Borehole Log

BH2

PROJECT NO	1226	**CO-ORDS**	432,353.79E / 411,185.77N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.84
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
148.84	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		GRAVEL
		0.5 m		0.5 m		
148.34	1	Firm brown sandy gravelly CLAY.		COB		
		2.1 m		2.1 m		
146.74	2	Moderately weak light grey MUDSTONE.		UM		BENTONITE
	3					ARISINGS
	4					
	5					
		5.8 m		5.8 m		
143.04	6	Moderately weak dark grey carbonaceous MUDSTONE.		DM		
	7					
		7.9 m		7.9 m		
140.94	8	Weak black COAL.		2FC		
		8.2 m		8.2 m		
140.64	9	Moderately weak grey MUDSTONE.		CM		
138.84	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH2

PROJECT NO	1226	**CO-ORDS**	432,353.79E / 411,185.77N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.84
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
		Logged	Matthew Simmons
		Checked	Matthew Thompson

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
138.84	10					
	11					
	12					
	13					
	14	Moderately weak grey MUDSTONE.		CM		
	15					
	16					
	17				1	
	18					
	19					
128.84	20					

1 2024-03-26 - Water Strike 18m

ARISINGS

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH2

PROJECT NO	1226	**CO-ORDS**	432,353.79E / 411,185.77N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.84
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
128.84	20	Moderately weak grey MUDSTONE. 21 m		CM 21 m		ARISINGS
127.84	21					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH3

PROJECT NO	1226	**CO-ORDS**	432,362.88E / 411,172.34N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.78
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
147.78	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		GRAVEL
		0.5 m		0.5 m		
147.28	1	Firm brown sandy gravelly CLAY.		COB		
		2.1 m		2.1 m		
145.68	2					BENTONITE
	3	Moderately weak light grey MUDSTONE.		UM		
	4	4.4 m		4.4 m		
143.38	5	Moderately weak dark grey carbonaceous MUDSTONE.		DM		
	6	6.7 m		6.7 m		
141.08		Weak black COAL. 7 m		2FC		GRAVEL
140.78	7	Moderately weak grey MUDSTONE.		7 m		
	8	8.8 m		CM		
138.98	9	Moderately weak dark grey carbonaceous MUDSTONE.				
137.78	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH3

PROJECT NO	1226	**CO-ORDS**	432,362.88E / 411,172.34N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.78
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
137.78	10	Moderately weak dark grey carbonaceous MUDSTONE.		CM		GRAVEL
	11					
	12 m					
135.78	12					
	13					
	14					
	15					
	16	Moderately weak to medium strong light grey MUDSTONE interbedded with medium strong orangish brown fine grained SANDSTONE.				
	17					
	18					ARISINGS
	19					
127.78	20					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH3

PROJECT NO	1226	**CO-ORDS**	432,362.88E / 411,172.34N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.78
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
127.78	20					
	21					
	22					
	23					
	24	Moderately weak to medium strong light grey MUDSTONE interbedded with medium strong orangish brown fine grained SANDSTONE.		CM		
	25					
	26					
	27					
	28					
	29					
117.78	30					

ARISINGS

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH3

PROJECT NO	1226	**CO-ORDS**	432,362.88E / 411,172.34N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.78
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
117.78	30					
	31					
	32					
	33					
	34					
	35	Moderately weak to medium strong light grey MUDSTONE interbedded with medium strong orangish brown fine grained SANDSTONE.		CM		ARISINGS
	36					
	37					
	38					
	39					
107.78	40					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH3

PROJECT NO	1226	**CO-ORDS**	432,362.88E / 411,172.34N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.78
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
107.78	40	Moderately weak to medium strong light grey MUDSTONE interbedded with medium strong orangish brown fine grained SANDSTONE. 40.5 m		CM 40.5 m		ARISING
107.28						

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH4

PROJECT NO	1226	**CO-ORDS**	432,355.14E / 411,154.75N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.18
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
147.18	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		CONCRETE
		0.5 m		0.5 m		
146.68	1	Firm brown sandy gravelly CLAY.		COB		BENTONITE
		2 m		2 m		
145.18	2	Moderately weak light grey MUSTONE.		UM		
	3	3.3 m		3.3 m		GRAVEL
143.88		Moderately weak dark grey carbonaceous MUDSTONE.		DM		
	4	4.8 m		4.8 m		
142.38		Weak black COAL.		2FC		BENTONITE
	5	5.1 m		5.1 m		
142.08	6	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		
	7					
	8					ARISINGS
	9					
137.18	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH4

PROJECT NO	1226	**CO-ORDS**	432,355.14E / 411,154.75N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.18
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
		Logged	Matthew Simmons
		Checked	Matthew Thompson

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
137.18	10					
	11					
	12					
	13					
	14	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		
	15					
	16					
	17					
	18					
	19					
127.18	20					ARISINGS

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH4

PROJECT NO	1226	**CO-ORDS**	432,355.14E / 411,154.75N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.18
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
127.18	20					
	21					
	22					
	23					
	24	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		
	25					
	26					
	27					
	28					
	29					
117.18	30					

ARISINGS

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH4

PROJECT NO	1226	**CO-ORDS**	432,355.14E / 411,154.75N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.18
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
117.18	30					
	31	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
	32					
	33 m			33 m		
114.18	33					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH5

PROJECT NO	1226	**CO-ORDS**	432,372.72E / 411,184.72N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.56
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
148.56	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		CONCRETE
		0.5 m		0.5 m		
148.06		Firm brown sandy gravelly CLAY.		COB		BENTONITE
	1					
		1.9 m		1.9 m		
146.66	2					
	3	Moderately weak light grey MUDSTONE.,		UM		GRAVEL
	4					
	5					BENTONITE
		6 m		6 m		
142.56	6					
	7	Moderately weak dark grey carbonaceous MUDSTONE.		DM		ARISINGS
	8	8.3 m		8.3 m		
140.26		Weak black COAL. 8.6 m		2FC		
139.96				8.6 m		
	9	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		
138.56	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH5

PROJECT NO	1226	**CO-ORDS**	432,372.72E / 411,184.72N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.56
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
138.56	10	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
128.56	20					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH5

PROJECT NO	1226	**CO-ORDS**	432,372.72E / 411,184.72N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.56
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
128.56	20	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
		21 m		21 m		
127.56	21					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH6

PROJECT NO	1226	**CO-ORDS**	432,383.99E / 411,190.32N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	149.06
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
149.06	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		GRAVEL
		0.5 m		0.5 m		
148.56		Firm brown sandy gravelly CLAY.		COB		
	1					
		1.8 m		1.8 m		
147.26	2			UM		BENTONITE
	3	Moderately weak light grey MUDSTONE.				ARISINGS
	4					
	5					
	6					
		6.4 m		6.4 m		
142.66		Moderately weak dark grey carbonaceous MUDSTONE.		DM		
	7					
	8					
		9.1 m		9.1 m		
139.96	9	Weak black COAL.		2FC		
		9.4 m		9.4 m		
139.66		Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		
139.06	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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APEX CONSULTING ENGINEERS	**Borehole Log**		**BH6**
PROJECT NO	1226	**CO-ORDS**	432,383.99E / 411,190.32N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	149.06
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
139.06	10					
	11					
	12					
	13					
	14	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
	15					
	16					
	17					
	18					
	19					
129.06	20					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH6

PROJECT NO	1226	**CO-ORDS**	432,383.99E / 411,190.32N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	149.06
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-27
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
129.06	20	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
		21 m		21 m		
128.06	21					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH7

PROJECT NO	1226	**CO-ORDS**	432,383.89E / 411,203.83N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.31
CLIENT	PIT STOP PRODUCTIONS	**DATES**	Not specified
Logged	Matthew Simmons	**Checked**	Matthew Thompson

Elevation	Depth	Descriptions	Code
150.31	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.	TS
		0.5 m	0.5 m
149.81	1	Firm brown sandy gravelly CLAY.	COB
		1.9 m	1.9 m
148.41	2		
	3		
	4		
	5	Moderately weak light grey MUDSTONE.	UM
	6		
	7		
	8		
		8.6 m	8.6 m
141.71	9	Moderately weak dark grey carbonaceous MUDSTONE.	DM
140.31	10		

Lithology

Water level

Well: CONCRETE; BENTONITE; GRAVEL; BENTONITE; ARISINGS

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH7

PROJECT NO	1226	**CO-ORDS**	432,383.89E / 411,203.83N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.31
CLIENT	PIT STOP PRODUCTIONS	**DATES**	Not specified
Logged	Matthew Simmons	**Checked**	Matthew Thompson

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
140.31	10	Moderately weak dark grey carbonaceous MUDSTONE. 10.6 m		DM 10.6 m		ARISINGS
139.71		Weak black COAL. 10.9 m		2FC 10.9 m		
139.41	11					
	12					
	13					
	14					
	15	Moderately weak light grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		
	16					
	17					
	18					
	19					
130.31	20					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH7

PROJECT NO	1226	**CO-ORDS**	432,383.89E / 411,203.83N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.31
CLIENT	PIT STOP PRODUCTIONS	**DATES**	Not specified
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
130.31	20	Moderately weak light grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
		21 m		21 m		
129.31	21					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH8

PROJECT NO	1226	**CO-ORDS**	432,371.94E / 411,214.31N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	151.65
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
151.65	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		GRAVEL
		0.5 m		0.5 m		
151.15		Firm brown sandy gravelly CLAY.		COB		
	1					
		1.9 m		1.9 m		
149.75	2					BENTONITE
	3					GRAVEL
	4	Moderately weak light grey MUDSTONE.		UM		
	5					
	6					
	7					
	8	8.3 m		8.3 m		ARISINGS
143.35		Moderately weak dark grey carbonaceous MUDSTONE.		DM		
	9					
141.65	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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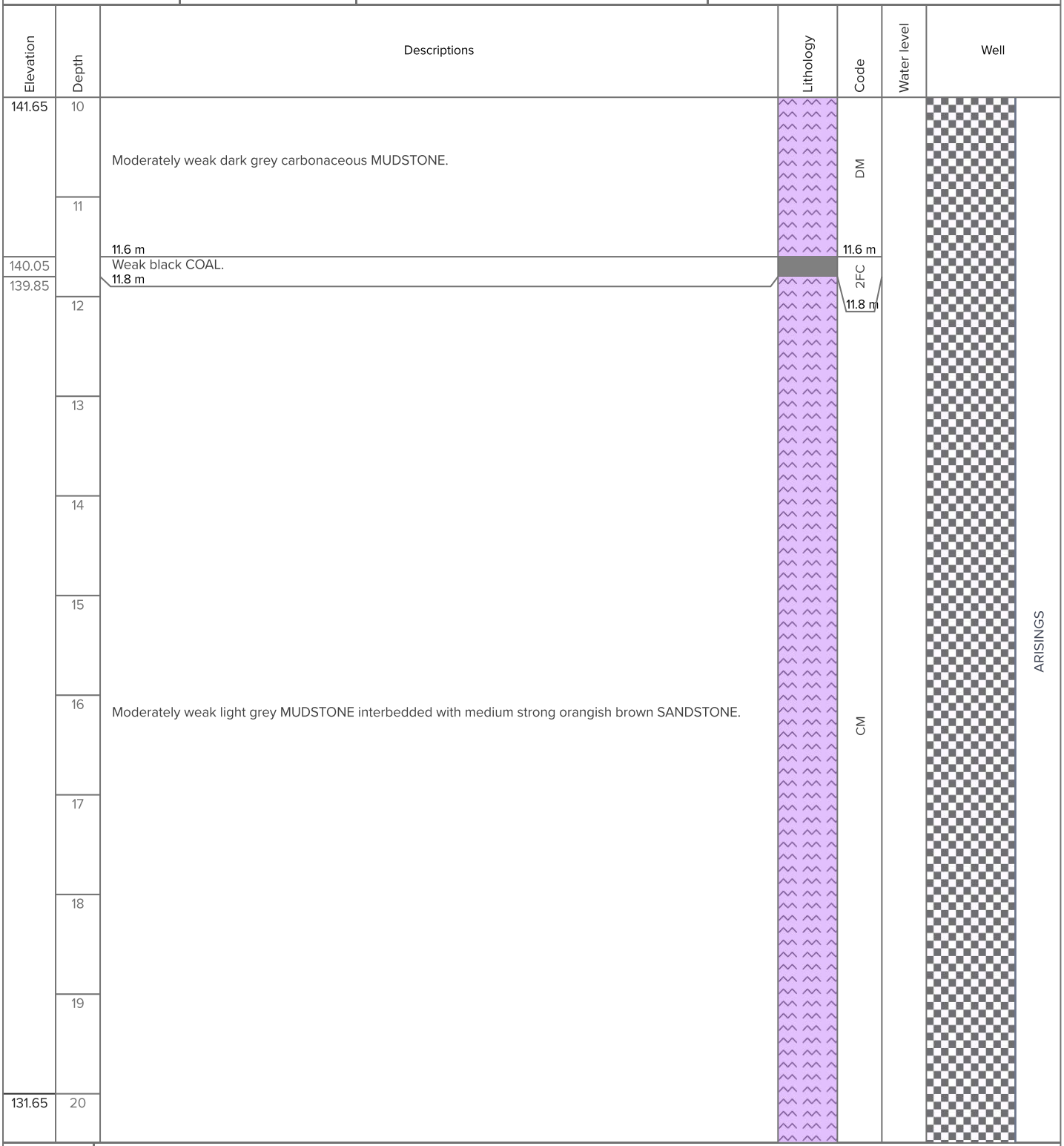
Borehole Log

