

Borehole Log

Borehole No.

PH105

Sheet 4 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431539.90 - 407550.55

Hole Type
PH

Location: South Yorkshire

Level: 103.50

Scale
1:50

Client: Strata Homes

Dates: 08/12/2021 - 08/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							(COAL MEASURES)	
					33.00	70.50	End of borehole at 33 00 m	

31
32
33
34
35
36
37
38
39
40

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH106

Sheet 1 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431580.43 - 407636.08

Hole Type
PH

Location: South Yorkshire

Level: 97.85

Scale
1:50

Client: Strata Homes

Dates: 09/12/2021 - 09/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.10	94.75		MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
					3.70	94.15		Black COAL. (SWALLOW WOOD COAL)	2
								Grey SILTSTONE. (COAL MEASURES)	3
					7.60	90.25		Grey MUDSTONE. (COAL MEASURES)	4
									5
									6
									7
									8
									9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH106

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431580.43 - 407636.08

Hole Type
PH

Location: South Yorkshire

Level: 97.85

Scale
1:50

Client: Strata Homes

Dates: 09/12/2021 - 09/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					18.70	79.15		Black COAL. (TOP HAIGH COAL)
					19.80	78.05		Grey MUDSTONE.

11
12
13
14
15
16
17
18
19
20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH107

Sheet 1 of 3

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431566.98 - 407675.11	Hole Type PH
Location: South Yorkshire		Level: 96.25	Scale 1:50
Client: Strata Homes		Dates: 09/12/2021 - 09/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					2.90	93.35		MADE GROUND: Brown and grey CLAY. (OPENCAST BACKFILL)	1
								Buff and grey interbedded SANDSTONE and SILTSTONE. (COAL MEASURES)	3
								Grey MUDSTONE. (COAL MEASURES)	9
					8.50	87.75			10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH107

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431566.98 - 407675.11

Hole Type
PH

Location: South Yorkshire

Level: 96.25

Scale
1:50

Client: Strata Homes

Dates: 09/12/2021 - 09/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					17.80	78.45		Black COAL. (TOP HAIGH COAL)	
					18.60	77.65		Grey MUDSTONE. (COAL MEASURES)	

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH107

Sheet 3 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431566.98 - 407675.11

Hole Type
PH

Location: South Yorkshire

Level: 96.25

Scale
1:50

Client: Strata Homes

Dates: 09/12/2021 - 09/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					25.20	71.05		Black COAL. (LOW HAIGH COAL)
					26.10	70.15		Grey MUDSTONE. (COAL MEASURES)
					30.00	66.25		End of borehole at 30 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Project Name: Bamsley West (LT1)

 Project No.
3104

Co-ords: 431566.47 - 407644.85

 Hole Type
PH

Location: South Yorkshire

Level: 98.00

 Scale
1:50

Client: Strata Homes

Dates: 13/12/2021 - 13/12/2021

 Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.00	95.00		MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	
								End of borehole at 3.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH109

Sheet 1 of 1

Project Name: Bamsley West (LT1)

 Project No.
3104

Co-ords: 431542.96 - 407717.30

 Hole Type
PH

Location: South Yorkshire

Level: 95.30

 Scale
1:50

Client: Strata Homes

Dates: 13/12/2021 - 13/12/2021

 Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.00	92.30		MADE GROUND: Grey gravelly CLAY. (OPENCAS T BACKFILL)	1
									2
									3
								End of borehole at 3.00 m	4
									5
									6
									7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH201

Sheet 1 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431551.57 - 407889.85

Hole Type
PH

Location: South Yorkshire

Level: 88.00

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
									8
					8.60	79.40		Grey MUDSTONE. (COAL MEASURES)	9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using water flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH201

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431551.57 - 407889.85

Hole Type
PH

Location: South Yorkshire

Level: 88.00

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using water flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH201

Sheet 3 of 3

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431551.57 - 407889.85

 Hole Type
PH

Location: South Yorkshire

Level: 88.00

 Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

 Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					23.00	65.00		Black COAL. (TOP HAIGH COAL)
					23.60	64.40		Grey MUDSTONE. (COAL MEASURES)
					29.00	59.00		End of borehole at 29.00 m

 21
22
23
24
25
26
27
28
29
30

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using water flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH202

Sheet 1 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431629.53 - 407879.03

Hole Type
PH

Location: South Yorkshire

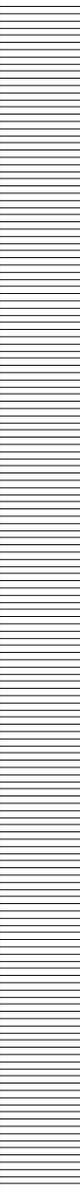
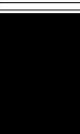
Level: 85.40

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					1.20	84.20		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
								Grey MUDSTONE. (COAL MEASURES)	2 3 4 5 6 7 8
					9.20	76.20		Black COAL. (SWALLOW WOOD COAL)	9
					10.00	75.40			10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using water flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH202

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431629.53 - 407879.03

Hole Type
PH

Location: South Yorkshire

Level: 85.40

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								Grey MUDSTONE. (COAL MEASURES)	11 12 13 14 15 16 17 18 19 20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using water flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH202

Sheet 3 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431629.53 - 407879.03

Hole Type
PH

Location: South Yorkshire

Level: 85.40

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
Well								
					24.10	61.30		Black COAL. (TOP HAIGH COAL)
					25.00	60.40		Grey MUDSTONE. (COAL MEASURES)
				28.00	57.40		End of borehole at 28 00 m	

21
22
23
24
25
26
27
28
29
30

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using water flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH203

Sheet 1 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431623.15 - 407860.02

Hole Type
PH

Location: South Yorkshire

Level: 86.60

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
									8
									9
					9.40	77.20		Grey MUDSTONE. (COAL MEASURES)	10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH203

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431623.15 - 407860.02

Hole Type
PH

Location: South Yorkshire

Level: 86.60

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								11 12 13 14 15 16 17 18 19 20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH203

Sheet 3 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431623.15 - 407860.02

Hole Type
PH

Location: South Yorkshire

Level: 86.60

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					23.30	63.30		Black COAL. (TOP HAIGH COAL)
					24.20	62.40		Grey MUDSTONE. (COAL MEASURES)
					30.00	56.60		End of borehole at 30 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH204

Sheet 1 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431610.32 - 407830.37

Hole Type
PH

Location: South Yorkshire

Level: 88.15

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1 2 3 4 5 6 7 8
					8.90	79.25	Grey MUDSTONE. (COAL MEASURES)		9 10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH204

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431610.32 - 407830.37

Hole Type
PH

Location: South Yorkshire

Level: 88.15

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								11 12 13 14 15 16 17 18 19 20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH204

Sheet 3 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431610.32 - 407830.37

Hole Type
PH

Location: South Yorkshire

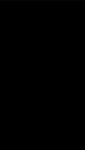
Level: 88.15

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					23.50	64.65		Black COAL. (TOP HAIGH COAL)	21
					24.50	63.65			Grey MUDSTONE. (COAL MEASURES)
									23
									24
									25
									26
									27
									28
									29
					30.00	58.15			30

End of borehole at 30 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH205

Sheet 1 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431531.39 - 407844.69

Hole Type
PH

Location: South Yorkshire

Level: 90.45

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					7.80	82.65		MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)
					8.80 9.00	81.65 81.45		
								Grey MUDSTONE. (COAL MEASURES)
								<i>Groundwater ingress from 8.4m.</i>
								Black COAL. (SWALLOW WOOD COAL)
								Grey MUDSTONE. (COAL MEASURES)



Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH205

Sheet 2 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431531.39 - 407844.69

Hole Type
PH

Location: South Yorkshire

Level: 90.45

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								11 12 13 14 15 16 17 18 19 20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH205

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431531.39 - 407844.69

Hole Type
PH

Location: South Yorkshire

Level: 90.45

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								21
				21.95	68.50		Black COAL. (TOP HAIGH COAL)	22
				22.50	67.95		Grey MUDSTONE. (COAL MEASURES)	23
								24
								25
								26
								27
								28
				29.20	61.25		Black COAL. (LOW HAIGH COAL)	29
				29.70	60.75		Grey MUDSTONE.	30

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH205

Sheet 4 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431531.39 - 407844.69	Hole Type PH
Location: South Yorkshire		Level: 90.45	Scale 1:50
Client: Strata Homes		Dates: 23/11/2021 - 23/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							(COAL MEASURES)	
					33.00	57.45	End of borehole at 33 00 m	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH206

Sheet 1 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431559.31 - 407816.95

Hole Type
PH

Location: South Yorkshire

Level: 90.75

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					1.00	89.75		MADE GROUND: Brown gravelly CLAY. (OPENCAS T BACKFILL)	
								MADE GROUND: Grey gravelly CLAY. (OPENCAS T BACKFILL)	1
									2
									3
									4
									5
									6
									7
					7.80	82.95		Grey MUDSTONE. (COAL MEASURES)	8
									9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH206

Sheet 2 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431559.31 - 407816.95

Hole Type
PH

Location: South Yorkshire

Level: 90.75

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
									11
									12
									13
									14
									15
									16
									17
									18
									19
									20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH206

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431559.31 - 407816.95

Hole Type
PH

Location: South Yorkshire

Level: 90.75

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					21.70	69.05		Black COAL. (TOP HAIGH COAL)
					22.50	68.25		Grey MUDSTONE. (COAL MEASURES)
					29.80	60.95		Black COAL.

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH206

Sheet 4 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431559.31 - 407816.95

Hole Type
PH

Location: South Yorkshire

Level: 90.75

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
[Pattern]					30.50	60.25		(LOW HAIGH COAL)
								Grey MUDSTONE. (COAL MEASURES)
					33.00	57.75		End of borehole at 33 00 m

31
32
33
34
35
36
37
38
39
40

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH207

Sheet 1 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431537.55 - 407770.00	Hole Type PH
Location: South Yorkshire		Level: 93.35	Scale 1:50
Client: Strata Homes		Dates: 01/12/2021 - 01/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					1.00	92.35		MADE GROUND: Brown gravelly CLAY. (OPENCAST BACKFILL)	1
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	2
									3
					7.60	85.75		Grey MUDSTONE. (COAL MEASURES)	4
									5
									6
									7
									8
									9
									10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH207

Sheet 2 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431537.55 - 407770.00	Hole Type PH
Location: South Yorkshire		Level: 93.35	Scale 1:50
Client: Strata Homes		Dates: 01/12/2021 - 01/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								11 12 13 14 15 16 17 18 19 20
	▼						From 14.5m ingress of groundwater during drilling.	

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH207

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431537.55 - 407770.00

Hole Type
PH

Location: South Yorkshire

Level: 93.35

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					22.00	71.35		21 22
					22.90	70.45		23 24 25 26 27 28 29 30

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH207

Sheet 4 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431537.55 - 407770.00	Hole Type PH
Location: South Yorkshire		Level: 93.35	Scale 1:50
Client: Strata Homes		Dates: 01/12/2021 - 01/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
Well					31.50	61.85		Black COAL. (LOW HAIGH COAL)
					32.30	61.05		Grey MUDSTONE. (COAL MEASURES)
					36.00	57.35		End of borehole at 36 00 m

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH208

Sheet 1 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431565.50 - 407758.47

Hole Type
PH

Location: South Yorkshire

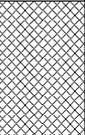
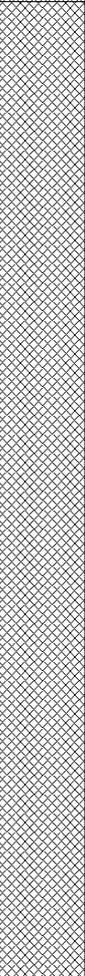
Level: 92.70

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					0.90	91.80		MADE GROUND: Brown gravelly CLAY. (OPENCAST BACKFILL)	
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
						Grey MUDSTONE (COAL MEASURES)	2		
					7.40	85.30			3
									4
									5
									6
									7
									8
									9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH208

Sheet 2 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431565.50 - 407758.47

Hole Type
PH

Location: South Yorkshire

Level: 92.70

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								11 12 13 14 15 16 17 18 19 20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH208

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431565.50 - 407758.47

Hole Type
PH

Location: South Yorkshire

Level: 92.70

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					21.00	71.70		Black COAL (TOP HAIGH COAL)	21
					21.90	70.80		Grey MUDSTONE (COAL MEASURES)	22
									23
									24
					28.20	64.50		Black COAL (LOW HAIGH COAL)	28
					29.00	63.70		Grey MUDSTONE (COAL MEASURES)	29
									30

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH208

Sheet 4 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431565.50 - 407758.47

Hole Type
PH

Location: South Yorkshire

Level: 92.70

Scale
1:50

Client: Strata Homes

Dates: 01/12/2021 - 01/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
[Pattern]								31 32 33 34 35 36 37 38 39 40
					33.00	59.70	[Pattern]	End of borehole at 33 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH209

Sheet 1 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431614.05 - 407744.03

Hole Type
PH

Location: South Yorkshire

Level: 91.20

Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.50	87.70		MADE GROUND: Brown gravelly CLAY. (OPENCASST BACKFILL)	1
								Grey SILTSTONE. (COAL MEASURES)	2
									3
									4
									5
									6
									7
					7.50	83.70		Grey MUDSTONE. (COAL MEASURES)	8
									9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH209

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431614.05 - 407744.03

Hole Type
PH

Location: South Yorkshire

Level: 91.20

Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					17.80	73.40		Black COAL. (TOP HAIGH COAL)
					18.40	72.80		Grey MUDSTONE. (COAL MEASURES)

11
12
13
14
15
16
17
18
19
20

Continued on next sheet

Remarks
1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH210

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431621.02 - 407765.66

Hole Type
PH

Location: South Yorkshire

Level: 90.15

Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					18.30	71.85		11 12 13 14 15 16 17 18
					19.10	71.05		19 20

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH210

Sheet 3 of 3

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431621.02 - 407765.66	Hole Type PH
Location: South Yorkshire		Level: 90.15	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
	▼								21
									22
									23
									24
									25
					26.20	63.95			26
					26.80	63.35			27
									28
									29
					30.00	60.15			30

Groundwater ingress from 24.0m

Black COAL.
(LOW HAIGH COAL)

Grey MUDSTONE.
(COAL MEASURES)

End of borehole at 30 00 m

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH211

Sheet 1 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431668.23 - 407793.02	Hole Type PH
Location: South Yorkshire		Level: 87.45	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1	
										2
										3
					5.40	82.05		Grey SILTSTONE. (COAL MEASURES)	4	
					6.10	81.35		Grey MUDSTONE. (COAL MEASURES)	5	
									6	
									7	
									8	
									9	
									10	

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH211

Sheet 3 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431668.23 - 407793.02	Hole Type PH
Location: South Yorkshire		Level: 87.45	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
▼					20.20	67.25		Grey MUDSTONE. (COAL MEASURES)	21
									22
								<i>Groundwater ingress form 23.0m.</i>	23
									24
									25
									26
									27
					28.60	58.85		Black COAL. (LOW HAIGH COAL)	29
					29.40	58.05		Grey MUDSTONE. (TOP HAIGH COAL)	30

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH211

Sheet 4 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431668.23 - 407793.02

Hole Type
PH

Location: South Yorkshire

Level: 87.45

Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
[Pattern]								31 32 33 34 35 36 37 38 39 40
					33.00	54.45	[Pattern]	End of borehole at 33 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH212

Sheet 1 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431594.39 - 407705.75

Hole Type
PH

Location: South Yorkshire

Level: 93.80

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					4.50	89.30		MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
					6.60	87.20		Grey SILTSTONE. (COAL MEASURES)	7
									8
									9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH212

Sheet 2 of 3

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431594.39 - 407705.75

Hole Type
PH

Location: South Yorkshire

Level: 93.80

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					17.90	75.90		Black COAL. (TOP HAIGH COAL)
					18.60	75.20		Grey MUDSTONE. (COAL MEASURES)

11
12
13
14
15
16
17
18
19
20

Continued on next sheet

Remarks
1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH212

Sheet 3 of 3

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431594.39 - 407705.75	Hole Type PH
Location: South Yorkshire		Level: 93.80	Scale 1:50
Client: Strata Homes		Dates: 10/12/2021 - 10/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
[Pattern]								21
								22
								23
								24
								25
					25.30	68.50	Black COAL. (LOW HAIGH COAL)	26
					26.10	67.70	Grey MUDSTONE. (COAL MEASURES)	27
								28
								29
					30.00	63.80	End of borehole at 30 00 m	30

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH213

Sheet 1 of 4

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431645.30 - 407707.14

 Hole Type
PH

Location: South Yorkshire

Level: 91.90

 Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

 Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		1
					3.50	88.40			2
					4.10	87.80	Black COAL. (SWALLOW WOOD COAL)		3
							Buff SANDSTONE. (COAL MEASURES)		4
									5
									6
					7.50	84.40	Grey MUDSTONE. (COAL MEASURES)		7
									8
									9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH213

Sheet 2 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431645.30 - 407707.14

Hole Type
PH

Location: South Yorkshire

Level: 91.90

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
Well casing	▼								
						19.50	72.40		Black COAL. (TOP HAIGH COAL)

Groundwater ingress from 11.6m.

Continued on next sheet

Remarks
1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH213

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431645.30 - 407707.14

Hole Type
PH

Location: South Yorkshire

Level: 91.90

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					20.20	71.70		Grey MUDSTONE. (COAL MEASURES)
					27.60	64.30		Black COAL. (LOW HAIGH COAL)
					28.40	63.50		Grey MUDSTONE. (COAL MEASURES)

21
22
23
24
25
26
27
28
29
30

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH213

Sheet 4 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431645.30 - 407707.14

Hole Type
PH

Location: South Yorkshire

Level: 91.90

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
[Hatched Pattern]								31 32 33 34 35 36 37 38 39 40
					33.00	58.90	[Horizontal Lines]	End of borehole at 33 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH214

Sheet 1 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431702.90 - 407731.10

Hole Type
PH

Location: South Yorkshire

Level: 88.85

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
					6.90	81.95		Grey MUDSTONE. (COAL MEASURES)	7
									8
									9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH214

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431702.90 - 407731.10

Hole Type
PH

Location: South Yorkshire

Level: 88.85

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					20.15	68.70		Black COAL. (TOP HAIGH COAL)
					21.00	67.85		Grey MUDSTONE. (COAL MEASURES)
					28.80	60.05		Black COAL. (LOW HAIGH COAL)
					29.60	59.25		Grey MUDSTONE. (COAL MEASURES)

21
22
23
24
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27
28
29
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Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH214

Sheet 4 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431702.90 - 407731.10

Hole Type
PH

Location: South Yorkshire

Level: 88.85

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					33.00	55.85		
								31
								32
								33
							End of borehole at 33 00 m	34
								35
								36
								37
								38
								39
								40

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH215

Sheet 1 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431669.05 - 407647.65	Hole Type PH
Location: South Yorkshire		Level: 93.35	Scale 1:50
Client: Strata Homes		Dates: 10/12/2021 - 10/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
					6.30	87.05			6
								Grey MUDSTONE. (COAL MEASURES)	7
									8
					8.70	84.65			9
								Grey SILTSTONE. (COAL MEASURES)	10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH215

Sheet 2 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431669.05 - 407647.65

Hole Type
PH

Location: South Yorkshire

Level: 93.35

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					10.40	82.95		Grey MUDSTONE. (COAL MEASURES)

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH215

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431669.05 - 407647.65

Hole Type
PH

Location: South Yorkshire

Level: 93.35

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					20.40	72.95		Black COAL. (TOP HAIGH COAL)
					21.40	71.95		Grey MUDSTONE. (COAL MEASURES)
					28.60	64.75		Black COAL. (LOW HAIGH COAL)
					29.50	63.85		Grey MUDSTONE. (COAL MEASURES)

21
22
23
24
25
26
27
28
29
30

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH215

Sheet 4 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431669.05 - 407647.65

Hole Type
PH

Location: South Yorkshire

Level: 93.35

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								31 32 33 34 35 36 37 38 39 40
					33.00	60.35		End of borehole at 33 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH216

Sheet 1 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431725.38 - 407690.98

Hole Type
PH

Location: South Yorkshire

Level: 89.70

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
					7.50	82.20		Grey MUDSTONE. (COAL MEASURES)	8
									9
					9.10	80.60		Grey SILTSTONE. (COAL MEASURES)	10
									Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH216

Sheet 3 of 4

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431725.38 - 407690.98

Hole Type
PH

Location: South Yorkshire

Level: 89.70

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					22.80	66.90		Black COAL. (TOP HAIGH COAL)	21
					23.80	65.90		Grey MUDSTONE. (COAL MEASURES)	22
									23
									24
									25
									26
									27
									28
									29
									30

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

PH216

Sheet 4 of 4

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431725.38 - 407690.98	Hole Type PH
Location: South Yorkshire		Level: 89.70	Scale 1:50
Client: Strata Homes		Dates: 10/12/2021 - 10/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
[Hatched Pattern]					30.70	59.00		Black COAL. (LOW HAIGH COAL)	31
					31.70	58.00		Grey MUDSTONE. (COAL MEASURES)	32
					33.00	56.70		End of borehole at 33 00 m	33
									34
									35
									36
									37
									38
									39
									40

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH217

Sheet 1 of 1

Project Name: Bamsley West (LT1)

 Project No.
3104

Co-ords: 431632.70 - 407733.99

 Hole Type
PH

Location: South Yorkshire

Level: 90.85

 Scale
1:50

Client: Strata Homes

Dates: 13/12/2021 - 13/12/2021

 Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.00	87.85		MADE GROUND: Grey gravelly CLAY. (OPENCAS T BACKFILL)	
								End of borehole at 3.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

PH219

Sheet 1 of 1

Project Name: Bamsley West (LT1)

Project No.
3104

Co-ords: 431665.94 - 407877.20

Hole Type
PH

Location: South Yorkshire

Level: 83.95

Scale
1:50

Client: Strata Homes

Dates: 13/12/2021 - 13/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.00	80.95		MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	
								End of borehole at 3.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST001a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431322.57 - 407666.10

