

Project Name: Kenyon Lane	Project No. 16717	Co-ords: 387661.00 - 401182.00 Level:	Date 22/06/2023
Location: Failsworth	Dimensions (m): 2.20 Depth 2.90		Scale 1:30
Client: AJP			Logged E. Canham

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	ES		0.25			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
	0.80	ES					MADE GROUND: Greyish brown clayey gravelly medium to coarse sand with pockets of dense black fine to medium sand and frequent cobbles. Gravel is fine to coarse subangular to subrounded of brick, plastic, asphalt, slate, clinker, metal, glass and cloth. Cobbles are subangular to angular of concrete and intact bricks.	1
				2.90			End of Pit at 2.90m	2
								3
								4

Trial Pit Photographs



Trial Pit 104

Trial Pit 104 Spoil

Remarks: 1. Complete. 2. Large concrete block encountered within the northern wall. 3 Depth of Made Ground unproven. 4. Slight hydrocarbon odour encountered.

Stability: Stable.

Project Name: Kenyon Lane	Project No. 16717	Co-ords: 387680.00 - 401186.00 Level:	Date 22/06/2023
Location: Failsworth	Dimensions (m): 2.00 0.60		Scale 1:30
Client: AJP	Depth 4.00		Logged E. Canham

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
	1.00	ES					MADE GROUND: Greyish brown clayey gravelly medium to coarse sand with frequent cobbles. Gravel is fine to coarse subangular to subrounded of mudstone, brick and glass. Cobbles are subangular to angular of concrete flagstones, intact bricks, metal, plastic, wood and rope.	1
	1.50	B						2
				3.20			MADE GROUND: Greyish brown slightly gravelly silty reworked clay with occasional cobbles and rare large boulder. Cobbles are angular bricks and boulder is subrounded mudstone.	3
				4.00			End of Pit at 4.00m	4

Trial Pit Photographs



Remarks: 1. Complete. 2. Frequent concrete flagstones encountered to 2.00 m bgl. 3 Depth of Made Ground unproven.

Stability: Stable.

Project Name: Kenyon Lane	Project No. 16717	Co-ords: 387703.00 - 401230.00 Level:	Date 22/06/2023
Location: Failsworth		Dimensions (m): 2.00 Depth 3.50	Scale 1:30
Client: AJP			Logged E. Canham

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.35	ES		0.40			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick, rare plastic and mudstone. (Topsoil)	
				1.20			MADE GROUND: Greyish brown clayey gravelly medium to coarse sand with pockets of black gravel and frequent cobbles. Gravel is fine to coarse subangular to subrounded of mudstone, brick and ash. Cobbles are subangular to angular of bricks and concrete.	1
	1.50	ES					Brown slightly silty SAND with occasional black streaks.	
	2.00	B		2.20			Orangish brown medium to coarse SAND.	2
				3.00			Greyish brown SILT.	3
				3.50			End of Pit at 3.50m	4

Trial Pit Photographs



Trial Pit 106



Trial Pit 106 Spoil

Remarks: 1. Complete.

Stability: Stable.

Project Name: Kenyon Lane	Project No. 16717	Co-ords: 387691.00 - 401241.00 Level:	Date 22/06/2023
Location: Failsworth	Dimensions (m): 1.80 Depth 3.00 0.60		Scale 1:30
Client: AJP			Logged E. Canham

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.25			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
				1.00			MADE GROUND: Greyish brown clayey gravelly fine to medium sand. Gravel is fine to coarse subangular to subrounded of mudstone, brick, cloth and plastic.	
				1.40			Brown slightly sandy CLAY.	1
				1.80			Orange slightly clayey medium to coarse SAND.	
				2.70			Light brown medium to coarse SAND.	2
	3.00	ES		3.00			Greyish brown clayey SILT.	
							End of Pit at 3.00m	3
								4

Trial Pit Photographs



Trial Pit 107



Trial Pit 107 Spoil

Remarks: 1. Complete.

Stability: Stable.

Project Name: Kenyon Lane	Project No. 16717	Co-ords: 387694.00 - 401233.00 Level:	Date 22/06/2023
Location: Failsworth		Dimensions (m): 1.90 Depth 2.80	Scale 1:30 Logged E. Canham
Client: AJP			

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	1.00	ES		0.25			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil) MADE GROUND: Greyish brown clayey gravelly fine to medium sand with frequent cobbles. Gravel is fine to coarse subangular to subrounded of mudstone and brick. Cobbles are subangular bricks.	1
				1.80			Orange silty SAND.	2
				2.00			Greyish brown silty SAND.	2
				2.40			Greyish brown clayey SILT with black traces.	3
				2.80			End of Pit at 2.80m	3
								4

Trial Pit Photographs



Trial Pit 108



Trial Pit 108 Spoil

Remarks: 1. Complete.

Stability: Stable.

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387681.00 - 401231.00
Level:

Date
22/06/2023

Location: Failsworth

Dimensions (m): 1.80

Scale
1:30

Client: AJP

Depth
1.20

Logged
E. Canham

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.20	ES		0.30			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
				1.20			MADE GROUND: Greyish brown sandy gravelly reworked clay with frequent cobbles. Gravel is fine to coarse subangular to subrounded of mudstone, brick and ceramic. Cobbles are subangular to angular of brick, mudstone, asphalt and plastic.	1
							End of Pit at 1.20m	2
								3
								4

Trial Pit Photographs



Trial Pit 109



Trial Pit 109 Spoil

Remarks: 1. Terminated at 1.20 m bgl due to concrete slab.

Stability: Stable.

Project Name: Kenyon Lane	Project No. 16717	Co-ords: 387671.00 - 401220.00 Level:	Date 22/06/2023
Location: Failsworth	Dimensions (m): 2.00 0.60		Scale 1:30
Client: AJP	Depth 3.00		Logged E. Canham

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	0.60	ES		0.30			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
				1.70			MADE GROUND: Greyish brown clayey gravelly fine to medium sand with occasional cobbles. Gravel is fine to coarse subangular to subrounded of mudstone, metal and brick. Cobbles are subangular intact bricks.	1
				2.10			MADE GROUND: Black slightly gravelly clayey fine to medium sand. (Slight hydrocarbon odour)	2
				2.70			Firm greyish brown silty sandy CLAY with black streaks.	
	2.80	ES		2.80			Orange medium to coarse SAND.	
				3.00			Greyish brown sandy SILT.	3
							End of Pit at 3.00m	4

Trial Pit Photographs



Trial Pit 110



Trial Pit 110 Spoil

Remarks: 1. Complete.

Stability: Stable.

Project Name: Kenyon Lane	Project No. 16717	Co-ords: 387654.00 - 401220.00 Level:	Date 22/06/2023
Location: Failsworth		Dimensions (m): 2.10 0.60	Scale 1:30
Client: AJP		Depth 1.60	Logged E. Canham

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
	1.10	ES		0.35			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
				1.00			MADE GROUND: Greyish brown clayey gravelly fine to medium sand with frequent cobbles. Gravel is fine to coarse subangular to subrounded of mudstone, ceramic and brick. Cobbles are subangular intact bricks and concrete.	1
				1.20			MADE GROUND: Black slightly silty reworked clay with wood fragments.	
				1.60			MADE GROUND: Brown sandy clay with ceramic drain encountered in western wall.	
							End of Pit at 1.60m	2
								3
								4

Trial Pit Photographs



Trial Pit 111

Trial Pit 111 Spoil

Remarks: 1. Terminated at 1.60 m bgl due to potential drain. 2. Concrete obstruction encountered in western wall of trial pit at 1.20 m bgl.

Stability: Stable.

Borehole Log

Borehole No.

WS101

Sheet 1 of 1

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387586.00 - 401149.00

Hole Type
WS

Location: Failsworth

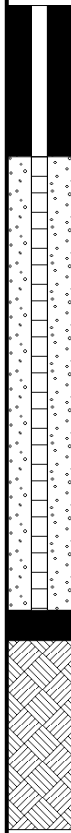
Level:

Scale
1:50

Client: AJP

Dates: 22/06/2023 -

Logged By
E. Canham

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.30			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
		1.00		N=6 (2,2/1,1,2,2)	1.00			MADE GROUND: Brown clayey gravelly fine to medium sand. Gravel is fine to coarse subangular to angular of concrete.	1
					1.50			MADE GROUND: Black gravelly fine to medium sand. Gravel is fine to medium subangular to angular of ash and clinker.	
		2.00		N=5 (2,2/1,1,2,1)	2.00			MADE GROUND: Grey sandy gravel. Gravel is fine to coarse subangular to angular of concrete and clinker.	2
					2.45			MADE GROUND: Black gravelly fine to medium sand. Gravel is fine to medium subangular to angular of ash and clinker.	
		3.00		N=4 (1,1/1,1,1,1)				MADE GROUND: Grey sandy clayey gravel with black bands. Gravel is fine to coarse subangular to angular of concrete and clinker.	3
		4.00		N=3 (1,0/1,1,0,1)					4
		5.00		N=4 (1,2/1,1,1,1)	4.95			MADE GROUND: Soft orangish brown sandy clay.	5
					5.45			End of borehole at 5.45 m	

Remarks

1. Complete. 2. Monitoring well installed- response zone (1.00 m to 4.00 m bgl).

Borehole Log

Borehole No.