BH8

PROJECT NO	1226	**CO-ORDS**	432,371.94E / 411,214.31N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	151.65
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	



Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH8

PROJECT NO	1226	**CO-ORDS**	432,371.94E / 411,214.31N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	151.65
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
131.65	20					
	21					
	22					
	23	Moderately weak light grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.				
	24					
	25			CM		ARISINGS
	26	26.2 m				
125.45		Moderately weak dark grey carbonaceous MUDSTONE.				
	27	27.3 m				
124.35						
	28					
	29	Moderately weak light grey MUDSTONE.				
121.65	30					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

Edited by APEX consulting
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Borehole Log

BH8

PROJECT NO	1226	**CO-ORDS**	432,371.94E / 411,214.31N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	151.65
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
121.65	30					
	31	Moderately weak light grey MUDSTONE.		CM		ARISINGS
	32					
	33 m			33 m		
118.65	33					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH9

PROJECT NO	1226	**CO-ORDS**	432,400.64E / 411,132.69N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	145.4
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
145.4	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		MG - TS		
		0.5 m		0.5 m		
144.9		MADE GROUND: Soft dark brown sandy gravelly CLAY with common coal fragments.		MG - SH		
	1	1.8 m		1.8 m		
143.6						
	2					
	3					
	4					
	5					
	6	POSSIBLE MADE GROUND: Firm orangish brown gravelly CLAY.		UND		GRAVEL
	7					
	8					
	9					
135.4	10					

Comments

MG-TS - Made Ground - Topsoil
MG-SH - Made Ground - Spoil Heap
UND - Undifferentiated Made Ground and Overburden
CM - Coal Measures

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Borehole Log

BH9

PROJECT NO	1226	**CO-ORDS**	432,400.64E / 411,132.69N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	145.4
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged	Matthew Simmons	**Checked**	Matthew Thompson

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
135.4	10	POSSIBLE MADE GROUND: Firm orangish brown gravelly CLAY.		UND		GRAVEL
	11					
	12	12.3 m		12.3 m		
133.1		Moderately weak light grey MUDSTONE Interbedded with medium strong orangish brown SANDSTONE.		CM		BENTONITE
	13					
	14					
	15					
	16	16.7 m				
128.7		Moderately weak dark grey carbonaceous MUDSTONE.				
	17	17.5 m				
127.9		Moderately weak grey MUDSTONE.				GRAVEL
	18					
	19					
125.4	20					

Comments

MG-TS - Made Ground - Topsoil
MG-SH - Made Ground - Spoil Heap
UND - Undifferentiated Made Ground and Overburden
CM - Coal Measures

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Borehole Log

BH9

PROJECT NO	1226	**CO-ORDS**	432,400.64E / 411,132.69N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	145.4
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
125.4	20	Moderately weak grey MUDSTONE. 21 m		CM 21 m		GRAVEL
124.4	21					

Comments	MG-TS - Made Ground - Topsoil MG-SH - Made Ground - Spoil Heap UND - Undifferentiated Made Ground and Overburden CM - Coal Measures

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Borehole Log

BH10

PROJECT NO	1226	**CO-ORDS**	432,376.78E / 411,147.15N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	146.42
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged	Matthew Simmons	**Checked**	Matthew Thompson

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
146.42	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		GRAVEL
146.22		0.2 m		0.2 m		
	1	Firm brown sandy gravelly CLAY.		COB		BENTONITE
	2					
	3					
		3.64 m		3.64 m		
142.78		Moderately weak dark grey carbonaceous MUDSTONE.		DM		ARISINGS
	4	4.6 m		4.6 m		
141.82		Weak black COAL.		2FC		
		4.9 m		4.9 m		
141.52	5					
	6					
	7	Moderately weak light grey MUDSTONE.		CM		
	8					
	9					
136.42	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH10

PROJECT NO	1226	**CO-ORDS**	432,376.78E / 411,147.15N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	146.42
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
136.42	10					
	11					
	12	Moderately weak light grey MUDSTONE.		CM		ARISINGS
	13					
	14					
		15 m		15 m		
131.42	15					

Comments

TS - Topsoil
COB - Cohesive Overburden
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH11

PROJECT NO	1226	**CO-ORDS**	432,397.31E / 411,114.12N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	142.97
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
142.97	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine. 0.5 m		TS 0.5 m		GRAVEL
142.47		MADE GROUND: Black mottled red angular fine to coarse coal fire clay and mudstone GRAVEL. 0.8 m		MG - SH 0.8 m		
142.17	1					BENTONITE
	2					
	3					
	4					
	5	Firm brown sandy gravelly CLAY.		COB		ARISINGS
	6					
	7					
	8					
	9					
132.97	10					

Comments

TS - Topsoil
MG-SH - Made Ground - Spoil Heap
COB - Cohesive Overburden
CM - Coal Measures

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Borehole Log

BH11

PROJECT NO	1226	**CO-ORDS**	432,397.31E / 411,114.12N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	142.97
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
132.97	10	Firm brown sandy gravelly CLAY. 10.7 m		COB 10.7 m		
132.27	11	Moderately weak light grey MUDSTONE.		CM		ARISINGS
	12	12.7 m				
130.27		Moderately weak dark grey carbonaceous MUDSTONE. 13.2 m				
129.77	13					
	14					
	15					
	16	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.				
	17					
	18					
	19					
122.97	20					

Comments

TS - Topsoil
MG-SH - Made Ground - Spoil Heap
COB - Cohesive Overburden
CM - Coal Measures

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Borehole Log

BH11

PROJECT NO	1226	**CO-ORDS**	432,397.31E / 411,114.12N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	142.97
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
122.97	20	Moderately weak grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE. 21 m		CM 21 m		ARISINGS
121.97	21					

Comments

TS - Topsoil
MG-SH - Made Ground - Spoil Heap
COB - Cohesive Overburden
CM - Coal Measures

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Borehole Log

BH12

PROJECT NO	1226	**CO-ORDS**	432,362.80E / 411,200.28N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.21
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
150.21	0	TOPSOIL: Dark brown sandy CLAY. Sand is fine.		TS		BENTONITE CONCRETE
		0.5 m		0.5 m		
149.71		POSSIBLE MADE GROUND: Firm brown sandy gravelly CLAY.		COB		
	1					
		1.7 m		1.7 m		
148.51	2			UM		GRAVEL
	3	Moderately weak light grey MUDSTONE.				
	4					BENTONITE
		5.1 m		5.1 m		
145.11	5			DM		ARISINGS
	6	Moderately weak dark grey carbonaceous MUDSTONE.				
	7					
	8	8.3 m		8.3 m		
141.91		Weak black COAL.		2FC		
		8.6 m		8.6 m		
141.61	9	Moderately weak light grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		
140.21	10					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH12

PROJECT NO	1226	**CO-ORDS**	432,362.80E / 411,200.28N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.21
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
140.21	10					
	11					
	12					
	13					
	14	Moderately weak light grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
	15					
	16					
	17					
	18					
	19					
130.21	20					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

BH12

PROJECT NO	1226	**CO-ORDS**	432,362.80E / 411,200.28N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.21
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-26
Logged Matthew Simmons		**Checked** Matthew Thompson	

Elevation	Depth	Descriptions	Lithology	Code	Water level	Well
130.21	20	Moderately weak light grey MUDSTONE interbedded with medium strong orangish brown SANDSTONE.		CM		ARISINGS
		21 m		21 m		
129.21	21					

Comments

TS - Topsoil
COB - Cohesive Overburden
UM - Upper Mudstone
DM - Carbonaceous Mudstone
2FC - 2-Foot Coal
CM - Coal Measures

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Borehole Log

TP1

PROJECT NO	1226	**CO-ORDS**	432,337.56E / 411,165.59N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.82
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
147.82	0	TOPSOIL: Dark brown very clayey fine to coarse SAND with common rootlets.		TS	ES	J, K & T	0.1 - 0.2 m		
		0.2 m		0.2 m					
147.62		Orangish brown clayey fine to coarse SAND.		GRS					
		0.4 m		0.4 m					
147.42		Firm to stiff orangish brown mottled light grey sandy gravelly CLAY. Sand is fine to coarse. Gravel is sub rounded fine to medium sandstone.							
		0.9 m							
146.92	1	Stiff friable light grey CLAY with common mudstone lithorelics.		CRS	D	T	1 - 1.1 m		ARISINGS
		1.64 m							
146.18		Stiff friable dark grey carbonaceous CLAY with common mudstone lithorelics.							
	2	2.2 m		2.2 m					
145.62		Very weak dark grey MUDSTONE. Recovered as sandy angular tabular GRAVEL.		UM					
		2.4 m		2.4 m					2.4 m
145.42									

Comments
TS - Topsoil
GRS - Granular Residual Soil
CRS - Cohesive Residual Soil
UM - Upper Mudstone

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Borehole Log

TP2

PROJECT NO	1226	**CO-ORDS**	432,359.70E / 411,154.11N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.06
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
147.06	0	TOPSOIL: Dark brown sandy CLAY with common rootlets. Sand is fine.		TS	ES	J, K & T	0.1 - 0.2 m		
		0.34 m		0.34 m					
146.72		Firm to stiff orangish brown mottled light grey sandy gravelly CLAY. Sand is fine to coarse. Gravels are sub angular fine to coarse mudstone.		CRS	D	T	1 - 1.1 m		ARISINGS
	1	1.84 m		1.84 m					
145.22		Very weak dark grey carbonaceous MUDSTONE. Recovered as angular tabular fine to coarse mudstone GRAVEL.		UM					
	2	2.4 m		2.4 m					2.4 m
144.66									

Comments
TS - Topsoil
CRS - Cohesive Residual Soils
UM - Upper Mudstone

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Borehole Log

TP3

PROJECT NO	1226	**CO-ORDS**	432,359.91E / 411,183.93N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.47
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
148.47	0	TOPSOIL: Dark brown clayey fine to coarse SAND with common rootlets. 0.2 m		TS 0.2 m	ES	J, K & T	0.1 - 0.2 m		
148.27		Yellowish brown clayey gravelly fine to coarse SAND. Gravels are angular to sub-rounded fine to coarse sandstone mudstone. 0.62 m		GRS 0.62 m	D	T	0.4 - 0.5 m		
147.85		Stiff dark grey gravelly CLAY with lithorelics of carbonaceos mudstone. Gravels are fine to medium angular mudstone coal. 0.93 m		CRS 0.93 m					
147.54	1	Very weak light yellowish grey weathered MUDSTONE. Recovered as very clayey gravelly fine to coarse SAND with common mudstone lithorelics. Gravels are sub angular fine to coarse mudstone. 1.97 m		GRS 1.97 m	D	T	1.5 - 1.6 m		ARISINGS
146.5	2	Weak light grey MUDSTONE. Recovered as sandy tabular angular fine to coarse GRAVEL. Sand is fine to coarse. 2.25 m		UM 2.25 m					2.25 m
146.22									

Comments
TS - Topsoil
GRS - Granular Residual Soils
CRS - Cohesive Residual Soils
UM - Upper Mudstone

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Borehole Log

TP4

PROJECT NO	1226	**CO-ORDS**	432,358.22E / 411,197.73N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.09
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills	Depth	S_u [kPa] 0 – 40
150.09	0	TOPSOIL: Dark brown clayey fine to coarse SAND with common rootlets. 0.2 m		TS 0.2 m	ES	J, K & T	0.1 - 0.2 m			0	
149.89		Yellowish brown clayey gravelly fine to coarse SAND. Gravels are angular to rounded fine to coarse mudstone sandstone. 0.53 m		GRS 0.53 m							
149.56		Stiff dark grey gravelly CLAY with lithorelics of carbonaceous mudstone. Gravels are fine to medium angular mudstone coal. 0.8 m		CRS 0.8 m	D	T	0.6 - 0.7 m				32.0
149.29									ARISINGS		
	1	Weak yellowish grey MUDSTONE. Recovered as sandy angular to sub angular mudstone GRAVEL.		UM						1	
		2 m		2 m					2 m		
148.09	2									2	

Comments
TS - Topsoil
GRS - Granular Residual Soils
CRS - Cohesive Residual Soils
UM - Upper Mudstone