Hole Type
PH

Location: South Yorkshire

Level: 107.65

Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					1.30	106.35		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
					1.55	106.10		Black COAL. (THIN COAL)	2
									Grey MUDSTONE. (COAL MEASURES)
					6.00	101.65		End of borehole at 6.00 m	6

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST001b

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431326.17 - 407664.26

Hole Type
PH

Location: South Yorkshire

Level: 107.70

Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					5.80	101.90		MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
								Grey MUDSTONE. (COAL MEASURES)	7
									8
					9.00	98.70			9
								End of borehole at 9.00 m	10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST001c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431329.37 - 407661.17

Hole Type
PH

Location: South Yorkshire

Level: 107.65

Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	
					5.90	101.75	Grey MUDSTONE. (COAL MEASURES)	
					9.00	98.65	End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST001d

Sheet 1 of 1

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431331.38 - 407660.17

 Hole Type
PH

Location: South Yorkshire

Level: 107.65

 Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

 Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
					6.30	101.35			
							Grey MUDSTONE. (COAL MEASURES)		
					9.00	98.65			
							End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST001e

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 18/11/2021 - 18/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
					6.30				6
								Grey MUDSTONE. (COAL MEASURES)	7
									8
					9.00				9
								End of borehole at 9.00 m	10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST001f

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 18/11/2021 - 18/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
									1
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	2
									3
									4
									5
					6.40				6
								Grey MUDSTONE. (COAL MEASURES)	7
									8
					9.00				9
								End of borehole at 9.00 m	10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST001g

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
					6.30		Grey MUDSTONE. (COAL MEASURES)		
					9.00		End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST001h

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAS T BACKFILL)		
					6.20		Grey MUDSTONE. (COAL MEASURES)		
					9.00		End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST001i

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 18/11/2021 - 18/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCASST BACKFILL)	1
								2
								3
								4
								5
					6.00		Grey MUDSTONE. (COAL MEASURES)	6
								7
								8
					9.00		End of borehole at 9.00 m	9
								10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST002a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431283.46 - 407582.77

Hole Type
PH

Location: South Yorkshire

Level: 114.90

Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
					1.50	113.40		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1	
					1.70	113.20			Black COAL. (THIN COAL) Grey MUDSTONE. (COAL MEASURES)	2
					3.00	111.90			End of borehole at 3.00 m	3
									4	
									5	
									6	
									7	
									8	
									9	
									10	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST002b

Sheet 1 of 1

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431285.40 - 407585.19

 Hole Type
PH

Location: South Yorkshire

Level: 114.70

 Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

 Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
								1	
								2	
								3	
								4	
								5	
					6.30	108.40		6	
							Grey MUDSTONE. (COAL MEASURES)	7	
								8	
					9.00	105.70		9	
							End of borehole at 9.00 m	10	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST002c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431287.35 - 407586.27

 Hole Type
PH

Location: South Yorkshire

Level: 114.60

 Scale
1:50

Client: Strata Homes

Dates: 18/11/2021 - 18/11/2021

 Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	
					6.10	108.50	Grey MUDSTONE. (COAL MEASURES)	
					9.00	105.60	End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST003a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431405.71 - 407892.62

Hole Type
PH

Location: South Yorkshire

Level: 94.55

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.90	90.65		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
									2
									3
									4
					6.00	88.55		Grey MUDSTONE. (COAL MEASURES)	5
									6
								End of borehole at 6.00 m	7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST003b

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431406.53 - 407889.82

Hole Type
PH

Location: South Yorkshire

Level: 94.55

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	
					4.50	90.05	Grey MUDSTONE. (COAL MEASURES)	
					6.00	88.55	End of borehole at 6.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST003c

Sheet 1 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431406.82 - 407888.74

Hole Type
PH

Location: South Yorkshire

Level: 94.55

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
								1	
								2	
								3	
								4	
								5	
								6	
								7	
								8	
					9.00	85.55		9	
					9.40	85.15	Grey MUDSTONE. (COAL MEASURES)		
							Black COAL. (SWALLOW WOOD COAL)		
								10	

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST003c

Sheet 2 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431406.82 - 407888.74

Hole Type
PH

Location: South Yorkshire

Level: 94.55

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
[Pattern]					10.20	84.35		Grey MUDSTONE. (COAL MEASURES)
					12.00	82.55		
							----- End of borehole at 12 00 m	

11
12
13
14
15
16
17
18
19
20

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST003d

Sheet 1 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431407.27 - 407887.58	Hole Type PH
Location: South Yorkshire		Level: 94.50	Scale 1:50
Client: Strata Homes		Dates: 24/11/2021 - 24/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
									8
									9
					9.80	84.70		Grey MUDSTONE.	10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST003d

Sheet 2 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431407.27 - 407887.58

Hole Type
PH

Location: South Yorkshire

Level: 94.50

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							(COAL MEASURES)	
					12.00	82.50	End of borehole at 12 00 m	



Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST003e

Sheet 1 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431407.73 - 407886.02	Hole Type PH
Location: South Yorkshire		Level: 94.55	Scale 1:50
Client: Strata Homes		Dates: 24/11/2021 - 24/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
									7
									8
									9
					10.00	84.55			10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST003e

Sheet 2 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431407.73 - 407886.02

Hole Type
PH

Location: South Yorkshire

Level: 94.55

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					12.00	82.55	 Grey MUDSTONE. (COAL MEASURES)	11 12 13 14 15 16 17 18 19 20	
							End of borehole at 12.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST004a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431354.47 - 407750.25

Hole Type
PH

Location: South Yorkshire

Level: 101.80

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.30	98.50		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
									2
									3
								Grey MUDSTONE. (COAL MEASURES)	4
									5
					6.00	95.80		End of borehole at 6.00 m	6
									7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST004b

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431356.99 - 407752.26	Hole Type PH
Location: South Yorkshire		Level: 101.65	Scale 1:50
Client: Strata Homes		Dates: 24/11/2021 - 24/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
					7.50	94.15		Grey MUDSTONE. (COAL MEASURES)	7
									8
					9.00	92.65		End of borehole at 9.00 m	9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST004c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431358.52 - 407753.39

Hole Type
PH

Location: South Yorkshire

Level: 101.50

Scale
1:50

Client: Strata Homes

Dates: 24/11/2021 - 24/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	
					7.60	93.90	Grey MUDSTONE. (COAL MEASURES)	
					9.00	92.50	End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST004d

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431360.14 - 407754.66	Hole Type PH
Location: South Yorkshire		Level: 101.45	Scale 1:50
Client: Strata Homes		Dates: 24/11/2021 - 24/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
					7.90	93.55		Grey MUDSTONE. (COAL MEASURES)	8
					9.00	92.45		----- End of borehole at 9.00 m	9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST005a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431349.66 - 407839.84

Hole Type
PH

Location: South Yorkshire

Level: 97.95

Scale
1:50

Client: Strata Homes

Dates: 25/11/2021 - 25/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.30	94.65		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
									2
									3
								Grey MUDSTONE. (COAL MEASURES)	4
									5
					6.00	91.95		End of borehole at 6.00 m	6
									7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST005b

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431352.55 - 407838.91	Hole Type PH
Location: South Yorkshire		Level: 97.95	Scale 1:50
Client: Strata Homes		Dates: 25/11/2021 - 25/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
								2
								3
								4
								5
								6
								7
					7.50	90.45		8
					7.90	90.05	Black COAL. (SWALLOW WOOD COAL)	
							Grey MUDSTONE. (COAL MEASURES)	
					9.00	88.95		9
							End of borehole at 9.00 m	10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST005c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431354.03 - 407838.44

Hole Type
PH

Location: South Yorkshire

Level: 97.90

Scale
1:50

Client: Strata Homes

Dates: 25/11/2021 - 25/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
								1	
								2	
								3	
								4	
								5	
								6	
								7	
					7.50	90.40			
					7.90	90.00	Black COAL. (SWALLOW WOOD COAL)		
							Grey MUDSTONE. (COAL MEASURES)		
					9.00	88.90			
							End of borehole at 9.00 m		
								9	
								10	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST005d

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431355.36 - 407838.02

Hole Type
PH

Location: South Yorkshire

Level: 97.90

Scale
1:50

Client: Strata Homes

Dates: 25/11/2021 - 25/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
								1	
								2	
								3	
								4	
								5	
								6	
								7	
					7.90	90.00		8	
							Grey MUDSTONE. (COAL MEASURES)		
					9.00	88.90		9	
							End of borehole at 9.00 m		
								10	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST006a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431420.75 - 407902.94

Hole Type
PH

Location: South Yorkshire

Level: 93.65

Scale
1:50

Client: Strata Homes

Dates: 25/11/2021 - 25/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.90	89.75		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
									2
									3
									4
					6.00	87.65		Grey MUDSTONE. (COAL MEASURES)	5
									6
								End of borehole at 6.00 m	7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST006b

Sheet 1 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431424.22 - 407901.50

Hole Type
PH

Location: South Yorkshire

Level: 93.50

Scale
1:50

Client: Strata Homes

Dates: 25/11/2021 - 25/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
								2
								3
								4
								5
								6
								7
								8
					9.00	84.50	Black COAL. (SWALLOW WOOD COAL)	9
					9.40	84.10	Grey MUDSTONE. (COAL MEASURES)	10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST006b

Sheet 2 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431424.22 - 407901.50	Hole Type PH
Location: South Yorkshire		Level: 93.50	Scale 1:50
Client: Strata Homes		Dates: 25/11/2021 - 25/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					12.00	81.50		
								End of borehole at 12.00 m

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST006c

Sheet 1 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431426.25 - 407900.81	Hole Type PH
Location: South Yorkshire		Level: 93.40	Scale 1:50
Client: Strata Homes		Dates: 25/11/2021 - 25/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
					9.00	84.40			8
					9.35	84.05		Black COAL. (SWALLOW WOOD COAL)	9
								Grey MUDSTONE. (COAL MEASURES)	10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST006d

Sheet 1 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431428.66 - 407899.85

Hole Type
PH

Location: South Yorkshire

Level: 93.25

Scale
1:50

Client: Strata Homes

Dates: 25/11/2021 - 25/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
								2
								3
								4
								5
								6
								7
								8
					8.90	84.35	Black COAL. (SWALLOW WOOD COAL)	9
					9.30	83.95	Grey MUDSTONE. (COAL MEASURES)	10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST006d

Sheet 2 of 2

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431428.66 - 407899.85

 Hole Type
PH

Location: South Yorkshire

Level: 93.25

 Scale
1:50

Client: Strata Homes

Dates: 25/11/2021 - 25/11/2021

 Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					12.00	81.25		11 12 13 14 15 16 17 18 19 20
							End of borehole at 12 00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007a

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431339.54 - 407547.57	Hole Type PH
Location: South Yorkshire		Level: 114.45	Scale 1:50
Client: Strata Homes		Dates: 26/11/2021 - 26/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							 Brown CLAY. (COHESIVE RESIDUAL SOIL)	1	
				3.00	111.45	 Black COAL. (THIN COAL)		3	
				3.30	111.15			 Grey MUDSTONE. (COAL MEASURES)	4
				6.00	108.45		End of borehole at 6.00 m		6

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007b

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431341.46 - 407549.26

Hole Type
PH

Location: South Yorkshire

Level: 114.25

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
[Redacted]								Brown CLAY. (COHESIVE RESIDUAL SOIL)
					3.00	111.25		
					3.30	110.95		
[Redacted]								Black COAL. (THIN COAL) Grey MUDSTONE. (COAL MEASURES)
					6.00	108.25		
								End of borehole at 6.00 m

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431343.67 - 407551.70

Hole Type
PH

Location: South Yorkshire

Level: 114.00

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
					3.10	110.90		2
					3.30	110.70	Black COAL. (THIN COAL)	3
							Grey MUDSTONE. (COAL MEASURES)	4
								5
					6.00	108.00		6
							End of borehole at 6.00 m	7
								8
								9
								10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007d

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		
					3.00				
					3.30		Black COAL. (THIN COAL)		
							Grey MUDSTONE. (COAL MEASURES)		
					6.00				
								End of borehole at 6.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007e

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					3.00 3.15		 Brown CLAY. (COHESIVE RESIDUAL SOIL)	1 2 3
							 Black COAL. (THIN COAL)	4
							 Grey MUDSTONE. (COAL MEASURES)	5 6
					6.00		End of borehole at 6.00 m	7 8 9 10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007f

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.00			Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
					3.15			Black COAL. (THIN COAL)	3
								Grey MUDSTONE. (COAL MEASURES)	4
									5
									6
									7
									8
					9.00				9
								End of borehole at 9.00 m	10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007g

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
					7.00			Grey MUDSTONE. (COAL MEASURES)	7
									8
					9.00				9
								End of borehole at 9.00 m	10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007h

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
					7.60		Grey MUDSTONE. (COAL MEASURES)		7
									8
					9.00				9
								End of borehole at 9.00 m	10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST007i

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
					7.90				8
							Grey MUDSTONE. (COAL MEASURES)		8
					9.00				9
								End of borehole at 9.00 m	9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST008a

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431408.92 - 407504.29	Hole Type PH
Location: South Yorkshire		Level: 113.05	Scale 1:50
Client: Strata Homes		Dates: 29/11/2021 - 29/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		1 2 3 4 5
					5.80	107.25		Grey MUDSTONE. (COAL MEASURES)	6 7 8
					9.00	104.05		End of borehole at 9.00 m	9 10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST008b

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 29/11/2021 - 29/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		1 2 3 4 5 6 7 8 9 10
					6.00		Grey MUDSTONE. (COAL MEASURES)		
					9.00		End of borehole at 9.00 m		

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST008c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431406.30 - 407508.44

Hole Type
PH

Location: South Yorkshire

Level: 112.85

Scale
1:50

Client: Strata Homes

Dates: 29/11/2021 - 29/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		
					6.00	106.85		Grey MUDSTONE. (COAL MEASURES)	
					9.00	103.85		End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST008d

Sheet 1 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431403.82 - 407511.02	Hole Type PH
Location: South Yorkshire		Level: 112.90	Scale 1:50
Client: Strata Homes		Dates: 29/11/2021 - 29/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
									7
									8
									9
									10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST008d

Sheet 2 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431403.82 - 407511.02

Hole Type
PH

Location: South Yorkshire

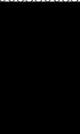
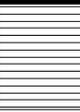
Level: 112.90

Scale
1:50

Client: Strata Homes

Dates: 29/11/2021 - 29/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					10.40	102.50		
								Black COAL. (SWALLOW WOOD COAL)
					11.30	101.60		Grey MUDSTONE. (COAL MEASURES)
					12.00	100.90		End of borehole at 12 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST008e

Sheet 1 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 29/11/2021 - 29/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
									7
									8
									9
									10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST008e

Sheet 2 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 29/11/2021 - 29/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					11.30			
					12.00			
								End of borehole at 12 00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST009a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 29/11/2021 - 29/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		
					5.80		Grey MUDSTONE. (COAL MEASURES)		
					9.00		End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST009b

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 29/11/2021 - 29/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		1 2 3 4 5 6
					6.60		Grey MUDSTONE. (COAL MEASURES)		7 8
					9.00		End of borehole at 9.00 m		9 10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST009c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 29/11/2021 - 29/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
								1	
								2	
								3	
								4	
								5	
								6	
								7	
					7.60		Grey MUDSTONE. (COAL MEASURES)	8	
					9.00		End of borehole at 9.00 m	9	
								10	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST009d

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 29/11/2021 - 29/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
								1	
								2	
								3	
								4	
								5	
								6	
								7	
					8.00		Grey MUDSTONE. (COAL MEASURES)	8	
					9.00		End of borehole at 9.00 m	9	
								10	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST009e

Sheet 1 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 29/11/2021 - 29/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
									7
									8
									9
									10

Continued on next sheet

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST009e

Sheet 2 of 2

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 29/11/2021 - 29/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
Well					10.30			
								Black COAL. (SWALLOW WOOD COAL)
					11.30			Grey MUDSTONE. (COAL MEASURES)
					12.00			End of borehole at 12 00 m



Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Project Name: Bamsley West (LT1)

 Project No.
3104

Co-ords: -

 Hole Type
PH

Location: South Yorkshire

Level:

 Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

 Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)		
							Buff and grey interbedded SANDSTONE and SILTSTONE. (COAL MEASURES)	1 2 3 4	
					4.50 4.80		Black COAL. (THIN COAL)	5	
								6 7 8	
					9.00		End of borehole at 9.00 m	9 10	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST101B

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 10/12/2021 - 10/12/2021		Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)		1
					3.30				2
					3.70		Black COAL. (THIN COAL)		3
							Buff SANDSTONE. (COAL MEASURES)		4
									5
					6.00				6
								End of borehole at 6.00 m	7
									8
									9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST101C

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 14/12/2021 - 14/12/2021		Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
					6.20				6
								Grey SILTSTONE. (COAL MEASURES)	7
									8
					9.00				9
								End of borehole at 9.00 m	10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST201a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431551.31 - 407902.19

Hole Type
PH

Location: South Yorkshire

Level: 87.70

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					2.00	85.70		Brown CLAY. (COHESIVE RESIDUAL SOIL)
					6.00	81.70		Grey MUDSTONE. (COAL MEASURES)
								End of borehole at 6.00 m

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST201b

Sheet 2 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431551.35 - 407899.28

Hole Type
PH

Location: South Yorkshire

Level: 87.80

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					12.00	75.80			11
								End of borehole at 12 00 m	12
									13
									14
									15
									16
									17
									18
									19
									20

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST201d

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431551.46 - 407891.06

Hole Type
PH

Location: South Yorkshire

Level: 88.00

Scale
1:50

Client: Strata Homes

Dates: 22/11/2021 - 22/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
									7
					8.60	79.40			8
					9.00	79.00		Grey MUDSTONE. (COAL MEASURES)	9
								End of borehole at 9.00 m	10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST202a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431630.30 - 407884.46

Hole Type
PH

Location: South Yorkshire

Level: 85.30

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					1.20	84.10		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
								Grey MUDSTONE. (COAL MEASURES)	2
									3
									4
									5
					6.00	79.30			6
								End of borehole at 6.00 m	7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST202b

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 23/11/2021 - 23/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					1.30		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1	
							Grey MUDSTONE. (COAL MEASURES)	2	
								3	
								4	
								5	
					6.00			6	
							End of borehole at 6.00 m	7	
								8	
								9	
								10	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

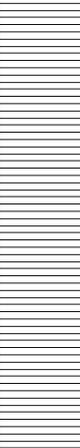
Borehole Log

Borehole No.

ST202c

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: -	Hole Type PH
Location: South Yorkshire	Level:		Scale 1:50
Client: Strata Homes	Dates: 23/11/2021 - 23/11/2021		Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.00			Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
								Grey MUDSTONE. (COAL MEASURES)	2
					6.00				3
									4
									5
									6
									7
									8
									9
									10

End of borehole at 6.00 m

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST202d

Sheet 1 of 2

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431631.03 - 407886.79

 Hole Type
PH

Location: South Yorkshire

Level: 85.35

 Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

 Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
								1	
								2	
								3	
								4	
								5	
								6	
								7	
					7.60	77.75		8	
					8.50	76.85			
					8.80	76.55		9	
								10	

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST202e

Sheet 1 of 2

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431631.55 - 407888.19

Hole Type
PH

Location: South Yorkshire

Level: 85.30

Scale
1:50

Client: Strata Homes

Dates: 23/11/2021 - 23/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
									7
									8
					9.00	76.30		Grey MUDSTONE. (COAL MEASURES)	9
									10

Continued on next sheet

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST203a

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431662.19 - 407713.24

Hole Type
PH

Location: South Yorkshire

Level: 91.20

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		
					6.00	85.20		Grey MUDSTONE. (COAL MEASURES)	
					9.00	82.20		End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST203b

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431665.05 - 407714.65

Hole Type
PH

Location: South Yorkshire

Level: 90.95

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					3.50	87.45		Brown CLAY. (COHESIVE RESIDUAL SOIL)	1
					3.90	87.05		Black COAL. (THIN COAL)	2
								Grey MUDSTONE. (COAL MEASURES)	3
									4
									5
					6.00	84.95		End of borehole at 6.00 m	6
									7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST203c

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431667.08 - 407716.04

Hole Type
PH

Location: South Yorkshire

Level: 90.90

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		
					6.50	84.40			
					9.00	81.90			
							Grey MUDSTONE. (COAL MEASURES)		
							End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST203d

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431669.41 - 407717.28

Hole Type
PH

Location: South Yorkshire

Level: 90.75

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		
					3.90	86.85			
					4.20	86.55	Black COAL. (THIN COAL)		
							Grey MUDSTONE. (COAL MEASURES)		
					9.00	81.75			
								End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST203e

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431672.22 - 407719.00	Hole Type PH
Location: South Yorkshire		Level: 90.55	Scale 1:50
Client: Strata Homes		Dates: 26/11/2021 - 26/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		1 2 3
					4.00	86.55		Black COAL. (THIN COAL)	4
					4.40	86.15		Grey MUDSTONE. (COAL MEASURES)	5 6 7 8
					9.00	81.55		End of borehole at 9.00 m	9 10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST203f

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431674.25 - 407720.31	Hole Type PH
Location: South Yorkshire		Level: 90.50	Scale 1:50
Client: Strata Homes		Dates: 26/11/2021 - 26/11/2021	Logged By WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		1 2 3 4	
					4.30	86.20		Black COAL. (THIN COAL)		5
					4.70	85.80		Grey MUDSTONE. (COAL MEASURES)		6 7 8
					9.00	81.50		End of borehole at 9.00 m		9 10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST203g

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431677.04 - 407721.94

Hole Type
PH

Location: South Yorkshire

Level: 90.25

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)	
					6.00	84.25	Grey MUDSTONE. (COAL MEASURES)	
					9.00	81.25	End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST203h

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
					6.30		Grey MUDSTONE. (COAL MEASURES)		
					9.00		End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST203I