WS102

Sheet 1 of 1

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387635.00 - 401171.00

Hole Type
WS

Location: Failsworth

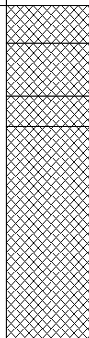
Level:

Scale
1:50

Client: AJP

Dates: 22/06/2023 -

Logged By
E. Canham

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.25	ES	N=15 (3,4/3,4,4,4)	0.25			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	1
		0.70			0.60			MADE GROUND: Brown slightly sandy gravelly reworked clay. Gravel is fine to coarse subangular to angular of brick, coal and mudstone.	
		1.00			0.80			MADE GROUND: Black clayey gravelly fine to medium sand. Gravel is fine to coarse subangular to subrounded of mudstone, sandstone and brick.	
		2.00			2.26			MADE GROUND: Greyish brown slightly silty gravelly reworked clay with frequent cobbles. Gravel is fine to coarse subangular to angular of brick and mudstone. Cobbles are subangular of concrete and brick.	
								End of borehole at 2.26 m	

Remarks

1. Refusal within Made Ground on 2.26 m bgl. 2. Monitoring well installed- response zone (1.00 m to 2.00 m bgl).

Borehole Log

Borehole No.

WS103

Sheet 1 of 1

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387692.00 - 401189.00

Hole Type
WS

Location: Failsworth

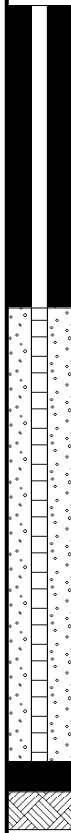
Level:

Scale
1:50

Client: AJP

Dates: 22/06/2023 -

Logged By
E. Canham

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30			0.30			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets with rare cobble. Gravel is fine to coarse subangular to angular of brick and mudstone. Cobble is subangular of concrete. (Topsoil)	
		1.00		N=10 (2,3/3,2,2,3)				MADE GROUND: Greyish brown sandy gravelly reworked clay becoming silty from 1.50 m bgl, with cobble encountered at 0.90 m to 1.00 m bgl. Gravel is fine to coarse subangular to angular of brick, concrete and coal. Cobbles is subangular of clinker.	1
		2.00 2.00	SPT	N=2 (1,0/1,0,1,0)	2.00			No recovery.	2
		3.00 3.00	SPT	N=12 (1,0/2,3,3,4)	3.00			Stiff medium strength greyish brown silty CLAY.	3
		4.00 4.00	SPT	N=12 (1,2/2,2,3,5)					4
		5.00 5.00	SPT	N=13 (1,2/3,3,4,3)					5
					5.45			End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1. Complete. 2. Monitoring well installed- response zone (2.00 m to 5.00 m bgl).

Borehole Log

Borehole No.

WS104

Sheet 1 of 1

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387692.00 - 401223.00

Hole Type
WS

Location: Failsworth

Level:

Scale
1:50

Client: AJP

Dates: 22/06/2023 -

Logged By
E. Canham

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30	ES	N=40 (3,6/9,10,8,13)	0.20			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
					0.40			MADE GROUND: Brown gravelly reworked clay with rare cobble.	
		1.00			1.00			MADE GROUND: Brick fill.	1
					1.20			MADE GROUND: Black slightly gravelly sandy clay. Gravel is fine to medium subangular to angular of ash, brick and concrete.	
					1.50			MADE GROUND: Brown gravelly sandy reworked clay with rare cobble. Gravel is fine to coarse subangular to angular of brick and concrete. Cobbles is subangular of clinker.	
		2.00	N=11 (4,3/3,3,3,2)		1.60			Orange medium to coarse SAND.	2
								Stiff medium strength brown sandy SILT.	
					2.70			Brown slightly silty fine to medium SAND.	
		3.00	N=5 (1,0/0,1,2,2)		2.80			Firm low strength greyish brown SILT. Becoming stiff medium strength from 4.00 m bgl.	3
									
		4.00	N=11 (2,2/2,3,3,3)						4
					4.80				
		5.00	SPT	N=13 (2,3/3,3,3,4)					
		5.00			5.45				
								End of borehole at 5.45 m	5
									6
									7
									8
									9
									10

Remarks

1. Complete. 2. Monitoring well installed- response zone (0.50 m to 2.00 m bgl). 3. Water strike encountered at 3.00 m bgl.

Borehole Log

Borehole No.

WS105

Sheet 1 of 1

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387678.00 - 401252.00

Hole Type
WS

Location: Failsworth

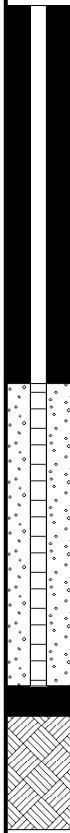
Level:

Scale
1:50

Client: AJP

Dates: 22/06/2023 -

Logged By
E. Canham

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.35			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
					0.60				
					0.70			MADE GROUND: Greyish brown sandy gravelly clay. Gravel is fine to coarse subangular to angular of brick and mudstone.	
		0.90	ES	N=6 (1,2/1,2,1,2)	1.20			MADE GROUND: Orangish brown fine to medium sand with brick cobble.	1
		1.00			1.45			MADE GROUND: Greyish brown reworked clay with black band of concrete and bitumen from 0.80 m to 0.95 m bgl.	
					1.50				
		2.00		N=6 (1,2/1,1,2,2)	2.50			Loose light greyish brown fine to medium SAND. Orange mottled black SAND. Loose greyish brown silty fine to medium SAND.	2
		2.00 - 5.00	B						
									
									
		3.00		N=9 (1,1/1,3,2,3)					3
									
		4.00		N=12 (2,2/3,3,3,3)					4
									
		5.00		N=13 (2,3/3,3,3,4)					5
					5.45				
								End of borehole at 5.45 m	6
									7
									8
									9
									10

Remarks

1. Complete. 2. Monitoring well installed- response zone (2.50 m to 4.50 m bgl). 3. Slight hydrocarbon odour encountered from 0.70 m to 1.00 m bgl.

Borehole Log

Borehole No.

WS106

Sheet 1 of 1

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387638.00 - 401203.00

Hole Type
WS

Location: Failsworth

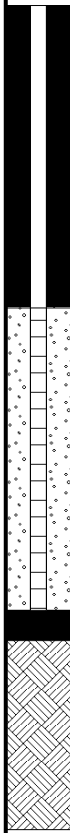
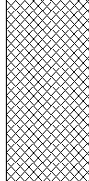
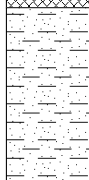
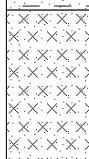
Level:

Scale
1:50

Client: AJP

Dates: 22/06/2023 -

Logged By
E. Canham

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES		0.25			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of glass, brick and ash. (Topsoil)	1
		1.00		N=9 (2,1/2,3,2,2)				MADE GROUND: Greyish brown slightly sandy gravelly reworked clay. Gravel is fine to coarse subangular to angular of brick, ash and concrete.	
		1.90 2.00 2.00	ES SPT		1.80			Firm low strength orangish brown sandy CLAY with occasional black sandy streaks.	2
		3.00		N=9 (2,3/2,2,2,3)	3.00			Firm low strength orangish brown sandy SILT with black streaks from 3.80 m to 4.00 m bgl.	3
		4.00		N=11 (1,2/2,2,3,4)	4.00			Stiff medium strength greyish brown SILT.	4
		5.00		N=12 (2,2/3,3,3,3)	5.45			End of borehole at 5.45 m	5
									6
									7
									8
									9
									10

Remarks

1. Complete. 2. Monitoring well installed- response zone (2.00 m to 4.00 m bgl). 3. Water strike encountered at 3.60 m bgl.

Borehole Log

Borehole No.

CP101

Sheet 1 of 1

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387699.00 - 401236.00

Hole Type
CP

Location: Failsworth

Level:

Scale
1:50

Client: AJP

Dates: 04/07/2023 -

Logged By
DP Drilling

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
		1.00		N=10 (1,2/2,3,2,3)	1.30			MADE GROUND: Brown gravelly sandy reworked clay. Gravel is fine to coarse subangular to angular of brick and concrete.	1
		2.00		N=7 (1,2/2,1,2,2)				Firm low strength brown sandy SILT with CLAY bands. Becoming stiff medium strength from 3.00 m bgl.	2
		3.00 3.00	SPT	N=14 (2,2/3,3,4,4)					3
		4.00 4.00	SPT	N=15 (3,3/3,4,4,4)					4
		5.00 5.00	SPT	N=18 (3,3/4,4,5,5)					5
					6.00				6
		6.50 6.50 6.50	B SPT	50 (4,5/50 for 230mm)				Very stiff very high strength brown sandy boulder CLAY.	7
		8.00 8.00	SPT	50 (7,10/50 for 260mm)					8
					8.41			End of borehole at 8.41 m	9
									10

Remarks

1. Refusal within stiff brown boulder clay at 8.41 m bgl.



Borehole Log

Borehole No.