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Borehole Log

TP5

PROJECT NO	1226	**CO-ORDS**	432,369.72E / 411,207.53N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	150.92
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
150.92	0	TOPSOIL: Dark brown sandy CLAY with common rootlets. Sand is fine.		TS	ES	J, K & T	0.1 - 0.2 m		
		0.2 m		0.2 m					
150.72		Yellowish brown clayey slightly gravelly fine to coarse SAND. Gravels are sub angular to sub rounded fine to medium mudstone sandstone.		GRS					
		0.67 m		0.67 m					
150.25		Very weak black COAL. Recovered as very gravelly fine to coarse SAND. Gravels are angular fine to medium coal.		MFC					
		0.82 m		0.82 m					
150.1		Very clayey fine to coarse SAND with common mudstone lithorelics.		GRS	D	T	1 - 1.1 m		ARISINGS
	1								
		1.2 m		1.2 m					
149.72		Weak light yellowish grey MUDSTONE. Recovered as angular fine to coarse mudstone GRAVEL.		UM					
		2 m		2 m					2 m
148.92	2								

Comments
TS - Topsoil
GRS - Granular Residual Soils
MFC - Meltonfield Coal
UM - Upper Mudstone

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Borehole Log

TP6

PROJECT NO	1226	**CO-ORDS**	432,393.66E / 411,199.00N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	149.63
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
149.63	0	TOPSOIL: Dark brown sandy CLAY with common rootlets. Sand is fine.		TS	ES	J, K & T	0.1 - 0.2 m		
		0.2 m		0.2 m					
149.43		Yellowish brown clayey gravelly fine to coarse SAND. Gravels are sub angular to sub rounded mudstone.		GRS	D	T	0.4 - 0.5 m		
		0.6 m		0.6 m					
149.03		Black very sandy angular fine to coarse COAL.		MFC					
		0.7 m		0.7 m					
148.93	1	Extremely weak light grey MUDSTONE. Recovered as clayey sandy angular fine to coarse mudstone GRAVEL.		GRS					ARISINGS
		1.7 m		1.7 m					
147.93		Moderately weak light grey MUDSTONE.		UM					
		2 m		2 m					2 m
147.63	2								

Comments
TS - Topsoil
GRS - Granular Residual Soils
MFC - Meltonfield Coal
UM - Upper Mudstone

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Borehole Log

TP7

PROJECT NO	1226	**CO-ORDS**	432,406.74E / 411,187.30N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	148.21
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
Logged	Matthew Simmons	**Checked**	Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
148.21	0	TOPSOIL: Dark brown sandy CLAY with common rootlets. Sand is fine.		TS	ES	J, K & T	0.1 - 0.2 m		
		0.2 m		0.2 m					
148.01		Yellowish brown clayey slightly silty slightly gravelly fine to coarse SAND. Gravels are angular fine to coarse mudstone.		GRS	D	T	0.5 - 0.6 m		
		0.67 m		0.67 m					
147.54		Extremely weak black COAL recovered as angular fine coal GRAVEL.		MFC					
		0.85 m		0.85 m					
147.36	1	Firm light yellowish brown sandy gravelly CLAY with common mudstone lithorelics. Sand is fine to medium. Gravels are angular fine to medium mudstone.		CRS					ARISINGS
		1.8 m		1.8 m					
		Moderately weak grey MUDSTONE. Recovered as angular gravels and cobbles.		UM					1.85 m
146.36		1.85 m		1.85 m					

Comments
TS - Topsoil
GRS - Granular Residual Soils
MFC - Meltonfield Coal
CRS - Cohesive Residual Soils
UM - Upper Mudstone

Edited by APEX consulting
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Sound Creation Design Studio, Barnsley
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Borehole Log

TP8

PROJECT NO	1226	**CO-ORDS**	432,427.41E / 411,170.02N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	146.24
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28

Logged Matthew Thompson

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills	Depth
146.24	0	MADE GROUND TOPSOIL: Black silty gravelly CLAY with rootlets. Gravel is rounded to angular fine to coarse of mixed lithologies including brick, concrete, coal, sandstone, mudstone, clinker. Rare fragments of metal.		MG - TS	ES	J, K & T	0.2 m			0
145.94		0.3 m		0.3 m						
		MADE GROUND: Firm grey-brown and black slightly sandy slightly gravelly CLAY. Gravel is coal, brick, sandstone, clinker. Low cobble content including brick. Rare fragments of metal. One timber fence post. One crisp packet. *0.30 - 1.20m: Some minor instability from 0.3m to 1.2m.*		MG - SH	ES	J, K & T	0.8 m			
	1			1.2 m						1
145.04		MADE GROUND: Firm grey and orange sandy CLAY with low cobble content of subangular sandstone.		MG - RW					ARISINGS	
	2	2.1 m		2.1 m						2
144.14		Stiff orange and grey mottled slightly sandy gravelly CLAY. Gravel is subangular fine to medium lithorelicts.		CRS						
	3	3.2 m		3.2 m					3.2 m	3
143.04										

s_u [kPa]: 0 – 90

75.0

Comments	MG-TS - Made Ground - Topsoil MG-SH - Made Ground - Spoil Heap MG-RW - Made Ground - Reworked CRS - Cohesive Residual Soils

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Borehole Log

TP9

PROJECT NO	1226	**CO-ORDS**	432,423.72E / 411,141.75N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	144.73
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28

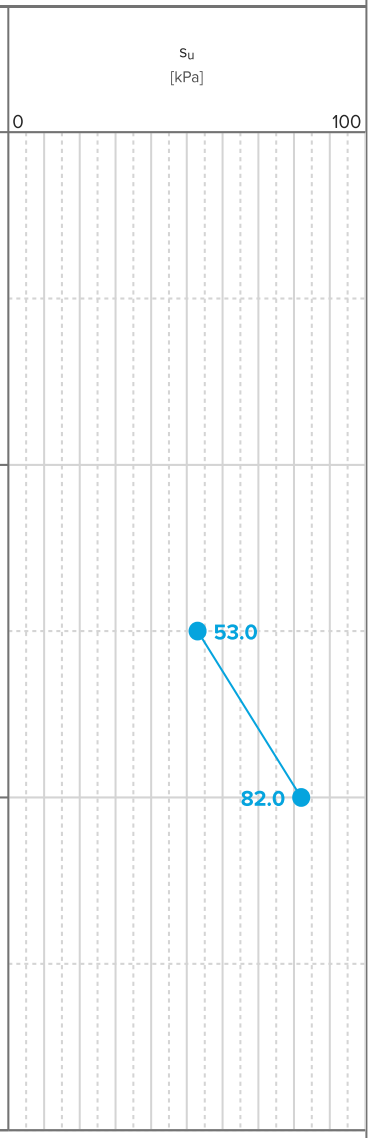
Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
144.73	0	MADE GROUND TOPSOIL: Dark brown sandy CLAY with common rootlets. Sand is fine.		MG - TS	ES	J, K & T	0.05 - 0.15 m		
144.56		0.17 m MADE GROUND: Blackish brown clayey sandy angular fine to medium coal mudstone burnt shale GRAVEL.		MG - SH 0.17 m					
144.33		0.4 m		0.4 m					
		MADE GROUND: Reworked red clayey sandy angular fine to coarse burnt shale GRAVEL with common cobbles. Cobbles are angular up to 150mm fire slate.		MG - RW	ES	J, K & T	0.7 - 0.8 m		
	1	1.1 m		1.1 m					
143.63		Firm light grey silty slightly sandy slightly gravelly CLAY. Sand is fine. Gravels are fine to medium angular mudstone.							
		1.7 m							
143.03		Stiff grey mottled greenish grey silty CLAY with common mudstone lithorelics.		CRS					ARISINGS
	2	2.16 m							
142.57		Stiff friable dark grey very gravelly CLAY. Gravels are angular fine to coarse mudstone.							
		3 m		3 m					3 m
141.73	3								



Comments	MG-TS - Made Ground - Topsoil MG-SH - Made Ground - Spoil Heap MG-RW - Made Ground - Reworked CRS - Cohesive Residual Soils

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Borehole Log

TP10

PROJECT NO	1226	**CO-ORDS**	432,403.26E / 411,144.38N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	145.88
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28
		Logged	Matthew Thompson
		Checked	Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills	Depth
145.88	0	MADE GROUND TOPSOIL: Brown slightly sandy CLAY with rootlets. Some angular fine to coarse gravel of burnt shale and mudstone. 0.1 m		MG - TS 0.1 m						0
145.78		MADE GROUND: Black and red very clayey SAND AND GRAVEL. Gravel is subangular fine to coarse of mudstone, burnt shale and coal.		MG - SH	ES	J, K & T	1 m			
	1	1.5 m		1.5 m						1
144.38		Firm orange and brown slightly sandy CLAY. 2 m							ARISINGS	
143.88	2	Stiff dark grey very gravelly CLAY. Gravel is subagnular fine to coarse of mudstone lithorelicts.		CRS						2
	3	3.2 m		3.2 m						3
142.68		Dark grey very clayey horizontally-orientated subagnular tabular fine to coarse GRAVEL of very weak mudstone. 3.4 m		UM 3.4 m					3.4 m	
142.48										

S_u [kPa]: 0 – 70

55.0

60.0

Comments	MG-TS - Made Ground - Topsoil MG-SH - Made Ground - Spoil Heap CRS - Cohesive Residual Soils UM - Upper Mudstone

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Borehole Log

TP11

PROJECT NO	1226	**CO-ORDS**	432,354.64E / 411,168.23N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	147.69
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample / **D:** Disturbed Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub / **T:** Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
147.69	0	TOPSOIL: Dark brown sandy CLAY with common rootlets. Sand is fine.		TS	ES	J, K & T	0.1 - 0.2 m		
		0.25 m		0.25 m					
147.44		Orangish brown slightly clayey slightly gravelly fine to coarse SAND. Gravels are sub rounded fine to coarse sandstone.		GRS					
		0.45 m		0.45 m					
147.24		Firm becoming stiff friable orangish brown slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is sub angular to sub rounded fine to coarse sandstone mudstone.		CRS	D	T	0.7 - 0.8 m		
	1								
		1.53 m		1.53 m					
146.16		Extremely weak light yellowish grey weathered mudstone recovered as silty very sandy angular tabular mudstone GRAVEL. Sand is fine to coarse.		WM					ARISINGS
	2								
		2.7 m		2.7 m					
144.99		Weak light grey MUDSTONE. Recovered as sandy angular tabular gravels and cobbles.		UM					
		2.92 m		2.92 m					2.92 m
144.77									

Comments
TS - Topsoil
GRS - Granular Residual Soils
CRS - Cohesive Residual Soils
WM - Weathered Mudstone
UM - Upper Mudstone

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Borehole Log

TP12

PROJECT NO	1226	**CO-ORDS**	432,413.60E / 411,120.55N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	144.31
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-03-28

Logged Matthew Thompson

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub

Elevation	Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills	Depth
144.31	0	MADE GROUND TOPSOIL: Brown slightly sandy CLAY with rootlets. Gravel is angular fine to coarse, predominantly of burnt shale and mudstone. 0.15 m		MG - TS	ES	J, K & T	0.1 m			0
144.16				0.15 m	ES	J, K & T	0.6 m			
	1	MADE GROUND: Dark grey-black and red very clayey angular fine to coarse GRAVEL of mudstone, coal and burnt shale. Low cobble content of coal.		MG - SH						1
	2	*2.60m: At 2.6m, groundwater seepage.*						2.6 m		2
	3	*3.00 - 3.10m: From 3.0m, becoming a soft gravelly CLAY.* 3.1 m		3.1 m						3
141.21		Stiff orange and grey sandy CLAY.		CRS						
		3.5 m		3.5 m					ARISINGS 3.5 m	
140.81										

s_u [kPa] 0 — 200

120.0

Comments	MG-TS - Made Ground - Topsoil MG-SH - Made Ground - Spoil Heap CRS - Cohesive Residual Soils

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Borehole Log

TP13

PROJECT NO	1226	**CO-ORDS**	432,404.34E / 411,129.03N
PROJECT NAME	SOUND CREATION DESIGN STUDIO, BARNSLEY	**LEVEL**	Not specified
CLIENT	PIT STOP PRODUCTIONS	**DATES**	2024-04-02