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 26/11/2021 - 26/11/2021

Logged By
WN

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown and grey gravelly CLAY. (OPENCAST BACKFILL)		
					6.40		Grey MUDSTONE. (COAL MEASURES)		
					9.00		End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204A

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431678.97 - 407801.16	Hole Type PH
Location: South Yorkshire		Level: 86.75	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					4.00	82.75		MADE GROUND: Brown CLAY (OPENCAST BACKFILL)	1
									2
									3
									4
								Grey MUDSTONE. (COAL MEASURES)	5
									6
									7
									8
					9.00	77.75			9
								End of borehole at 9.00 m	10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST204B

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431675.63 - 407803.13	Hole Type PH
Location: South Yorkshire		Level: 86.75	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)		1
					4.00	82.75		Grey MUDSTONE. (COAL MEASURES)	2
									3
									4
									5
									6
								End of borehole at 6.00 m	7
									8
					9.00	77.75			9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204C

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431674.04 - 407804.60	Hole Type PH
Location: South Yorkshire		Level: 86.80	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)		1
					4.00	82.80		Grey MUDSTONE. (COAL MEASURES)	4
					6.00	80.80		End of borehole at 6.00 m	6
									7
									8
									9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204D

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431672.10 - 407805.71	Hole Type PH
Location: South Yorkshire		Level: 86.85	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)	
					4.10	82.75		
							Grey MUDSTONE. (COAL MEASURES)	
					6.00	80.85		
							End of borehole at 6.00 m	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204E

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431669.62 - 407807.37	Hole Type PH
Location: South Yorkshire		Level: 86.80	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)		1
					3.90	82.90			2
									3
									4
							Grey MUDSTONE. (COAL MEASURES)		5
					6.00	80.80			6
								End of borehole at 6.00 m	7
									8
									9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204F

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431667.62 - 407808.35	Hole Type PH
Location: South Yorkshire		Level: 86.85	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)	1
					3.80	83.05		2
							Grey MUDSTONE. (COAL MEASURES)	3
								4
					6.00	80.85		5
							End of borehole at 6.00 m	6
								7
								8
								9
								10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204G

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431665.28 - 407809.86	Hole Type PH
Location: South Yorkshire		Level: 86.85	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)		1
					4.00	82.85		Grey MUDSTONE. (COAL MEASURES)	4
					6.00	80.85		End of borehole at 6.00 m	6
									7
									8
									9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204H

Sheet 1 of 1

Project Name: Bamsley West (LT1)

 Project No.
3104

Co-ords: 431662.39 - 407811.42

 Hole Type
PH

Location: South Yorkshire

Level: 86.90

 Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

 Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)		
					4.20	82.70	Grey MUDSTONE. (COAL MEASURES)		
					6.00	80.90	End of borehole at 6.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204I

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431660.54 - 407812.63	Hole Type PH
Location: South Yorkshire		Level: 86.90	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCASST BACKFILL)		1 2 3 4 5 6 7 8 9 10
					6.00	80.90		Grey MUDSTONE. (COAL MEASURES)	
					9.00	77.90		End of borehole at 9.00 m	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204J

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431658.31 - 407813.92

Hole Type
PH

Location: South Yorkshire

Level: 86.95

Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Brown CLAY (OPENCASST BACKFILL)	
					6.20	80.75	Grey MUDSTONE. (COAL MEASURES)	
				9.00	77.95		End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204K

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431656.11 - 407814.95

Hole Type
PH

Location: South Yorkshire

Level: 86.95

Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)		1
									2
									3
									4
									5
									6
					7.20	79.75		Grey MUDSTONE. (COAL MEASURES)	7
									8
					9.00	77.95		End of borehole at 9.00 m	9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST204L

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431653.46 - 407816.34	Hole Type PH
Location: South Yorkshire		Level: 87.00	Scale 1:50
Client: Strata Homes		Dates: 02/12/2021 - 02/12/2021	Logged By GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown CLAY (OPENCAST BACKFILL)		1
									2
									3
									4
									5
					7.50	79.50			6
							Grey MUDSTONE. (COAL MEASURES)		7
									8
					9.00	78.00			9
								End of borehole at 9.00 m	10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST204M

Sheet 1 of 1

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431651.38 - 407817.45

 Hole Type
PH

Location: South Yorkshire

Level: 87.00

 Scale
1:50

Client: Strata Homes

Dates: 02/12/2021 - 02/12/2021

 Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							MADE GROUND: Brown gravelly CLAY. (OPENCAST BACKFILL)		
					7.60	79.40	Grey MUDSTONE. (COAL MEASURES)		
					9.00	78.00	End of borehole at 9.00 m		

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205A

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431676.80 - 407764.36

Hole Type
PH

Location: South Yorkshire

Level: 88.00

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
				5.20	82.80		Light greyish brown SILTSTONE. (COAL MEASURES)	
				7.60	80.40		Light grey MUDSTONE. (COAL MEASURES)	
				9.00	79.00		End of borehole at 9.00 m	

Remarks
1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205B

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431678.61 - 407762.30

Hole Type
PH

Location: South Yorkshire

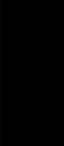
Level: 87.95

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
					3.30	84.65		
					3.70	84.25		
							Black COAL. (THIN COAL)	
							Light greyish brown SILTSTONE. (COAL MEASURES)	
				6.00	81.95		End of borehole at 6.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST205C

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431679.86 - 407760.79	Hole Type PH
Location: South Yorkshire		Level: 88.00	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
					3.20	84.80		
					3.70	84.30		
							Black COAL. (THIN COAL)	
							Light greyish brown SILTSTONE. (COAL MEASURES)	
				6.00	82.00		End of borehole at 6.00 m	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205D

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431680.85 - 407759.65

Hole Type
PH

Location: South Yorkshire

Level: 88.00

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
					3.30	84.70		Black COAL. (THIN COAL)
					3.80	84.20		Light greyish brown SILTSTONE. (COAL MEASURES)
				6.00	82.00		End of borehole at 6.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205E

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431682.15 - 407758.14	Hole Type PH
Location: South Yorkshire		Level: 88.00	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
								4	
								5	
					6.00	82.00		Light greyish brown SILTSTONE. (COAL MEASURES)	6
									7
								Light grey MUDSTONE. (COAL MEASURES)	8
					8.70	79.30			9
					9.00	79.00		End of borehole at 9.00 m	9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205F

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431683.38 - 407756.92	Hole Type PH
Location: South Yorkshire		Level: 88.00	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
				3.50	84.50			
				3.70	84.30			
							Black COAL. (THIN COAL)	
							Light greyish brown SILTSTONE. (COAL MEASURES)	
				6.00	82.00		End of borehole at 6.00 m	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205G

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431684.38 - 407755.83	Hole Type PH
Location: South Yorkshire		Level: 88.00	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
					3.50	84.50		
					3.70	84.30		
							Black COAL. (THIN COAL)	
							Light greyish brown SILTSTONE. (COAL MEASURES)	
				6.00	82.00		End of borehole at 6.00 m	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205H

Sheet 1 of 1

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431685.38 - 407754.56

 Hole Type
PH

Location: South Yorkshire

Level: 88.05

 Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

 Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
				3.30	84.75		Black COAL. (THIN COAL)	
				4.10	83.95		Light greyish brown SILTSTONE. (COAL MEASURES)	
				6.00	82.05		End of borehole at 6.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205I

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431686.52 - 407753.39

Hole Type
PH

Location: South Yorkshire

Level: 88.15

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
				3.60	84.55		Black COAL. (THIN COAL)	
				4.40	83.75		Light greyish brown SILTSTONE. (COAL MEASURES)	
				6.00	82.15		End of borehole at 6.00 m	

Remarks
1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST205J

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431687.36 - 407752.59	Hole Type PH
Location: South Yorkshire		Level: 88.15	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
								Brown CLAY. (COHESIVE RESIDUAL SOIL)	1	
										2
										3
					4.00	84.15		Black COAL. (THIN COAL)	4	
					4.80	83.35		Light greyish brown SILTSTONE. (COAL MEASURES)	5	
					6.00	82.15		End of borehole at 6.00 m	6	
									7	
									8	
									9	
									10	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST206A

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431642.58 - 407783.19	Hole Type PH
Location: South Yorkshire		Level: 88.80	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Brown CLAY. (COHESIVE RESIDUAL SOIL)		1
				2.70	86.10		Black COAL. (THIN COAL)		2
				3.20	85.60		Light greyish brown SILTSTONE. (COAL MEASURES)		3
				6.00	82.80		----- End of borehole at 6.00 m		4
									5
									6
									7
									8
									9
									10

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST206B

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431641.05 - 407783.99

Hole Type
PH

Location: South Yorkshire

Level: 88.80

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							Brown CLAY. (COHESIVE RESIDUAL SOIL)	
				2.70	86.10		Black COAL. (THIN COAL)	
				3.20	85.60		Light greyish brown SILTSTONE. (COAL MEASURES)	
				6.00	82.80		End of borehole at 6.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

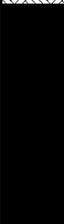
Borehole Log

Borehole No.

ST206C

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431639.78 - 407784.81	Hole Type PH
Location: South Yorkshire		Level: 88.85	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
					3.00	85.85		Black COAL. (THIN COAL)
					3.20	85.65		Light greyish brown SILTSTONE. (COAL MEASURES)
					6.00	82.85		End of borehole at 6.00 m

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



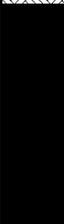
Borehole Log

Borehole No.

ST206D

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431638.53 - 407785.60	Hole Type PH
Location: South Yorkshire		Level: 88.85	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
								Brown CLAY. (COHESIVE RESIDUAL SOIL)
					3.00	85.85		Black COAL. (THIN COAL)
					3.20	85.65		Light greyish brown SILTSTONE. (COAL MEASURES)
					6.00	82.85		End of borehole at 6.00 m

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST206E

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431636.84 - 407786.53

Hole Type
PH

Location: South Yorkshire

Level: 88.90

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
					3.60	85.30		Light grey SILTSTONE. (COAL MEASURES)	3
									4
					6.00	82.90		End of borehole at 6.00 m	5
									6
									7
									8
									9
									10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST206F

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: 431635.61 - 407787.65

Hole Type
PH

Location: South Yorkshire

Level: 88.90

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	
					3.60	85.30	Light grey SILTSTONE. (COAL MEASURES)	
					6.00	82.90	End of borehole at 6.00 m	



Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST207A

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
					6.80				7
								Light grey SILTSTONE. (COAL MEASURES)	8
					9.00				9
								End of borehole at 9.00 m	10

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST207B

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431553.85 - 407731.43	Hole Type PH
Location: South Yorkshire		Level: 94.15	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
								MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
				6.50	87.65		Light brown SILTSTONE. (COAL MEASURES)	5	
								6	
				8.60	85.55		Light grey MUDSTONE. (COAL MEASURES)	7	
								8	
				9.00	85.15			9	
								10	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST207C

Sheet 1 of 1

Project Name: Barnsley West (LT1)	Project No. 3104	Co-ords: 431554.36 - 407729.22	Hole Type PH
Location: South Yorkshire		Level: 94.25	Scale 1:50
Client: Strata Homes		Dates: 03/12/2021 - 03/12/2021	Logged By CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					6.20	88.05		MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	1
									2
									3
									4
									5
									6
					8.00	86.25		Light brown SILTSTONE. (COAL MEASURES)	7
									8
					9.00	85.25		Light grey MUDSTONE. (COAL MEASURES)	9
									10
								End of borehole at 9.00 m	

Remarks
 1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.



Borehole Log

Borehole No.

ST207D

Sheet 1 of 1

Project Name: Barnsley West (LT1)

 Project No.
3104

Co-ords: 431554.66 - 407728.31

 Hole Type
PH

Location: South Yorkshire

Level: 94.35

 Scale
1:50

Client: Strata Homes

Dates: 03/12/2021 - 03/12/2021

 Logged By
CC

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
							MADE GROUND: Grey gravelly CLAY. (OPENCAST BACKFILL)	
				5.90	88.45		Light brown SILTSTONE. (COAL MEASURES)	
				7.40	86.95		Light grey MUDSTONE. (COAL MEASURES)	
				9.00	85.35		End of borehole at 9.00 m	

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Borehole Log

Borehole No.

ST207F

Sheet 1 of 1

Project Name: Barnsley West (LT1)

Project No.
3104

Co-ords: -

Hole Type
PH

Location: South Yorkshire

Level:

Scale
1:50

Client: Strata Homes

Dates: 10/12/2021 - 10/12/2021

Logged By
GLM

Well	Water Strikes	Samples and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
		Depth (m)	Type	Results				
					3.50		MADE GROUND: Brown gravelly CLAY. (OPENCAST BACKFILL)	1
							Buff SANDSTONE. (COAL MEASURES)	4
					5.90		Grey SILTSTONE. (COAL MEASURES)	6
				6.20		Grey MUDSTONE. (COAL MEASURES)		7
				9.00			End of borehole at 9.00 m	9

Remarks

1. Prior to drilling a Cable Avoidance Tool (CAT) survey was carried out. 2. Exploratory hole surveyed in (level and co-ordinates) on completion. 3. Borehole advanced using air flush. 4. 100% of flush returned throughout drilling.

Appendix J
Chemical Test Results



DETS

Certificate of Analysis

Certificate Number 21-26120

Issued: 20-Dec-21

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference 21-26120

Client Reference 3104

Order No PO18455

Contract Title Barnsley West

Description 35 Soil samples.

Date Received 09-Dec-21

Date Started 09-Dec-21

Date Completed 20-Dec-21

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

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

Approved By



Adam Fenwick
Contracts Manager





Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120

Client Ref 3104

Contract Title Barnsley West

Lab No	1945491	1945492	1945493	1945494	1945495	1945496
Sample ID	TP005	TP031	TP033	TP019	TP004	TP007
Depth	0.40	0.30	0.40	0.30	0.50	0.90
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1945491	1945492	1945493	1945494	1945495	1945496
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	2.0	< 1.0	< 1.0	3.0	< 1.0	22
Moisture Content	DETSC 1004	0.1	%	12	16	18	17	22	7.3
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	6.2	8.5	7.2	9.5	11	5.9
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	0.4	0.3	0.3	0.4	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg	20	20	20	18	19	22
Chromium III	DETSC 2301*	0.15	mg/kg	20	20	20	18	19	22
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	39	24	26	21	21	41
Lead	DETSC 2301#	0.3	mg/kg	17	21	15	26	28	18
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10	22	< 10	< 10	< 10	< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	33	20	20	14	14	46
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	27	26	30	25	30	20
Zinc	DETSC 2301#	1	mg/kg	95	72	71	62	68	120
Inorganics									
pH	DETSC 2008#		pH	6.5	7.4	6.7	5.8	6.0	7.8
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	0.9	0.8	1.0	1.9	1.2
Chloride Aqueous Extract	DETSC 2055	1	mg/l	2.5	3.3	5.6	5.1	8.3	2.8
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	< 1.0	1.7	< 1.0	< 1.0	2.8	2.3
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	33	280	17	89	28	30
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120
 Client Ref 3104
 Contract Title Barnsley West

Lab No	1945491	1945492	1945493	1945494	1945495	1945496
Sample ID	TP005	TP031	TP033	TP019	TP004	TP007
Depth	0.40	0.30	0.40	0.30	0.50	0.90
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120

Client Ref 3104

Contract Title Barnsley West

Lab No	1945497	1945498	1945499	1945500	1945501	1945502
Sample ID	TP016	TP017	TP019	TP021	TP021	TP023
Depth	0.80	0.70	0.70	0.60	1.30	1.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1945497	1945498	1945499	1945500	1945501	1945502
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	18	26	31	< 1.0	17	10
Moisture Content	DETSC 1004	0.1	%	8.6	9.1	6.3	16	6.3	12
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	5.4	7.3	6.1	9.0	6.0	7.0
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.3	0.3	0.2	0.2	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	0.1	0.1	0.1	< 0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg	18	18	18	17	16	13
Chromium III	DETSC 2301*	0.15	mg/kg	18	18	18	17	16	13
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	34	33	36	30	31	25
Lead	DETSC 2301#	0.3	mg/kg	32	17	14	22	13	30
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10	< 10	< 10	< 10	< 10	17
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	33	31	34	31	30	24
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	19	21	17	23	15	16
Zinc	DETSC 2301#	1	mg/kg	97	91	110	76	84	95
Inorganics									
pH	DETSC 2008#		pH	7.6	7.8	7.5	6.1	8.0	7.4
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	1.3	0.9	< 0.5	4.4	0.7	1.4
Chloride Aqueous Extract	DETSC 2055	1	mg/l	12	11	1.9	3.3	2.0	3.8
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	1.0	2.4	< 1.0	1.5	1.2	< 1.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	17	28	23	31	25	110
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	0.04	< 0.03	0.04	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.05	0.07	0.04	< 0.03	0.05	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120
 Client Ref 3104
 Contract Title Barnsley West

Lab No	1945497	1945498	1945499	1945500	1945501	1945502
Sample ID	TP016	TP017	TP019	TP021	TP021	TP023
Depth	0.80	0.70	0.70	0.60	1.30	1.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120

Client Ref 3104

Contract Title Barnsley West

Lab No	1945503	1945504	1945505	1945506	1945507	1945508
Sample ID	TP026	TP027	TP029	TP031	TP036	TP101
Depth	0.50	1.30	0.70	0.60	0.60	2.50
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1945503	1945504	1945505	1945506	1945507	1945508
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	12	8.0	32	2.0	3.0	5.0
Moisture Content	DETSC 1004	0.1	%	10	11	7.2	8.2	8.6	8.8
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	12	6.2	6.0	5.9	6.8	5.7
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	0.2	< 0.2	0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	< 0.1	0.1	0.4	0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	18	24	16	17	17	17
Chromium III	DETSC 2301*	0.15	mg/kg	18	24	16	17	17	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	37	23	38	33	32	36
Lead	DETSC 2301#	0.3	mg/kg	32	14	24	15	16	17
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	11	18	< 10	< 10	< 10	170
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	40	31	31	39	32	36
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	19	29	18	16	18	17
Zinc	DETSC 2301#	1	mg/kg	110	57	100	150	94	86
Inorganics									
pH	DETSC 2008#		pH	7.8	7.5	7.7	8.1	7.4	7.1
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	1.3	0.8	0.9	1.0	1.2	1.9
Chloride Aqueous Extract	DETSC 2055	1	mg/l	2.5	6.7	2.3	3.7	2.9	3.6
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.9
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	47	140	24	25	20	1200
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	13
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	27
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	< 0.03	0.04	0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120
 Client Ref 3104
 Contract Title Barnsley West

Lab No	1945503	1945504	1945505	1945506	1945507	1945508
Sample ID	TP026	TP027	TP029	TP031	TP036	TP101
Depth	0.50	1.30	0.70	0.60	0.60	2.50
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120

Client Ref 3104

Contract Title Barnsley West

Lab No	1945509	1945510	1945511	1945512	1945513	1945514
Sample ID	TP020	TP002	TP005	TP006	TP008	TP015
Depth	0.70	0.10	0.10	0.20	0.20	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1945509	1945510	1945511	1945512	1945513	1945514
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	4.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%	9.5	23	25	24	24	25
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	12	14	14	13	11	13
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.2	0.5	0.6	0.5	0.5	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.2	0.2	0.2	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	17	20	20	22	22	23
Chromium III	DETSC 2301*	0.15	mg/kg	17	20	20	22	22	23
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	35	28	24	25	27	31
Lead	DETSC 2301#	0.3	mg/kg	17	38	37	35	31	34
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	16					
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.06	0.06	0.07	0.07	0.05
Nickel	DETSC 2301#	1	mg/kg	35	18	16	19	27	20
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	18	34	31	33	32	38
Zinc	DETSC 2301#	1	mg/kg	94	89	70	80	82	88
Inorganics									
pH	DETSC 2008#		pH	7.9	6.5	6.4	6.6	6.7	6.5
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	1.4	3.4	5.3	2.7	2.4	2.3
Chloride Aqueous Extract	DETSC 2055	1	mg/l	2.8					
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	< 1.0					
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	100					
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.03
Anthracene	DETSC 3303	0.03	mg/kg	0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	0.04	< 0.03	< 0.03	0.06
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	< 0.03	< 0.03	0.05
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	< 0.03	< 0.03	0.04



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120
 Client Ref 3104
 Contract Title Barnsley West

Lab No	1945509	1945510	1945511	1945512	1945513	1945514
Sample ID	TP020	TP002	TP005	TP006	TP008	TP015
Depth	0.70	0.10	0.10	0.20	0.20	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120
 Client Ref 3104
 Contract Title Barnsley West

Lab No	1945515	1945516	1945517	1945518	1945519	1945520
Sample ID	TP018	TP019	TP025	TP027	TP028	TP032
Depth	0.10	0.10	0.20	0.20	0.10	0.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1945515	1945516	1945517	1945518	1945519	1945520
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%	25	23	28	18	21	22
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	9.7	11	19	9.2	10	7.3
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.7	0.3	0.6	0.4	0.5	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.2	0.2	0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg	23	22	21	20	21	16
Chromium III	DETSC 2301*	0.15	mg/kg	23	22	21	20	21	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	26	26	31	27	24	20
Lead	DETSC 2301#	0.3	mg/kg	32	35	43	26	29	21
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg	0.05	0.06	0.08	< 0.05	0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	17	19	20	18	16
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	0.5	< 0.5	< 0.5	0.7
Vanadium	DETSC 2301#	0.8	mg/kg	34	37	38	32	32	26
Zinc	DETSC 2301#	1	mg/kg	77	76	90	79	76	61
Inorganics									
pH	DETSC 2008#		pH	6.6	6.5	6.7	6.9	6.2	6.5
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	2.3	2.8	4.1	2.0	1.9	2.0
Chloride Aqueous Extract	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l						
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.03	< 0.03	0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	0.04	< 0.03	0.04
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04	< 0.03	0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis Soil Samples

