg/kg	0.10															
Nickel	U	2450	mg/kg	0.50															
Lead	U	2450	mg/kg	0.50															
Selenium	U	2450	mg/kg	0.20															
Zinc	U	2450	mg/kg	0.50															
Aliphatic TPH >C5-C6	N	2680	mg/kg	1.0															
Aliphatic TPH >C6-C8	N	2680	mg/kg	1.0															
Aliphatic TPH >C9-C10	U	2680	mg/kg	1.0															
Aliphatic TPH >C10-C12	U	2680	mg/kg	1.0															
Aliphatic TPH >C12-C16	U	2680	mg/kg	1.0															
Aliphatic TPH >C16-C21	U	2680	mg/kg	1.0															
Aliphatic TPH >C21-C35	U	2680	mg/kg	1.0															
Aliphatic TPH >C35-C44	N	2680	mg/kg	1.0															
Total Aliphatic Hydrocarbons	N	2680	mg/kg	5.0															
Aromatic TPH >C5-C7	N	2680	mg/kg	1.0															
Aromatic TPH >C7-C8	N	2680	mg/kg	1.0															
Aromatic TPH >C8-C10	U	2680	mg/kg	1.0															
Aromatic TPH >C10-C12	U	2680	mg/kg	1.0															
Aromatic TPH >C12-C16	U	2680	mg/kg	1.0															
Aromatic TPH >C16-C21	U	2680	mg/kg	1.0															
Aromatic TPH >C21-C35	U	2680	mg/kg	1.0															
Aromatic TPH >C35-C44	N	2680	mg/kg	1.0															
Total Aromatic Hydrocarbons	N	2680	mg/kg	5.0															
Total Petroleum Hydrocarbons	N	2680	mg/kg	10.0															
Naphthalene	U	2700	mg/kg	0.10															
Acenaphthylene	U	2700	mg/kg	0.10															

Results - Soil

Project: 7861 Mount Vernon Road

Client: CoDA Structures	Chemtest Job No.:		Chemtest Sample ID.:		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550			
	Quotation No.:	Order No.:	Client Sample Ref.:	Client Sample ID.:	TP14	TP17	TP16	TP17	TP18	TP22	TP24	TP25	TP25	TP25	TP25	TP25	TP25	TP25	TP25	
			Sample Type:	Sample ID.:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
			Top Depth (m):	Asbestos Lab:	1.70	1.35	0.70	0.60	1.00	0.60	0.70	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	
			COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	20-20550	
Acenaphthene	U	2700	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Fluorene	U	2700	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Phenanthrene	U	2700	mg/kg	0.10	[A] 1.4	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 0.75	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Anthracene	U	2700	mg/kg	0.10	[A] 0.32	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 0.73	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Fluoranthene	U	2700	mg/kg	0.10	[A] 2.7	[A] 0.60	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 7.4	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Pyrene	U	2700	mg/kg	0.10	[A] 2.9	[A] 0.72	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 8.4	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Benzo[a]anthracene	U	2700	mg/kg	0.10	[A] 1.0	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 4.0	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Chrysene	U	2700	mg/kg	0.10	[A] 1.1	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 3.8	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Benzo[b]fluoranthene	U	2700	mg/kg	0.10	[A] 1.1	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 4.7	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Benzo[k]fluoranthene	U	2700	mg/kg	0.10	[A] 0.56	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 1.8	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Benzo[a]pyrene	U	2700	mg/kg	0.10	[A] 1.1	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 4.3	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Indeno[1,2,3-c,d]Pyrene	U	2700	mg/kg	0.10	[A] 0.85	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 2.3	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Dibenz[a,h]Anthracene	U	2700	mg/kg	0.10	[A] 0.27	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 0.61	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Benzo[g,h,i]perylene	U	2700	mg/kg	0.10	[A] 0.71	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 2.6	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	
Total Of 16 PAH's	U	2700	mg/kg	2.0	[A] 14	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] 42	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	
Dichlorodifluoromethane	U	2760	µg/kg	1.0																
Chloromethane	U	2760	µg/kg	1.0																
Vinyl Chloride	U	2760	µg/kg	1.0																
Bromomethane	U	2760	µg/kg	20																
Chloromethane	U	2760	µg/kg	2.0																
Trichlorofluoromethane	U	2760	µg/kg	1.0																
1,1-Dichloroethene	U	2760	mg/kg	1.0																
Trans 1,2-Dichloroethene	U	2760	mg/kg	1.0																
1,1-Dichloroethane	U	2760	µg/kg	1.0																
cis 1,2-Dichloroethene	U	2760	µg/kg	1.0																
Bromochloromethane	U	2760	µg/kg	5.0																
Trichloromethane	U	2760	µg/kg	1.0																
1,1,1-Trichloroethane	U	2760	µg/kg	1.0																
Tetrachloromethane	U	2760	µg/kg	1.0																
1,1-Dichloropropene	U	2760	µg/kg	1.0																
Benzene	U	2760	µg/kg	1.0																
1,2-Dichloroethane	U	2760	µg/kg	2.0																
Trichloroethene	N	2760	µg/kg	1.0																
1,2-Dichloropropane	U	2760	µg/kg	1.0																
Dibromomethane	U	2760	µg/kg	1.0																
Bromodichloromethane	U	2760	µg/kg	5.0																
cis-1,3-Dichloropropene	N	2760	µg/kg	10																
Toluene	U	2760	µg/kg	1.0																
Trans-1,3-Dichloropropene	N	2760	µg/kg	10																