Logged Matthew Simmons

Checked Matthew Thompson

SAMPLE STATUS
ES: Environmental Soil Sample

SAMPLING METHODS
J, K & T: Jar, Small Jar & Tub

Depth	Descriptions	Lithology	Code	Status	Method	Samples	Water level	Backfills
0	MADE GROUND TOPSOIL: Dark brown sandy CLAY with common rootlets. Sand is fine. 0.2 m		MG - TS 0.2 m	ES	J, K & T	0.1 - 0.2 m		
	MADE GROUND: Red very clayey sandy angular to sub rounded fine to coarse burnt shale mudstone GRAVEL. Sand is fine to medium. 1.2 m		MG - SH	ES	J, K & T	1 - 1.1 m		ARISINGS
1	MADE GROUND: Blackish grey clayey very sandy angular to sub angular fine to coarse coal mudstone burnt shale GRAVEL. 1.95 m							
2	MADE GROUND: Very soft dark yellow sandy CLAY. Sand is fine to medium. 2.7 m		2.7 m					
	MADE GROUND: Firm grey, black and green mottled red slightly sandy slightly gravelly CLAY. Sand is fine to medium. Gravel is angular fine to medium coal mudstone burnt shale. 2.95 m		MG - RW 2.95 m					
3	Stiff light grey CLAY with common mudstone lithorelics. 3.2 m		CRS 3.2 m					3.2 m

Comments
MG-TS - Made Ground - Topsoil
MG-SH - Made Ground - Spoil Heap
MG-RW - Made Ground - Reworked
CRS - Cohesive Residual Soils

Edited by APEX consulting
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Appendix F – Chemical Laboratory Results

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Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 24-014061

Project / Site name:	Sound Creation Design Centre, Barnsley	**Samples received on:**	08/04/2024
Your job number:	1226	**Samples instructed on/ Analysis started on:**	15/04/2024
Your order number:		**Analysis completed by:**	18/04/2024
Report Issue Number:	1	**Report issued on:**	19/04/2024
Samples Analysed:	15 soil samples		

Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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

Analytical Report Number: 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

Lab Sample Number				170215	170216	170217	170218	170219
Sample Reference				TP1	Tp3	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.10	0.10	0.10	0.05
Date Sampled				02/04/2024	02/04/2024	02/04/2024	02/04/2024	28/03/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	24	18	28	21	19
Total mass of sample received	kg	0.1	NONE	1.2	0.6	0.5	0.6	1.1
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KSZ	KSZ	KSZ	KSZ	KSZ
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7	5.5	7	5.1	5
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	2.7	1.4	3.7	4.1	3.2
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	-	-	-	-	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	-	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.23	< 0.05	0.19	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.36	< 0.05	0.36	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.28	< 0.05	0.31	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.17	< 0.05	0.16	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.19	< 0.05	0.2	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.21	< 0.05	0.25	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.11	< 0.05	0.08	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.14	< 0.05	0.17	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.15	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.2	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.69	< 0.80	2.07	< 0.80	< 0.80

Analytical Report Number: 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

Lab Sample Number				170215	170216	170217	170218	170219
Sample Reference				TP1	Tp3	TP5	TP6	TP7
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.10	0.10	0.10	0.05
Date Sampled				02/04/2024	02/04/2024	02/04/2024	02/04/2024	28/03/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	8.2	7.7	13	12
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5	0.4	0.7	0.7	1
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	2.5	< 1.8
Chromium (III)	mg/kg	1	NONE	27	10	5.5	13	14
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	10	5.5	13	14
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	7.9	8.5	29	16
Lead (aqua regia extractable)	mg/kg	1	MCERTS	36	23	35	47	30
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	9.8	8.3	3.9	9.7	10
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	2.1	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	24	18	8.3	19	19
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	46	38	23	46	38
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	-
TPH (C10 - C25) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	< 10	< 10	< 10	< 10	-
TPH (C25 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	10	< 10	< 10	24	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

Lab Sample Number				170220	170221	170222	170223	170224
Sample Reference				TP11	TP8	TP9	TP12	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.20	0.05	0.10	0.10
Date Sampled				02/04/2024	28/03/2024	28/03/2024	28/03/2024	02/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	22	21	33	32	25
Total mass of sample received	kg	0.1	NONE	1.2	1.1	1.2	0.6	1.1
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KSZ	KSZ	KSZ	KSZ	KSZ
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	6.1	7.4	5.9	6.1	6.9
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	-	-	-	-	-
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	-	-	-	-	-
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	-	-	-	-	-
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	3.1	3.8	5.3	6.2	3.8
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	-	-	-	-	-
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	-	-	-	-	-
Calorific Value	MJ/Kg	0.12	ISO 17025	-	-	-	-	-
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	0.09	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.09	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.49	0.58	0.27	0.12	0.12
Anthracene	mg/kg	0.05	MCERTS	0.09	0.12	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.85	1.7	0.38	0.2	0.22
Pyrene	mg/kg	0.05	MCERTS	0.64	1.7	0.34	0.16	0.2
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.33	0.92	0.16	0.09	0.12
Chrysene	mg/kg	0.05	MCERTS	0.36	1.1	0.22	0.12	0.15
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.48	1.3	0.24	0.14	0.19
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.2	0.65	0.12	0.09	0.07
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.37	1.2	0.22	0.11	0.12
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.54	0.12	0.09	0.09
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.18	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.62	0.13	0.09	0.1
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	3.81	10.7	2.29	1.21	1.38

Analytical Report Number: 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

Lab Sample Number				170220	170221	170222	170223	170224
Sample Reference				TP11	TP8	TP9	TP12	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.20	0.05	0.10	0.10
Date Sampled				02/04/2024	28/03/2024	28/03/2024	28/03/2024	02/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	13	25	16	15	14
Boron (water soluble)	mg/kg	0.2	MCERTS	0.4	1.6	0.8	1.3	1.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (III)	mg/kg	1	NONE	15	23	17	17	20
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	15	23	17	17	20
Copper (aqua regia extractable)	mg/kg	1	MCERTS	28	57	27	20	18
Lead (aqua regia extractable)	mg/kg	1	MCERTS	60	110	41	33	35
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	8.8	19	14	17	14
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	21	26	27	22	26
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	49	200	74	65	63
Magnesium (leachate equivalent)	mg/l	2.5	NONE	-	-	-	-	-
Magnesium (water soluble)	mg/kg	5	NONE	-	-	-	-	-
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	1	NONE	-	< 1.0	-	< 1.0	-
TPH (C10 - C25) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	14	-	< 10	-
TPH (C25 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	-	33	-	35	-

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number: 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

Lab Sample Number				170225	170226	170227	170228	170229
Sample Reference				TP8	TP9	TP10	TP12	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.70	1.00	0.60	1.00
Date Sampled				28/03/2024	28/03/2024	28/03/2024	28/03/2024	02/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	15	17	19	17	12
Total mass of sample received	kg	0.1	NONE	0.6	0.8	0.6	0.6	0.5
Asbestos								
Asbestos in Soil Detected/Not Detected	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
Asbestos Analyst ID	N/A	N/A	N/A	KSZ	KSZ	KSZ	KSZ	KSZ
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	7.9	5.2	4.8	4.9	5.6
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	34	68	76	51	110
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	16.8	34.1	38.1	25.3	54.5
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	0.6	0.9	1.2	1.4	1.7
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	1.2	1.5	1.3	4.4	0.3
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Calorific Value	MJ/Kg	0.12	ISO 17025	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	0.13	< 0.05	0.27	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	0.13	0.58	< 0.05	0.55	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	0.26	0.13	< 0.05	0.14	< 0.05
Pyrene	mg/kg	0.05	MCERTS	0.26	0.08	< 0.05	0.12	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.14	< 0.05	< 0.05	0.07	< 0.05
Chrysene	mg/kg	0.05	MCERTS	0.15	< 0.05	< 0.05	0.07	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.26	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.15	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	1.35	0.92	< 0.80	1.22	< 0.80

Analytical Report Number: 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

Lab Sample Number				170225	170226	170227	170228	170229
Sample Reference				TP8	TP9	TP10	TP12	TP13
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.80	0.70	1.00	0.60	1.00
Date Sampled				28/03/2024	28/03/2024	28/03/2024	28/03/2024	02/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	12	40	24	30	8.9
Boron (water soluble)	mg/kg	0.2	MCERTS	0.9	1.9	1.1	0.8	2.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	2	< 1.8
Chromium (III)	mg/kg	1	NONE	26	27	19	16	18
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	26	27	19	16	18
Copper (aqua regia extractable)	mg/kg	1	MCERTS	68	36	14	47	30
Lead (aqua regia extractable)	mg/kg	1	MCERTS	34	38	26	30	25
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	43	34	23	23	18
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	26	44	29	24	31
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	120	68	70	46	36
Magnesium (leachate equivalent)	mg/l	2.5	NONE	6.7	< 2.5	< 2.5	< 2.5	2.7
Magnesium (water soluble)	mg/kg	5	NONE	14	< 5.0	< 5.0	< 5.0	5.3
Petroleum Hydrocarbons								
Petroleum Range Organics (C6 - C10) HS_1D_TOTAL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C10 - C25) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	18	< 10	< 10	< 10	< 10
TPH (C25 - C40) EH_CU_1D_TOTAL	mg/kg	10	MCERTS	32	< 10	< 10	< 10	< 10

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
170215	TP1	None Supplied	0.1	Brown clay and loam with gravel and vegetation
170216	Tp3	None Supplied	0.1	Brown loam and clay with gravel and vegetation
170217	TP5	None Supplied	0.1	Brown loam and clay with gravel and vegetation
170218	TP6	None Supplied	0.1	Brown loam and clay with gravel and vegetation
170219	TP7	None Supplied	0.05	Brown loam and clay with gravel and vegetation
170220	TP11	None Supplied	0.1	Brown loam and clay with gravel and vegetation
170221	TP8	None Supplied	0.2	Brown loam and clay with gravel and vegetation
170222	TP9	None Supplied	0.05	Brown loam and clay with gravel and vegetation
170223	TP12	None Supplied	0.1	Brown loam and clay with gravel and vegetation
170224	TP13	None Supplied	0.1	Brown loam and clay with gravel and vegetation
170225	TP8	None Supplied	0.8	Brown loam and clay with gravel and vegetation
170226	TP9	None Supplied	0.7	Brown clay and sand with brick
170227	TP10	None Supplied	1	Brown clay with gravel
170228	TP12	None Supplied	0.6	Grey clay and sand with gravel and vegetation
170229	TP13	None Supplied	1	Brown loam and clay with gravel and vegetation

Analytical Report Number : 24-014061
Project / Site name: Sound Creation Design Centre, Barnsley

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Asbestos identification in Soil	Asbestos Identification with the use of polarised light microscopy in conjunction with dispersion staining techniques	In-house method based on HSG 248, 2021	A001B	D	ISO 17025
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate (Walkley Black Method)	In-house method	L009B	D	MCERTS
Calorific Value of soil	Determination of the calorific value of soil by combustion in a controlled environment	Calorific Value of Soil by Bomb Calorimeter	L013B	D	ISO 17025
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil	L038B	D	MCERTS
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES	In-house method based on Second Site Properties version 3	L038B	D	MCERTS
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds (including PAH) in soil by extraction in dichloromethane and hexane followed by GC-MS	In-house method based on USEPA 8270	L064B	D	MCERTS
Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	Determination of total petroleum hydrocarbons in soil by GC-FID/GC-MS HS	In-house method	L076B/L088	D/W	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078B	W	NONE
Chromium III in soil	In-house method by calculation from total Cr and Cr VI	In-house method by calculation	L080	W	NONE
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry	In-house method	L080	W	MCERTS

Analytical Report Number : 24-014061
Project / Site name: Sound Creation Design Centre, Barnsley

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Information in Support of Analytical Results

List of HWOL Acronyms and Operators

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

Sample Deviation Report

Analytical Report Number : 24-014061

Project / Site name: Sound Creation Design Centre, Barnsley

This deviation report indicates the sample and test deviations that apply to the samples submitted for analysis.Please note that the associated result(s) may be unreliable and should be interpreted with care.