Our Ref 21-26120
Client Ref 3104
Contract Title Barnsley West

Lab No	1945515	1945516	1945517	1945518	1945519	1945520
Sample ID	TP018	TP019	TP025	TP027	TP028	TP032
Depth	0.10	0.10	0.20	0.20	0.10	0.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26120

Client Ref 3104

Contract Title Barnsley West

Lab No	1945521	1945522	1945523	1945524	1945525
Sample ID	TP034	TP036	TP001	TP010	TP022
Depth	0.10	0.10	0.20	0.20	1.90
Other ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Preparation								
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	< 1.0	< 1.0	< 1.0	
Moisture Content	DETSC 1004	0.1	%	20	21	27	28	
Metals								
Arsenic	DETSC 2301#	0.2	mg/kg	8.6	10	12	11	
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.4	0.4	0.6	0.7	
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.2	0.2	
Chromium	DETSC 2301#	0.15	mg/kg	20	23	21	22	
Chromium III	DETSC 2301*	0.15	mg/kg	20	23	21	22	
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	
Copper	DETSC 2301#	0.2	mg/kg	28	24	25	25	
Lead	DETSC 2301#	0.3	mg/kg	25	31	35	32	
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l					< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05	
Nickel	DETSC 2301#	1	mg/kg	21	20	17	18	
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	
Vanadium	DETSC 2301#	0.8	mg/kg	33	38	36	35	
Zinc	DETSC 2301#	1	mg/kg	78	82	76	76	
Inorganics								
pH	DETSC 2008#		pH	6.4	6.0	6.4	6.7	
Calorific Value	DETSC 5008	1	MJ/kg					24.4
Total Organic Carbon	DETSC 2084#	0.5	%	2.1	2.4	3.6	2.9	
Chloride Aqueous Extract	DETSC 2055	1	mg/l					3.7
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l					< 1.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l					31
Petroleum Hydrocarbons								
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	
PAHs								
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.04	< 0.03	< 0.03	
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	< 0.03	< 0.03	
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	< 0.03	< 0.03	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	< 0.03	< 0.03	

Summary of Chemical Analysis Soil Samples

Our Ref 21-26120

Client Ref 3104

Contract Title Barnsley West

Lab No	1945521	1945522	1945523	1945524	1945525
Sample ID	TP034	TP036	TP001	TP010	TP022
Depth	0.10	0.10	0.20	0.20	1.90
Other ID					
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	19/11/2021	19/11/2021	19/11/2021	19/11/2021	19/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units					
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	0.14	< 0.10	< 0.10	

Summary of Asbestos Analysis

Soil Samples

Our Ref 21-26120

Client Ref 3104

Contract Title Barnsley West

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1945491	TP005 0.40	SOIL	NAD	none	Lee Kerridge
1945492	TP031 0.30	SOIL	NAD	none	Lee Kerridge
1945493	TP033 0.40	SOIL	NAD	none	Lee Kerridge
1945494	TP019 0.30	SOIL	NAD	none	Lee Kerridge
1945495	TP004 0.50	SOIL	NAD	none	Lee Kerridge
1945496	TP007 0.90	SOIL	NAD	none	Lee Kerridge
1945497	TP016 0.80	SOIL	NAD	none	Lee Kerridge
1945498	TP017 0.70	SOIL	NAD	none	Lee Kerridge
1945499	TP019 0.70	SOIL	NAD	none	Lee Kerridge
1945500	TP021 0.60	SOIL	NAD	none	Lee Kerridge
1945501	TP021 1.30	SOIL	NAD	none	Lee Kerridge
1945502	TP023 1.20	SOIL	NAD	none	Lee Kerridge
1945503	TP026 0.50	SOIL	NAD	none	Lee Kerridge
1945504	TP027 1.30	SOIL	NAD	none	Lee Kerridge
1945505	TP029 0.70	SOIL	NAD	none	Lee Kerridge
1945506	TP031 0.60	SOIL	NAD	none	Lee Kerridge
1945507	TP036 0.60	SOIL	NAD	none	Lee Kerridge
1945508	TP101 2.50	SOIL	NAD	none	Lee Kerridge
1945509	TP020 0.70	SOIL	NAD	none	Lee Kerridge
1945510	TP002 0.10	SOIL	NAD	none	Lee Kerridge
1945511	TP005 0.10	SOIL	NAD	none	Lee Kerridge
1945512	TP006 0.20	SOIL	NAD	none	Lee Kerridge
1945513	TP008 0.20	SOIL	NAD	none	Lee Kerridge
1945514	TP015 0.20	SOIL	NAD	none	Lee Kerridge
1945515	TP018 0.10	SOIL	NAD	none	Lee Kerridge
1945516	TP019 0.10	SOIL	NAD	none	Lee Kerridge
1945517	TP025 0.20	SOIL	NAD	none	Lee Kerridge
1945518	TP027 0.20	SOIL	NAD	none	Lee Kerridge
1945519	TP028 0.10	SOIL	NAD	none	Lee Kerridge
1945520	TP032 0.10	SOIL	NAD	none	Lee Kerridge
1945521	TP034 0.10	SOIL	NAD	none	Lee Kerridge
1945522	TP036 0.10	SOIL	NAD	none	Lee Kerridge
1945523	TP001 0.20	SOIL	NAD	none	Lee Kerridge
1945524	TP010 0.20	SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 21-26120
 Client Ref 3104
 Contract Barnsley West

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1945491	TP005 0.40 SOIL	19/11/21	PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	BTEX, Naphthalene, PAH MS, EPH/TPH
1945492	TP031 0.30 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945493	TP033 0.40 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945494	TP019 0.30 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945495	TP004 0.50 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945496	TP007 0.90 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945497	TP016 0.80 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945498	TP017 0.70 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945499	TP019 0.70 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945500	TP021 0.60 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945501	TP021 1.30 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945502	TP023 1.20 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945503	TP026 0.50 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945504	TP027 1.30 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	

Information in Support of the Analytical Results

Our Ref 21-26120
 Client Ref 3104
 Contract Barnsley West

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1945505	TP029 0.70 SOIL	19/11/21	PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	BTEX, Naphthalene, PAH MS, EPH/TPH
1945506	TP031 0.60 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945507	TP036 0.60 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945508	TP101 2.50 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945509	TP020 0.70 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945510	TP002 0.10 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945511	TP005 0.10 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945512	TP006 0.20 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945513	TP008 0.20 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945514	TP015 0.20 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945515	TP018 0.10 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945516	TP019 0.10 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945517	TP025 0.20 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945518	TP027 0.20 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	

Information in Support of the Analytical Results

Our Ref 21-26120
 Client Ref 3104
 Contract Barnsley West

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1945519	TP028 0.10 SOIL	19/11/21	PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	BTEX, Naphthalene, PAH MS, EPH/TPH
1945520	TP032 0.10 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945521	TP034 0.10 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945522	TP036 0.10 SOIL	19/11/21	GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945523	TP001 0.20 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945524	TP010 0.20 SOIL	19/11/21	GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1945525	TP022 1.90 SOIL	19/11/21	PT 1L		

Key: P-Plastic T-Tub G-Glass J-Jar

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

Soil Analysis Notes

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

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

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

Disposal

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

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

End of Report



Certificate of Analysis

Certificate Number 21-26815

Issued: 04-Jan-22

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference 21-26815

Client Reference 3104

Order No PO18490

Contract Title Barnsley West (LT1)

Description 39 Soil samples.

Date Received 17-Dec-21

Date Started 17-Dec-21

Date Completed 04-Jan-22

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

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

Approved By



Adam Fenwick
Contracts Manager



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Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950130	1950131	1950132	1950133	1950134	1950135
Sample ID	TP052	TP057	TP062	TP064	TP201	TP211
Depth	0.80	0.40	0.50	0.60	0.40	0.40
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	08/12/2021	08/12/2021	29/11/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	< 1.0	86	< 1.0	< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%	18	19	6.2	19	15	16
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	8.7	7.3	3.0	15	7.0	7.3
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.2	0.3	< 0.2	< 0.2	0.2	0.2
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	19	18	16	19	20	19
Chromium III	DETSC 2301*	0.15	mg/kg	19	18	16	19	20	19
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	29	22	31	21	25	25
Lead	DETSC 2301#	0.3	mg/kg	18	12	16	13	20	16
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10		< 10	< 10		< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	21	12	29	16	20	17
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	27	24	27	24	32	25
Zinc	DETSC 2301#	1	mg/kg	67	53	84	56	68	55
Inorganics									
pH	DETSC 2008#		pH	6.6	4.9	7.6	7.4	7.1	7.0
Total Organic Carbon	DETSC 2084#	0.5	%	0.9	0.5	1.3	< 0.5	0.8	2.0
Chloride Aqueous Extract	DETSC 2055	1	mg/l	2.6		1.8	1.8		1.9
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	1.1		< 1.0	< 1.0		< 1.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	89		17	65		11
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950130	1950131	1950132	1950133	1950134	1950135
Sample ID	TP052	TP057	TP062	TP064	TP201	TP211
Depth	0.80	0.40	0.50	0.60	0.40	0.40
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	08/12/2021	08/12/2021	29/11/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950136	1950137	1950138	1950139	1950140	1950141
Sample ID	TP215	TP047	TP048	TP054	TP065	TP069
Depth	0.40	0.60	1.60	2.00	0.80	0.60
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	29/11/2021	08/12/2021	08/12/2021	08/12/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	< 1.0	< 1.0	67	36	24
Moisture Content	DETSC 1004	0.1	%	21	18	10	9.3	10	9.2
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	6.4	7.5	6.0	4.8	4.9	6.9
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.3	0.2	< 0.2	< 0.2	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	18	20	18	16	17	18
Chromium III	DETSC 2301*	0.15	mg/kg	18	20	18	16	17	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	29	25	35	40	27	32
Lead	DETSC 2301#	0.3	mg/kg	22	17	16	19	15	15
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l		14		12		< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	18	21	35	36	30	35
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	30	34	20	17	20	20
Zinc	DETSC 2301#	1	mg/kg	75	69	97	94	81	92
Inorganics									
pH	DETSC 2008#		pH	7.0	7.0	7.8	7.6	7.4	7.3
Total Organic Carbon	DETSC 2084#	0.5	%	1.0	0.9	1.3	1.6	0.7	0.5
Chloride Aqueous Extract	DETSC 2055	1	mg/l		1.5		2.2		2.9
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l		2.0		< 1.0		< 1.0
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l		150		89		14
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950136	1950137	1950138	1950139	1950140	1950141
Sample ID	TP215	TP047	TP048	TP054	TP065	TP069
Depth	0.40	0.60	1.60	2.00	0.80	0.60
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	29/11/2021	08/12/2021	08/12/2021	08/12/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950142	1950143	1950144	1950145	1950146	1950147
Sample ID	TP106	TP202	TP204	TP206	TP208	TP211
Depth	1.00	0.60	0.60	1.00	1.30	0.70
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	18	12	7.0	14	8.0	5.0
Moisture Content	DETSC 1004	0.1	%	11	11	10	9.8	9.1	18
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	5.9	4.8	6.1	5.1	5.1	17
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	0.2	1.0
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
Chromium	DETSC 2301#	0.15	mg/kg	18	16	17	18	14	22
Chromium III	DETSC 2301*	0.15	mg/kg	18	16	17	18	14	22
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	31	38	34	30	62	42
Lead	DETSC 2301#	0.3	mg/kg	18	16	17	14	18	42
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l		69		< 10	24	< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.09
Nickel	DETSC 2301#	1	mg/kg	33	31	33	37	28	20
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	26	19	18	24	18	47
Zinc	DETSC 2301#	1	mg/kg	89	77	84	87	69	98
Inorganics									
pH	DETSC 2008#		pH	7.0	7.2	7.3	7.0	7.5	6.4
Total Organic Carbon	DETSC 2084#	0.5	%	0.7	1.9	1.3	0.7	2.4	3.7
Chloride Aqueous Extract	DETSC 2055	1	mg/l		2.5		3.6	2.4	3.3
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l		1.8		1.7	1.9	1.4
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l		460		19	170	< 10
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	< 0.03	< 0.03	0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950142	1950143	1950144	1950145	1950146	1950147
Sample ID	TP106	TP202	TP204	TP206	TP208	TP211
Depth	1.00	0.60	0.60	1.00	1.30	0.70
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950148	1950149	1950150	1950151	1950152	1950153
Sample ID	TP216	TP221	TP40	TP44	TP45	TP048
Depth	0.80	2.00	2.50	1.20	2.00	0.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	29/11/2021	29/11/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	11	16	17	24	56	< 1.0
Moisture Content	DETSC 1004	0.1	%	11	11	12	8.2	8.7	24
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	6.8	6.3	6.1	5.7	4.7	12
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	0.2	< 0.2	< 0.2	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	0.1	0.1	< 0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg	16	16	17	17	17	21
Chromium III	DETSC 2301*	0.15	mg/kg	16	16	17	17	17	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	38	33	36	32	30	27
Lead	DETSC 2301#	0.3	mg/kg	20	15	19	14	16	33
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10	23	19	10	< 10	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05
Nickel	DETSC 2301#	1	mg/kg	35	32	34	32	32	18
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	19	19	20	20	20	37
Zinc	DETSC 2301#	1	mg/kg	120	84	92	88	86	77
Inorganics									
pH	DETSC 2008#		pH	7.3	7.2	7.4	7.9	8.0	5.6
Total Organic Carbon	DETSC 2084#	0.5	%	1.5	1.1	1.5	1.0	0.7	2.6
Chloride Aqueous Extract	DETSC 2055	1	mg/l	2.2	3.1	2.5	2.4	2.1	
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	< 1.0	< 1.0	< 1.0	< 1.0	1.1	
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	25	160	130	11	40	
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	< 10	< 10	
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04	< 0.03	0.04
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.06
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03



Summary of Chemical Analysis Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950148	1950149	1950150	1950151	1950152	1950153
Sample ID	TP216	TP221	TP40	TP44	TP45	TP048
Depth	0.80	2.00	2.50	1.20	2.00	0.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	29/11/2021	29/11/2021	08/12/2021	08/12/2021	08/12/2021	08/12/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950154	1950155	1950156	1950157	1950158	1950159
Sample ID	TP050	TP054	TP062	TP064	TP070	TP105
Depth	0.10	0.10	0.10	0.10	0.10	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	08/12/2021	08/12/2021	29/11/2021	29/11/2021	08/12/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Stones >10mm	DETS 1003*	1	% m/m	< 1.0	< 1.0	< 1.0	< 1.0	52	< 1.0
Moisture Content	DETS 1004	0.1	%	22	22	21	21	9.9	21
Metals									
Arsenic	DETS 2301#	0.2	mg/kg	12	12	12	18	6.4	12
Boron, Water Soluble	DETS 2311#	0.2	mg/kg	0.6	0.7	0.5	0.7	< 0.2	0.6
Cadmium	DETS 2301#	0.1	mg/kg	0.2	0.2	0.2	0.2	< 0.1	0.2
Chromium	DETS 2301#	0.15	mg/kg	23	22	20	22	17	21
Chromium III	DETS 2301*	0.15	mg/kg	23	22	20	22	17	21
Chromium, Hexavalent	DETS 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETS 2301#	0.2	mg/kg	26	28	25	30	36	25
Lead	DETS 2301#	0.3	mg/kg	33	32	30	42	34	32
Magnesium Aqueous Extract	DETS 2076*	10	mg/l						
Mercury	DETS 2325#	0.05	mg/kg	< 0.05	0.05	< 0.05	0.08	< 0.05	0.05
Nickel	DETS 2301#	1	mg/kg	17	17	17	16	33	17
Selenium	DETS 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.7	< 0.5	< 0.5
Vanadium	DETS 2301#	0.8	mg/kg	44	40	37	40	18	36
Zinc	DETS 2301#	1	mg/kg	88	72	72	80	79	76
Inorganics									
pH	DETS 2008#		pH	6.6	6.2	5.7	6.9	7.8	6.0
Total Organic Carbon	DETS 2084#	0.5	%	2.8	2.5	3.3	3.5	1.5	2.6
Chloride Aqueous Extract	DETS 2055	1	mg/l						
Nitrate Aqueous Extract as NO3	DETS 2055	1	mg/l						
Sulphate Aqueous Extract as SO4	DETS 2076#	10	mg/l						
Petroleum Hydrocarbons									
EPH (C6-C10)	DETS 3321*	0.1	mg/kg						
EPH (C10-C12)	DETS 3311	10	mg/kg						
EPH (C12-C16)	DETS 3311	10	mg/kg						
EPH (C16-C21)	DETS 3311	10	mg/kg						
EPH (C21-C35)	DETS 3311	10	mg/kg						
EPH (C35-C40)	DETS 3311	10	mg/kg						
EPH (C10-C40)	DETS 3311#	10	mg/kg						
PAHs									
Naphthalene	DETS 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETS 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETS 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETS 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETS 3303#	0.03	mg/kg	0.03	< 0.03	0.04	0.08	0.03	0.05
Anthracene	DETS 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETS 3303#	0.03	mg/kg	0.05	0.04	0.06	0.12	< 0.03	0.06
Pyrene	DETS 3303#	0.03	mg/kg	0.04	0.03	0.05	0.10	< 0.03	0.05
Benzo(a)anthracene	DETS 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.05	< 0.03	< 0.03



Summary of Chemical Analysis Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950154	1950155	1950156	1950157	1950158	1950159
Sample ID	TP050	TP054	TP062	TP064	TP070	TP105
Depth	0.10	0.10	0.10	0.10	0.10	0.20
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	08/12/2021	08/12/2021	29/11/2021	29/11/2021	08/12/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.04	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	0.15	0.39	< 0.10	0.16

Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950160	1950161	1950162	1950163	1950164	1950165
Sample ID	TP107	TP201	TP205	TP208	TP214	TP221
Depth	0.10	0.10	0.10	0.10	0.10	0.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%	21	20	19	21	19	24
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	12	13	14	12	13	13
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg	0.5	0.5	0.7	0.6	0.6	0.7
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3	0.2	0.3	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	22	23	21	23	23	22
Chromium III	DETSC 2301*	0.15	mg/kg	22	23	21	23	23	22
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	25	30	27	29	34	26
Lead	DETSC 2301#	0.3	mg/kg	30	39	38	39	40	33
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.07	0.09	0.10	0.07	< 0.05
Nickel	DETSC 2301#	1	mg/kg	19	19	17	18	23	18
Selenium	DETSC 2301#	0.5	mg/kg	0.6	< 0.5	0.6	0.8	1.3	0.8
Vanadium	DETSC 2301#	0.8	mg/kg	35	37	35	37	38	38
Zinc	DETSC 2301#	1	mg/kg	82	83	78	84	89	83
Inorganics									
pH	DETSC 2008#		pH	6.3	6.3	6.2	6.2	6.4	6.1
Total Organic Carbon	DETSC 2084#	0.5	%	2.1	3.0	4.0	3.0	6.2	2.7
Chloride Aqueous Extract	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l						
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg						
EPH (C10-C12)	DETSC 3311	10	mg/kg						
EPH (C12-C16)	DETSC 3311	10	mg/kg						
EPH (C16-C21)	DETSC 3311	10	mg/kg						
EPH (C21-C35)	DETSC 3311	10	mg/kg						
EPH (C35-C40)	DETSC 3311	10	mg/kg						
EPH (C10-C40)	DETSC 3311#	10	mg/kg						
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.06	0.10	0.10	0.10	0.09	0.05
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.08	0.15	0.18	0.16	0.14	0.07
Pyrene	DETSC 3303#	0.03	mg/kg	0.07	0.12	0.15	0.13	0.11	0.06
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.04	0.05	0.06	0.05	0.06	0.04



Summary of Chemical Analysis

Soil Samples

Our Ref 21-26815
 Client Ref 3104
 Contract Title Barnsley West (LT1)

Lab No	1950160	1950161	1950162	1950163	1950164	1950165
Sample ID	TP107	TP201	TP205	TP208	TP214	TP221
Depth	0.10	0.10	0.10	0.10	0.10	0.10
Other ID						
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	08/12/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021	29/11/2021
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units						
Chrysene	DETSC 3303	0.03	mg/kg	0.03	0.07	0.08	0.07	0.04	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	0.07	0.05	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	0.03	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.25	0.54	0.64	0.56	0.40	0.18

Summary of Chemical Analysis Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950166	1950167	1950168
Sample ID	TP211	TP056	TP061
Depth	2.50	0.10	0.10
Other ID			
Sample Type	SOIL	SOIL	SOIL
Sampling Date	29/11/2021	08/12/2021	08/12/2021
Sampling Time	n/s	n/s	n/s

Test	Method	LOD	Units			
Preparation						
Stones >10mm	DETSC 1003*	1	% m/m		< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%		23	20
Metals						
Arsenic	DETSC 2301#	0.2	mg/kg		12	11
Boron, Water Soluble	DETSC 2311#	0.2	mg/kg		0.8	0.4
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg		21	21
Chromium III	DETSC 2301*	0.15	mg/kg		21	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		26	27
Lead	DETSC 2301#	0.3	mg/kg		32	32
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10		
Mercury	DETSC 2325#	0.05	mg/kg		0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg		17	18
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg		34	37
Zinc	DETSC 2301#	1	mg/kg		73	72
Inorganics						
pH	DETSC 2008#		pH		6.4	6.0
Total Organic Carbon	DETSC 2084#	0.5	%		2.7	2.0
Chloride Aqueous Extract	DETSC 2055	1	mg/l	2.7		
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	< 1.0		
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	20		
Petroleum Hydrocarbons						
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg			
EPH (C10-C12)	DETSC 3311	10	mg/kg			
EPH (C12-C16)	DETSC 3311	10	mg/kg			
EPH (C16-C21)	DETSC 3311	10	mg/kg			
EPH (C21-C35)	DETSC 3311	10	mg/kg			
EPH (C35-C40)	DETSC 3311	10	mg/kg			
EPH (C10-C40)	DETSC 3311#	10	mg/kg			
PAHs						
Naphthalene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg		< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.06	0.05
Anthracene	DETSC 3303	0.03	mg/kg		< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.09	0.07
Pyrene	DETSC 3303#	0.03	mg/kg		0.07	0.06
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.04	0.03