CP102

Sheet 1 of 2

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387639.00 - 401164.00

Hole Type
CP

Location: Failsworth

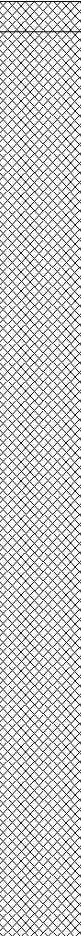
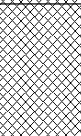
Level:

Scale
1:50

Client: AJP

Dates: 03/07/2023 -

Logged By
DP Drilling

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.20			MADE GROUND: Brown slightly gravelly clayey medium to coarse sand with frequent roots and rootlets. Gravel is fine to coarse subangular to angular of brick and mudstone. (Topsoil)	
		1.00		N=12 (1,2/2,5,3,2)				MADE GROUND: Greyish brown slightly silty gravelly reworked clay with frequent cobbles. Gravel is fine to coarse subangular to angular of brick and mudstone. Cobbles are subangular of concrete and brick.	1
		2.00 2.00	B	N=12 (2,2/3,2,3,4)					2
		3.00		N=17 (2,3/2,4,8,3)					3
		4.00		N=13 (2,2/3,3,4,3)					4
		5.00		N=14 (2,2/3,4,3,4)					5
		6.20			6.20			MADE GROUND: Black silty fine to medium sand with clay bands.	6
		6.50 6.50	B	N=10 (2,2/2,3,2,3)					7
		7.10			7.10			Medium dense grey silty SAND with CLAY bands.	8
		8.00 8.00	SPT	N=16 (3,3/4,3,4,5)					9
		9.95	SPT						10

Continued on next sheet

Remarks

1. Refusal within dense sandy gravel at 12.35 m bgl.





Borehole Log

Borehole No.

CP102

Sheet 2 of 2

Project Name: Kenyon Lane

Project No.
16717

Co-ords: 387639.00 - 401164.00

Hole Type
CP

Location: Failsworth

Level:

Scale
1:50

Client: AJP

Dates: 03/07/2023 -

Logged By
DP Drilling

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		9.95	B	N=16 (2,3/4,4,4,4)				Very stiff very high strength brown CLAY.	11
		11.00 11.00		50 (3,4/50 for 270mm)	10.90				
					11.60				
		12.00		50 (4,5/50 for 200mm)	12.35			Dense brown sandy GRAVEL.	12
								End of borehole at 12.35 m	13
									14
									15
									16
									17
									18
									19
									20

Remarks

1. Refusal within dense sandy gravel at 12.35 m bgl.



APPENDIX VI

CHEMICAL TESTING

RESULTS

Eleanor Canham

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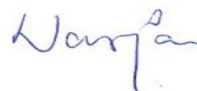
i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

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

Analytical Report Number : 23-41374

Project / Site name:	Kenyon Lane	Samples received on:	23/06/2023
Your job number:	16 717	Samples instructed on/ Analysis started on:	26/06/2023
Your order number:	005318	Analysis completed by:	04/07/2023
Report Issue Number:	1	Report issued on:	04/07/2023
Samples Analysed:	2 leachate samples - 9 soil samples		

Signed:



Dominika Warjan
Reporting Specialist
For & on behalf of i2 Analytical Ltd.

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

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

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

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

Excel copies of reports are only valid when accompanied by this PDF certificate.

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

Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Lab Sample Number	2726458	2726459	2726460	2726461	2726462
Sample Reference	TP101	TP102	TP102	TP104	TP105
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	1.20	0.20	0.80	0.80	1.00
Date Sampled	22/06/2023	22/06/2023	22/06/2023	22/06/2023	22/06/2023
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
Moisture Content	%	0.01	NONE	16	13
Total mass of sample received	kg	0.001	NONE	0.6	0.8

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	Chrysotile & Amosite	-	Chrysotile
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Detected	Not-detected	Detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	0.003	-	0.002
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	0.003	-	0.002
Asbestos Analyst ID	N/A	N/A	N/A	PDO	SSZ	SSZ	PDO	SSZ

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	5.5	7.6	8.9	8.3	8.5
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	1.7	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	42000	560	1500	1600	910
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	0.14	0.047	0.37	0.25	0.061
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	280	94	750	500	120
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	141	46.8	374	249	60.6
Sulphide	mg/kg	1	MCERTS	< 1.0	1.1	24	8.1	4.2
Total Sulphur	mg/kg	50	MCERTS	19000	470	1900	880	520
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.5	3.3	1.9	1.6	1.3

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	0.11	0.18	-	0.77	0.12
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	0.07	-	0.25	0.09
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	0.66	-	1.8	0.42
Fluorene	mg/kg	0.05	MCERTS	< 0.05	0.5	-	1.4	0.28
Phenanthrene	mg/kg	0.05	MCERTS	0.39	6.4	-	12	3
Anthracene	mg/kg	0.05	MCERTS	0.08	1.6	-	2.7	0.71
Fluoranthene	mg/kg	0.05	MCERTS	0.66	10	-	16	5.4
Pyrene	mg/kg	0.05	MCERTS	0.6	9.1	-	15	5.1
Benzo(a)anthracene	mg/kg	0.05	MCERTS	0.26	4.6	-	6.9	2.6
Chrysene	mg/kg	0.05	MCERTS	0.31	4.2	-	6.3	2.2
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	0.31	4.8	-	8	2.8
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	0.16	2.3	-	2.2	1.1
Benzo(a)pyrene	mg/kg	0.05	MCERTS	0.19	4.2	-	5.9	2.4
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	0.14	1.9	-	3.3	1.1
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.67	-	0.6	0.34
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	0.17	2.4	-	3.6	1.4

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	3.38	53.8	-	86.6	29
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Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Lab Sample Number	2726458	2726459	2726460	2726461	2726462
Sample Reference	TP101	TP102	TP102	TP104	TP105
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	1.20	0.20	0.80	0.80	1.00
Date Sampled	22/06/2023	22/06/2023	22/06/2023	22/06/2023	22/06/2023
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

	mg/kg	1	MCERTS	130	12	15	70	12
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Barium (aqua regia extractable)	mg/kg	0.06	MCERTS	-	-	-	-	-
Beryllium (aqua regia extractable)	mg/kg	0.2	MCERTS	-	-	-	-	-
Boron (water soluble)	mg/kg	0.2	MCERTS	-	-	-	-	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	0.8
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	28	21	20	21	19
Copper (aqua regia extractable)	mg/kg	1	MCERTS	100	58	51	110	130
Lead (aqua regia extractable)	mg/kg	1	MCERTS	560	110	120	260	320
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	3.3	< 0.3	< 0.3	0.5	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	7.9	23	21	22	20
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	25	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	-	-	-	-	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	30	190	120	170	580

Petroleum Hydrocarbons

TPH (C5 - C6) HS_ID_TOTAL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C6 - C8) HS_ID_TOTAL	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C8 - C10) HS_ID_TOTAL	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C10 - C12) EH_CU_ID_TOTAL	mg/kg	2	MCERTS	< 2.0	< 2.0	7.8	< 2.0	< 2.0
TPH (C12 - C16) EH_CU_ID_TOTAL	mg/kg	4	MCERTS	< 4.0	4.1	150	5.2	5.4
TPH (C16 - C21) EH_CU_ID_TOTAL	mg/kg	1	MCERTS	1.6	29	210	32	20
TPH (C21 - C35) EH_CU_ID_TOTAL	mg/kg	1	MCERTS	10	60	130	78	52
TPH (C35 - C40) EH_CU_ID_TOTAL	mg/kg	10	NONE	< 10	< 10	11	19	12
TPH Total C5 - C40 EH_CU+HS_ID_TOTAL	mg/kg	10	NONE	14	92	510	130	90

VOCs

Chloromethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Chloroethane	µg/kg	5	NONE	-	-	< 5.0	-	-
Bromomethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Vinyl Chloride	µg/kg	5	NONE	-	-	< 5.0	-	-
Trichlorofluoromethane	µg/kg	5	NONE	-	-	< 5.0	-	-
1,1-dichloroethene	µg/kg	5	NONE	-	-	< 5.0	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	NONE	-	-	< 5.0	-	-
Cis-1,2-dichloroethene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-	-	< 5.0	-	-
1,1-dichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
2,2-Dichloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Trichloromethane	µg/kg	5	NONE	-	-	< 5.0	-	-
1,1,1-Trichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,2-dichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,1-Dichloropropene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Trans-1,2-dichloroethene	µg/kg	5	NONE	-	-	< 5.0	-	-
Benzene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
Tetrachloromethane	µg/kg	5	NONE	-	-	< 5.0	-	-
1,2-dichloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Trichloroethene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Dibromomethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Bromodichloromethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Cis-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Trans-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-

Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Lab Sample Number				2726458	2726459	2726460	2726461	2726462
Sample Reference				TP101	TP102	TP102	TP104	TP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.20	0.20	0.80	0.80	1.00
Date Sampled				22/06/2023	22/06/2023	22/06/2023	22/06/2023	22/06/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
Toluene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
1,1,2-Trichloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,3-Dichloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Dibromochloromethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Tetrachloroethene	µg/kg	5	NONE	-	-	< 5.0	-	-
1,2-Dibromoethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Chlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,1,1,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Ethylbenzene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
p & m-xylene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
Styrene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Tribromomethane	µg/kg	5	NONE	-	-	< 5.0	-	-
o-xylene	µg/kg	5	MCERTS	-	-	< 5.0	-	-
1,1,2,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Isopropylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Bromobenzene	µg/kg	5	NONE	-	-	< 5.0	-	-
N-Propylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
2-Chlorotoluene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
4-Chlorotoluene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,3,5-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Tert-Butylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,2,4-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Sec-Butylbenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,3-dichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
P-Isopropyltoluene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,2-dichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,4-dichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Butylbenzene	µg/kg	5	NONE	-	-	< 5.0	-	-
1,2-Dibromo-3-chloropropane	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
1,2,4-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-
Hexachlorobutadiene	µg/kg	5	NONE	-	-	< 5.0	-	-
1,2,3-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	< 5.0	-	-

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	ISO 17025	-	-	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	0.37	-	-

Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Lab Sample Number				2726458	2726459	2726460	2726461	2726462
Sample Reference				TP101	TP102	TP102	TP104	TP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				1.20	0.20	0.80	0.80	1.00
Date Sampled				22/06/2023	22/06/2023	22/06/2023	22/06/2023	22/06/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	0.6	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	1.5	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	0.5	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	1.4	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	6.8	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	2.6	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	0.6	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	< 0.2	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	12	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	11	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	5.1	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	4.7	-	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	-	5.5	-	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	-	2.4	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	4.7	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	2.2	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	0.62	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	2.8	-	-

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

Analytical Report Number: 23-41374
 Project / Site name: Kenyon Lane
 Your Order No: 005318

Lab Sample Number				2726463	2726464	2726465	2726466
Sample Reference				TP107	TP108	TP110	WS106
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	1.00	2.80	0.20
Date Sampled				22/06/2023	22/06/2023	22/06/2023	22/06/2023
Time Taken				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
Moisture Content	%	0.01	NONE	22	14	13	15
Total mass of sample received	kg	0.001	NONE	0.3	0.8	0.3	0.3

Asbestos in Soil Screen / Identification Name	Type	N/A	ISO 17025	-	-	-	-
Asbestos in Soil	Type	N/A	ISO 17025	-	Not-detected	-	Not-detected
Asbestos Quantification (Stage 2)	%	0.001	ISO 17025	-	-	-	-
Asbestos Quantification Total	%	0.001	ISO 17025	-	-	-	-
Asbestos Analyst ID	N/A	N/A	N/A	N/A	SSZ	N/A	SSZ

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	-	8.3	-	8.4
Total Cyanide	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Total Sulphate as SO ₄	mg/kg	50	MCERTS	-	190	-	520
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	g/l	0.00125	MCERTS	-	0.011	-	0.096
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/kg	2.5	MCERTS	-	22	-	190
Water Soluble SO ₄ (2:1 Leach. Equiv.) 1hr extraction	mg/l	1.25	MCERTS	-	10.8	-	95.9
Sulphide	mg/kg	1	MCERTS	-	< 1.0	-	54
Total Sulphur	mg/kg	50	MCERTS	-	210	-	1000
Total Organic Carbon (TOC) - Automated	%	0.1	MCERTS	0.6	1	0.3	1

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	-	< 1.0	-	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.33
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.32
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	0.44	< 0.05	2.5
Anthracene	mg/kg	0.05	MCERTS	< 0.05	0.11	< 0.05	0.54
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	0.75	< 0.05	3.9
Pyrene	mg/kg	0.05	MCERTS	< 0.05	0.79	< 0.05	3.5
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	0.29	< 0.05	1.7
Chrysene	mg/kg	0.05	MCERTS	< 0.05	0.29	< 0.05	1.7
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.28	< 0.05	1.9
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	< 0.05	0.09	< 0.05	0.72
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.26	< 0.05	1.3
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	0.12	< 0.05	0.8
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	0.22
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	0.21	< 0.05	0.87

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	ISO 17025	< 0.80	3.63	< 0.80	20.3
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Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Lab Sample Number				2726463	2726464	2726465	2726466
Sample Reference				TP107	TP108	TP110	WS106
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	1.00	2.80	0.20
Date Sampled				22/06/2023	22/06/2023	22/06/2023	22/06/2023
Time Taken				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	3.9	8.8	3.5	9.9
Barium (aqua regia extractable)	mg/kg	1	MCERTS	42	-	46	-
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.68	-	0.31	-
Boron (water soluble)	mg/kg	0.2	MCERTS	< 0.2	-	< 0.2	-
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	0.5
Chromium (hexavalent)	mg/kg	1.8	MCERTS	< 1.8	< 1.8	< 1.8	< 1.8
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	-	12	-	19
Copper (aqua regia extractable)	mg/kg	1	MCERTS	21	28	11	33
Lead (aqua regia extractable)	mg/kg	1	MCERTS	11	66	17	80
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	24	12	8.1	24
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	19	-	8	-
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	58	50	20	170

Petroleum Hydrocarbons

TPH (C5 - C6) HS_ID_TOTAL	mg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0
TPH (C6 - C8) HS_ID_TOTAL	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C8 - C10) HS_ID_TOTAL	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
TPH (C10 - C12) EH_CU_ID_TOTAL	mg/kg	2	MCERTS	< 2.0	< 2.0	< 2.0	< 2.0
TPH (C12 - C16) EH_CU_ID_TOTAL	mg/kg	4	MCERTS	< 4.0	< 4.0	< 4.0	< 4.0
TPH (C16 - C21) EH_CU_ID_TOTAL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	14
TPH (C21 - C35) EH_CU_ID_TOTAL	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	38
TPH (C35 - C40) EH_CU_ID_TOTAL	mg/kg	10	NONE	< 10	< 10	< 10	< 10
TPH Total C5 - C40 EH_CU+HS_ID_TOTAL	mg/kg	10	NONE	< 10	< 10	< 10	55

VOCs

Chloromethane	µg/kg	5	ISO 17025	-	-	-	-
Chloroethane	µg/kg	5	NONE	-	-	-	-
Bromomethane	µg/kg	5	ISO 17025	-	-	-	-
Vinyl Chloride	µg/kg	5	NONE	-	-	-	-
Trichlorofluoromethane	µg/kg	5	NONE	-	-	-	-
1,1-dichloroethene	µg/kg	5	NONE	-	-	-	-
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	5	NONE	-	-	-	-
Cis-1,2-dichloroethene	µg/kg	5	ISO 17025	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	5	NONE	-	-	-	-
1,1-dichloroethane	µg/kg	5	ISO 17025	-	-	-	-
2,2-Dichloropropane	µg/kg	5	ISO 17025	-	-	-	-
Trichloromethane	µg/kg	5	NONE	-	-	-	-
1,1,1-Trichloroethane	µg/kg	5	ISO 17025	-	-	-	-
1,2-dichloroethane	µg/kg	5	ISO 17025	-	-	-	-
1,1-Dichloropropene	µg/kg	5	ISO 17025	-	-	-	-
Trans-1,2-dichloroethene	µg/kg	5	NONE	-	-	-	-
Benzene	µg/kg	5	MCERTS	-	-	-	-
Tetrachloromethane	µg/kg	5	NONE	-	-	-	-
1,2-dichloropropane	µg/kg	5	ISO 17025	-	-	-	-
Trichloroethene	µg/kg	5	ISO 17025	-	-	-	-
Dibromomethane	µg/kg	5	ISO 17025	-	-	-	-
Bromodichloromethane	µg/kg	5	ISO 17025	-	-	-	-
Cis-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	-	-
Trans-1,3-dichloropropene	µg/kg	5	ISO 17025	-	-	-	-

Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Lab Sample Number				2726463	2726464	2726465	2726466
Sample Reference				TP107	TP108	TP110	WS106
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	1.00	2.80	0.20
Date Sampled				22/06/2023	22/06/2023	22/06/2023	22/06/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Toluene	µg/kg	5	MCERTS	-	-	-	-
1,1,2-Trichloroethane	µg/kg	5	ISO 17025	-	-	-	-
1,3-Dichloropropane	µg/kg	5	ISO 17025	-	-	-	-
Dibromochloromethane	µg/kg	5	ISO 17025	-	-	-	-
Tetrachloroethene	µg/kg	5	NONE	-	-	-	-
1,2-Dibromoethane	µg/kg	5	ISO 17025	-	-	-	-
Chlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	-	-	-
Ethylbenzene	µg/kg	5	MCERTS	-	-	-	-
p & m-xylene	µg/kg	5	MCERTS	-	-	-	-
Styrene	µg/kg	5	ISO 17025	-	-	-	-
Tribromomethane	µg/kg	5	NONE	-	-	-	-
o-xylene	µg/kg	5	MCERTS	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/kg	5	ISO 17025	-	-	-	-
Isopropylbenzene	µg/kg	5	ISO 17025	-	-	-	-
Bromobenzene	µg/kg	5	NONE	-	-	-	-
N-Propylbenzene	µg/kg	5	ISO 17025	-	-	-	-
2-Chlorotoluene	µg/kg	5	ISO 17025	-	-	-	-
4-Chlorotoluene	µg/kg	5	ISO 17025	-	-	-	-
1,3,5-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	-	-
Tert-Butylbenzene	µg/kg	5	ISO 17025	-	-	-	-
1,2,4-Trimethylbenzene	µg/kg	5	ISO 17025	-	-	-	-
Sec-Butylbenzene	µg/kg	5	ISO 17025	-	-	-	-
1,3-dichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
P-Isopropyltoluene	µg/kg	5	ISO 17025	-	-	-	-
1,2-dichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
1,4-dichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
Butylbenzene	µg/kg	5	NONE	-	-	-	-
1,2-Dibromo-3-chloropropane	µg/kg	5	ISO 17025	-	-	-	-
1,2,4-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-
Hexachlorobutadiene	µg/kg	5	NONE	-	-	-	-
1,2,3-Trichlorobenzene	µg/kg	5	ISO 17025	-	-	-	-

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	ISO 17025	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	NONE	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-

Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Lab Sample Number				2726463	2726464	2726465	2726466
Sample Reference				TP107	TP108	TP110	WS106
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				3.00	1.00	2.80	0.20
Date Sampled				22/06/2023	22/06/2023	22/06/2023	22/06/2023
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	NONE	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	NONE	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	NONE	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	NONE	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	MCERTS	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	NONE	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	NONE	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	NONE	-	-	-	-
Anthraquinone	mg/kg	0.3	NONE	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	NONE	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	ISO 17025	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	ISO 17025	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

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



Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane
Your Order No: 005318

Certificate of Analysis - Asbestos Quantification

Methods:

Qualitative Analysis

The samples were analysed qualitatively for asbestos by polarising light and dispersion staining as described by the Health and Safety Executive in HSG 248.

Quantitative Analysis

The analysis was carried out using our documented in-house method A006-PL based on HSE Contract Research Report No: 83/1996: Development and Validation of an analytical method to determine the amount of asbestos in soils and loose aggregates (Davies et al, 1996) and HSG 248. Our method includes initial examination of the entire representative sample, then fractionation and detailed analysis of each fraction, with quantification by hand picking and weighing.

The limit of detection (reporting limit) of this method is 0.001 %.

The method has been validated using samples of at least 100 g, results for samples smaller than this should be interpreted with caution.

Both Qualitative and Quantitative Analyses are UKAS accredited.

Sample Number	Sample ID	Sample Depth (m)	Sample Weight (g)	Asbestos Containing Material Types Detected (ACM)	PLM Results	Asbestos by hand picking/weighing (%)	Total % Asbestos in Sample
2726460	TP102	0.80	133	Loose Fibres	Chrysotile & Amosite	0.003	0.003
2726462	TP105	1.00	148	Loose Fibres	Chrysotile	0.002	0.002

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation.

Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane

Your Order No: 005318

Lab Sample Number	2726467	2726468
Sample Reference	TP105	TP108
Sample Number	None Supplied	None Supplied
Depth (m)	1.00	1.00
Date Sampled	22/06/2023	22/06/2023
Time Taken	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection
		Accreditation Status

General Inorganics

pH (automated)	pH Units	N/A	ISO 17025	8.4	8.4
Total Cyanide (Low Level 1 µg/l)	µg/l	1	ISO 17025	6.4	< 1.0

Total Phenols

Total Phenols (monohydric)	µg/l	1	ISO 17025	1	1.8
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	0.51	< 0.01
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	0.35	< 0.01
Fluorene	µg/l	0.01	ISO 17025	0.2	< 0.01
Phenanthrene	µg/l	0.01	ISO 17025	0.29	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01	< 0.01
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01

Total PAH

Total EPA-16 PAHs	µg/l	0.2	NONE	1.4	< 0.2
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Heavy Metals / Metalloids

Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	2.1
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	3.3	1.1
Copper (dissolved)	µg/l	0.7	ISO 17025	7.3	5
Lead (dissolved)	µg/l	1	ISO 17025	6.3	2.3
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	1.1	0.8
Selenium (dissolved)	µg/l	4	ISO 17025	5.4	5.4
Zinc (dissolved)	µg/l	0.4	ISO 17025	7.7	3.5

Monoaromatics & Oxygenates

Benzene	µg/l	3	ISO 17025	< 3.0	< 3.0
Toluene	µg/l	3	ISO 17025	< 3.0	< 3.0
Ethylbenzene	µg/l	3	ISO 17025	< 3.0	< 3.0
p & m-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
o-xylene	µg/l	3	ISO 17025	< 3.0	< 3.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10

Analytical Report Number: 23-41374
Project / Site name: Kenyon Lane

Your Order No: 005318

Lab Sample Number	2726467	2726468
Sample Reference	TP105	TP108
Sample Number	None Supplied	None Supplied
Depth (m)	1.00	1.00
Date Sampled	22/06/2023	22/06/2023
Time Taken	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection
		Accreditation Status

Petroleum Hydrocarbons

TPH1 (C10 - C40) _{EH, ID, TOTAL, MS}	µg/l	10	NONE	< 10	< 10
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TPH-CWG - Aliphatic >C5 - C6 _{HS, ID, AL}	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8 _{HS, ID, AL}	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10 # _{HS, ID, AL}	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12 _{EH, ID, AL, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16 _{EH, ID, AL, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21 _{EH, ID, AL, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35 _{EH, ID, AL, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35) _{HS+EH, ID, AL, MS}	µg/l	10	NONE	< 10	< 10

TPH-CWG - Aromatic >C5 - C7 _{HS, ID, AR}	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8 _{HS, ID, AR}	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10 _{HS, ID, AR}	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12 _{EH, ID, AR, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C12 - C16 _{EH, ID, AR, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C16 - C21 _{EH, ID, AR, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C21 - C35 _{EH, ID, AR, MS}	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35) _{HS+EH, ID, AR, MS}	µg/l	10	NONE	< 10	< 10

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

Analytical Report Number : 23-41374
Project / Site name: Kenyon Lane

* 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 *
2726458	TP101	None Supplied	1.2	Brown gravelly clay with clinker
2726459	TP102	None Supplied	0.2	Brown loam and clay with gravel and vegetation.
2726460	TP102	None Supplied	0.8	Brown loam and clay with rubble and brick.
2726461	TP104	None Supplied	0.8	Brown loam and clay with gravel and vegetation.
2726462	TP105	None Supplied	1	Brown loam and clay with gravel and vegetation.
2726463	TP107	None Supplied	3	Brown clay and sand.
2726464	TP108	None Supplied	1	Brown sandy clay with gravel and brick.
2726465	TP110	None Supplied	2.8	Brown sandy clay with gravel.
2726466	WS106	None Supplied	0.2	Brown clay and sand with gravel and vegetation.

Analytical Report Number : 23-41374

Project / Site name: Kenyon Lane

Water matrix abbreviations:

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

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
BS EN 12457-1 (2:1) Leachate Prep	2:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-1.	L043-PL	W	NONE
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	A001-PL	D	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in leachate - LOW LEVEL 1 ug/l	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	ISO 17025
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in leachate	Determination of PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L102B-PL	W	ISO 17025
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
pH at 20oC in leachate (automated)	Determination of pH in leachate by electrometric measurement.	In house method.	L099B	W	ISO 17025
Sulphide in soil	Determination of sulphide in soil by acidification and heating to liberate hydrogen sulphide, trapped in an alkaline solution then assayed by ion selective electrode.	In-house method	L010-PL	D	MCERTS
Total sulphate (as SO4 in soil)	Determination of total sulphate in soil by extraction with 10% HCl followed by ICP-OES.	In house method.	L038-PL	D	MCERTS

Analytical Report Number : 23-41374

Project / Site name: Kenyon Lane

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
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total Sulphur in soil	Determination of total sulphur in soil by extraction with aqua-regia, potassium bromide/bromate followed by ICP-OES.	In house method.	L038-PL	D	MCERTS
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
TPH1 (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	ISO 17025
Total cyanide in soil	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in leachates (Monoaromatics)	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	MCERTS
Total cyanide in leachate - 1µg/l	Determination of total cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Asbestos Quantification - Gravimetric	Asbestos quantification by gravimetric method - in house method based on references.	HSE Report No: 83/1996, HSG 248, HSG 264 & SCA Blue Book (draft).	A006-PL	D	ISO 17025
Hexavalent chromium in soil	Determination of hexavalent chromium in soil by extraction in NaOH and addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

Analytical Report Number : 23-41374
Project / Site name: Kenyon Lane

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
Sulphate, water soluble, in soil (1hr extraction)	Sulphate, water soluble, in soil (1hr extraction)	In-house method	L038-PL	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 30°C.