Results - Soil

Project: 7861 Mount Vernon Road

Client: CoDA Structures	Chemtest Job No.		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		
	Quotation No.:	Chemtest Sample ID.:	Client Sample Ref.:	TP14	TP16	TP17	TP18	TP17	TP17	TP18	TP22	TP24	TP25	TP25	TP25	TP25	TP25	TP25	TP26
Order No.:	Client Sample ID.:	Client Sample Ref.:	392	400	404	417	406	406	417	420	431	425	427	425	427	425	427	425	435
	Sample Type:	Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top Depth (m):	Top Depth (m):	1.70	0.70	0.60	1.00	1.35	1.00	1.00	0.60	0.70	0.70	1.00	0.25	1.00	1.00	1.00	0.30	
	Asbestos Lab:	Asbestos Lab:	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	
Determinand	Accred.	SOP	Units	LOD															
1,1,2-Trichloroethane	U	2760	µg/kg	10															
Tetrachloroethane	U	2760	µg/kg	1.0															
1,3-Dichloropropane	U	2760	µg/kg	2.0															
Dibromochloromethane	U	2760	µg/kg	10															
1,2-Dibromoethane	U	2760	µg/kg	5.0															
Chlorobenzene	U	2760	µg/kg	1.0															
1,1,1,2-Tetrachloroethane	U	2760	µg/kg	2.0															
Ethylbenzene	U	2760	µg/kg	1.0															
m & p-Xylene	U	2760	µg/kg	1.0															
o-Xylene	U	2760	µg/kg	1.0															
Styrene	U	2760	µg/kg	1.0															
Tribromomethane	U	2760	µg/kg	1.0															
Isopropylbenzene	U	2760	µg/kg	1.0															
Bromobenzene	U	2760	µg/kg	1.0															
1,2,3-Trichloropropane	N	2760	µg/kg	50															
N-Propylbenzene	U	2760	µg/kg	1.0															
2-Chlorotoluene	U	2760	µg/kg	1.0															
1,3,5-Trimethylbenzene	U	2760	µg/kg	1.0															
4-Chlorotoluene	U	2760	µg/kg	1.0															
tert-Butylbenzene	U	2760	µg/kg	1.0															
1,2,4-Trimethylbenzene	U	2760	µg/kg	1.0															
sec-Butylbenzene	U	2760	µg/kg	1.0															
1,3-Dichlorobenzene	U	2760	µg/kg	1.0															
4-Isopropyltoluene	U	2760	µg/kg	1.0															
1,4-Dichlorobenzene	U	2760	µg/kg	1.0															
N-Butylbenzene	U	2760	µg/kg	1.0															
1,2-Dichlorobenzene	U	2760	µg/kg	1.0															
1,2-Dibromo-3-Chloropropane	U	2760	µg/kg	50															
1,2,4-Trichlorobenzene	U	2760	µg/kg	1.0															
Hexachlorobutadiene	U	2760	µg/kg	1.0															
1,2,3-Trichlorobenzene	U	2760	µg/kg	2.0															
Methyl Tert-Butyl Ether	U	2760	µg/kg	1.0															
N-Nitrosodimethylamine	U	2790	mg/kg	0.50															
Phenol	U	2790	mg/kg	0.50															
2-Chlorophenol	U	2790	mg/kg	0.50															
Bis-(2-Chloroethyl)Ether	U	2790	mg/kg	0.50															
1,3-Dichlorobenzene	U	2790	mg/kg	0.50															
1,4-Dichlorobenzene	N	2790	mg/kg	0.50															
1,2-Dichlorobenzene	U	2790	mg/kg	0.50															

Results - Soil

Project: 7861 Mount Vernon Road

Client: CoDA Structures		Chemtest Job No.:		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550						
Quotation No.:	Chemtest Sample ID.:	Client Sample Ref.:	Client Sample ID.:	Sample Type:	Top Depth (m):	Asbestos Lab:	Accred.	SOP	Units	LOD	1043894	1043895	1043896	1043897	1043898	1043899	1043900	1043901	1043902	20-20550	20-20550	
Order No.:											TP14	TP16	TP17	TP17	TP18	TP22	TP24	TP25	TP25	TP25	TP25	TP26
											392	400	404	406	417	420	431	425	427	425	427	435
											SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
											1.70	0.70	0.60	1.35	1.00	0.60	0.70	0.25	1.00	0.25	1.00	0.30
											COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD																		
2-Methylphenol	U	2790	mg/kg	0.50																		
Bis(2-Chloroisopropyl)Ether	U	2790	mg/kg	0.50																		
Hexachloroethane	N	2790	mg/kg	0.50																		
N-Nitrosodi-n-propylamine	U	2790	mg/kg	0.50																		
4-Methylphenol	U	2790	mg/kg	0.50																		
Nitrobenzene	U	2790	mg/kg	0.50																		
Isophorone	U	2790	mg/kg	0.50																		
2-Nitrophenol	N	2790	mg/kg	0.50																		
2,4-Dimethylphenol	N	2790	mg/kg	0.50																		
Bis(2-Chloroethoxy)Methane	U	2790	mg/kg	0.50																		
2,4-Dichlorophenol	U	2790	mg/kg	0.50																		
1,2,4-Trichlorobenzene	U	2790	mg/kg	0.50																		
Naphthalene	U	2790	mg/kg	0.50																		
4-Chloroaniline	N	2790	mg/kg	0.50																		
Hexachlorobutadiene	U	2790	mg/kg	0.50																		
4-Chloro-3-Methylphenol	U	2790	mg/kg	0.50																		
2-Methylnaphthalene	U	2790	mg/kg	0.50																		
4-Nitrophenol	N	2790	mg/kg	0.50																		
Hexachlorocyclopentadiene	N	2790	mg/kg	0.50																		
2,4,6-Trichlorophenol	U	2790	mg/kg	0.50																		
2,4,5-Trichlorophenol	U	2790	mg/kg	0.50																		
2-Chloronaphthalene	U	2790	mg/kg	0.50																		
2-Nitroaniline	U	2790	mg/kg	0.50																		
Acenaphthylene	U	2790	mg/kg	0.50																		
Dimethylphthalate	U	2790	mg/kg	0.50																		
2,6-Dinitrotoluene	U	2790	mg/kg	0.50																		
Acenaphthene	U	2790	mg/kg	0.50																		
3-Nitroaniline	N	2790	mg/kg	0.50																		
Dibenzofuran	U	2790	mg/kg	0.50																		
4-Chlorophenylphenylether	U	2790	mg/kg	0.50																		
2,4-Dinitrotoluene	U	2790	mg/kg	0.50																		
Fluorene	U	2790	mg/kg	0.50																		
Diethyl Phthalate	U	2790	mg/kg	0.50																		
4-Nitroaniline	U	2790	mg/kg	0.50																		
2-Methyl-4,6-Dinitrophenol	N	2790	mg/kg	0.50																		
Azobenzene	U	2790	mg/kg	0.50																		
4-Bromophenylphenyl Ether	U	2790	mg/kg	0.50																		
Hexachlorobenzene	U	2790	mg/kg	0.50																		
Pentachlorophenol	N	2790	mg/kg	0.50																		