Summary of Chemical Analysis Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	1950166	1950167	1950168
Sample ID	TP211	TP056	TP061
Depth	2.50	0.10	0.10
Other ID			
Sample Type	SOIL	SOIL	SOIL
Sampling Date	29/11/2021	08/12/2021	08/12/2021
Sampling Time	n/s	n/s	n/s

Test	Method	LOD	Units			
Chrysene	DETSC 3303	0.03	mg/kg		< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		< 0.03	0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		0.26	0.19

Summary of Asbestos Analysis

Soil Samples

Our Ref 21-26815

Client Ref 3104

Contract Title Barnsley West (LT1)

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1950130	TP052 0.80	SOIL	NAD	none	Steven Lambert
1950131	TP057 0.40	SOIL	NAD	none	Steven Lambert
1950132	TP062 0.50	SOIL	NAD	none	Steven Lambert
1950133	TP064 0.60	SOIL	NAD	none	Steven Lambert
1950134	TP201 0.40	SOIL	NAD	none	Steven Lambert
1950135	TP211 0.40	SOIL	NAD	none	Steven Lambert
1950136	TP215 0.40	SOIL	NAD	none	Steven Lambert
1950137	TP047 0.60	SOIL	NAD	none	Steven Lambert
1950138	TP048 1.60	SOIL	NAD	none	Steven Lambert
1950139	TP054 2.00	SOIL	NAD	none	Steven Lambert
1950140	TP065 0.80	SOIL	NAD	none	Steven Lambert
1950141	TP069 0.60	SOIL	NAD	none	Steven Lambert
1950142	TP106 1.00	SOIL	NAD	none	Steven Lambert
1950143	TP202 0.60	SOIL	NAD	none	Steven Lambert
1950144	TP204 0.60	SOIL	NAD	none	Steven Lambert
1950145	TP206 1.00	SOIL	NAD	none	Steven Lambert
1950146	TP208 1.30	SOIL	NAD	none	Steven Lambert
1950147	TP211 0.70	SOIL	NAD	none	Steven Lambert
1950148	TP216 0.80	SOIL	NAD	none	Steven Lambert
1950149	TP221 2.00	SOIL	NAD	none	Steven Lambert
1950150	TP40 2.50	SOIL	NAD	none	Steven Lambert
1950151	TP44 1.20	SOIL	NAD	none	Steven Lambert
1950152	TP45 2.00	SOIL	NAD	none	Steven Lambert
1950153	TP048 0.10	SOIL	NAD	none	Steven Lambert
1950154	TP050 0.10	SOIL	NAD	none	Steven Lambert
1950155	TP054 0.10	SOIL	NAD	none	Steven Lambert
1950156	TP062 0.10	SOIL	NAD	none	Steven Lambert
1950157	TP064 0.10	SOIL	NAD	none	Steven Lambert
1950158	TP070 0.10	SOIL	NAD	none	Steven Lambert
1950159	TP105 0.20	SOIL	NAD	none	Steven Lambert
1950160	TP107 0.10	SOIL	NAD	none	Steven Lambert
1950161	TP201 0.10	SOIL	NAD	none	Steven Lambert
1950162	TP205 0.10	SOIL	NAD	none	Steven Lambert
1950163	TP208 0.10	SOIL	NAD	none	Steven Lambert
1950164	TP214 0.10	SOIL	NAD	none	Steven Lambert
1950165	TP221 0.10	SOIL	NAD	none	Steven Lambert
1950167	TP056 0.10	SOIL	NAD	none	Steven Lambert
1950168	TP061 0.10	SOIL	NAD	none	Steven Lambert

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 21-26815
 Client Ref 3104
 Contract Barnsley West (LT1)

Containers Received & Deviating Samples

Lab No	Sample ID	Date		Containers Received	Holding time exceeded for tests	Inappropriate container for tests
		Sampled				
1950130	TP052 0.80 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950131	TP057 0.40 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950132	TP062 0.50 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950133	TP064 0.60 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950134	TP201 0.40 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950135	TP211 0.40 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950136	TP215 0.40 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950137	TP047 0.60 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950138	TP048 1.60 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950139	TP054 2.00 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950140	TP065 0.80 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950141	TP069 0.60 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950142	TP106 1.00 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950143	TP202 0.60 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950144	TP204 0.60 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950145	TP206 1.00 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950146	TP208 1.30 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950147	TP211 0.70 SOIL	29/11/21		GJ 250ml	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950148	TP216 0.80 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950149	TP221 2.00 SOIL	29/11/21		GJ 250ml, PT 1L	BTEX (14 days), Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days), EPH/TPH (14 days)	
1950150	TP40 2.50 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950151	TP44 1.20 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950152	TP45 2.00 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950153	TP048 0.10 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	

Information in Support of the Analytical Results

Our Ref 21-26815
 Client Ref 3104
 Contract Barnsley West (LT1)

Lab No	Sample ID	Date		Containers Received	Holding time exceeded for tests	Inappropriate container for tests
		Sampled				
1950154	TP050 0.10 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950155	TP054 0.10 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950156	TP062 0.10 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950157	TP064 0.10 SOIL	29/11/21		GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1950158	TP070 0.10 SOIL	29/11/21		GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1950159	TP105 0.20 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950160	TP107 0.10 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950161	TP201 0.10 SOIL	29/11/21		GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1950162	TP205 0.10 SOIL	29/11/21		GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1950163	TP208 0.10 SOIL	29/11/21		GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1950164	TP214 0.10 SOIL	29/11/21		GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1950165	TP221 0.10 SOIL	29/11/21		GJ 250ml, PT 1L	Naphthalene (14 days), PAH MS (14 days), pH + Conductivity (7 days)	
1950166	TP211 2.50 SOIL	29/11/21		GJ 250ml, PT 1L		
1950167	TP056 0.10 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	
1950168	TP061 0.10 SOIL	08/12/21		GJ 250ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

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

Soil Analysis Notes

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

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

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

Disposal

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

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

End of Report

Appendix K
Geotechnical Test Results



LABORATORY REPORT



4043

Contract Number: PSL21/9638

Report Date: 02 February 2022

Client's Reference: 3104

Client Name: Lithos Consulting
Parkhill
Walton Road
Wetherby
North Yorkshire
LS22 5DZ

For the attention of: George Morton

Contract Title: Barnsley (West)

Date Received: 9/12/2021

Date Commenced: 9/12/2021

Date Completed: 2/2/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins
(Director)



L Knight
(Assistant Laboratory Manager)

R Berriman
(Quality Manager)

S Royle
(Laboratory Manager)

S Eyre
(Senior Technician)

T Watkins
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Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP004	1	D&B	0.10		Brown TOPSOIL.
TP007	1	D&B	0.10		Brown TOPSOIL.
TP017	1	D&B	0.10		Brown TOPSOIL.
TP031	1	D&B	0.10		Brown TOPSOIL.
TP035	1	D&B	0.10		Brown TOPSOIL.
TP102	1	D&B	0.20		Brown TOPSOIL.
TP012	1	D&B	0.10		Brown slightly gravelly sandy CLAY.
TP015	1	D&B	0.20		Brown slightly gravelly sandy CLAY.
TP001	2	D	0.50		Brown mottled grey slightly gravelly slightly sandy very silty CLAY.
TP009	2	D	0.90		Brown slightly gravelly slightly sandy CLAY.
TP017	2	D	0.50		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP023	4	D	1.70		Brown mottled grey slightly gravelly sandy CLAY.
TP027	6	D	1.90		Brown mottled grey slightly gravelly sandy CLAY.
TP020	2	D&B	0.40		Brown slightly gravelly slightly sandy CLAY.
TP104	3	D&B	1.50		Brown mottled grey slightly gravelly sandy very silty CLAY.
TP003	2	D&B	0.80		Brown mottled grey COLLIERY SPOIL.
TP005	4	D&B	1.00		Brown mottled grey COLLIERY SPOIL.
TP007	4	D&B	1.00		Brown mottled grey COLLIERY SPOIL.
TP007	5	D&B	1.80		Brown COLLIERY SPOIL.



4043

PSL

Professional Soils Laboratory

Barnsley (West)

Contract No:

PSL21/9638

Client Ref:

3104

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP011	3	D&B	2.00		Brown mottled grey COLLIERY SPOIL.
TP013	1	D&B	0.90		Grey COLLIERY SPOIL.
TP014	3	D&B	3.20		Brown mottled grey COLLIERY SPOIL.
TP015	3	D&B	3.50		Brown mottled grey COLLIERY SPOIL.
TP016	1	D&B	0.80		Grey COLLIERY SPOIL.
TP016	2	D&B	1.40		Grey COLLIERY SPOIL.
TP017	4	D&B	1.00		Grey COLLIERY SPOIL.
TP018	2	D&B	0.60		Brown mottled grey COLLIERY SPOIL.
TP020	4	D&B	0.90		Brown mottled grey COLLIERY SPOIL.
TP022	1	D&B	0.50		Grey COLLIERY SPOIL.
TP023	3	D&B	1.30		Grey COLLIERY SPOIL.
TP024	1	D&B	0.60		Brown mottled grey COLLIERY SPOIL.
TP026	3	D&B	0.90		Grey mottled brown COLLIERY SPOIL.
TP027	4	D&B	1.20		Brown mottled grey COLLIERY SPOIL.
TP030	4	D&B	0.70		Brown mottled grey COLLIERY SPOIL.
TP035	2	D&B	0.80		Grey COLLIERY SPOIL.
TP037	2	D&B	1.00		Grey COLLIERY SPOIL.
TP101	2	D&B	1.20		Brown mottled grey COLLIERY SPOIL.
TP101	3	D&B	2.40		Brown mottled grey COLLIERY SPOIL.



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PSL

Professional Soils Laboratory

Barnsley (West)

Contract No:

PSL21/9638

Client Ref:

3104

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP102	4	D&B	1.20		Grey COLLIERY SPOIL.
TP103	4	D&B	2.90		Grey COLLIERY SPOIL.
TP001	4	D&B	1.40		Grey slightly clayey MUDSTONE.
TP002	3	D&B	1.00		Grey slightly clayey MUDSTONE.
TP022	5	D&B	2.30		Grey slightly clayey weathered MUDSTONE.
BH001	1	B	0.00		Brown slightly gravelly slightly sandy CLAY.
BH003	1	B	0.00		Brown slightly gravelly slightly sandy CLAY.
BH004	3	B	1.00		Brown very gravelly sandy CLAY.
BH006	1	B	0.00		Brown gravelly sandy CLAY.
BH009	1	B	0.00		Brown slightly gravelly slightly sandy CLAY.
BH002	18	B	12.00		Grey COLLIERY SPOIL.
BH008	13	B	8.00		Grey COLLIERY SPOIL.
BH008	16	B	10.00		Grey mottled brown COLLIERY SPOIL.
BH010	14	B	9.00		Grey mottled brown COLLIERY SPOIL.
BH010	17	B	11.00		Grey COLLIERY SPOIL.
BH013	10	B	6.50		Grey mottled brown COLLIERY SPOIL.
BH007	8	D	5.00		Brown mottled grey slightly gravelly sandy CLAY.
BH007	9	D	6.00		Brown mottled grey slightly gravelly sandy CLAY.
BH010	18	D	11.90		Brown sandy clayey GRAVEL.



4043

PSL

Professional Soils Laboratory

Barnsley (West)

Contract No:

PSL21/9638

Client Ref:

3104

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH013	13	D	9.10		Dark brown slightly gravelly sandy CLAY.
BH001	2	D	1.00		Brown COLLIERY SPOIL.
BH001	4	D	2.00		Brown COLLIERY SPOIL.
BH001	5	D	3.00		Brown COLLIERY SPOIL.
BH002	4	D	2.00		Brown COLLIERY SPOIL.
BH002	5	D	3.00		Brown COLLIERY SPOIL.
BH002	7	D	5.00		Brown COLLIERY SPOIL.
BH002	8	D	6.00		Brown COLLIERY SPOIL.
BH002	9	D	6.50		Brown mottled grey COLLIERY SPOIL.
BH002	11	D	8.00		Brown COLLIERY SPOIL.
BH002	12	D	9.00		Dark grey COLLERY SPOIL.
BH002	13	D	9.50		Brown COLLIERY SPOIL.
BH002	15	D	11.00		Brown mottled grey COLLIERY SPOIL.
BH002	16	D	12.00		Dark grey COLLERY SPOIL.
BH002	17	D	12.50		Brown mottled grey COLLIERY SPOIL.
BH005	2	D	1.00		Brown COLLIERY SPOIL.
BH005	4	D	2.00		Brown COLLIERY SPOIL.
BH005	5	D	3.00		Brown mottled grey COLLIERY SPOIL.
BH005	6	D	4.00		Brown mottled grey COLLIERY SPOIL.



4043

PSL

Professional Soils Laboratory

Barnsley (West)

Contract No:

PSL21/9638

Client Ref:

3104

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH005	7	D	5.00		Brown mottled grey COLLIERY SPOIL.
BH007	2	D	1.00		Brown mottled grey COLLIERY SPOIL.
BH007	4	D	2.00		Grey COLLIERY SPOIL.
BH007	5	D	3.00		Brown COLLIERY SPOIL.
BH007	6	D	4.00		Brown mottled grey COLLIERY SPOIL.
BH008	2	D	1.00		Brown mottled grey COLLIERY SPOIL.
BH008	4	D	2.00		Brown COLLIERY SPOIL.
BH008	5	D	3.00		Brown COLLIERY SPOIL.
BH008	6	D	4.00		Grey mottled brown COLLIERY SPOIL.
BH008	8	D	5.00		Brown COLLIERY SPOIL.
BH008	9	D	6.00		Brown COLLIERY SPOIL.
BH008	10	D	6.50		Brown COLLIERY SPOIL.
BH008	12	D	8.00		Brown mottled grey COLLIERY SPOIL.
BH008	14	D	9.00		Brown COLLIERY SPOIL.
BH008	15	D	9.50		Brown COLLIERY SPOIL.
BH008	17	D	11.00		Brown mottled grey COLLIERY SPOIL.
BH013	3	D	2.00		Brown mottled grey COLLIERY SPOIL.
BH013	5	D	3.00		Brown COLLIERY SPOIL.
BH013	6	D	4.00		Brown COLLIERY SPOIL.



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Professional Soils Laboratory

Barnsley (West)

Contract No:

PSL21/9638

Client Ref:

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP012	1	D&B	0.10		31		2.64					
TP015	1	D&B	0.20		33		2.64	48	23	25	93	Intermediate Plasticity CI
TP001	2	D	0.50		26			60	27	33	97	High Plasticity CH
TP009	2	D	0.90		22			54	25	29	95	High Plasticity CH
TP017	2	D	0.50		22			58	26	32	98	High Plasticity CH
TP023	4	D	1.70		19			46	22	24	93	Intermediate Plasticity CI
TP027	6	D	1.90		18			53	24	29	97	High Plasticity CH
TP020	2	D&B	0.40		22		2.65					
TP104	3	D&B	1.50		20		2.65	51	23	28	96	High Plasticity CH
TP005	4	D&B	1.00		10		2.65	40	21	19	49	Intermediate Plasticity CI
TP011	3	D&B	2.00		7.9		2.67	37	19	18	42	Intermediate Plasticity CI
TP013	1	D&B	0.90		6.4		2.64	40	19	21	56	Intermediate Plasticity CI
TP015	3	D&B	3.50		13			38	18	20	52	Intermediate Plasticity CI
TP016	1	D&B	0.80		10		2.67					
TP016	2	D&B	1.40		15		2.64					
TP018	2	D&B	0.60		15		2.67	42	21	21	85	Intermediate Plasticity CI
TP022	1	D&B	0.50		7.8		2.67					
TP023	3	D&B	1.30		12		2.69	44	21	23	63	Intermediate Plasticity CI
TP026	3	D&B	0.90		7.2		2.63	35	18	17	59	Intermediate Plasticity CI

SYMBOLS : NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.



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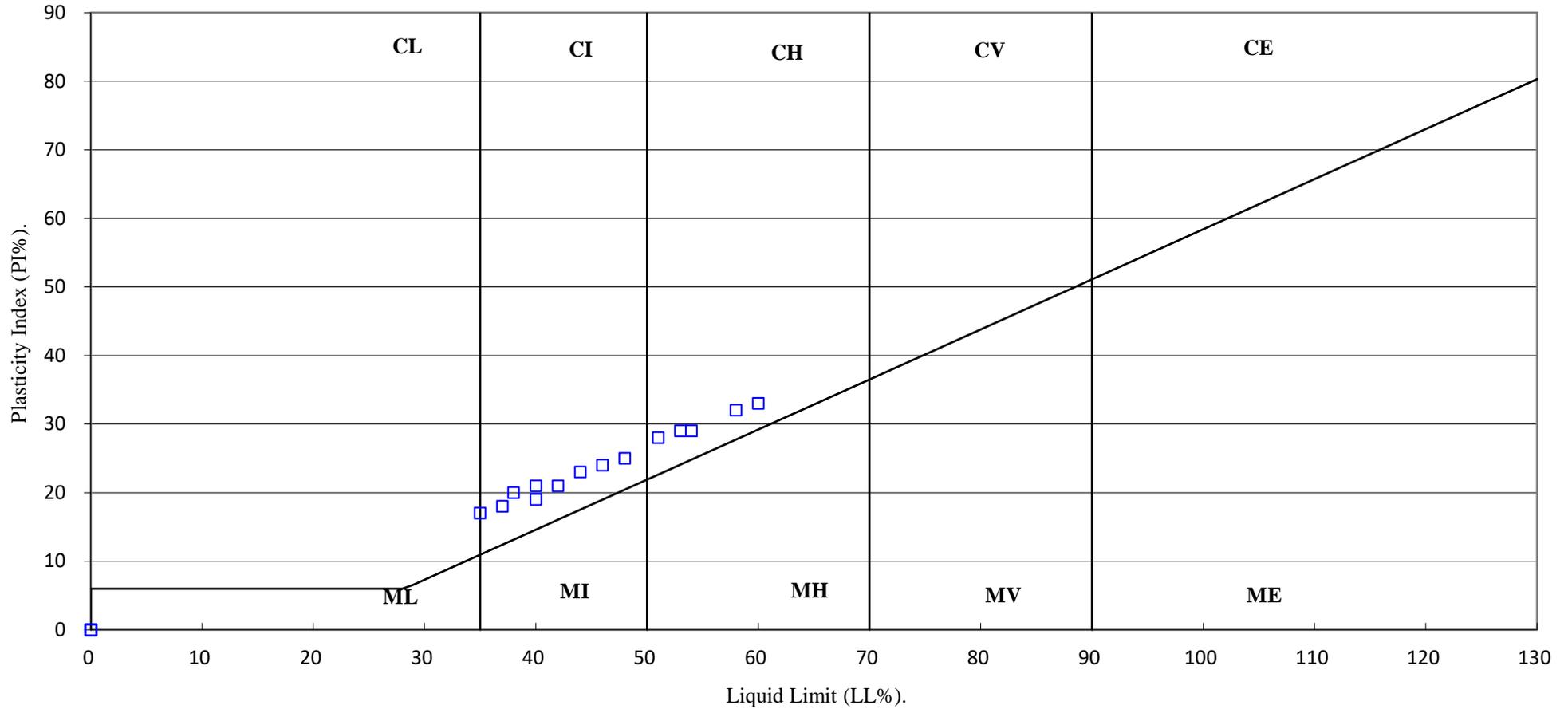
Contract No:

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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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Barnsley (West)

Contract No:

PSL21/9638

Client Ref:

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP035	2	D&B	0.80		7.6		2.66	43	20	23	53	Intermediate Plasticity CI
TP101	2	D&B	1.20		17		2.65	45	21	24	81	Intermediate Plasticity CI
TP102	4	D&B	1.20		7.8		2.67	36	18	18	48	Intermediate Plasticity CI
TP001	4	D&B	1.40		12		2.69					
TP002	3	D&B	1.00		13		2.69					
TP022	5	D&B	2.30		9.4		2.57					
BH001	1	B	0.00		33			66	30	36	93	High Plasticity CH
BH003	1	B	0.00		34			69	31	38	97	High Plasticity CH
BH004	3	B	1.00		20			47	23	24	66	Intermediate Plasticity CI
BH006	1	B	0.00		21			45	22	23	85	Intermediate Plasticity CI
BH009	1	B	0.00		23			57	25	32	90	High Plasticity CH
BH002	18	B	12.00		12			36	17	19	75	Intermediate Plasticity CI
BH008	16	B	10.00		9.3			38	19	19	71	Intermediate Plasticity CI
BH010	17	B	11.00		8.1			33	17	16	74	Low Plasticity CL
BH013	10	B	6.50		11			41	20	21	86	Intermediate Plasticity CI
BH007	8	D	5.00		11			43	22	21	94	Intermediate Plasticity CI
BH007	9	D	6.00		7.8			37	18	19	97	Intermediate Plasticity CI
BH010	18	D	11.90		9.4							
BH013	13	D	9.10		13			39	21	18	92	Intermediate Plasticity CI