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

##Quality control parameter has a high recovery (outside of limit); however the associated result is below the reporting limit, other checks applied prior to reporting the data have been accepted. The result should be considered as being deviating and may be compromised.

APPENDIX VII

ORIGIN OF TIER 2 GENERIC ASSESSMENT CRITERIA

CONSTITUENT	ORIGIN OF RISK ASSESSMENT VALUE
Arsenic	2014 LQM/CIEH S4ULs
Cadmium	2014 LQM/CIEH S4ULs
Chromium	2014 LQM/CIEH S4ULs
Lead	2014 LQM/CIEH S4ULs
Mercury	2014 LQM/CIEH S4ULs – methylmercury
Nickel	2014 LQM/CIEH S4ULs
Selenium	2014 LQM/CIEH S4ULs
Copper	2014 LQM/CIEH S4ULs
Zinc	2014 LQM/CIEH S4ULs
Cyanide – Total	2014 LQM/CIEH S4ULs
Phenols – Total	2014 LQM/CIEH S4ULs
Naphthalene	General assessment criteria (GAC) developed by CIEH/LQM Suitable 4 Use Levels with supporting data from SR3, SR7 and existing Tox report where applicable. 1% SOM.
Acenaphthylene	
Acenaphthene	
Fluorene	
Phenanthrene	
Anthracene	
Fluoranthene	
Pyrene	
Benzo(a)Anthracene	
Chrysene	
Benzo(b/k)Fluoranthene ⁽ⁱⁱⁱ⁾	
Benzo(a)Pyrene	
Indeno(123-cd)Pyrene	
Dibenzo(a,h)Anthracene	
Benzo(ghi)Perylene	
TPH C ₅ -C ₆ (aliphatic)	
TPH C ₆ -C ₈ (aliphatic)	
TPH C ₈ -C ₁₀ (aliphatic)	
TPH C ₁₀ -C ₁₂ (aliphatic)	
TPH C ₁₂ -C ₁₆ (aromatic)	
TPH C ₁₆ -C ₂₁ (aromatic)	
TPH C ₂₁ -C ₃₅ (aromatic)	



APPENDIX VIII

GEOTECHNICAL TESTING

RESULTS

TEST REPORT

Client e3p

Address Taylor Road
Trafford Park
Urmston
Manchester
M41 7JQ

Contract Kenyon Lane

Job Number MRN 4588/80

Date of Issue 27 July 2023

Page 1 of 7

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.



Andrew House, Hadfield Street, Dukinfield, Cheshire SK16 4QX Tel: 0161 475 0870
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Also at: London: 020 8523 1999

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MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

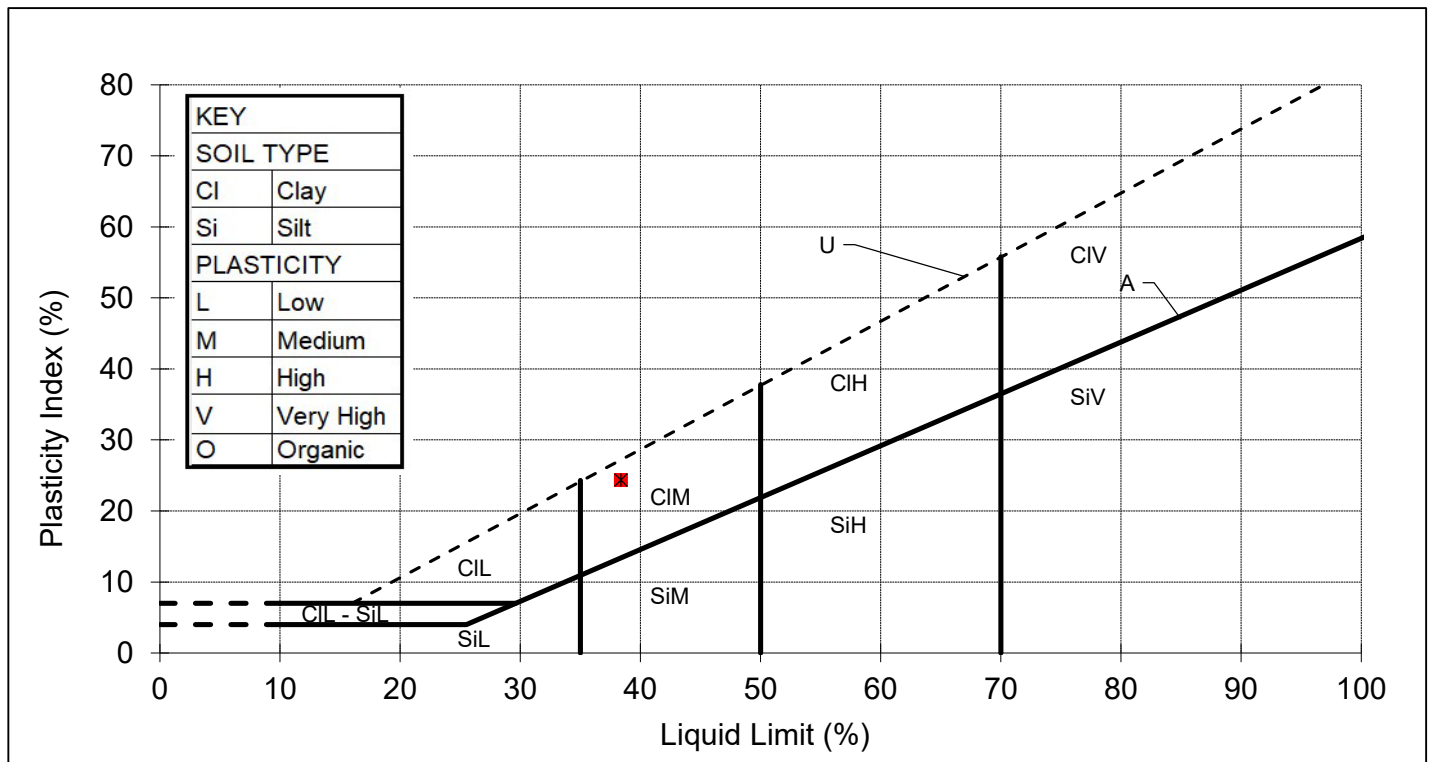
CLIENT	e3p
SITE	Kenyon Lane
JOB NUMBER	MRN 4588/80

SAMPLE LABEL	WS103 2	DATE SAMPLED	Not advised
SAMPLE No.	127963	DATE RECEIVED	04-Jul-23
DATE TESTED	10-Jul-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	18.9	37.6	1.016	
Determination 2 (avg)	19.0	37.9		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.9	38	14	24	79