Key: a - No sampling date b - Incorrect container c - Holding time d - Headspace e - Temperature

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP10	N/A	S	170227	c	Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	L076B/L088	c
TP12	N/A	S	170223	bc	Speciated EPA-16 PAHs and/or Semi-volatile organic compounds in soil	L064B	b
TP12	N/A	S	170223	bc	Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	L076B/L088	bc
TP12	N/A	S	170228	c	Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	L076B/L088	c
TP8	N/A	S	170221	c	Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	L076B/L088	c
TP8	N/A	S	170225	c	Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	L076B/L088	c
TP9	N/A	S	170226	c	Total petroleum hydrocarbons by GC-FID/GC-MS HS in soil	L076B/L088	c

Appendix G – Geotechnical Laboratory Results

Apex Consulting Engineers Ltd
Unit 3, Acres Hill Business Park
2 Acres Hill Lane
Sheffield
South Yorkshire
S9 4LT

t: (114) 2419360

e: matthew.simmons@apexconsulting.co.uk

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

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 24-013785

Project / Site name:	Sound Creationd Design Centre, Barnsley	**Samples received on:**	08/04/2024
Your job number:	1226	**Samples instructed on/ Analysis started on:**	12/04/2024
Your order number:		**Analysis completed by:**	19/04/2024
Report Issue Number:	1	**Report issued on:**	19/04/2024
Samples Analysed:	5 soil samples		

Signed:

Anna Goc
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41-711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils - 4 weeks from reporting
leachates - 2 weeks from reporting
waters - 2 weeks from reporting
asbestos - 6 months from reporting

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

Analytical Report Number: 24-013785
Project / Site name: Sound Creationd Design Centre, Barnsley

Lab Sample Number				168907	168908	168909	168910	168911
Sample Reference				TP3	TP4	TP3	TP2	TP1
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.40	0.60	1.50	1.00	1.00
Date Sampled				02/04/2024	02/04/2024	02/04/2024	02/04/2024	02/04/2024
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	10	21	11	14	12
Total mass of sample received	kg	0.1	NONE	0.5	0.4	0.3	0.5	0.4
General Inorganics								
pH (L099)	pH Units	N/A	MCERTS	5.3	4.9	5.1	5.7	7
Water Soluble Sulphate as SO_4 16hr extraction (2:1)	mg/kg	2.5	MCERTS	53	41	33	69	31
Water Soluble SO_4 16hr extraction (2:1 Leachate Equivalent)	mg/l	1.25	MCERTS	26.5	20.4	16.7	34.6	15.3
Water Soluble Chloride (2:1) (leachate equivalent)	mg/l	0.5	MCERTS	0.7	1	< 0.5	1.5	2.5
Water Soluble Nitrate (2:1) as N	mg/kg	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Water Soluble Nitrate (2:1) as N (leachate equivalent)	mg/l	2	NONE	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Heavy Metals / Metalloids								
Magnesium (leachate equivalent)	mg/l	2.5	NONE	< 2.5	< 2.5	< 2.5	3.9	6.7
Magnesium (water soluble)	mg/kg	5	NONE	< 5.0	< 5.0	< 5.0	7.7	13

U/S = Unsuitable Sample I/S = Insufficient Sample ND = Not detected

Analytical Report Number : 24-013785
Project / Site name: Sound Creationd Design Centre, Barnsley

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
168907	TP3	None Supplied	0.4	Brown sand with gravel
168908	TP4	None Supplied	0.6	Brown clay and sand
168909	TP3	None Supplied	1.5	Brown sandy clay
168910	TP2	None Supplied	1	Brown clay and sand with vegetation
168911	TP1	None Supplied	1	Brown sandy clay

Analytical Report Number : 24-013785
Project / Site name: Sound Creationd Design Centre, Barnsley

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically (up to 30°C)	In-house method	L019B	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight	In-house method based on British Standard Methods and MCERTS requirements.	L019B	D	NONE
Magnesium, water soluble, in soil	Determination of water soluble magnesium by extraction with water followed by ICP-OES	In-house method based on TRL 447	L038B	D	NONE
Sulphate, water soluble, in soil (16hr extraction)	Sulphate, water soluble, in soil (16hr extraction)	In-house method	L038B	D	MCERTS
Water Soluble Nitrate (2:1) as N in soil	Determination of nitrate by reaction with sodium salicylate and colorimetry	In-house method based on Examination of Water and Wastewatern & Polish Standard Method PN-82/C-04579.08, 2:1 extraction	L078B	W	NONE
Chloride, water soluble, in soil	Determination of Chloride colorimetrically by discrete analyser	In-house method	L082B	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement	In-house method	L099	D	MCERTS

For method numbers ending in 'UK' or 'A' analysis have been carried out in our laboratory in the United Kingdom (Watford).
For method numbers ending in 'F' analysis have been carried out in our laboratory in the United Kingdom (East Kilbride).
For method numbers ending in 'PL' or 'B' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.
Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

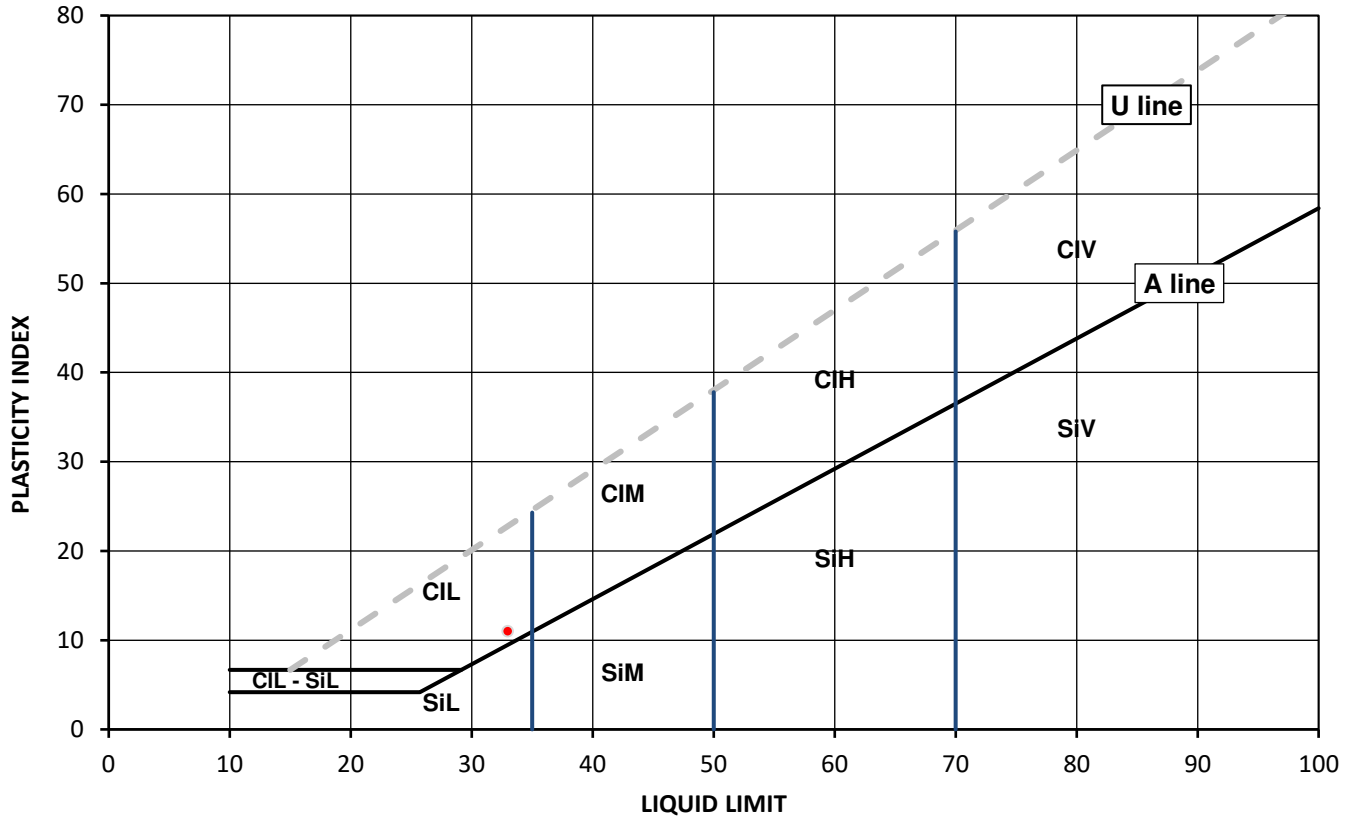
Client:	Apex Consulting Engineers Ltd	Client Reference:	1226
Client Address:	Unit 3, Acres Hill Business Park, 2 Acres Hill Lane, Sheffield, South Yorkshire, S9 4LT	Job Number:	24-013784-1
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168899	Depth Top [m]:	0.40
Hole No.:	TP6	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Yellowish brown slightly gravelly very sandy silty CLAY		
Sample Preparation:	Tested after >0.425mm removed by hand; The water content in the sample was increased		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
19.9	33	22	11	-0.18	1.18	87



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed: Katarzyna Banys

Katarzyna Banys
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 01/05/2024

GF 337.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

i2 Analytical Ltd
Unit 8 Harrowden Road
Brackmills Industrial Estate
Northampton NN4 7EB

4041

Client:	Apex Consulting Engineers Ltd	Client Reference:	1226
Client Address:	Unit 3, Acres Hill Business Park, 2 Acres Hill Lane, Sheffield, South Yorkshire, S9 4LT	Job Number:	24-013784-1
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

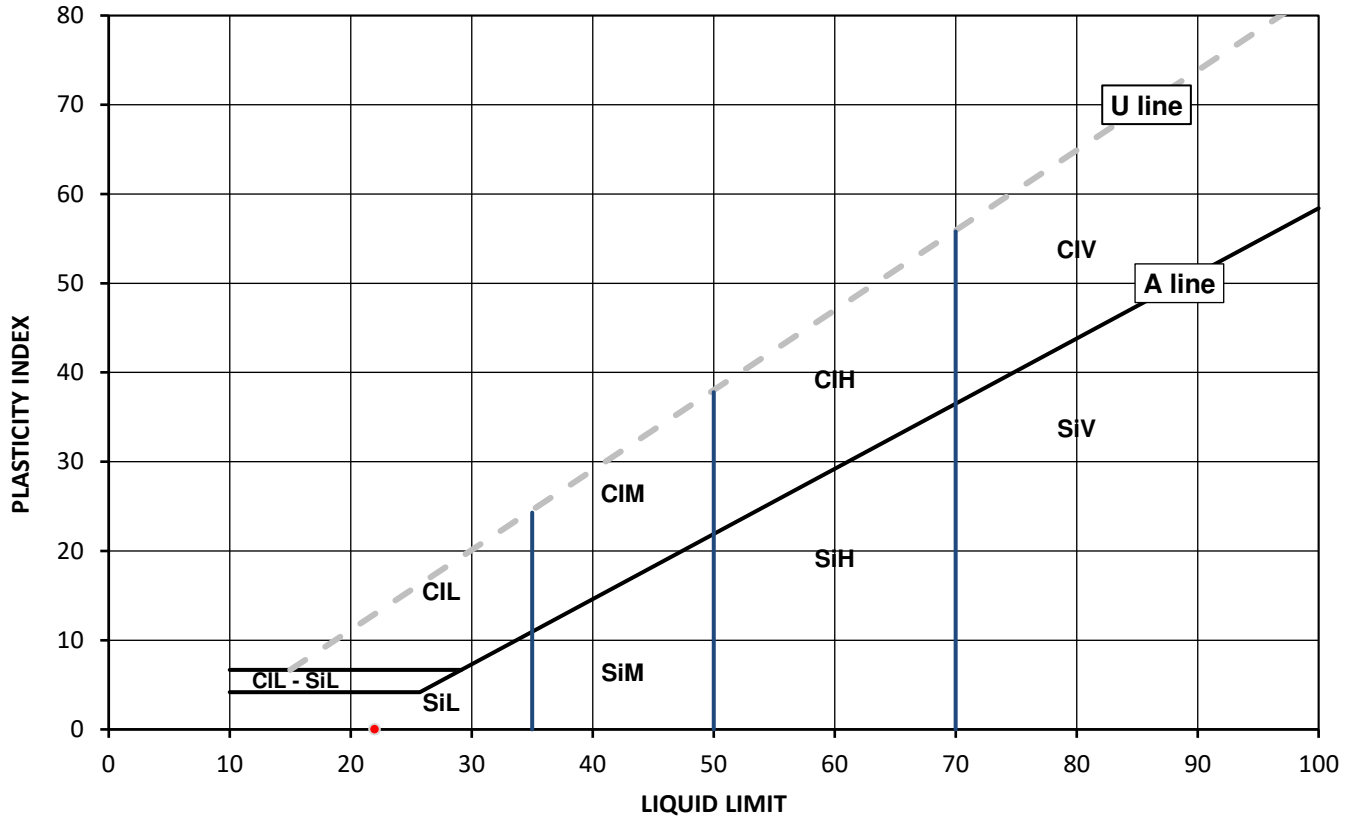
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168900	Depth Top [m]:	0.40
Hole No.:	TP3	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown slightly gravelly SAND		

Sample Preparation: Tested after >0.425mm removed by hand; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
12.4	22	NP	NP	N/A	N/A	81



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks: NP - non plastic

Signed: Katarzyna Banys

Katarzyna Banys
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 01/05/2024

GF 337.13

TEST CERTIFICATE

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4041

Client:	Apex Consulting Engineers Ltd	Client Reference:	1226
Client Address:	Unit 3, Acres Hill Business Park, 2 Acres Hill Lane, Sheffield, South Yorkshire, S9 4LT	Job Number:	24-013784-1
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