SYMBOLS : NP : Non Plastic

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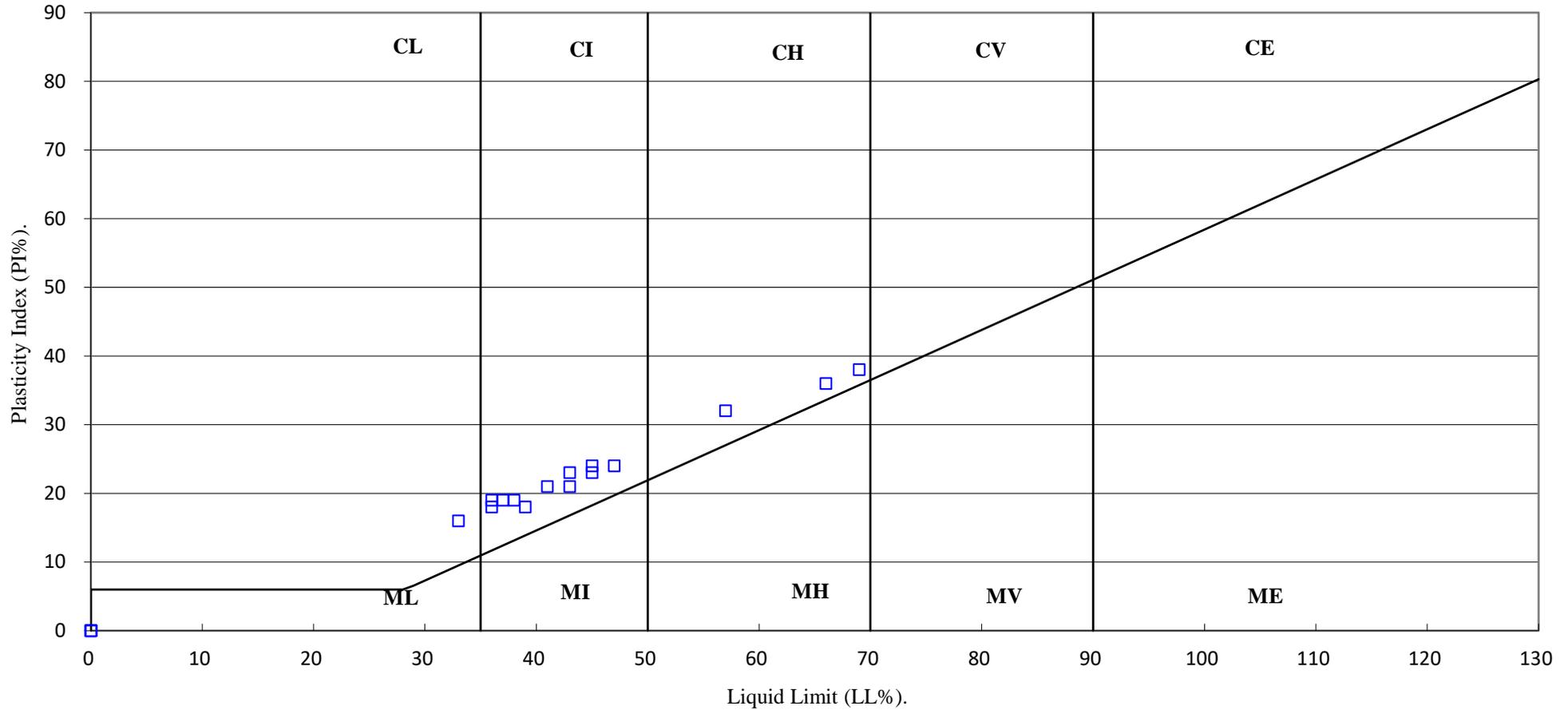
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Client Ref:

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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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Professional Soils Laboratory

Barnsley (West)

Contract No:

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Client Ref:

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH001	2	D	1.00		8.7							
BH001	4	D	2.00		8.5							
BH001	5	D	3.00		9.2							
BH002	4	D	2.00		16							
BH002	5	D	3.00		20							
BH002	7	D	5.00		25							
BH002	8	D	6.00		22							
BH002	9	D	6.50		16							
BH002	11	D	8.00		15							
BH002	12	D	9.00		11							
BH002	13	D	9.50		13							
BH002	15	D	11.00		11							
BH002	16	D	12.00		12							
BH002	17	D	12.50		9.6							
BH005	2	D	1.00		6.4			37	19	18	49	Intermediate Plasticity CI
BH005	4	D	2.00		8.2							
BH005	5	D	3.00		9.4							
BH005	6	D	4.00		9.5							
BH005	7	D	5.00		12			48	23	25	84	Intermediate Plasticity CI

SYMBOLS : NP : Non Plastic

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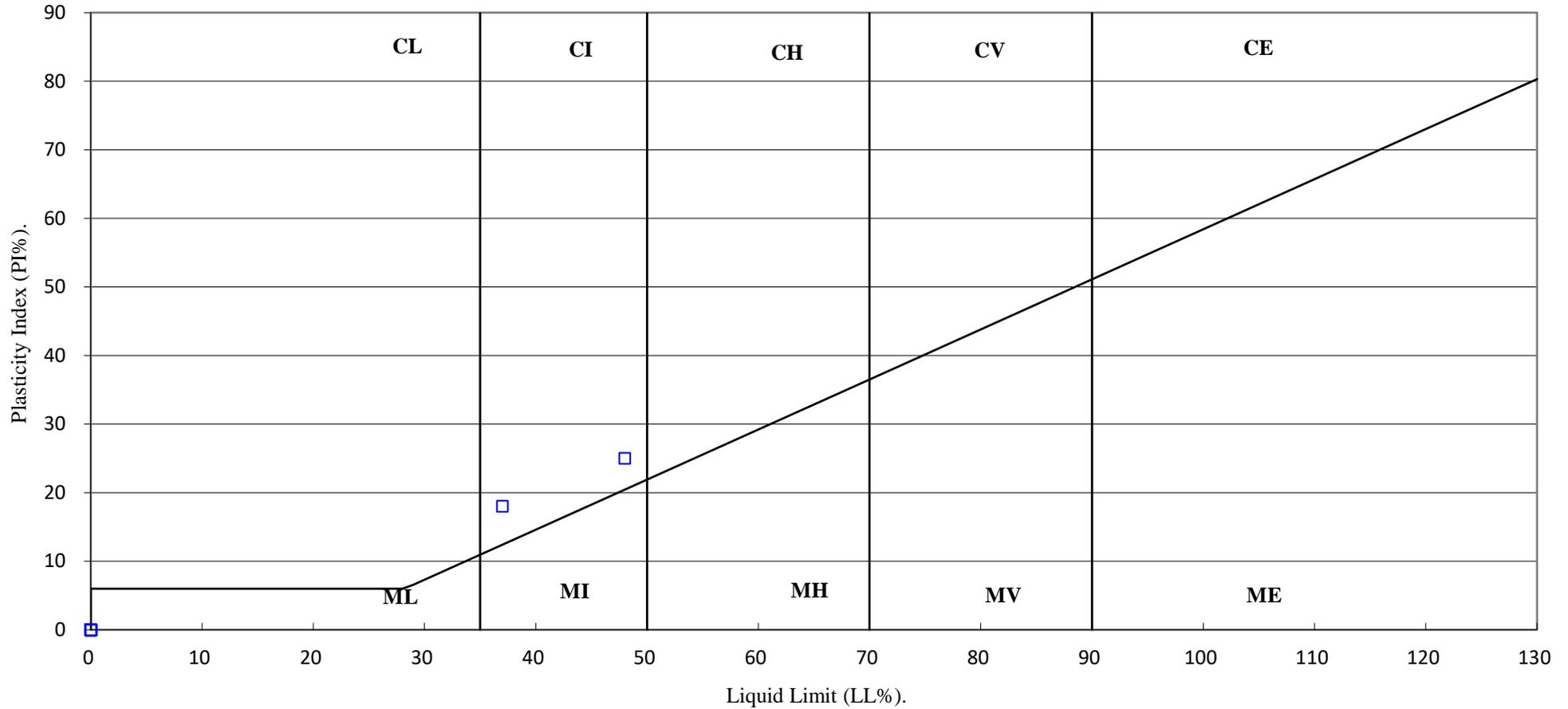
Contract No:

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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH007	2	D	1.00		11							
BH007	4	D	2.00		12		39	18	21	75		Intermediate Plasticity CI
BH007	5	D	3.00		11							
BH007	6	D	4.00		12							
BH008	2	D	1.00		12		47	22	25	82		Intermediate Plasticity CI
BH008	4	D	2.00		14							
BH008	5	D	3.00		11							
BH008	6	D	4.00		17		48	25	23	57		Intermediate Plasticity CI
BH008	8	D	5.00		8.3							
BH008	9	D	6.00		11							
BH008	10	D	6.50		12							
BH008	12	D	8.00		13		40	21	19	82		Intermediate Plasticity CI
BH008	14	D	9.00		13							
BH008	15	D	9.50		7.7							
BH008	17	D	11.00		6.4							
BH013	3	D	2.00		10		45	23	22	81		Intermediate Plasticity CI
BH013	5	D	3.00		12							
BH013	6	D	4.00		10							
BH013	8	D	5.00		10		41	21	20	75		Intermediate Plasticity CI

SYMBOLS : NP : Non Plastic

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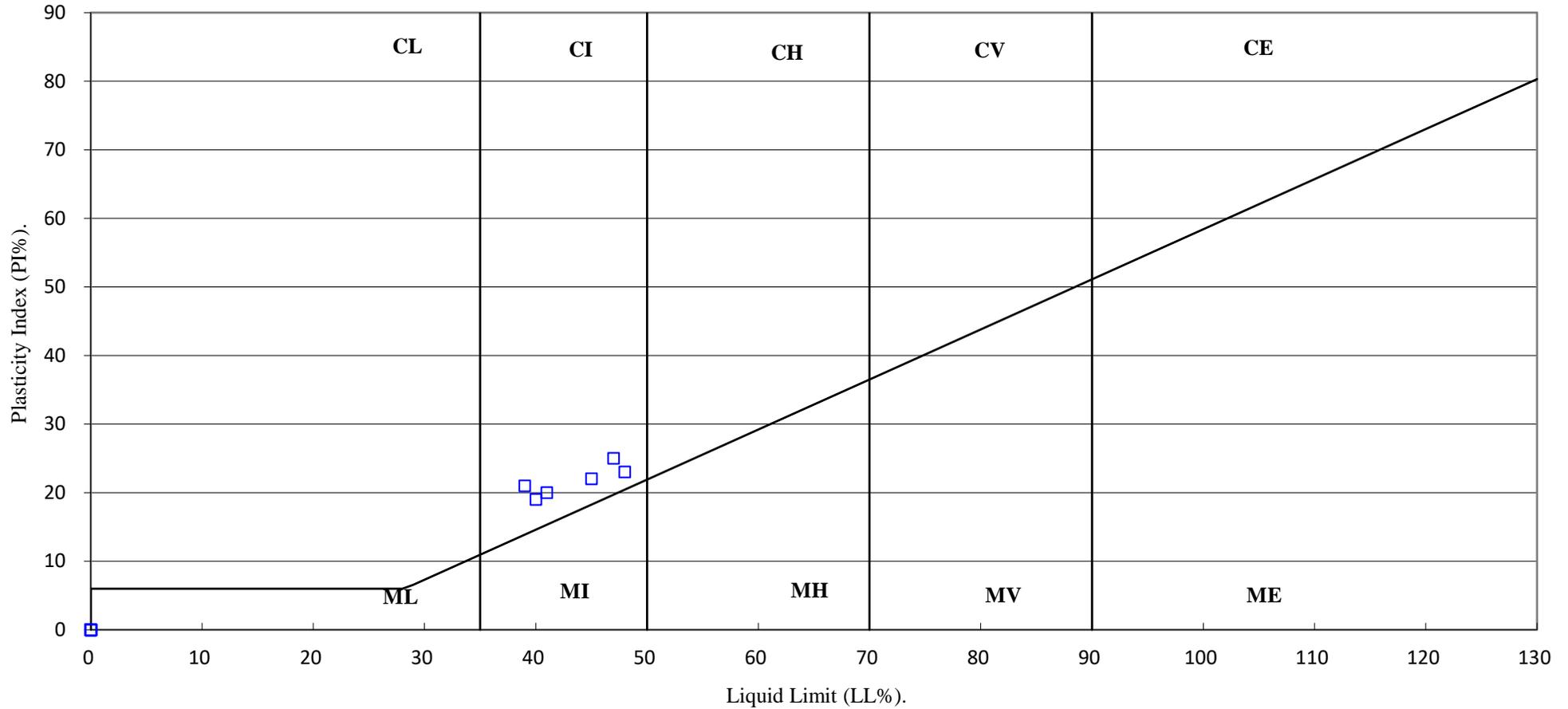
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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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PARTICLE SIZE DISTRIBUTION TEST

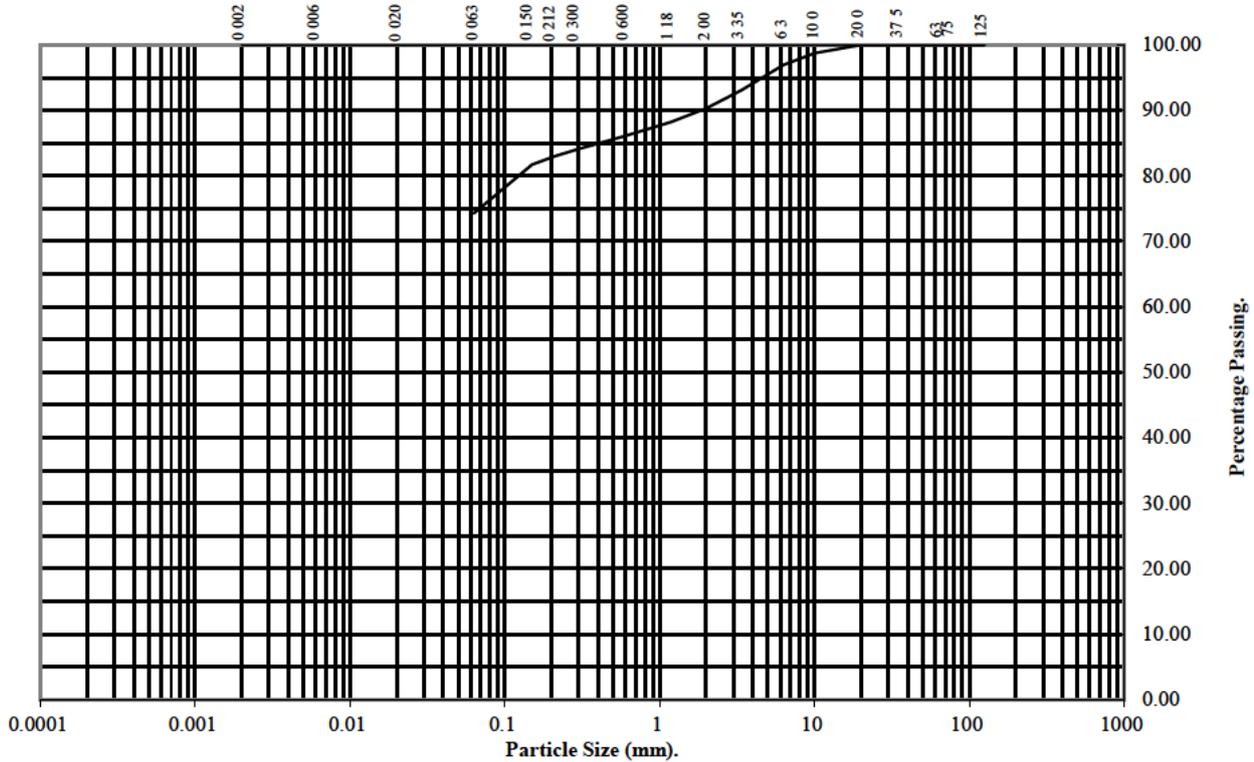
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH006 **Top Depth (m):** 0.00

Sample Number: 1 **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	97
3.35	93
2	90
1.18	88
0.6	86
0.3	84
0.212	83
0.15	82
0.063	74

Soil Fraction	Total Percentage
Cobbles	0
Gravel	10
Sand	16
Silt/Clay	74

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

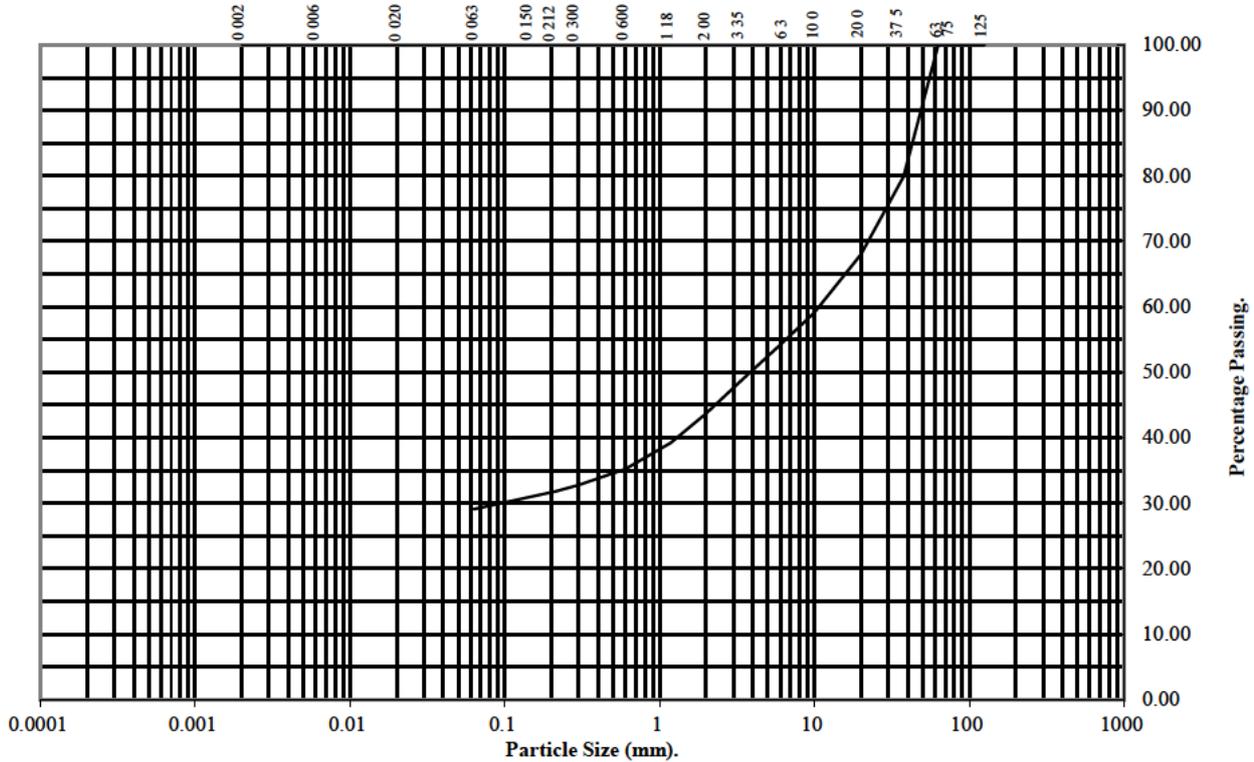
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH010 **Top Depth (m):** 9.00

Sample Number: 14 **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	80
20	68
10	59
6.3	55
3.35	49
2	44
1.18	39
0.6	35
0.3	33
0.212	32
0.15	31
0.063	29

Soil Fraction	Total Percentage
Cobbles	0
Gravel	56
Sand	15
Silt/Clay	29

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

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PARTICLE SIZE DISTRIBUTION TEST

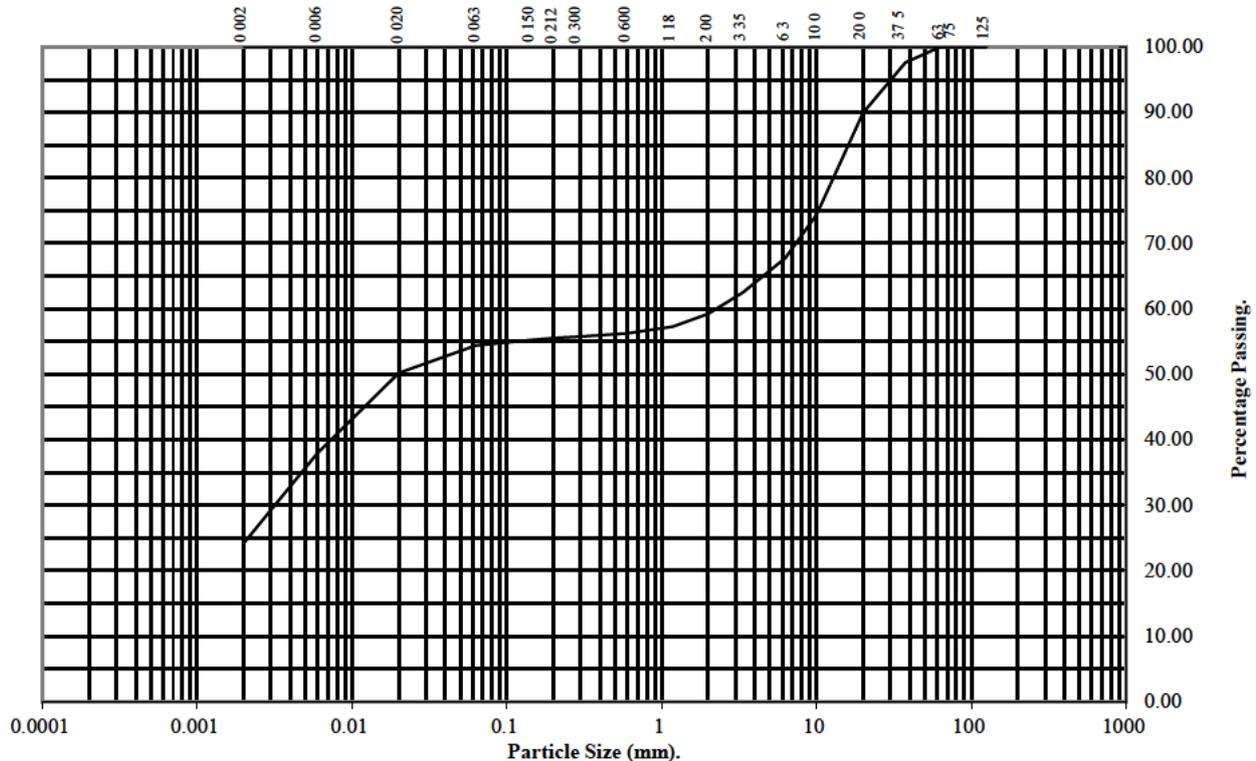
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP003 Top Depth (m): 0.80

Sample Number: 2 Base Depth(m):

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	98
20	90
10	74
6.3	68
3.35	62
2	59
1.18	57
0.6	56
0.3	56
0.212	56
0.15	55
0.063	54