Results - Soil

Project: 7861 Mount Vernon Road

Client: CoDA Structures	Chemtest Job No.:		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		20-20550		
	Quotation No.:	Chemtest Sample ID.:	1043894	TP14	1043895	TP16	1043896	TP17	1043897	TP17	1043898	TP18	1043899	TP22	1043900	TP24	1043901	TP25	1043902	TP25	1043903
Order No.:	Client Sample Ref.:	392	SOIL	400	SOIL	404	SOIL	406	SOIL	417	SOIL	420	SOIL	431	SOIL	425	SOIL	427	SOIL	435	SOIL
	Client Sample ID.:	1.70	SOIL	0.70	SOIL	0.60	SOIL	1.35	SOIL	1.00	SOIL	0.60	SOIL	0.70	SOIL	0.25	SOIL	1.00	SOIL	0.30	SOIL
	Sample Type:	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
	Top Depth (m):																				
	Asbestos Lab:																				
Determinand	Accred	SOP	Units	LOD																	
Phenanthrene	U	2790	mg/kg	0.50																	
Anthracene	U	2790	mg/kg	0.50																	
Carbazole	U	2790	mg/kg	0.50																	
Di-N-Butyl Phthalate	U	2790	mg/kg	0.50																	
Fluoranthene	U	2790	mg/kg	0.50																	
Pyrene	U	2790	mg/kg	0.50																	
Butylbenzyl Phthalate	U	2790	mg/kg	0.50																	
Benzofluoranthene	U	2790	mg/kg	0.50																	
Chrysene	U	2790	mg/kg	0.50																	
Bis(2-Ethylhexyl)Phthalate	N	2790	mg/kg	0.50																	
Di-N-Octyl Phthalate	U	2790	mg/kg	0.50																	
Benzofluoranthene	U	2790	mg/kg	0.50																	
Benzofluoranthene	U	2790	mg/kg	0.50																	
Benzofluoranthene	U	2790	mg/kg	0.50																	
Indeno(1,2,3-c,d)Pyrene	U	2790	mg/kg	0.50																	
Dibenz(a,h)Anthracene	U	2790	mg/kg	0.50																	
Benzofluoranthene	U	2790	mg/kg	0.50																	

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63, Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1043884	TP2	354			A	Plastic Tub 500g
1043885	TP3	341			A	Plastic Tub 500g
1043886	TP4	357			A	Plastic Tub 500g
1043887	TP4	358			A	Plastic Tub 500g
1043888	TP5	363			A	Plastic Tub 500g
1043889	TP5	365			A	Plastic Tub 500g
1043890	TP8	370			A	Amber Glass 250ml
1043891	TP10	377			A	Plastic Tub 500g
1043892	TP11	388			A	Plastic Tub 500g
1043893	TP14	390			A	Plastic Tub 500g
1043894	TP14	392			A	Plastic Tub 500g
1043895	TP16	400			A	Plastic Tub 500g
1043896	TP17	404			A	Plastic Tub 500g
1043897	TP17	406			A	Plastic Tub 500g
1043898	TP18	417			A	Plastic Tub 500g
1043899	TP22	420			A	Plastic Tub 500g
1043900	TP24	431			A	Plastic Tub 500g
1043901	TP25	425			A	Plastic Tub 500g
1043902	TP25	427			A	Plastic Tub 500g
1043903	TP26	435			A	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2680	TPH A/A Split	Aliphatics: >C5-C8, >C6-C8,>C8-C10, >C10-C12, >C12-C16, >C16-C21, >C21-C35, >C35- C44Aromatics: >C5-C7, >C7-C8, >C8- C10, >C10-C12, >C12-C16, >C16- C21, >C21- C35, >C35- C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS

Report Information

Key

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

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

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

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

All Asbestos testing is performed at the indicated laboratory

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

Sample Deviation Codes

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

Sample Retention and Disposal

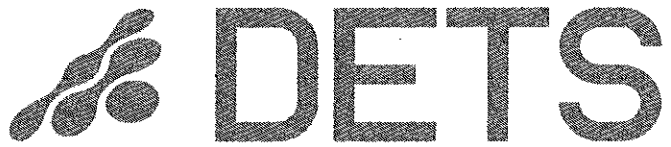
All soil samples will be retained for a period of 45 days from the date of receipt

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

Charges may apply to extended sample storage

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

customerservices@chemtest.com



Certificate of Analysis

Certificate Number 17-16278

28-Nov-17

Client ARP Geotechnical
5/6 Northwest Business Park
Servia Hill
Leeds
LS6 2QH

Our Reference 17-16278

Client Reference SWY/02

Order No (not supplied)

Contract Title Mount Vernon Hospital

Description 29 Soil samples.