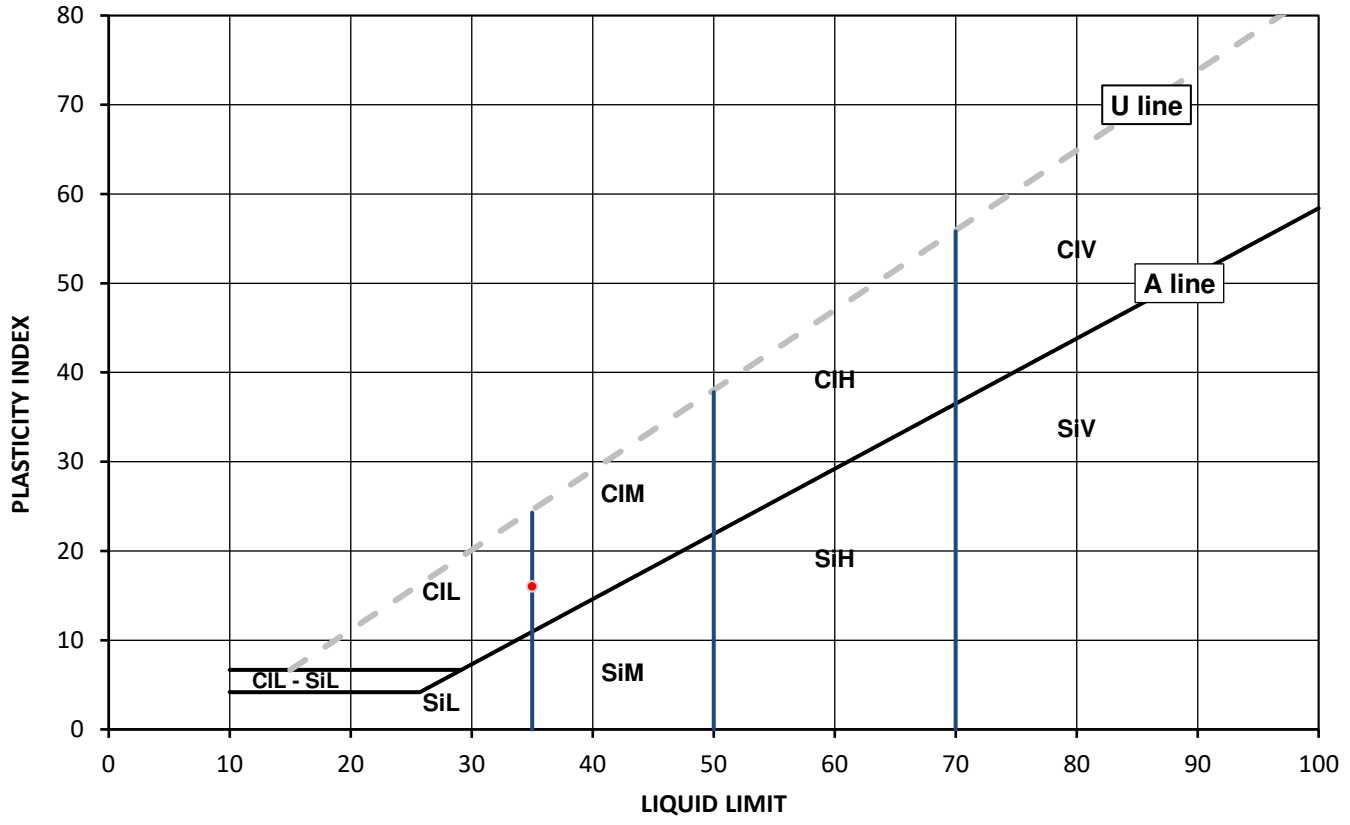
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168901	Depth Top [m]:	1.00
Hole No.:	TP5	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brown sandy CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
17.0	35	19	16	-0.13	1.13	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed: Katarzyna Banys

Katarzyna Banys
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Date Reported: 01/05/2024

GF 337.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

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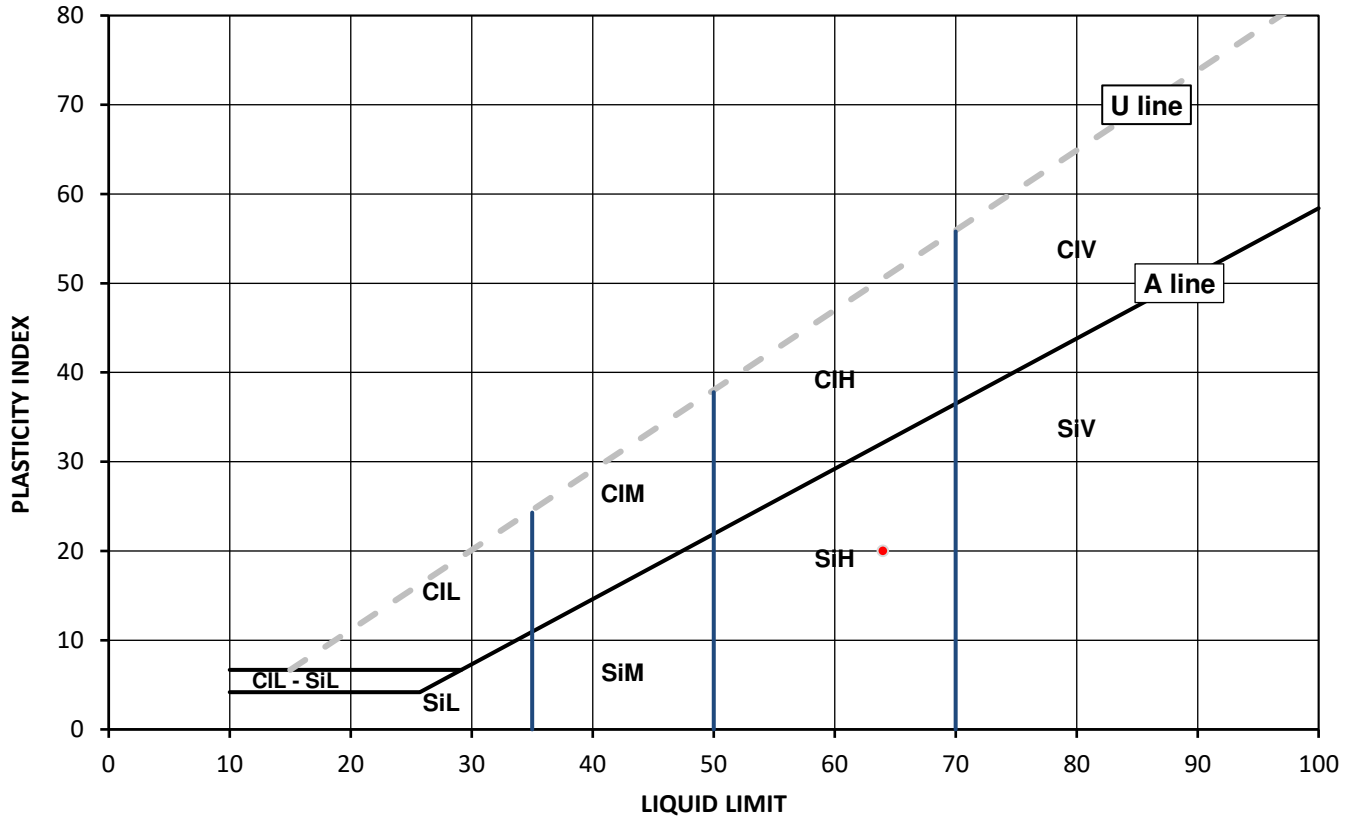
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168902	Depth Top [m]:	0.60
Hole No.:	TP4	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Brownish black clayey SILT		
Sample Preparation:	Tested in natural condition; The water content in the sample was increased		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
28.6	64	44	20	-0.75	1.75	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed: Katarzyna Banys

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Date Reported: 01/05/2024

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TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

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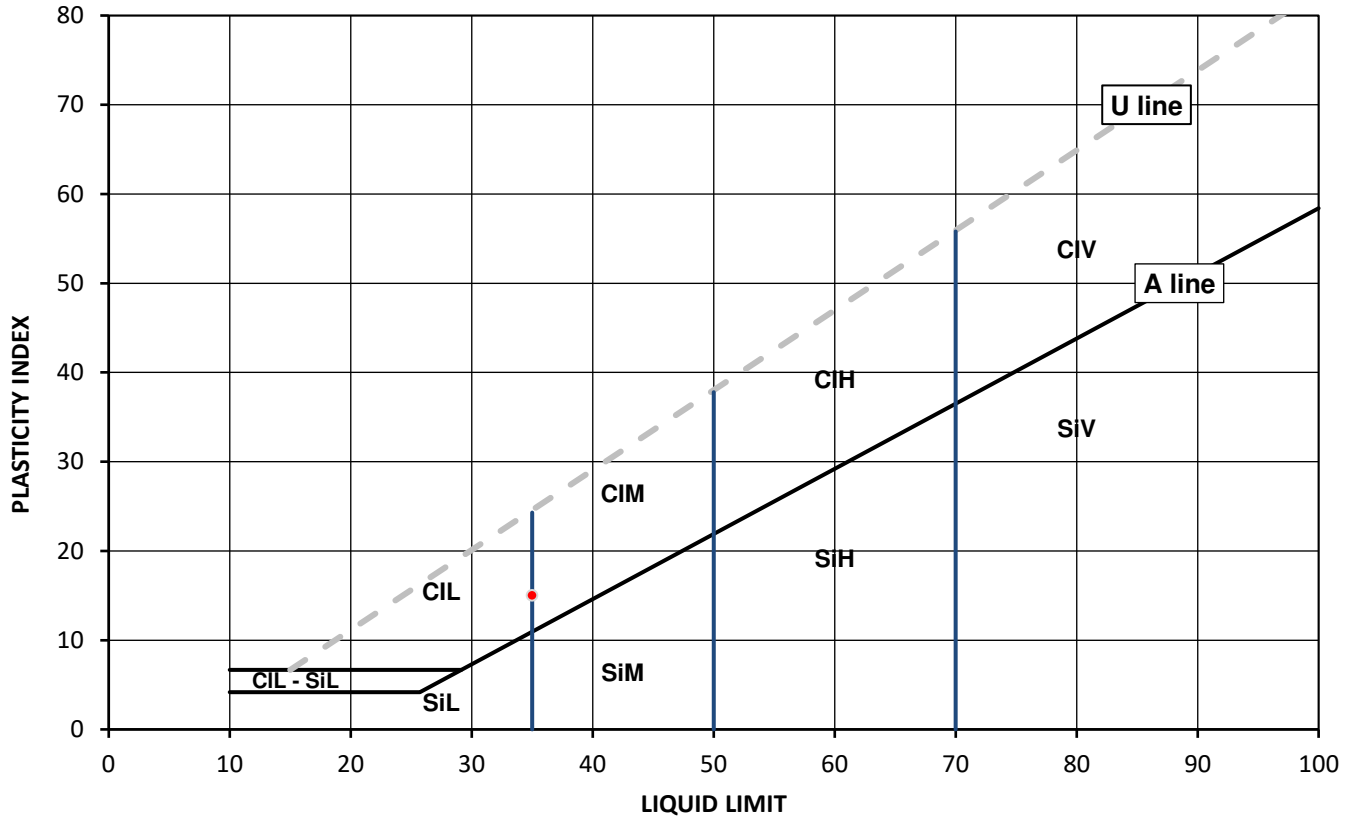
Client Address:	Unit 3, Acres Hill Business Park, 2 Acres Hill Lane, Sheffield, South Yorkshire, S9 4LT	Job Number:	24-013784-1
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168903	Depth Top [m]:	1.50
Hole No.:	TP3	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown sandy CLAY		
Sample Preparation:	Tested in natural condition; The water content in the sample was increased		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
23.7	35	20	15	0.27	0.73	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed: Katarzyna Banys

Katarzyna Banys
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Date Reported: 01/05/2024