Particle Diameter	Percentage Passing
0.02	50
0.006	38
0.002	24

Soil Fraction	Total Percentage
Cobbles	0
Gravel	41
Sand	5
Silt	30
Clay	24

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

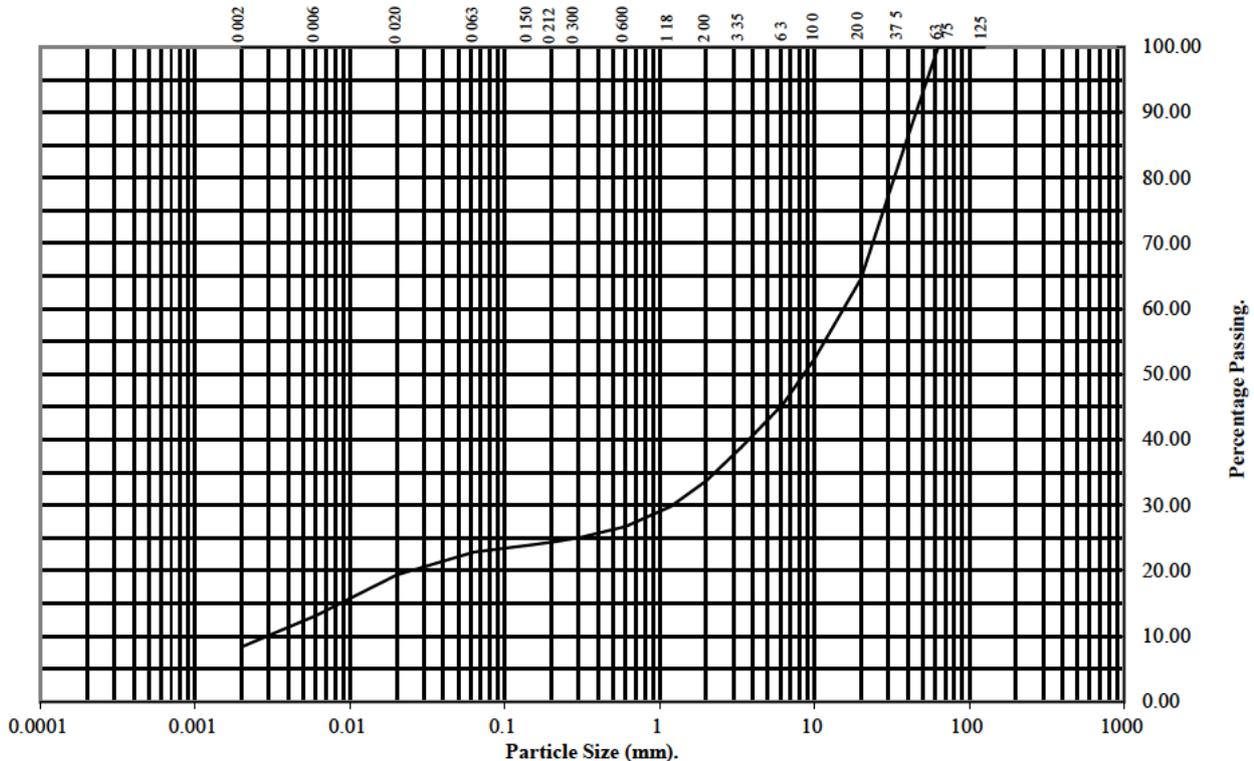
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP007 Top Depth (m): 1.80

Sample Number: 5 Base Depth(m):

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	84
20	65
10	52
6.3	45
3.35	39
2	34
1.18	30
0.6	27
0.3	25
0.212	24
0.15	24
0.063	23

Particle Diameter	Percentage Passing
0.02	19
0.006	13
0.002	8

Soil Fraction	Total Percentage
Cobbles	0
Gravel	66
Sand	11
Silt	15
Clay	8

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

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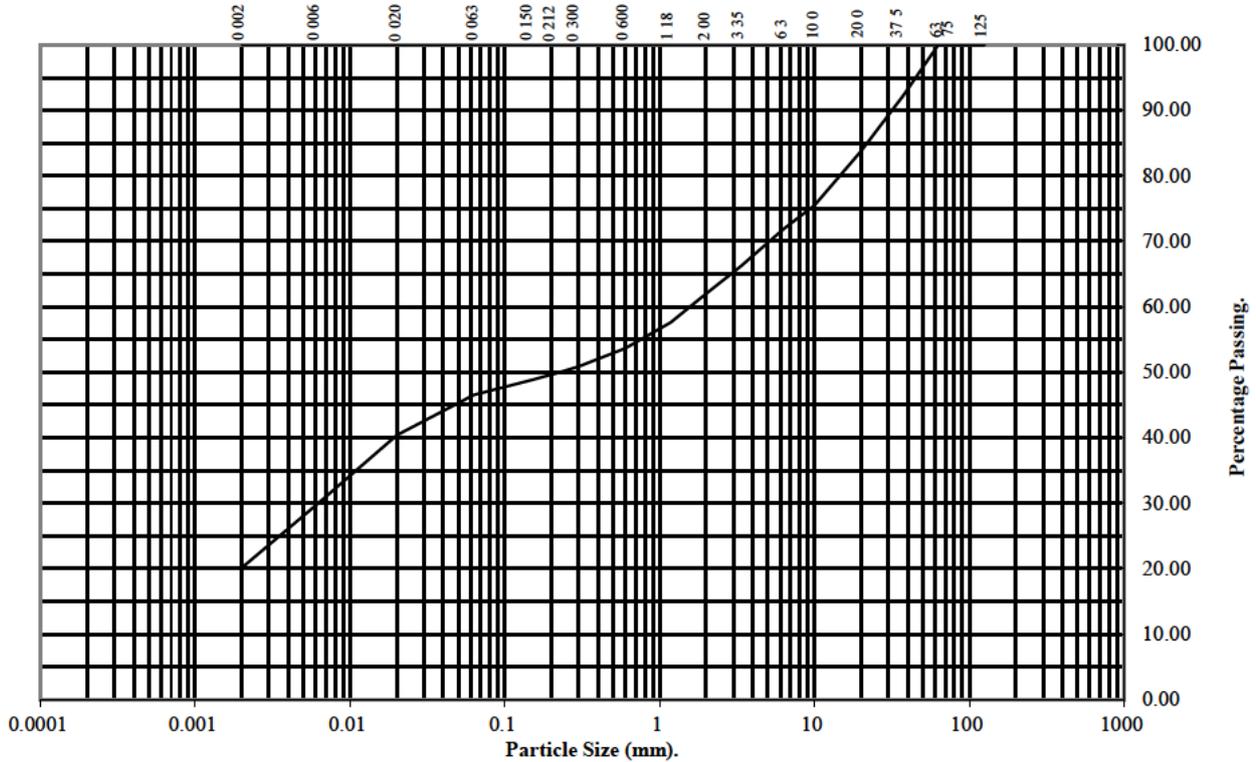
PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP015 **Top Depth (m):** 3.50

Sample Number: 3 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	92
20	84
10	76
6.3	72
3.35	66
2	62
1.18	58
0.6	54
0.3	51
0.212	50
0.15	49
0.063	47

Particle Diameter	Percentage Passing
0.02	40
0.006	30
0.002	20

Soil Fraction	Total Percentage
Cobbles	0
Gravel	38
Sand	15
Silt	27
Clay	20

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

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PARTICLE SIZE DISTRIBUTION TEST

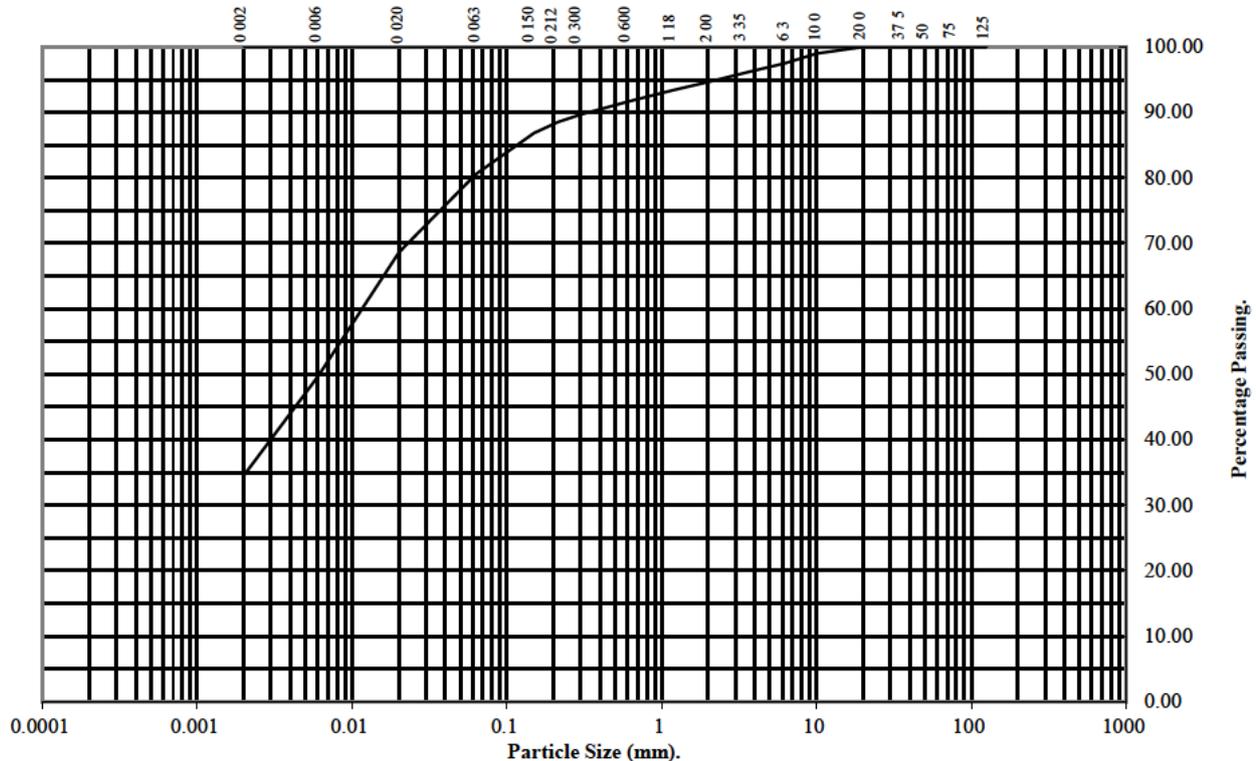
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP017 **Top Depth (m):** 0.10

Sample Number: 1 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	100
10	99
6.3	98
3.35	96
2	95
1.18	93
0.6	92
0.3	90
0.212	88
0.15	87
0.063	81

Particle Diameter	Percentage Passing
0.02	69
0.006	50
0.002	35

Soil Fraction	Total Percentage
Cobbles	0
Gravel	5
Sand	14
Silt	46
Clay	35

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

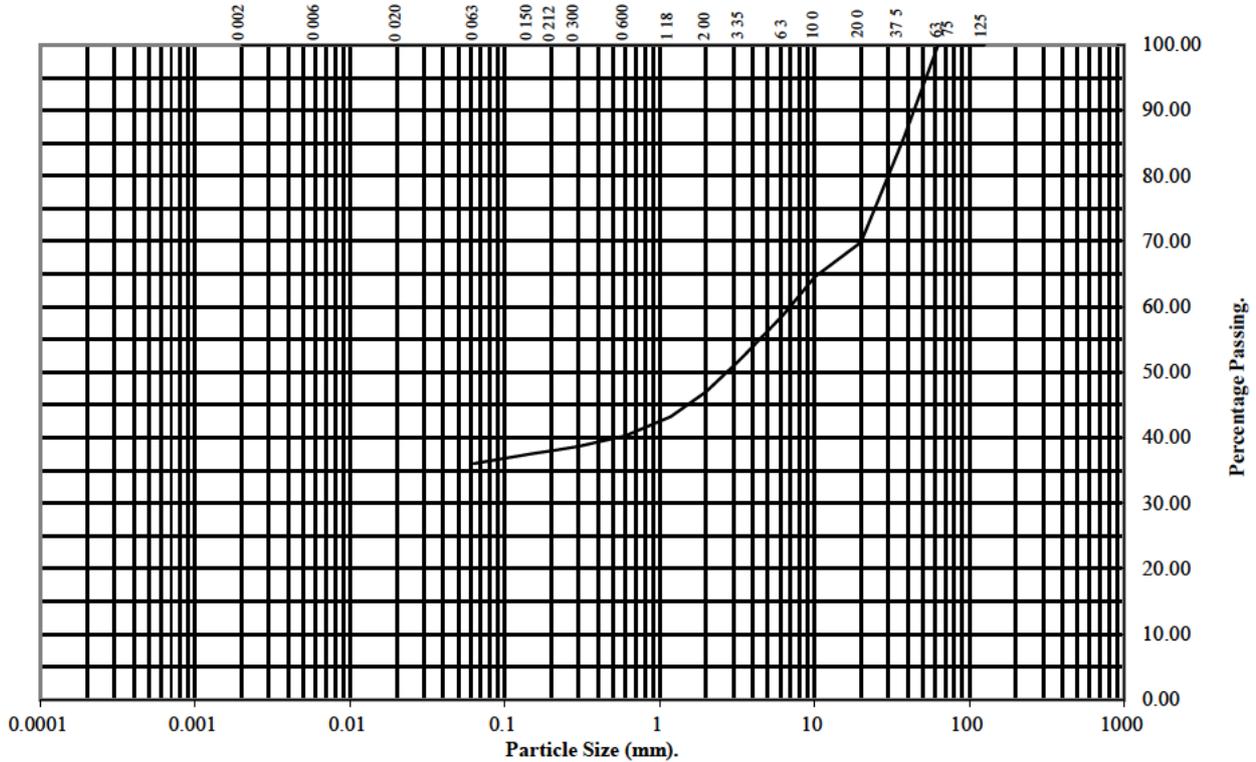
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP017 **Top Depth (m):** 1.00

Sample Number: 4 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	86
20	70
10	65
6.3	59
3.35	52
2	47
1.18	43
0.6	40
0.3	39
0.212	38
0.15	38
0.063	36

Soil Fraction	Total Percentage
Cobbles	0
Gravel	53
Sand	11
Silt/Clay	36

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

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PARTICLE SIZE DISTRIBUTION TEST

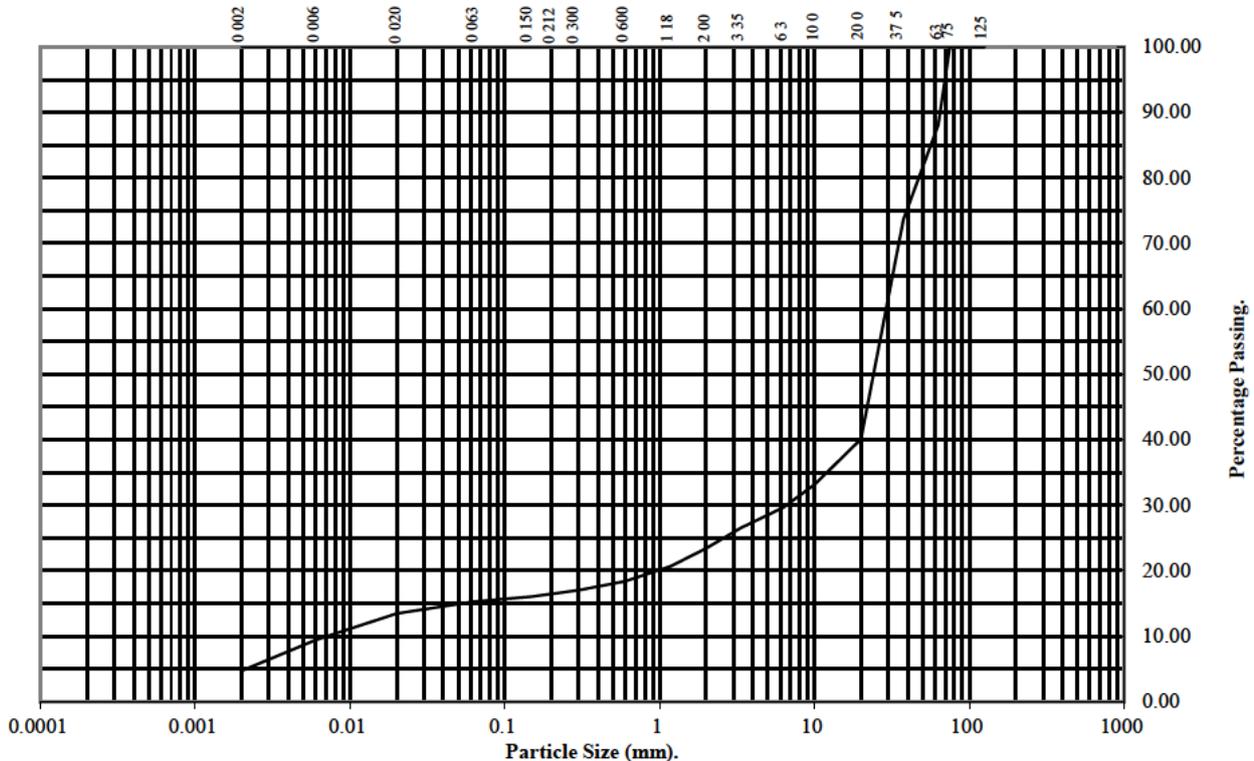
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP020 **Top Depth (m):** 0.90

Sample Number: 4 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	88
37.5	74
20	40
10	33
6.3	30
3.35	27
2	23
1.18	21
0.6	18
0.3	17
0.212	17
0.15	16
0.063	15

Particle Diameter	Percentage Passing
0.02	13
0.006	9
0.002	5

Soil Fraction	Total Percentage
Cobbles	12
Gravel	65
Sand	8
Silt	10
Clay	5

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

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PARTICLE SIZE DISTRIBUTION TEST

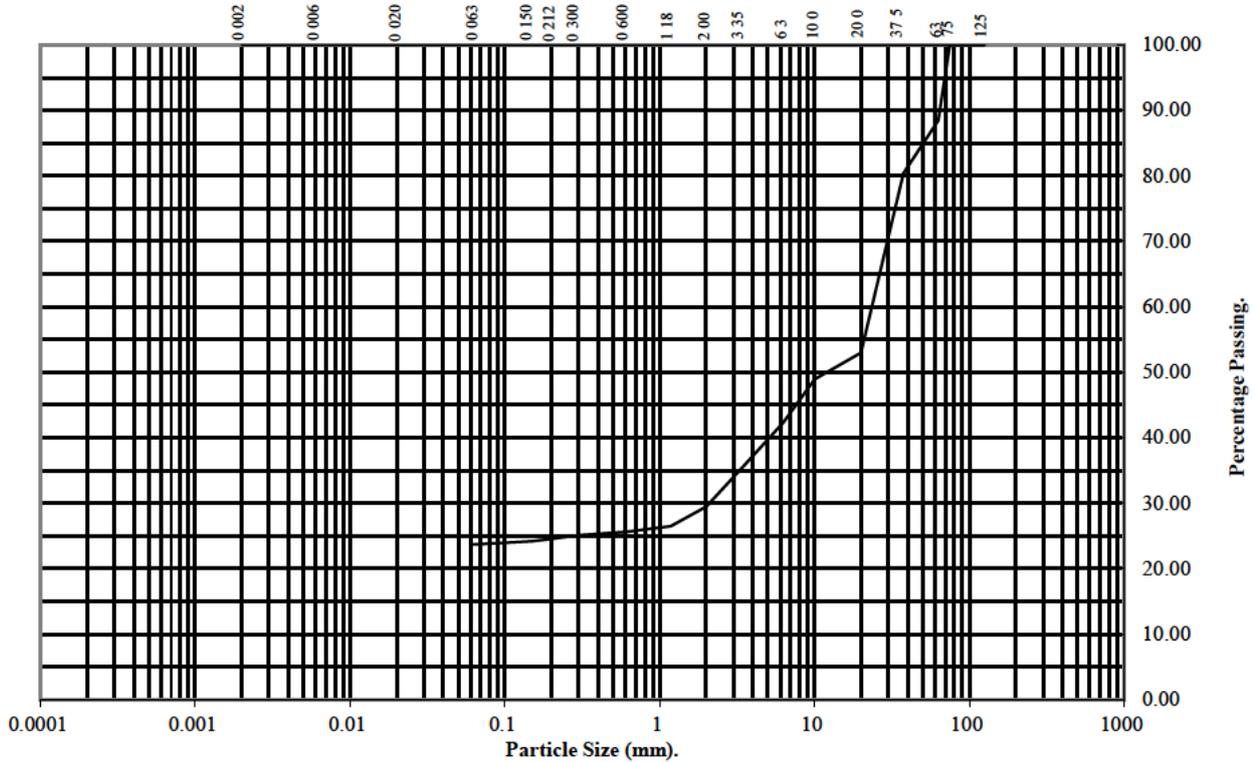
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP037 **Top Depth (m):** 1.00

Sample Number: 2 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	88
37.5	80
20	53
10	49
6.3	42
3.35	35
2	29
1.18	26
0.6	26
0.3	25
0.212	25
0.15	24
0.063	24

Soil Fraction	Total Percentage
Cobbles	12
Gravel	59
Sand	5
Silt/Clay	24

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

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PARTICLE SIZE DISTRIBUTION TEST