Date Received 21-Nov-17

Date Started 21-Nov-17

Date Completed 28-Nov-17

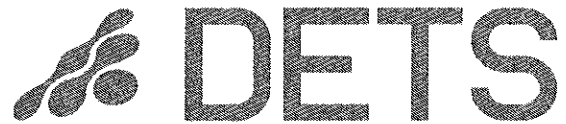
Test Procedures Identified by prefix DETSn (details on request).

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

Approved By

Adam Fenwick
Contracts Manager





Summary of Chemical Analysis

Soil Samples

Our Ref 17-16278

Client Ref SWY/02

Contract Title Mount Vernon Hospital

Lab No	1261596	1261597	1261598	1261599	1261600	1261601
Sample ID	WS1	WS1	WS2	WS2	WS3	WS3
Depth	0.10-0.30	0.50-0.70	0.00-0.20	1.00-1.20	0.00-0.20	0.50-0.70
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	15/11/17	15/11/17	15/11/17	15/11/17	15/11/17	15/11/17
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETS 2301#	0.2	mg/kg	12	10	15	12	8.6	
Cadmium	DETS 2301#	0.1	mg/kg	0.3	0.2	0.2	0.2	0.2	
Chromium III	DETS 2301*	0.15	mg/kg	19	9.8	19	8.0	9.2	
Chromium, Hexavalent	DETS 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Copper	DETS 2301#	0.2	mg/kg	39	36	36	25	24	
Lead	DETS 2301#	0.3	mg/kg	57	58	55	59	48	
Mercury	DETS 2325#	0.05	mg/kg	0.12	0.09	0.12	0.15	0.08	
Nickel	DETS 2301#	1	mg/kg	16	11	17	10	10	
Selenium	DETS 2301#	0.5	mg/kg	< 0.5	< 0.5	0.8	0.6	< 0.5	
Zinc	DETS 2301#	1	mg/kg	88	68	91	76	58	
Inorganics									
pH	DETS 2008#			8.2	8.0	7.1	7.7	6.9	7.5
Organic matter	DETS 2002#	0.1	%	4.9	2.3	7.4	3.3	4.5	
Sulphate Aqueous Extract as SO4	DETS 2076#	10	mg/l	14	< 10	25	56	15	< 10
Sulphate as SO4, Total	DETS 2321#	0.01	%	0.05	0.03	0.09	0.06	0.06	< 0.01
Petroleum Hydrocarbons									
EPH (C10-C40)	DETS 3311#	10	mg/kg	47	26	< 10	22	< 10	
PAHs									
Naphthalene	DETS 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthylene	DETS 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Acenaphthene	DETS 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Fluorene	DETS 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Phenanthrene	DETS 3301	0.1	mg/kg	0.9	0.2	0.3	0.6	< 0.1	
Anthracene	DETS 3301	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1	< 0.1	
Fluoranthene	DETS 3301	0.1	mg/kg	1.8	0.5	0.5	0.9	0.1	
Pyrene	DETS 3301	0.1	mg/kg	1.8	0.5	0.6	0.9	0.1	
Benzo(a)anthracene	DETS 3301	0.1	mg/kg	0.9	0.2	0.2	0.4	< 0.1	
Chrysene	DETS 3301	0.1	mg/kg	1.0	0.2	0.3	0.4	< 0.1	
Benzo(b)fluoranthene	DETS 3301	0.1	mg/kg	0.7	0.2	0.2	0.3	< 0.1	
Benzo(k)fluoranthene	DETS 3301	0.1	mg/kg	0.5	0.2	0.2	0.2	< 0.1	
Benzo(a)pyrene	DETS 3301	0.1	mg/kg	1.0	0.3	0.4	0.5	< 0.1	
Indeno(1,2,3-c,d)pyrene	DETS 3301	0.1	mg/kg	0.6	0.2	< 0.1	0.4	< 0.1	
Dibenzo(a,h)anthracene	DETS 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
Benzo(g,h,i)perylene	DETS 3301	0.1	mg/kg	0.6	0.1	< 0.1	0.2	< 0.1	
PAH Total	DETS 3301	1.6	mg/kg	10	2.6	2.9	4.9	< 1.6	
Phenols									
Phenol - Monohydric	DETS 2130#	0.3	mg/kg	< 0.3	< 0.3	0.3	< 0.3	< 0.3	