REMARKS

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

27-Jul-23

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

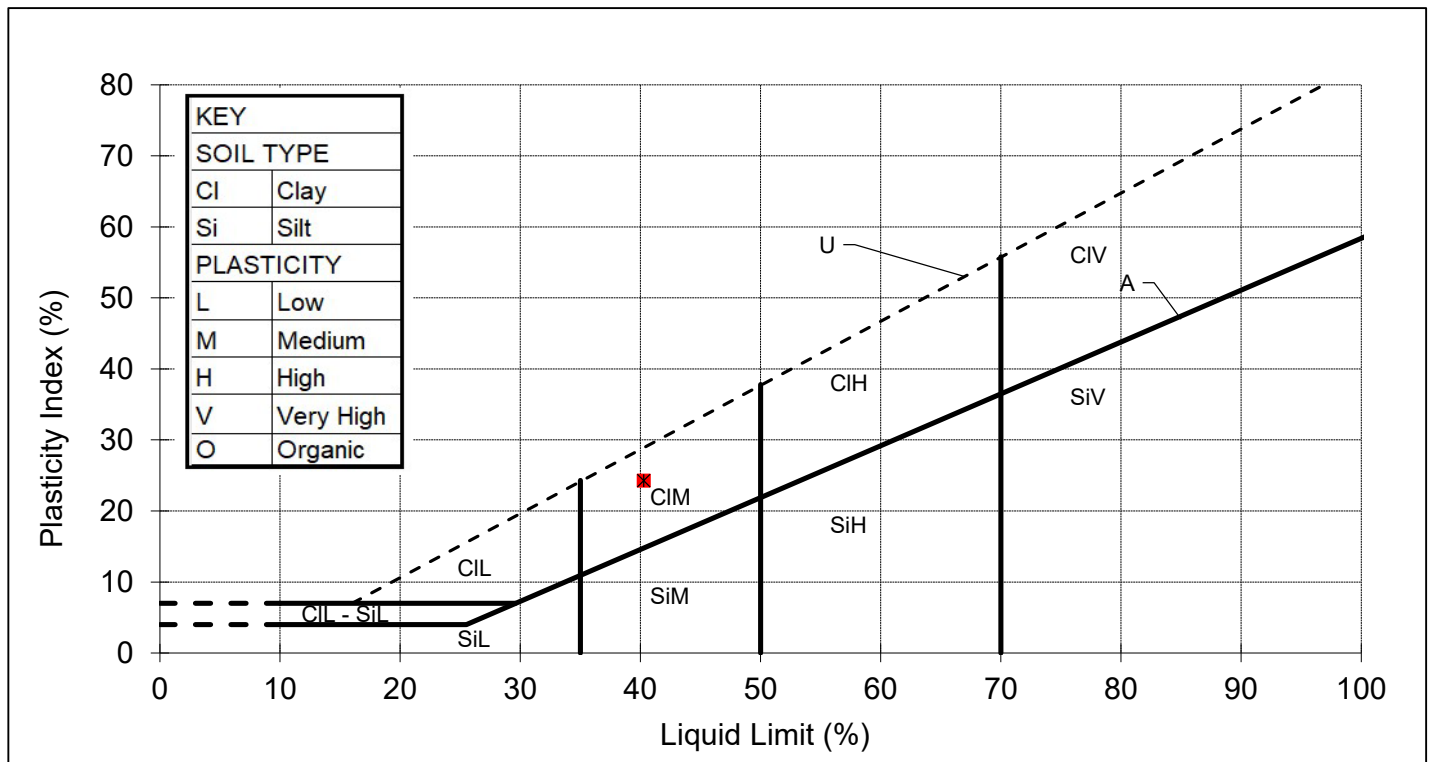
CLIENT	e3p
SITE	Kenyon Lane
JOB NUMBER	MRN 4588/80

SAMPLE LABEL	WS103 3	DATE SAMPLED	Not advised
SAMPLE No.	127964	DATE RECEIVED	04-Jul-23
DATE TESTED	10-Jul-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.4	39.8	1.012	
Determination 2 (avg)	19.4	39.8		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18.8	40	16	24	68



REMARKS

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

27-Jul-23

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

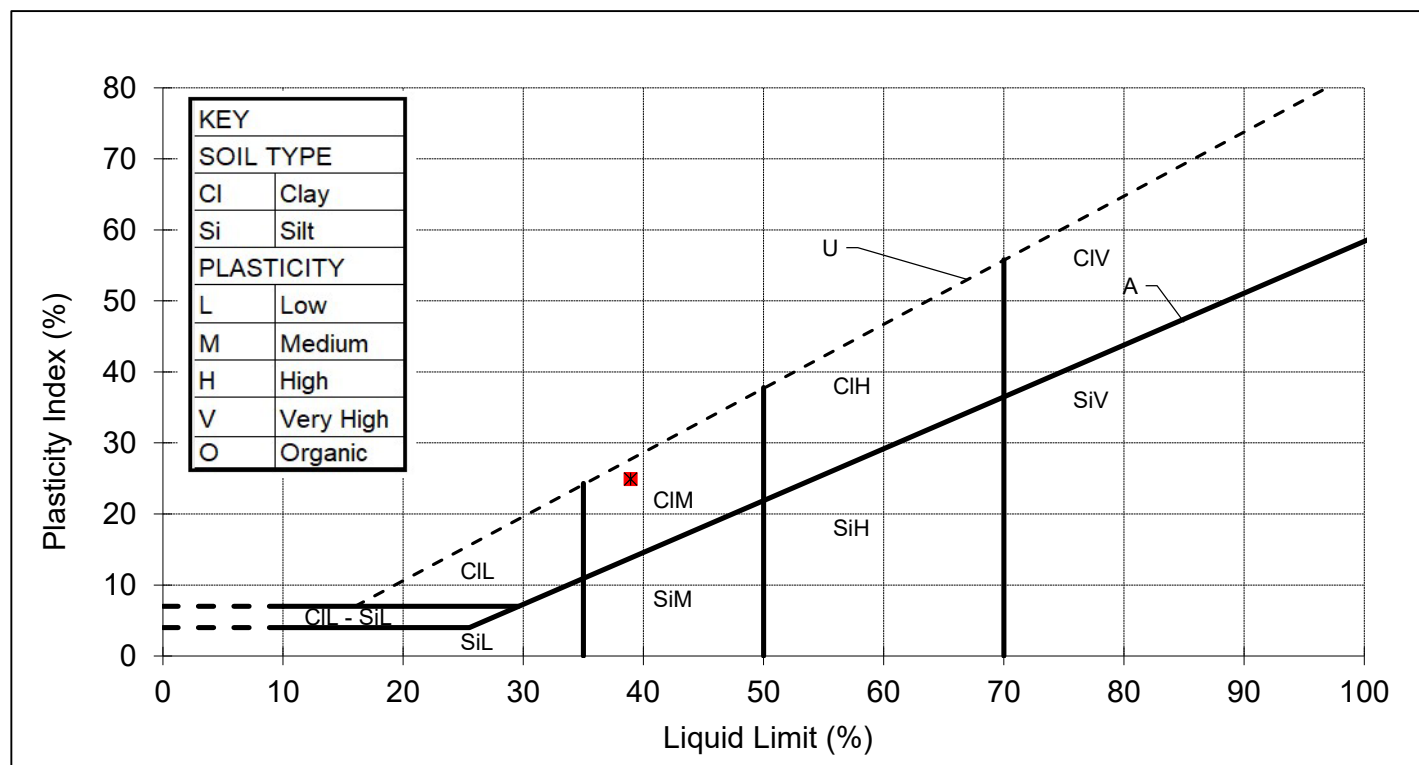
CLIENT	e3p
SITE	Kenyon Lane
JOB NUMBER	MRN 4588/80

SAMPLE LABEL	WS106 2	DATE SAMPLED	Not advised
SAMPLE No.	127968	DATE RECEIVED	04-Jul-23
DATE TESTED	10-Jul-23	SAMPLED BY	Client

MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.0	38.2	1.018	
Determination 2 (avg)	19.2	38.3		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
19.1	39	14	25	78



REMARKS

SIGNED

NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

27-Jul-23

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

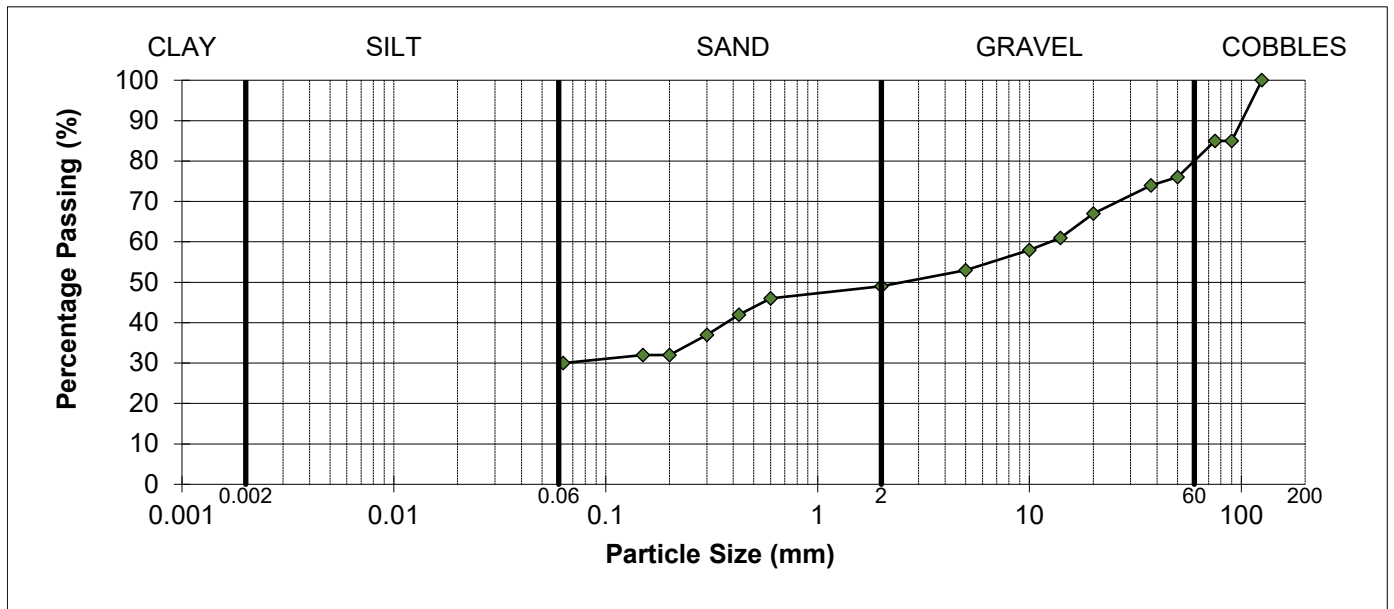
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	e3p
SITE	Kenyon Lane
JOB NUMBER	MRN 4588/80