GF 337.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

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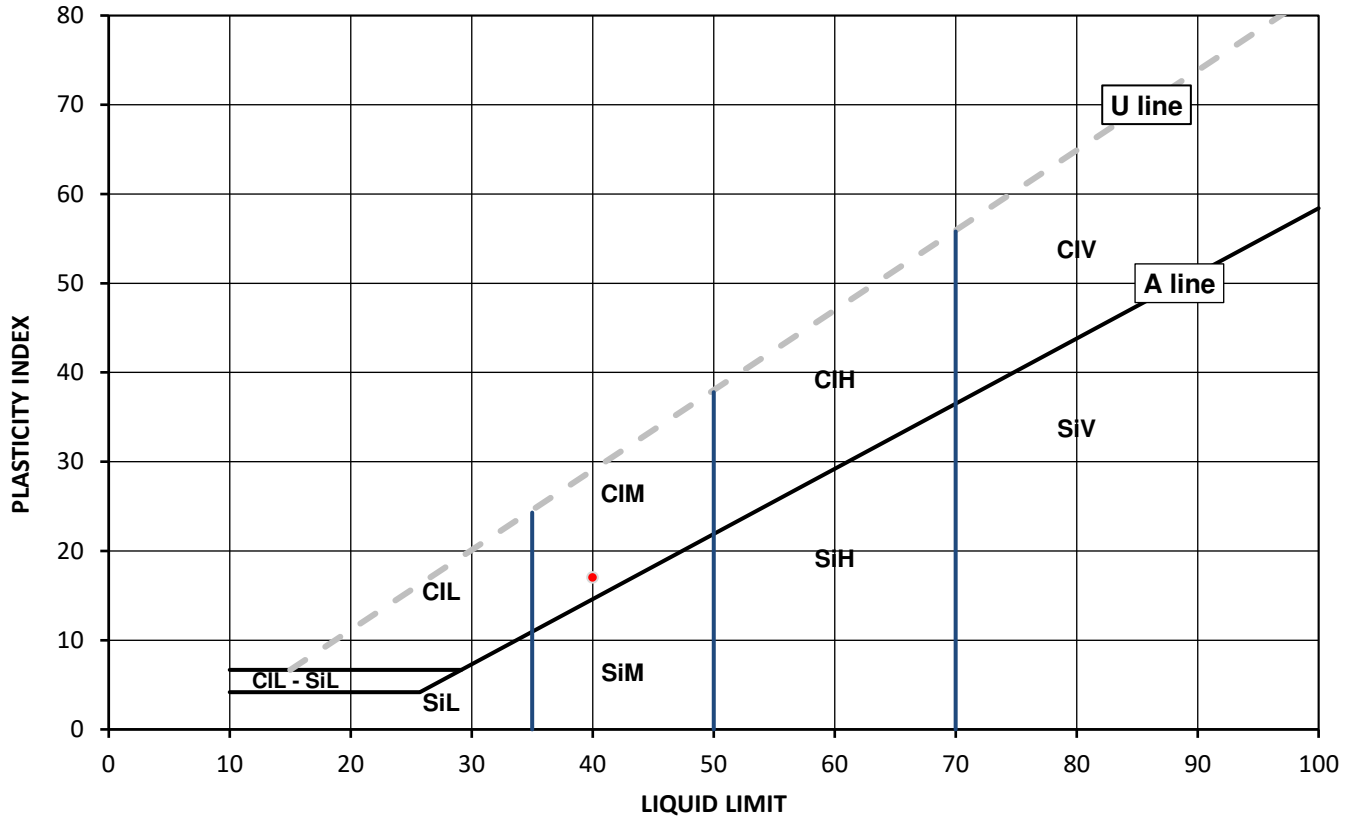
Client:	Apex Consulting Engineers Ltd	Client Reference:	1226
Client Address:	Unit 3, Acres Hill Business Park, 2 Acres Hill Lane, Sheffield, South Yorkshire, S9 4LT	Job Number:	24-013784-1
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168904	Depth Top [m]:	0.70
Hole No.:	TP11	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Light brown sandy silty CLAY		
Sample Preparation:	Tested in natural condition; The water content in the sample was increased		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
17.6	40	23	17	-0.29	1.29	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed: Katarzyna Banys

Katarzyna Banys
Reporting Specialist
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Date Reported: 01/05/2024

GF 337.13

TEST CERTIFICATE

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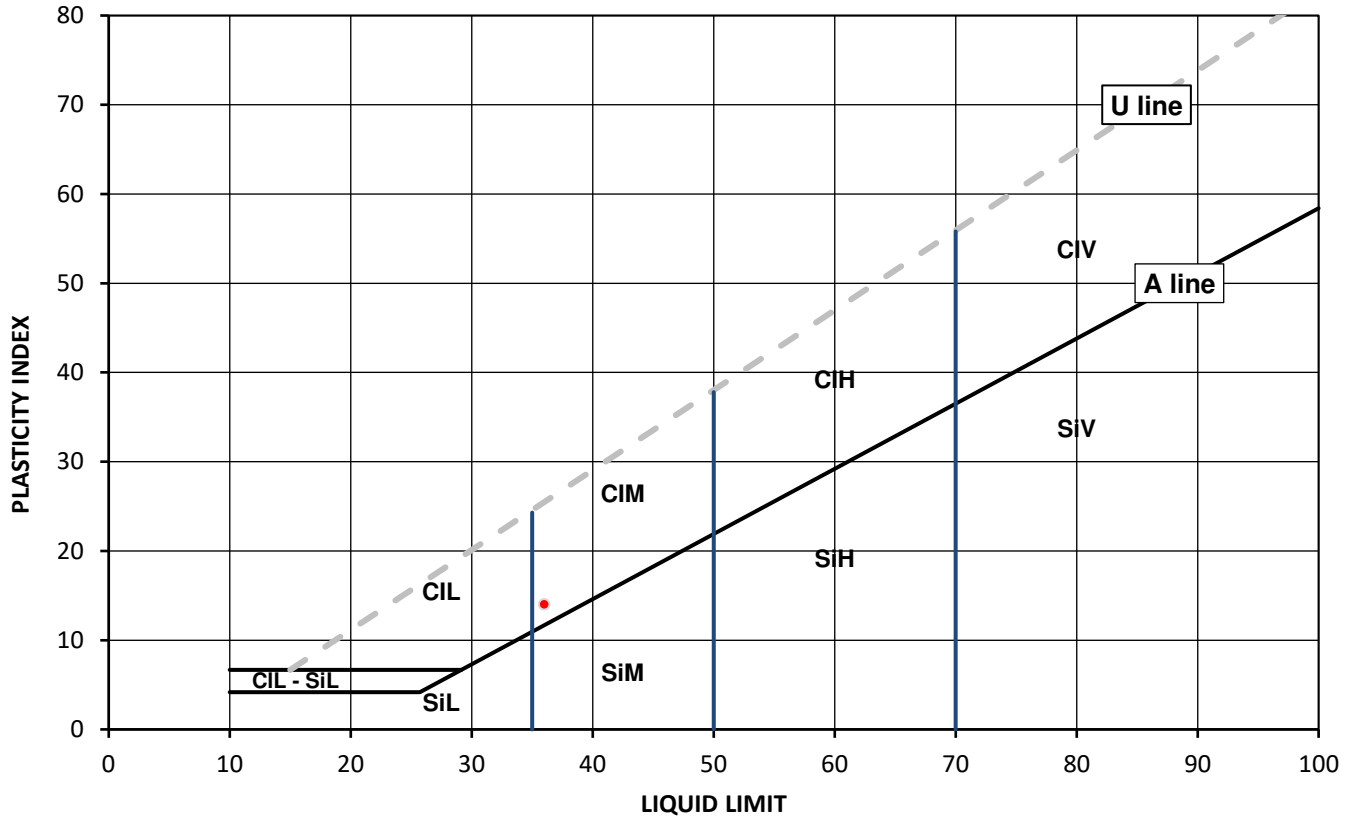
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168905	Depth Top [m]:	1.00
Hole No.:	TP2	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Greyish brown sandy silty CLAY		
Sample Preparation:	Tested in natural condition; The water content in the sample was increased		
Cone Type:	80g/30deg		

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
19.2	36	22	14	-0.21	1.21	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed: Katarzyna Banys

Katarzyna Banys
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 01/05/2024

GF 337.13

TEST CERTIFICATE

DETERMINATION OF LIQUID AND PLASTIC LIMITS

Tested in Accordance with: BS EN ISO 17892-12:2018+A2:2022, cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6

i2 Analytical Ltd
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Client:	Apex Consulting Engineers Ltd	Client Reference:	1226
Client Address:	Unit 3, Acres Hill Business Park, 2 Acres Hill Lane, Sheffield, South Yorkshire, S9 4LT	Job Number:	24-013784-1
		Date Sampled:	02/04/2024
		Date Received:	08/04/2024
Contact:	Matthew Simmons	Date Tested:	23/04/2024
Site Address:	Sound Creationd Design Centre, Barnsley	Sampled By:	Not Given

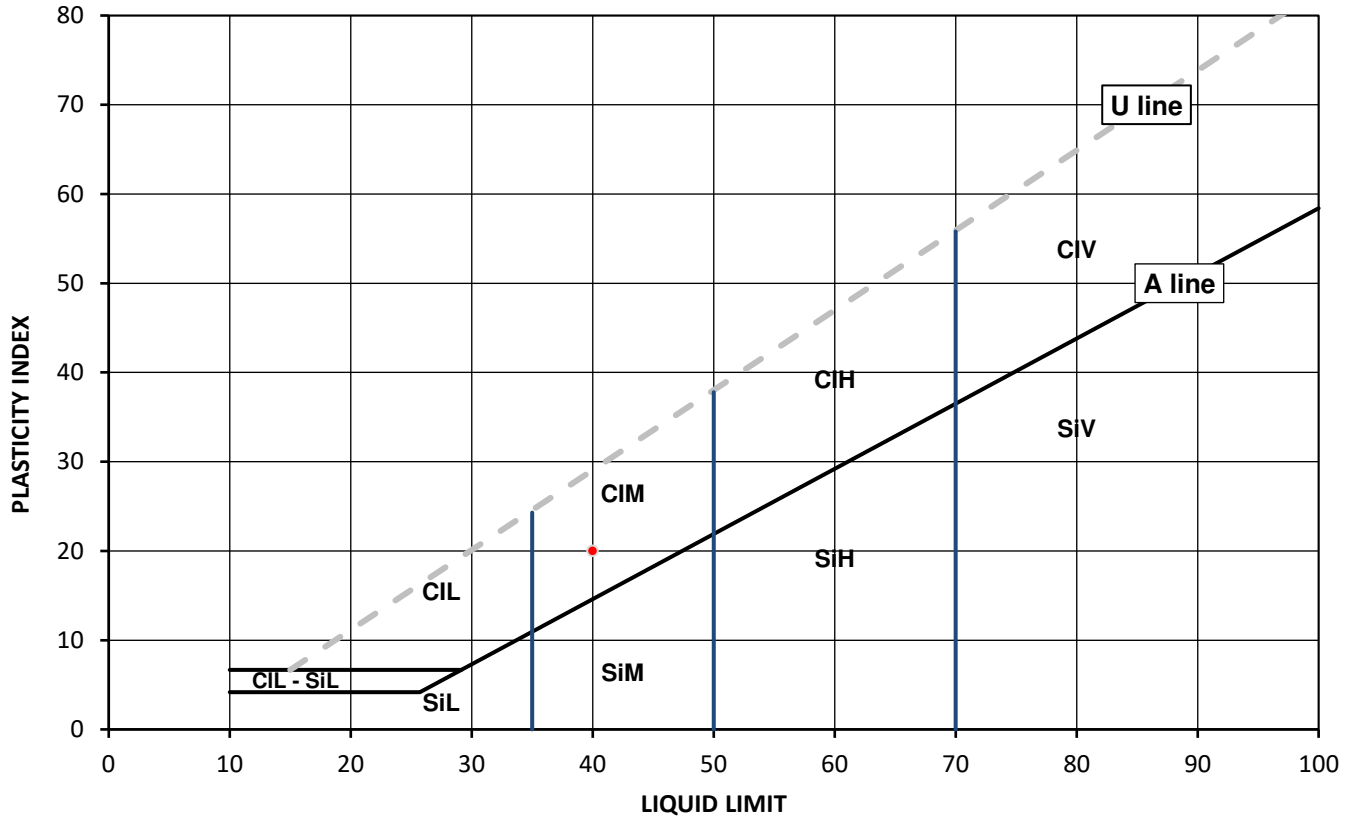
Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference:	168906	Depth Top [m]:	1.00
Hole No.:	TP1	Depth Base [m]:	Not Given
Sample Reference:	Not Given	Sample Type:	D
Sample Description:	Dark grey sandy CLAY		

Sample Preparation: Tested in natural condition; The water content in the sample was increased
Cone Type: 80g/30deg

As Received Water Content [W] %	Liquid Limit [WL] %	Plastic Limit [Wp] %	Plasticity Index [Ip] %	Liquidity Index [IL] % #	Consistency Index [IC] % #	% Passing 425µm BS Test Sieve
12.8	40	20	20	-0.35	1.35	100



Legend, based on BS EN ISO 14688 2:2018 Geotechnical investigation and testing – Identification and classification of soil

		Plasticity		Liquid Limit
Cl	Clay	L	Low	below 35
Si	Silt	M	Medium	35 to 50
		H	High	50 to 70
		V	Very high	exceeding 70
		O	Organic	append to classification for organic material (eg ClHO)

Note: Water Content by BS EN 17892-1: 2014; # Non accredited

Remarks:

Signed: Katarzyna Banys

Katarzyna Banys
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 01/05/2024

GF 337.13

SUMMARY REPORT

SUMMARY OF CLASSIFICATION TEST RESULTS

Tested in Accordance with:

BS EN ISO 17892-12:2018+A2:2022 cl 5.3 and 5.5, Fall Cone Method, 4 Pt Test, BS 1377-2:2022, cl 5.2 and 6. W by BS EN 17892-1:2014.