Summary of Chemical Analysis

Soil Samples

Our Ref 17-16278

Client Ref SWY/02

Contract Title Mount Vernon Hospital

Lab No	1261602	1261603	1261604	1261605	1261606	1261607
Sample ID	WS4	WS4	WS5	WS6	WS7	WS8
Depth	0.10-0.30	0.50-0.70	0.10-0.30	0.00-0.20	0.20-0.40	0.10-0.30
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	15/11/17	15/11/17	15/11/17	15/11/17	15/11/17	16/11/17
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1261602	1261603	1261604	1261605	1261606	1261607
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	13	6.0	19	11	13	13
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.3	0.2	0.2	0.2
Chromium III	DETSC 2301*	0.15	mg/kg	13	5.1	14	9.0	12	11
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	27	12	59	21	28	25
Lead	DETSC 2301#	0.3	mg/kg	47	17	74	46	50	54
Mercury	DETSC 2325#	0.05	mg/kg	0.08	< 0.05	0.15	0.08	0.07	0.15
Nickel	DETSC 2301#	1	mg/kg	14	6.9	16	12	13	12
Selenium	DETSC 2301#	0.5	mg/kg	0.8	< 0.5	0.8	< 0.5	0.6	0.7
Zinc	DETSC 2301#	1	mg/kg	75	26	210	53	87	65
Inorganics									
pH	DETSC 2008#			7.2	8.7	7.0	6.6	7.0	7.8
Organic matter	DETSC 2002#	0.1	%	4.1	0.4	5.9	3.5	5.5	5.3
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	11	< 10	12	< 10	12	17
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.05	0.03	0.05	0.04	0.28	0.08
Petroleum Hydrocarbons									
EPH (C10-C40)	DETSC 3311#	10	mg/kg	30	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.3	< 0.1	0.3	0.1	0.3	0.3
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	1.0	0.2	0.6	0.3	0.7	0.9
Pyrene	DETSC 3301	0.1	mg/kg	1.0	0.2	0.6	0.3	0.7	0.9
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.6	< 0.1	0.3	0.1	0.4	0.4
Chrysene	DETSC 3301	0.1	mg/kg	0.6	< 0.1	0.3	< 0.1	0.4	0.3
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.6	< 0.1	0.2	0.1	0.3	0.3
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.4	< 0.1	0.2	0.1	0.2	0.2
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.8	< 0.1	0.3	0.7	0.7	0.9
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	0.4	< 0.1	0.2	0.2	< 0.1	0.4
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.3	< 0.1	0.2	0.1	< 0.1	0.2
PAH Total	DETSC 3301	1.6	mg/kg	6.0	< 1.6	3.2	2.1	3.9	5.0
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.6	0.5	0.9	< 0.3	0.4	0.4



Summary of Chemical Analysis

Soil Samples

Our Ref 17-16278

Client Ref SWY/02

Contract Title Mount Vernon Hospital

Lab No	1261608	1261609	1261610	1261611	1261612	1261613
Sample ID	WS9	WS9	WS10	WS11	WS12	WS13
Depth	0.00-0.20	0.60-0.80	0.10-0.30	0.00-0.20	0.50-0.70	0.30-0.50
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	16/11/17	16/11/17	16/11/17	16/11/17	16/11/17	16/11/17
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	14		14	15	6.7	2.9
Cadmium	DETSC 2301#	0.1	mg/kg	0.3		0.6	0.3	0.3	< 0.1
Chromium III	DETSC 2301*	0.15	mg/kg	16		12	10	15	4.1
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	29		23	28	20	8.3
Lead	DETSC 2301#	0.3	mg/kg	64		71	120	110	7.8
Mercury	DETSC 2325#	0.05	mg/kg	0.18		0.15	0.18	0.16	< 0.05
Nickel	DETSC 2301#	1	mg/kg	13		9.9	12	6.2	7.8
Selenium	DETSC 2301#	0.5	mg/kg	0.7		< 0.5	0.9	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	71		150	52	48	18
Inorganics									
pH	DETSC 2008#			8.0	8.1	8.0	6.9	10.1	8.7
Organic matter	DETSC 2002#	0.1	%	5.9		4.1	4.5	1.9	0.1
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	24	< 10	11	15	29	< 10
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.08	0.02	0.06	0.06	0.06	0.01
Petroleum Hydrocarbons									
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10		140	51	25	< 10
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1		< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1		0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1		0.2	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	0.2		1.9	0.3	0.6	0.2
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1		0.6	0.1	0.2	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	0.6		3.2	1.2	1.6	0.5
Pyrene	DETSC 3301	0.1	mg/kg	0.6		2.9	1.4	1.5	0.6
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	0.3		1.5	0.6	0.8	1.5
Chrysene	DETSC 3301	0.1	mg/kg	0.3		1.2	0.4	0.7	0.3
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	0.2		0.9	0.5	0.5	0.3
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	0.2		0.6	0.3	0.4	0.2
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	0.6		1.5	1.0	0.8	0.5
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	0.3		0.7	0.5	0.6	0.3
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1		0.3	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	0.2		0.8	0.4	0.5	0.2
PAH Total	DETSC 3301	1.6	mg/kg	3.6		16	6.8	8.4	4.7
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.4		0.4	0.3	< 0.3	< 0.3



Summary of Chemical Analysis

Soil Samples

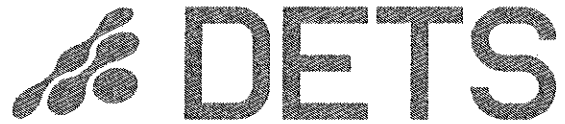
Our Ref 17-16278

Client Ref SWY/02

Contract Title Mount Vernon Hospital

Lab No	1261614	1261615	1261616	1261617	1261618	1261619
Sample ID	WS13	WS15	WS15	WS16	WS16	WS17
Depth	0.70-0.90	0.10-0.30	0.90-1.10	0.10-0.30	0.60-0.80	0.30-0.50
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	16/11/17	16/11/17	16/11/17	16/11/17	16/11/17	16/11/17
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg		15	22	19	19	1.5
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	0.3	0.3	0.2	0.8
Chromium III	DETSC 2301*	0.15	mg/kg		11	13	9.7	8.5	110
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		26	40	30	34	12
Lead	DETSC 2301#	0.3	mg/kg		99	380	93	170	7.6
Mercury	DETSC 2325#	0.05	mg/kg		0.15	0.25	0.21	0.70	< 0.05
Nickel	DETSC 2301#	1	mg/kg		10	14	11	12	2.2
Selenium	DETSC 2301#	0.5	mg/kg		0.5	< 0.5	0.6	< 0.5	0.8
Zinc	DETSC 2301#	1	mg/kg		57	140	62	73	39
Inorganics									
pH	DETSC 2008#			9.4	7.3	8.3	7.4	8.0	11.1
Organic matter	DETSC 2002#	0.1	%		4.8	3.9	4.3	5.1	3.1
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	11	< 10	19	14	35	160
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.06	0.11	0.06	0.07	0.32
Petroleum Hydrocarbons									
EPH (C10-C40)	DETSC 3311#	10	mg/kg		67	37	29	14	2900
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	< 0.5
Acenaphthylene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	1.1
Acenaphthene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	1.4
Fluorene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	2.5
Phenanthrene	DETSC 3301	0.1	mg/kg		0.6	0.4	0.2	0.4	20
Anthracene	DETSC 3301	0.1	mg/kg		0.2	0.1	< 0.1	0.1	4.9
Fluoranthene	DETSC 3301	0.1	mg/kg		2.0	1.2	0.6	1.2	120
Pyrene	DETSC 3301	0.1	mg/kg		2.1	1.3	0.7	1.2	130
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		1.8	0.8	0.3	0.6	74
Chrysene	DETSC 3301	0.1	mg/kg		1.0	0.6	0.3	0.6	69
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		0.7	0.5	0.3	0.4	57
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		0.4	0.3	< 0.1	0.3	40
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		1.5	0.8	0.4	0.8	80
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		0.6	0.5	< 0.1	0.5	53
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		0.3	< 0.1	< 0.1	< 0.1	8.7
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		0.6	0.5	< 0.1	0.4	46
PAH Total	DETSC 3301	1.6	mg/kg		12	7.2	2.8	6.5	710
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3	< 0.3	< 0.3	< 0.3	< 0.3