SAMPLE LABEL	TP105 1.5	DATE SAMPLED	Not advised
LAB SAMPLE No	127961	DATE RECEIVED	04-Jul-23
DATE TESTED	01-Jun-19	SAMPLED BY	Client

MATERIAL	Brown clay bound silty SAND & GRAVEL
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	53	
90	85		2	49	
75	85		0.6	46	
50	76		0.425	42	
37.5	74		0.3	37	
20	67		0.2	32	
14	61		0.15	32	
10	58		0.063	30	



REMARKS

As received water content = 16.8%

SIGNED



NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

27-Jul-23

TEST CERTIFICATE
PARTICLE SIZE DISTRIBUTION

BS EN ISO 17892-4:2016

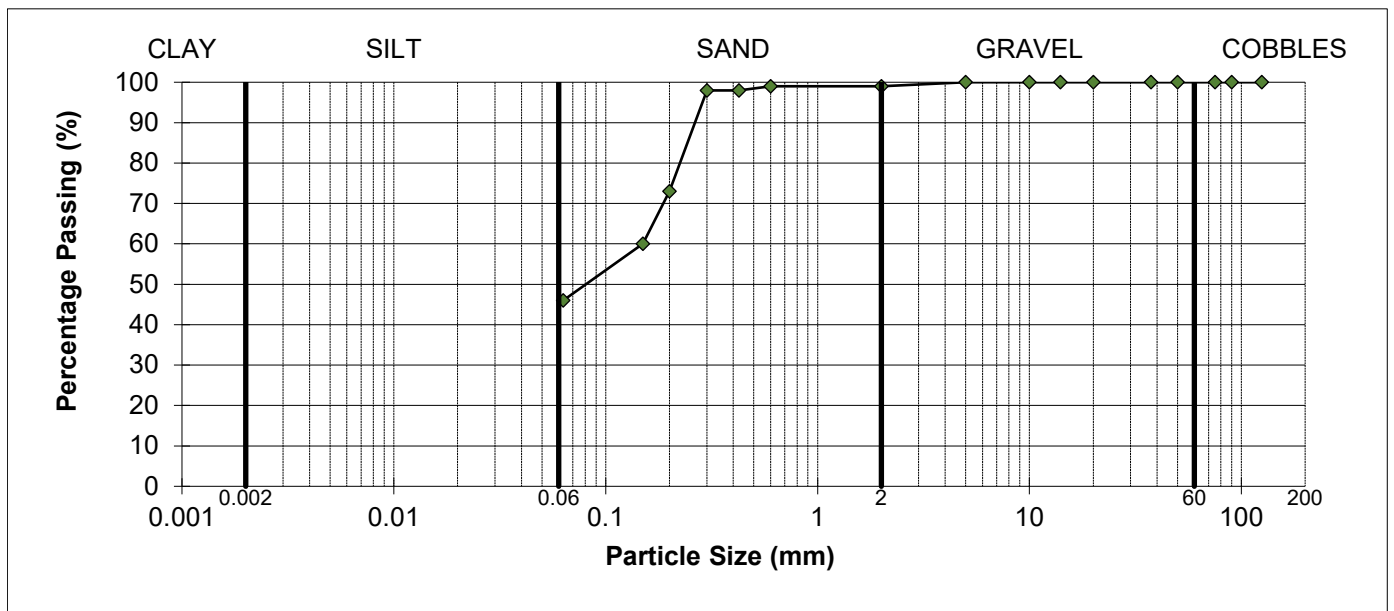
Determination of Water Content in accordance with BS EN ISO 17892-1:2014+A1:2022 (Oven Dry)

CLIENT	e3p
SITE	Kenyon Lane
JOB NUMBER	MRN 4588/80

SAMPLE LABEL	TP106 2	DATE SAMPLED	Not advised
LAB SAMPLE No	127962	DATE RECEIVED	04-Jul-23
DATE TESTED	01-Jun-19	SAMPLED BY	Client

MATERIAL	Brown clay bound silty SAND
ADVISED SOURCE	Site Investigation Sample

Sieve Size (mm)	% Passing (%)	Specification (%)	Sieve Size (mm)	% Passing (%)	Specification (%)
125	100		5	100	
90	100		2	99	
75	100		0.6	99	
50	100		0.425	98	
37.5	100		0.3	98	
20	100		0.2	73	
14	100		0.15	60	
10	100		0.063	46	



REMARKS

As received water content = 21.6%

SIGNED



NAME

O.P. Davies BA (Hons)
(Laboratory Manager)

DATE

27-Jul-23

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TEL 0161 475 0870



TEST CERTIFICATE

DRY DENSITY/WATER CONTENT RELATIONSHIP 2.5kg RAMMER

BS 1377-2:2022 Cl.11

PARTICLE DENSITY METHOD BS 1377-2:2022 Cl.9.2

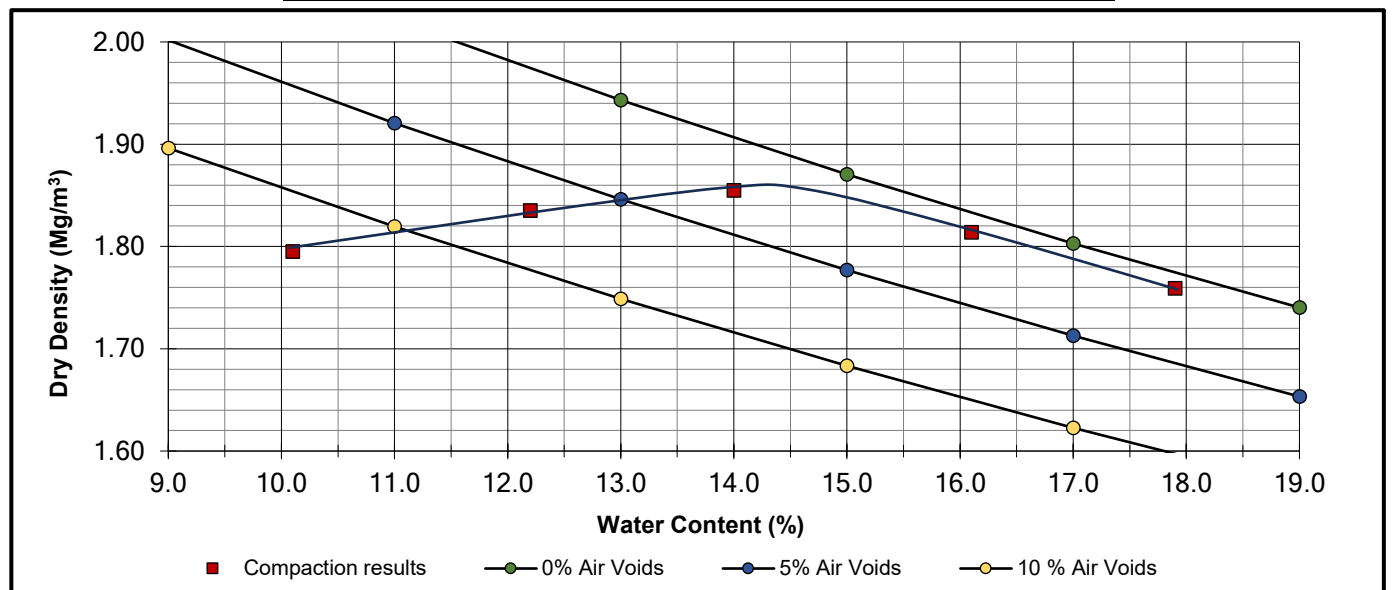
CLIENT	E3P
SITE	Kenyon Lane
JOB NUMBER	MRN 4588/80

SAMPLE LABEL	TP105 15	DATE SAMPLED	05-May-23
SAMPLE NUMBER	127962	DATE RECEIVED	05-May-23
DATE TESTED	12-Jul-23	SAMPLED BY	

MATERIAL	Brown clay bound silty SAND & GRAVEL
ADVISED SOURCE	Site Investigation Sample
PRE TREATMENT	Air Dried / Separate Batches

RETAINED 37.5mm	26 %	GRADING ZONE	Zone X
RETAINED 20mm	33 %	PARTICLE DENSITY	2.60 Mg/m ³ (Assumed)

POINT NUMBER	WATER CONTENT (%)	DRY DENSITY (Mg/m ³)
1	10.1	1.795
2	12.2	1.835
3	14.0	1.855
4	16.1	1.814
5	17.9	1.759



OPTIMUM WATER CONTENT	14	(%)
MAXIMUM DRY DENSITY	1.86	(Mg/m ³)

REMARKS

NAME O.P. Davies BA (Hons)
(Laboratory Manager)

SIGNED

DATE 27-Jul-23