i2 Analytical Ltd
Unit 8 Harrowden Road
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4041

Client: Apex Consulting Engineers Ltd

Client Address: Unit 3, Acres Hill Business Park, 2 Acres Hill Lane, Sheffield, South Yorkshire, S9 4LT

Contact: Matthew Simmons

Site Address: Sound Creationd Design Centre, Barnsley

Client Reference: 1226
Job Number: 24-013784-1
Date Sampled: 02/04/2024
Date Received: 08/04/2024
Date Tested: 23/04/2024
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow, 41-711 Ruda Slaska, Poland

Test results

Laboratory Reference	Hole No.	Sample				Description	Remarks	W	Liquid & Plastic Limit							Density		
		Reference	Depth Top m	Depth Base m	Type			%	% Passing 425um %	WL* %	Correlation Factor	Wp %	Ip %	Cone type	Sample Preparation	bulk Mg/m3	dry Mg/m3	PD Mg/m3
168899	TP6	Not Given	0.40	Not Given	D	Yellowish brown slightly gravelly very sandy silty CLAY	Atterberg 4 Point	19.9	87	33	-	22	11	80g/30 deg	R / I			
168900	TP3	Not Given	0.40	Not Given	D	Light brown slightly gravelly SAND	Atterberg 4 Point	12.4	81	22	-	NP	NP	80g/30 deg	R / I			
168901	TP5	Not Given	1.00	Not Given	D	Brown sandy CLAY	Atterberg 4 Point	17.0	100	35	-	19	16	80g/30 deg	N / I			
168902	TP4	Not Given	0.60	Not Given	D	Brownish black clayey SILT	Atterberg 4 Point	28.6	100	64	-	44	20	80g/30 deg	N / I			
168903	TP3	Not Given	1.50	Not Given	D	Light brown sandy CLAY	Atterberg 4 Point	23.7	100	35	-	20	15	80g/30 deg	N / I			
168904	TP11	Not Given	0.70	Not Given	D	Light brown sandy silty CLAY	Atterberg 4 Point	17.6	100	40	-	23	17	80g/30 deg	N / I			
168905	TP2	Not Given	1.00	Not Given	D	Greyish brown sandy silty CLAY	Atterberg 4 Point	19.2	100	36	-	22	14	80g/30 deg	N / I			
168906	TP1	Not Given	1.00	Not Given	D	Dark grey sandy CLAY	Atterberg 4 Point	12.8	100	40	-	20	20	80g/30 deg	N / I			

Note: # Non accredited; NP - Non plastic; N - Tested in natural condition, R - Tested after >0,425mm removed by hand, W - Tested after washing to remove >425mm; I - The water content in the sample was increased , D - The water content in the sample was decreased; * - One point liquid limit corrected as per the report Correlation Factor by Clayton C.R.I and Jukes A.W (1978)

Comments:

Signed: Katarzyna Banys

Katarzyna Banys
Reporting Specialist
for and on behalf of i2 Analytical Ltd

Date Reported: 01/05/2024 **GF 362.14**

Appendix H – Soakaway Testing Results

Soakaway Test Calculation

Site:Windhill Lane, Barnsley
Jon no.:1226
Date:2024/03/28

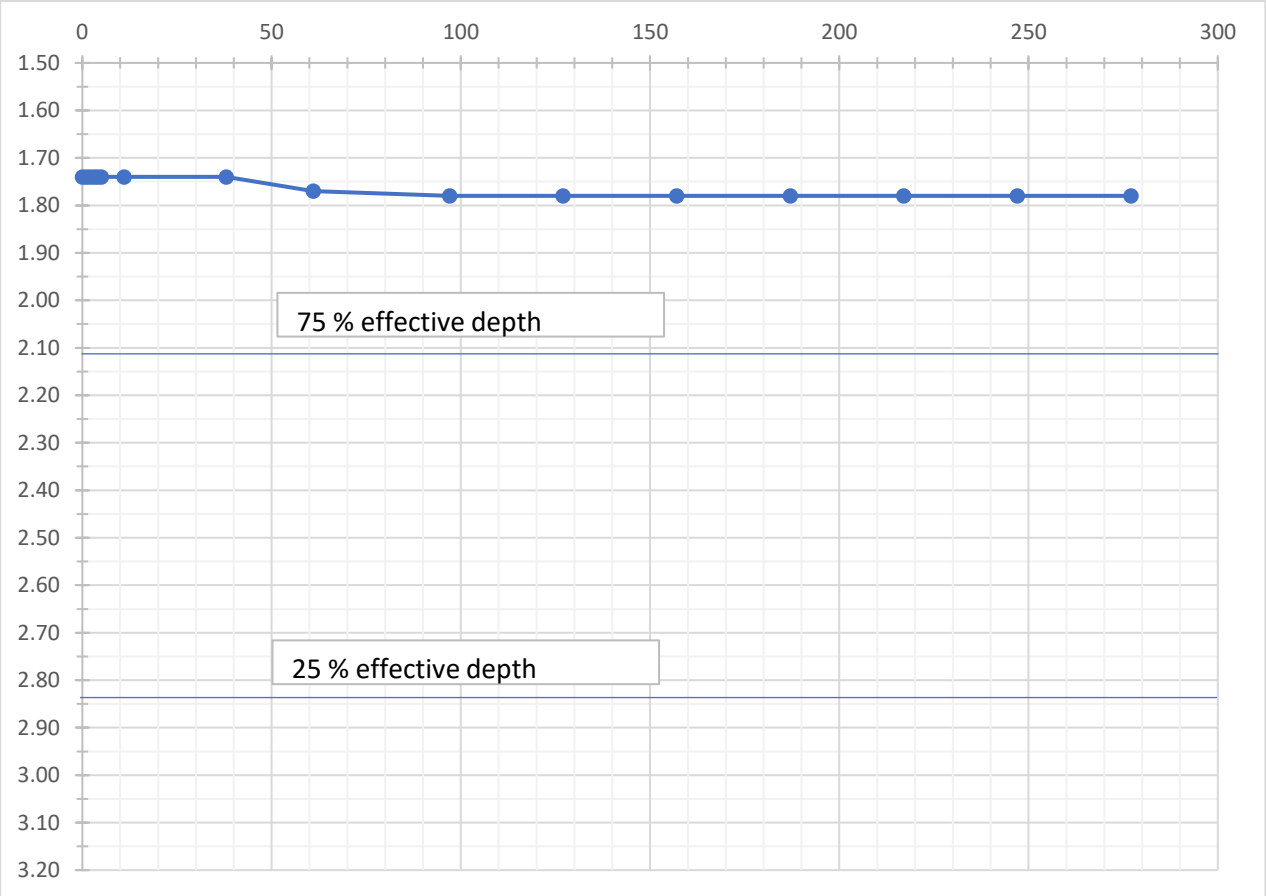
Trial Pit	TP8
Test no.	1

Elapsed Time (min)	Depth to water (m)
0	1.74
1	1.74
2	1.74
3	1.74
4	1.74
5	1.74
11	1.74
38	1.74
61	1.77
97	1.78
127	1.78
157	1.78
187	1.78
217	1.78
247	1.78
277	1.78

Length (m)	2.00
Width (m)	0.35
Depth (m)	3.20
Water column (m)	1.46
75%-25% Water volume (m^3)	0.51
Water surface area (m^2)	4.13
75% effective depth	2.11
50% effective depth	0.73
25% effective depth	2.84

Mins at 75 % effective depth	N/A
Mins at 25% effective depth	N/A

Infiltration rate
Unable to calculate



APEX CONSULTING ENGINEERS

Soakaway Test Calculation

Site:Windhill Lane, Barnsley
Jon no.:1226
Date:2024/03/28

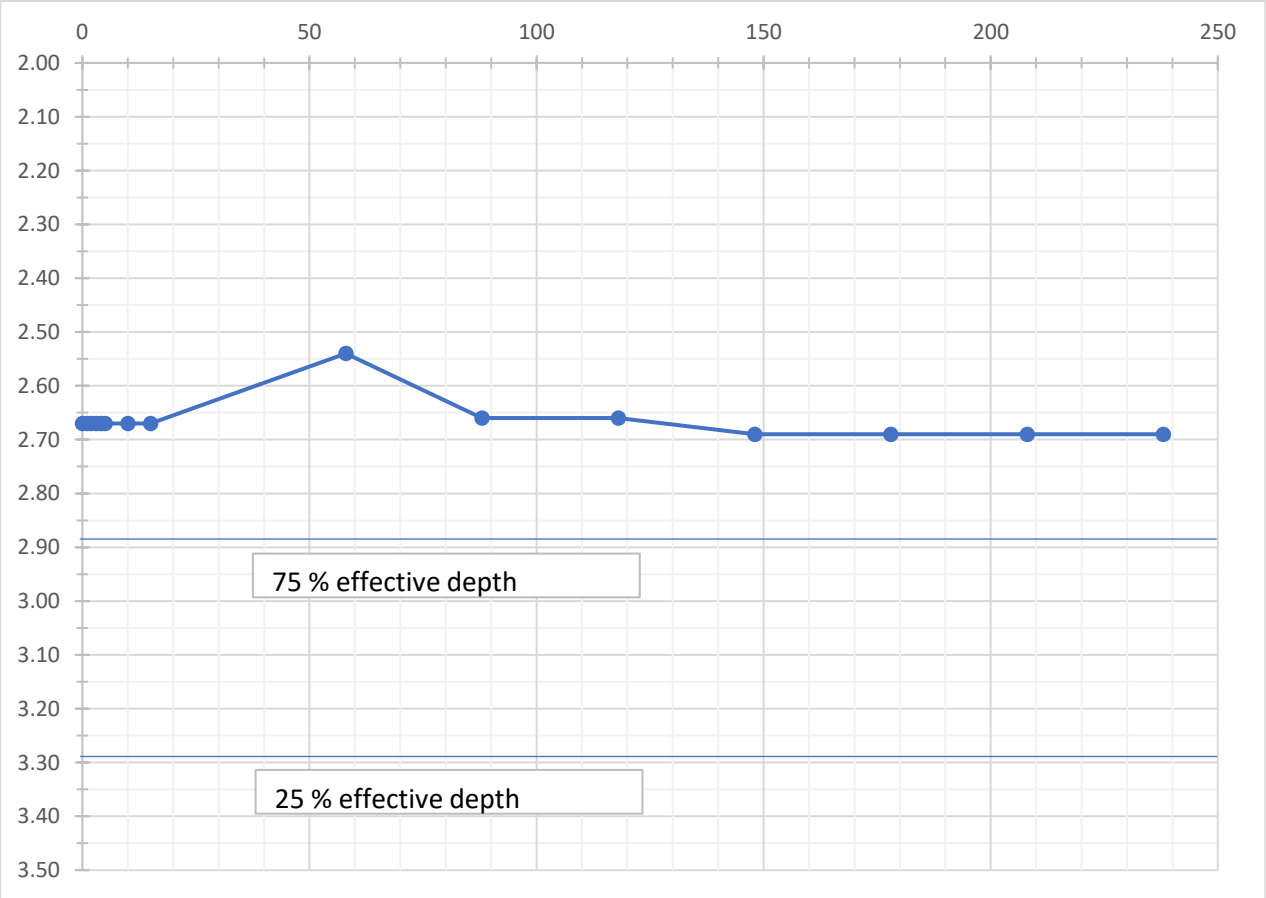
Trial Pit	TP12
Test no.	1

Elapsed Time (min)	**Depth to water (m)**
0	2.67
1	2.67
2	2.67
3	2.67
4	2.67
5	2.67
10	2.67
15	2.67
58	2.54
88	2.66
118	2.66
148	2.69
178	2.69
208	2.69
238	2.69

Length (m)	2.00
Width (m)	0.40
Depth (m)	3.50
Water column (m)	0.83
75%-25% Water volume (m^3)	0.33
Water surface area (m^2)	2.79
75% effective depth	2.88
50% effective depth	0.42
25% effective depth	3.29

Mins at 75 % effective depth	N/A
Mins at 25% effective depth	N/A

Infiltration rate
Unable to calculate



Soakaway Test Calculation

Site:Windhill Lane, Barnsley
Jon no.:1226
Date:2024/03/28

Trial Pit	TP10
Test no.	1

Elapsed Time (min)	Depth to water (m)
0	2.50
1	2.47
2	2.47
3	2.47
4	2.47
5	2.47
9	2.47
39	2.53
69	2.48
99	2.57
129	2.57
159	2.57
189	2.57

Length (m)	2.00
Width (m)	0.40
Depth (m)	3.40
Water column (m)	0.90
75%-25% Water volume (m^3)	0.36
Water surface area (m^2)	2.96
75% effective depth	2.73
50% effective depth	0.45
25% effective depth	3.18

Mins at 75 % effective depth	N/A
Mins at 25% effective depth	N/A

Infiltration rate
Unable to calculate