Summary of Chemical Analysis

Soil Samples

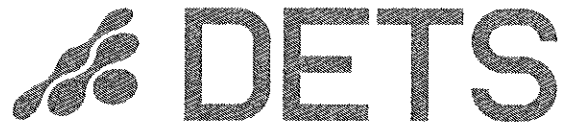
Our Ref 17-16278

Client Ref SWY/02

Contract Title Mount Vernon Hospital

Lab No	1261620	1261621	1261622	1261623	1261624
Sample ID	WS17	HS1	HS2	HS3	HS4
Depth	0.90-1.10	0.20	0.20	0.20	0.10-0.30
Other ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	16/11/17	16/11/17	16/11/17	16/11/17	16/11/17
Sampling Time	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg		8.7	7.0	8.3	15
Cadmium	DETSC 2301#	0.1	mg/kg		0.3	0.2	0.3	< 0.1
Chromium III	DETSC 2301*	0.15	mg/kg		6.1	6.8	12	23
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		18	16	22	52
Lead	DETSC 2301#	0.3	mg/kg		120	23	50	43
Mercury	DETSC 2325#	0.05	mg/kg		0.12	< 0.05	0.10	0.16
Nickel	DETSC 2301#	1	mg/kg		6.4	9.2	7.6	36
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg		61	35	64	38
Inorganics								
pH	DETSC 2008#			9.7	7.8	8.4	7.4	7.8
Organic matter	DETSC 2002#	0.1	%		10	4.1	8.2	6.6
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	44	48	16	28	82
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.13	0.06	0.11	0.22
Petroleum Hydrocarbons								
EPH (C10-C40)	DETSC 3311#	10	mg/kg		120	55	140	< 10
PAHs								
Naphthalene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	DETSC 3301	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg		0.5	0.2	0.3	0.1
Anthracene	DETSC 3301	0.1	mg/kg		0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg		1.1	0.3	1.1	0.3
Pyrene	DETSC 3301	0.1	mg/kg		1.3	0.3	1.2	0.4
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		0.6	0.1	0.6	0.1
Chrysene	DETSC 3301	0.1	mg/kg		0.4	0.1	0.5	0.2
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		1.5	< 0.1	0.4	0.2
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		0.4	< 0.1	0.3	0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		1.1	0.2	1.0	0.3
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		0.4	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		0.4	< 0.1	< 0.1	< 0.1
PAH Total	DETSC 3301	1.6	mg/kg		8.0	< 1.6	5.4	1.7
Phenols								
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		< 0.3	< 0.3	< 0.3	< 0.3



Summary of Asbestos Analysis

Soil Samples

Our Ref 17-16278

Client Ref SWY/02

Contract Title Mount Vernon Hospital

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1261596	WS1 0.10-0.30	SOIL	NAD	none	Steven Lambert
1261597	WS1 0.50-0.70	SOIL	NAD	none	Steven Lambert
1261598	WS2 0.00-0.20	SOIL	NAD	none	Steven Lambert
1261599	WS2 1.00-1.20	SOIL	NAD	none	Steven Lambert
1261600	WS3 0.00-0.20	SOIL	NAD	none	Steven Lambert
1261602	WS4 0.10-0.30	SOIL	NAD	none	Steven Lambert
1261603	WS4 0.50-0.70	SOIL	NAD	none	Steven Lambert
1261604	WS5 0.10-0.30	SOIL	NAD	none	Steven Lambert
1261605	WS6 0.00-0.20	SOIL	NAD	none	Steven Lambert
1261606	WS7 0.20-0.40	SOIL	NAD	none	Steven Lambert
1261607	WS8 0.10-0.30	SOIL	NAD	none	Steven Lambert
1261608	WS9 0.00-0.20	SOIL	NAD	none	Steven Lambert
1261610	WS10 0.10-0.30	SOIL	NAD	none	Steven Lambert
1261611	WS11 0.00-0.20	SOIL	NAD	none	Steven Lambert
1261612	WS12 0.50-0.70	SOIL	NAD	none	Steven Lambert
1261613	WS13 0.30-0.50	SOIL	NAD	none	Steven Lambert
1261615	WS15 0.10-0.30	SOIL	NAD	none	Steven Lambert
1261616	WS15 0.90-1.10	SOIL	NAD	none	Steven Lambert
1261617	WS16 0.10-0.30	SOIL	NAD	none	Steven Lambert
1261618	WS16 0.60-0.80	SOIL	NAD	none	Steven Lambert
1261619	WS17 0.30-0.50	SOIL	NAD	none	Steven Lambert
1261621	HS1 0.20	SOIL	NAD	none	Steven Lambert
1261622	HS2 0.20	SOIL	NAD	none	Steven Lambert
1261623	HS3 0.20	SOIL	NAD	none	Steven Lambert
1261624	HS4 0.10-0.30	SOIL	NAD	none	Steven Lambert

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1.101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 17-16278
 Client Ref SWY/02
 Contract Mount Vernon Hospital

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1261596	WS1 0.10-0.30 SOIL	15/11/17	GJ 60ml, PG		
1261597	WS1 0.50-0.70 SOIL	15/11/17	GJ 60ml, PG		
1261598	WS2 0.00-0.20 SOIL	15/11/17	GJ 60ml, PG		
1261599	WS2 1.00-1.20 SOIL	15/11/17	GJ 60ml, PG		
1261600	WS3 0.00-0.20 SOIL	15/11/17	GJ 60ml, PG		
1261601	WS3 0.50-0.70 SOIL	15/11/17	GJ 60ml, PG		
1261602	WS4 0.10-0.30 SOIL	15/11/17	GJ 60ml, PG		
1261603	WS4 0.50-0.70 SOIL	15/11/17	GJ 60ml, PG		
1261604	WS5 0.10-0.30 SOIL	15/11/17	GJ 60ml, PG		
1261605	WS6 0.00-0.20 SOIL	15/11/17	GJ 60ml, PG		
1261606	WS7 0.20-0.40 SOIL	15/11/17	GJ 60ml, PG		
1261607	WS8 0.10-0.30 SOIL	16/11/17	GJ 60ml, PG		
1261608	WS9 0.00-0.20 SOIL	16/11/17	GJ 60ml, PG		
1261609	WS9 0.60-0.80 SOIL	16/11/17	GJ 60ml, PG		
1261610	WS10 0.10-0.30 SOIL	16/11/17	GJ 60ml, PG		
1261611	WS11 0.00-0.20 SOIL	16/11/17	GJ 60ml, PG		
1261612	WS12 0.50-0.70 SOIL	16/11/17	GJ 60ml, PG		
1261613	WS13 0.30-0.50 SOIL	16/11/17	GJ 60ml, PG		
1261614	WS13 0.70-0.90 SOIL	16/11/17	GJ 60ml, PG		
1261615	WS15 0.10-0.30 SOIL	16/11/17	GJ 60ml, PG		
1261616	WS15 0.90-1.10 SOIL	16/11/17	GJ 60ml, PG		
1261617	WS16 0.10-0.30 SOIL	16/11/17	GJ 60ml, PG		
1261618	WS16 0.60-0.80 SOIL	16/11/17	GJ 60ml, PG		
1261619	WS17 0.30-0.50 SOIL	16/11/17	GJ 60ml, PG		
1261620	WS17 0.90-1.10 SOIL	16/11/17	GJ 60ml, PG		
1261621	HS1 0.20 SOIL	16/11/17	GJ 60ml, PG		
1261622	HS2 0.20 SOIL	16/11/17	GJ 60ml, PG		
1261623	HS3 0.20 SOIL	16/11/17	GJ 60ml, PG		
1261624	HS4 0.10-0.30 SOIL	16/11/17	GJ 60ml, PG		

Key: G-Glass P-Plastic J-Jar G-Bag

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

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

CoDa Structures

Consulting Civil & Structural Engineers
14 Springfield Court
GUISELEY
LS20 8FD

**PHASE 2 ENGINEERING & ENVIRONMENTAL
ASSESSMENT**

**FOR A RESIDENTIAL DEVELOPMENT AT THE
FORMER MOUNT VERNON HOSPITAL,
MOUNT VERNON ROAD, BARNSELY**

APPENDIX H

**CONTAMINATION ASSESSMENT CRITERIA FOR
RESIDENTIAL USE WITH HOME GROWN PRODUCE**

	Units	Residential Use With Homegrown Produce	Derivation Tool
ORGANICS			
Sum of PCDDs, PCDFs, (eg PCBs)	mg/kg	8	EA 2009
Phenol	mg/kg	280	LQM/CIEH S4UL's
Chlorophenols	mg/kg	0.87	LQM/CIEH S4UL's
Pentachlorophenols	mg/kg	0.22	LQM/CIEH S4UL's
PAHs I&II EPA			
Acenaphthene	mg/kg	210	LQM/CIEH S4UL's
Acenaphthylene	mg/kg	170	LQM/CIEH S4UL's
Anthracene	mg/kg	2400	LQM/CIEH S4UL's
Benzo (a) Anthracene	mg/kg	7.2	LQM/CIEH S4UL's
Benzo (a) pyrene	mg/kg	5.0	SP1010: Development of C4SL's for Assessment of Land Affected by Contamination
Benzo (b) fluoranthene	mg/kg	2.6	LQM/CIEH S4UL's
Benzo (k) fluoranthene	mg/kg	77	LQM/CIEH S4UL's
Benzo (g, h, i) perylene	mg/kg	320	LQM/CIEH S4UL's
Chrysene	mg/kg	15	LQM/CIEH S4UL's
Di-benzo (a, h) anthracene	mg/kg	0.24	LQM/CIEH S4UL's
Indeno (1, 2, 3-cd) pyrene	mg/kg	27	LQM/CIEH S4UL's
Fluoranthene	mg/kg	280	LQM/CIEH S4UL's
Fluorene	mg/kg	170	LQM/CIEH S4UL's
Naphthalene	mg/kg	2.3	LQM/CIEH S4UL's
Phenanthrene	mg/kg	95	LQM/CIEH S4UL's
Pyrene	mg/kg	620	LQM/CIEH S4UL's
Total PAHs	mg/kg	no sum	
VOCs			
1,1,1 Trichloroethane	mg/kg	8.8	LQM/CIEH S4UL's
Vinyl Chloride	mg/kg	0.00064	LQM/CIEH S4UL's
1,2 Dichloroethane	mg/kg	0.0071	LQM/CIEH S4UL's
Tetrachloroethene	mg/kg	1.2	LQM/CIEH S4UL's
Chlorobenzene	mg/kg	0.46	LQM/CIEH S4UL's
1,2 Dichlorobenzene	mg/kg	23	LQM/CIEH S4UL's
1,3 Dichlorobenzene	mg/kg	0.4	LQM/CIEH S4UL's
1,4 Dichlorobenzene	mg/kg	61	LQM/CIEH S4UL's
1,2,3 Trichlorobenzene	mg/kg	1.5	LQM/CIEH S4UL's
1,2,4 Trichlorobenzene	mg/kg	2.6	LQM/CIEH S4UL's
1,3,5 Trichlorobenzene	mg/kg	0.33	LQM/CIEH S4UL's
1,2,3,4 Tetrachlorobenzene	mg/kg	15	LQM/CIEH S4UL's
1,2,3,5 Tetrachlorobenzene	mg/kg	0.66	LQM/CIEH S4UL's
1,2,4,5 Tetrachlorobenzene	mg/kg	0.33	LQM/CIEH S4UL's
Pentachlorobenzene	mg/kg	5.8	LQM/CIEH S4UL's
Hexachlorobenzene	mg/kg	1.8	LQM/CIEH S4UL's
Trichloroethene	mg/kg	0.016	LQM/CIEH S4UL's
Trichloromethane	mg/kg	0.91	LQM/CIEH S4UL's
GENERAL INORGANICS			
Easily Liberatable Cyanide (free)	mg/kg	38	Acute effects infant 1 dose 3g soil
Thiocyanate	mg/kg	50	Former ICRC Threshold Trigger Value
HEAVY METAL/METALLOIDS			
Arsenic	mg/kg	37	SP1010: Development of C4SL's for Assessment of Land Affected by Contamination
Cadmium	mg/kg	22	SP1010: Development of C4SL's for Assessment of Land Affected by Contamination
Chromium (III)	mg/kg	910	LQM/CIEH S4UL's
Chromium (VI)	mg/kg	21	SP1010: Development of C4SL's for Assessment of Land Affected by Contamination
Lead	mg/kg	200	SP1010: Development of C4SL's for Assessment of Land Affected by Contamination
Mercury (inorganic)	mg/kg	40	LQM/CIEH S4UL's
Nickel	mg/kg	180	LQM/CIEH S4UL's
Selenium	mg/kg	250	LQM/CIEH S4UL's
Boron	mg/kg	290	LQM/CIEH S4UL's
Copper	mg/kg	2400	LQM/CIEH S4UL's
Zinc	mg/kg	3700	LQM/CIEH S4UL's
Beryllium	mg/kg	1.7	LQM/CIEH S4UL's
Vanadium	mg/kg	410	LQM/CIEH S4UL's
MONOCAROMATICS			
Benzene	mg/kg	0.87	SP1010: Development of C4SL's for Assessment of Land Affected by Contamination
Toluene	mg/kg	130	LQM/CIEH S4UL's
Ethylbenzene	mg/kg	47	LQM/CIEH S4UL's
o - Xylene	mg/kg	60	LQM/CIEH S4UL's
m - Xylene	mg/kg	89	LQM/CIEH S4UL's
p - Xylene	mg/kg	56	LQM/CIEH S4UL's
ALIPHATIC HYDROCARBONS			
TPH Aliphatic>EC5-8	mg/kg	42	LQM/CIEH S4UL's
TPH Aliphatic>EC6-8	mg/kg	100	LQM/CIEH S4UL's
TPH Aliphatic>EC8-10	mg/kg	27	LQM/CIEH S4UL's
TPH Aliphatic>EC10-12	mg/kg	130	LQM/CIEH S4UL's
TPH Aliphatic>EC12-16	mg/kg	1100	LQM/CIEH S4UL's
TPH Aliphatic>EC16-35	mg/kg	65000	LQM/CIEH S4UL's
TPH Aliphatic>C35-44	mg/kg	65000	LQM/CIEH S4UL's
TPH Aromatic>EC5-7	mg/kg	70	LQM/CIEH S4UL's
TPH Aromatic>EC7-8	mg/kg	130	LQM/CIEH S4UL's
TPH Aromatic>EC8-10	mg/kg	34	LQM/CIEH S4UL's
TPH Aromatic>EC10-12	mg/kg	74	LQM/CIEH S4UL's
TPH Aromatic>EC12-16	mg/kg	140	LQM/CIEH S4UL's
TPH Aromatic>EC18-21	mg/kg	280	LQM/CIEH S4UL's
TPH Aromatic>EC21-35	mg/kg	1100	LQM/CIEH S4UL's
TPH Aromatic>EC35-44	mg/kg	1100	LQM/CIEH S4UL's
PESTICIDES			
Aldrin	mg/kg	5.7	LQM/CIEH S4UL's
Altrazine	mg/kg	3.3	LQM/CIEH S4UL's
Dichloroas	mg/kg	0.032	LQM/CIEH S4UL's
Endosulfans	mg/kg	7.4	LQM/CIEH S4UL's
Hexachlorocyclonexane	mg/kg	0.06	LQM/CIEH S4UL's
Dieldrin	mg/kg	0.07	LQM/CIEH S4UL's
OTHERS			
pH	Value	<5	Former ICRC Threshold Trigger Value
Asbestos	-	Presence	Lab Screening
Sulphate	mg/l	600	Class D81 - BRE Special Digest 1
Sulphide	mg/kg	250	Former ICRC Threshold Trigger Value
Sulphur	mg/kg	5000	Former ICRC Threshold Trigger Value
Calorific Value	MJ/kg	2	Fire Research