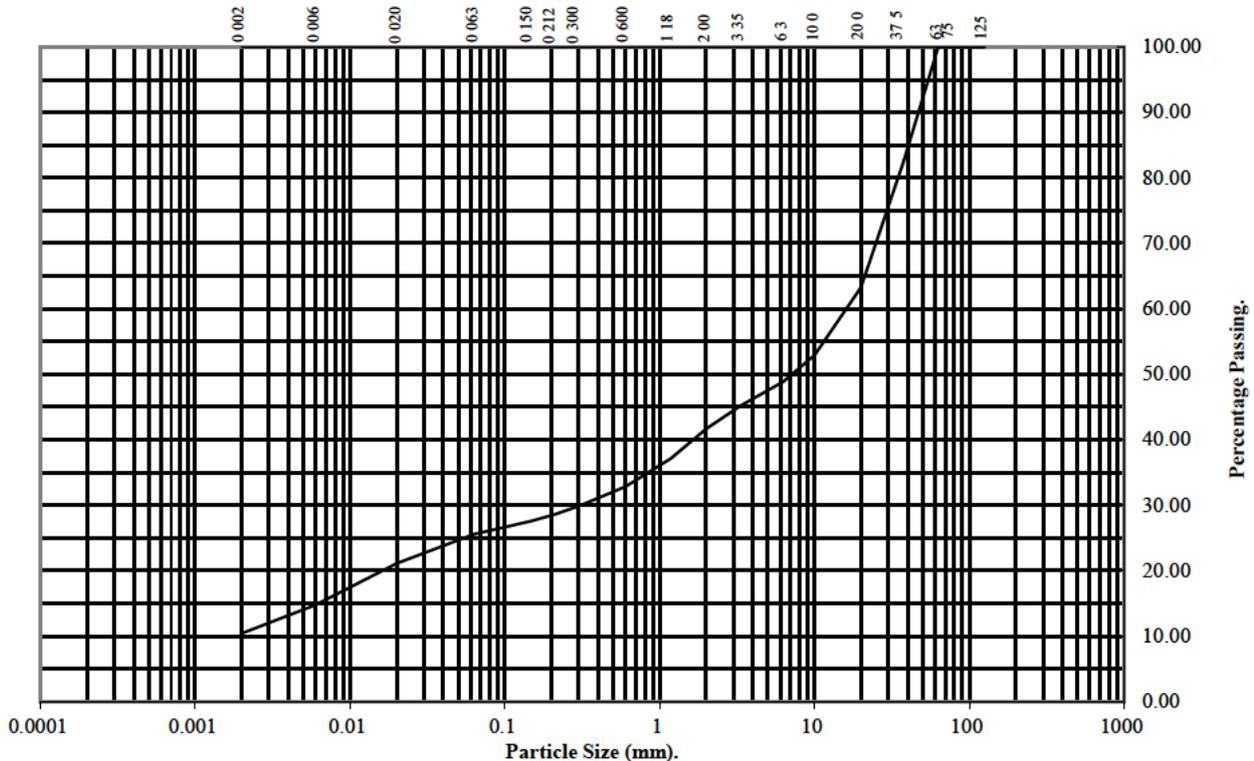
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP101 **Top Depth (m):** 2.40

Sample Number: 3 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	82
20	63
10	53
6.3	49
3.35	45
2	42
1.18	37
0.6	33
0.3	30
0.212	29
0.15	28
0.063	26

Particle Diameter	Percentage Passing
0.02	21
0.006	15
0.002	10

Soil Fraction	Total Percentage
Cobbles	0
Gravel	58
Sand	16
Silt	16
Clay	10

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

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PARTICLE SIZE DISTRIBUTION TEST

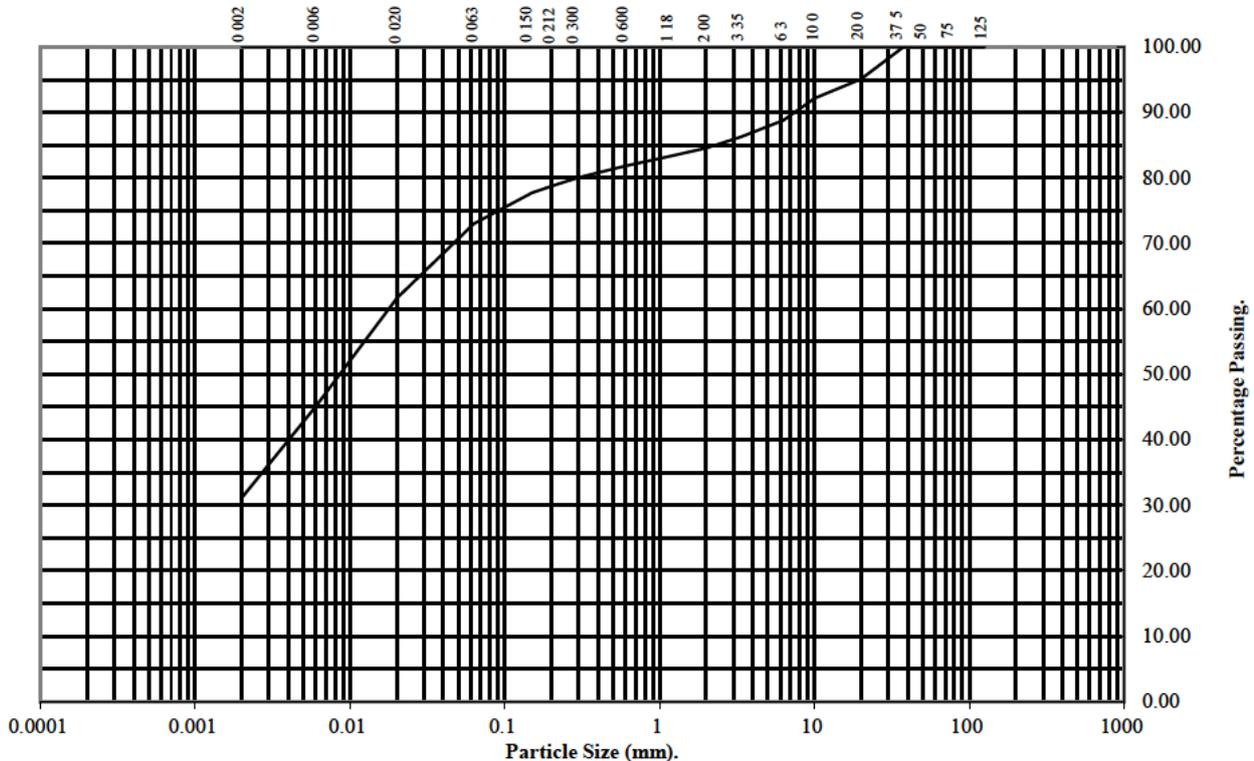
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP102 Top Depth (m): 0.20

Sample Number: 1 Base Depth(m):

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	95
10	92
6.3	89
3.35	86
2	85
1.18	83
0.6	82
0.3	80
0.212	79
0.15	78
0.063	73

Particle Diameter	Percentage Passing
0.02	62
0.006	45
0.002	31

Soil Fraction	Total Percentage
Cobbles	0
Gravel	15
Sand	12
Silt	42
Clay	31

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

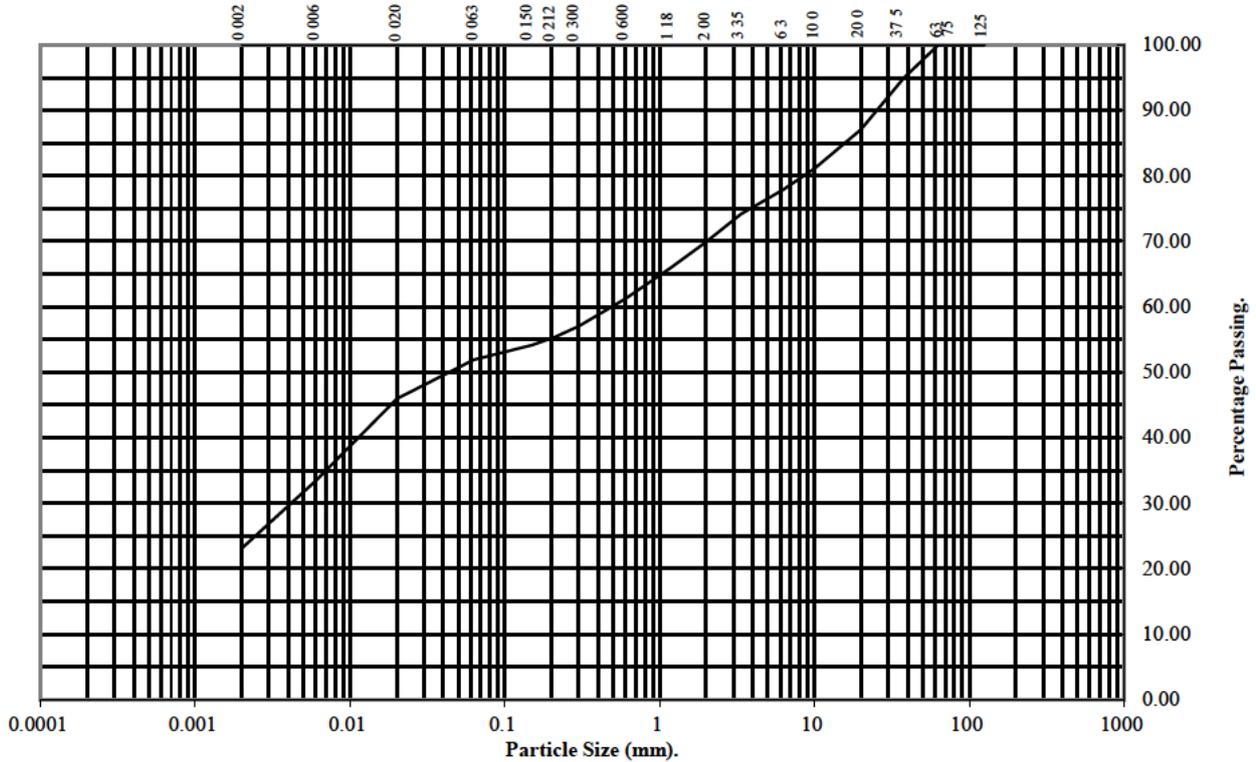
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP103 **Top Depth (m):** 2.90

Sample Number: 4 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	95
20	87
10	81
6.3	78
3.35	74
2	70
1.18	66
0.6	61
0.3	57
0.212	55
0.15	54
0.063	52

Particle Diameter	Percentage Passing
0.02	46
0.006	33
0.002	23

Soil Fraction	Total Percentage
Cobbles	0
Gravel	30
Sand	18
Silt	29
Clay	23

Remarks:
See Summary of Soil Descriptions



Barnsley (West)

Contract No:
PSL21/9638
Client Ref:
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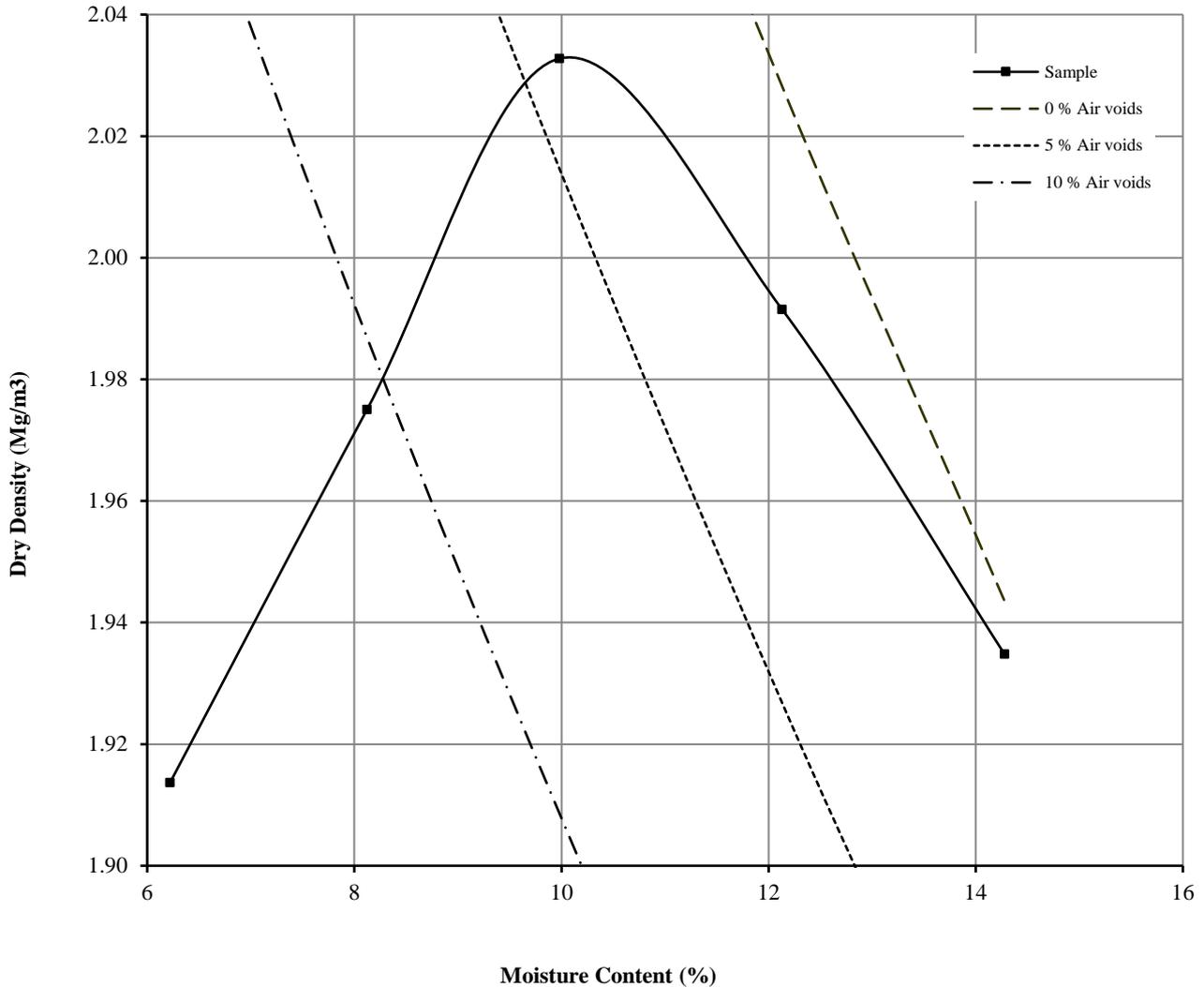
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP001 Top Depth (m) : 1.40

Sample Number: 4 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	12	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):	3
Maximum Dry Density (Mg/m ³):	2.03		Material Retained on 20.0 mm Test Sieve (%):	13
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

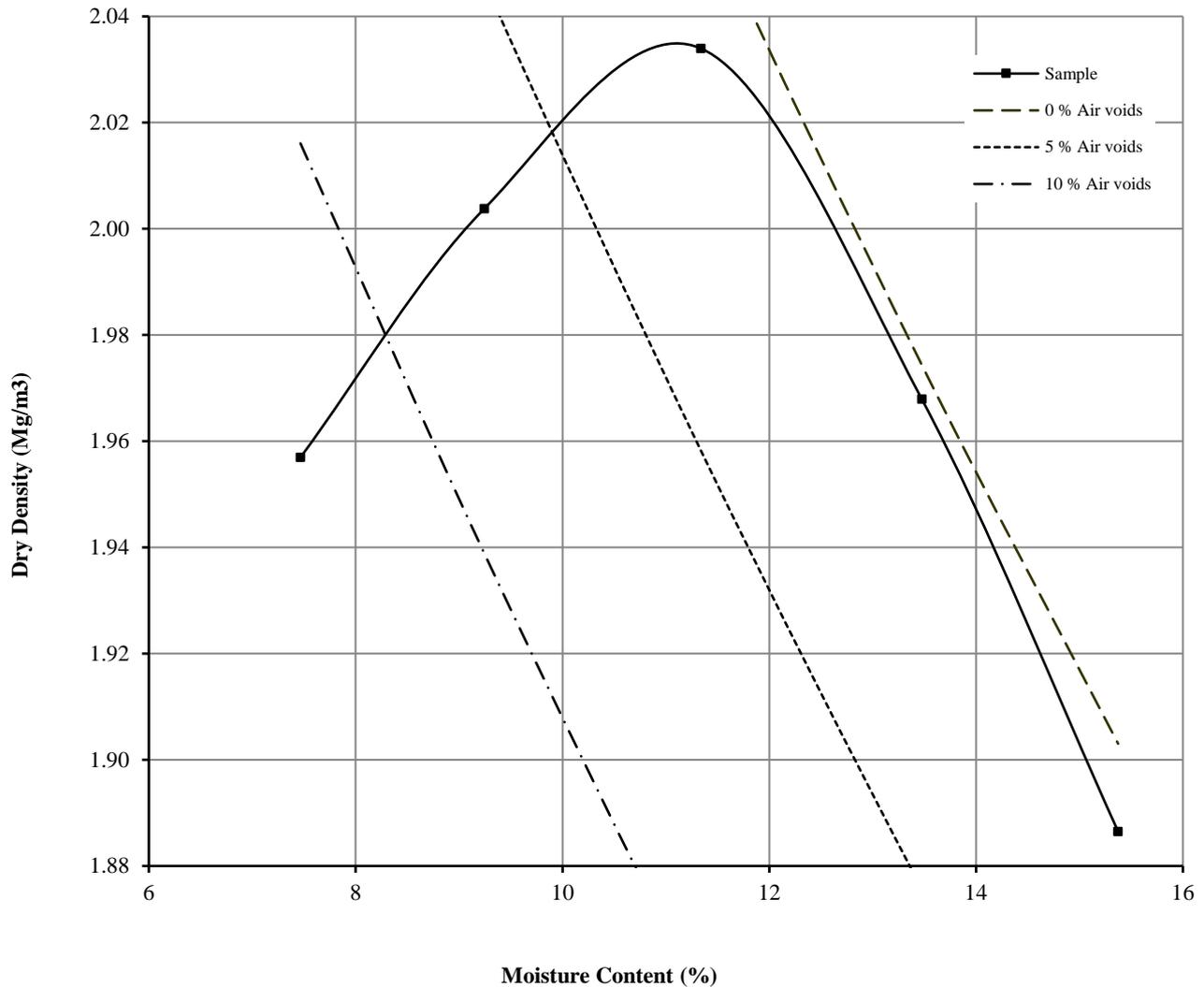
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **TP002** Top Depth (m) : **1.00**

Sample Number: **3** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	13	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):	19
Maximum Dry Density (Mg/m ³):	2.03		Material Retained on 20.0 mm Test Sieve (%):	12
Optimum Moisture Content (%):	11			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

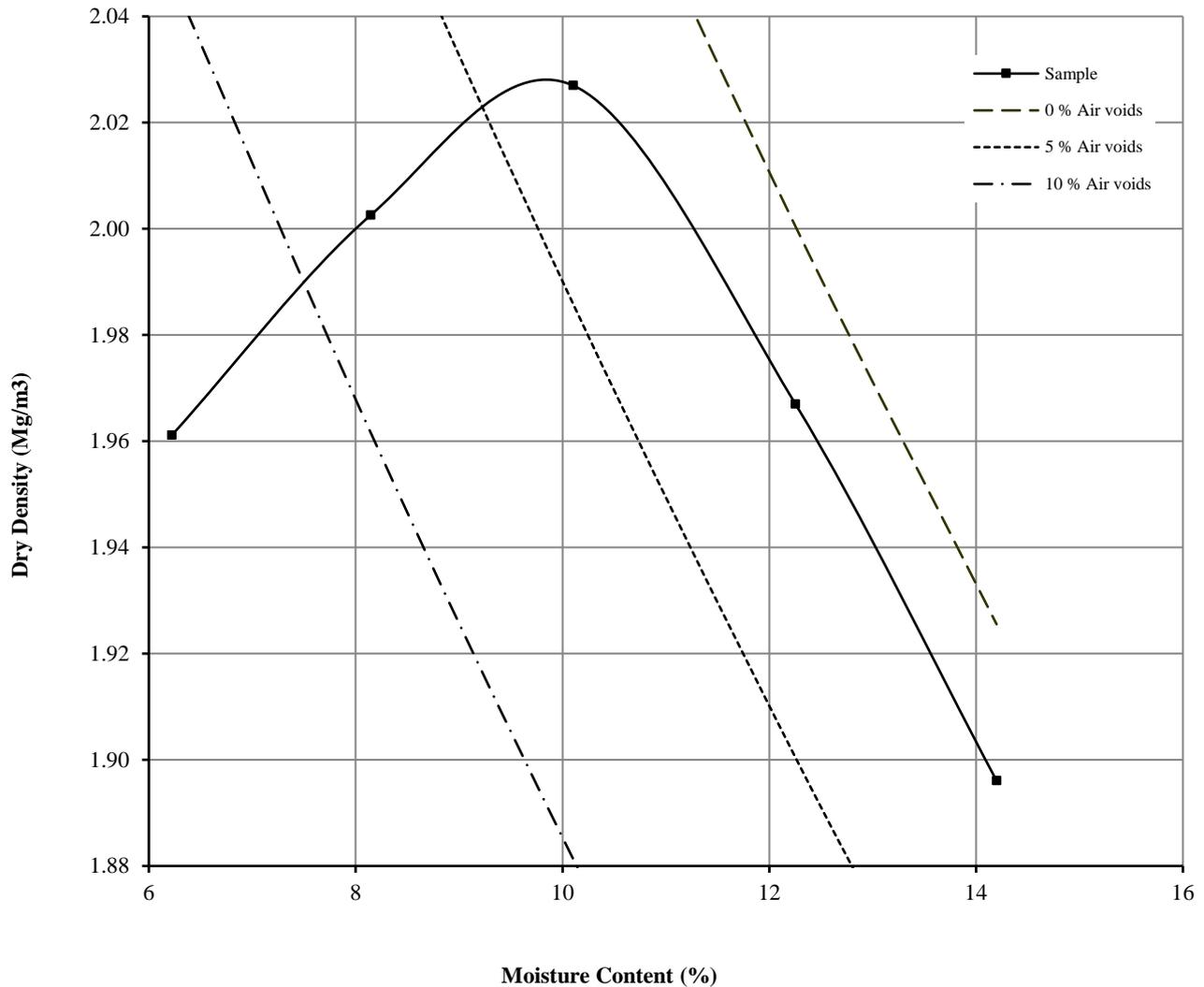
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP005 Top Depth (m) : 1.00

Sample Number: 4 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	10	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):	55
Maximum Dry Density (Mg/m ³):	2.03		Material Retained on 20.0 mm Test Sieve (%):	10
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

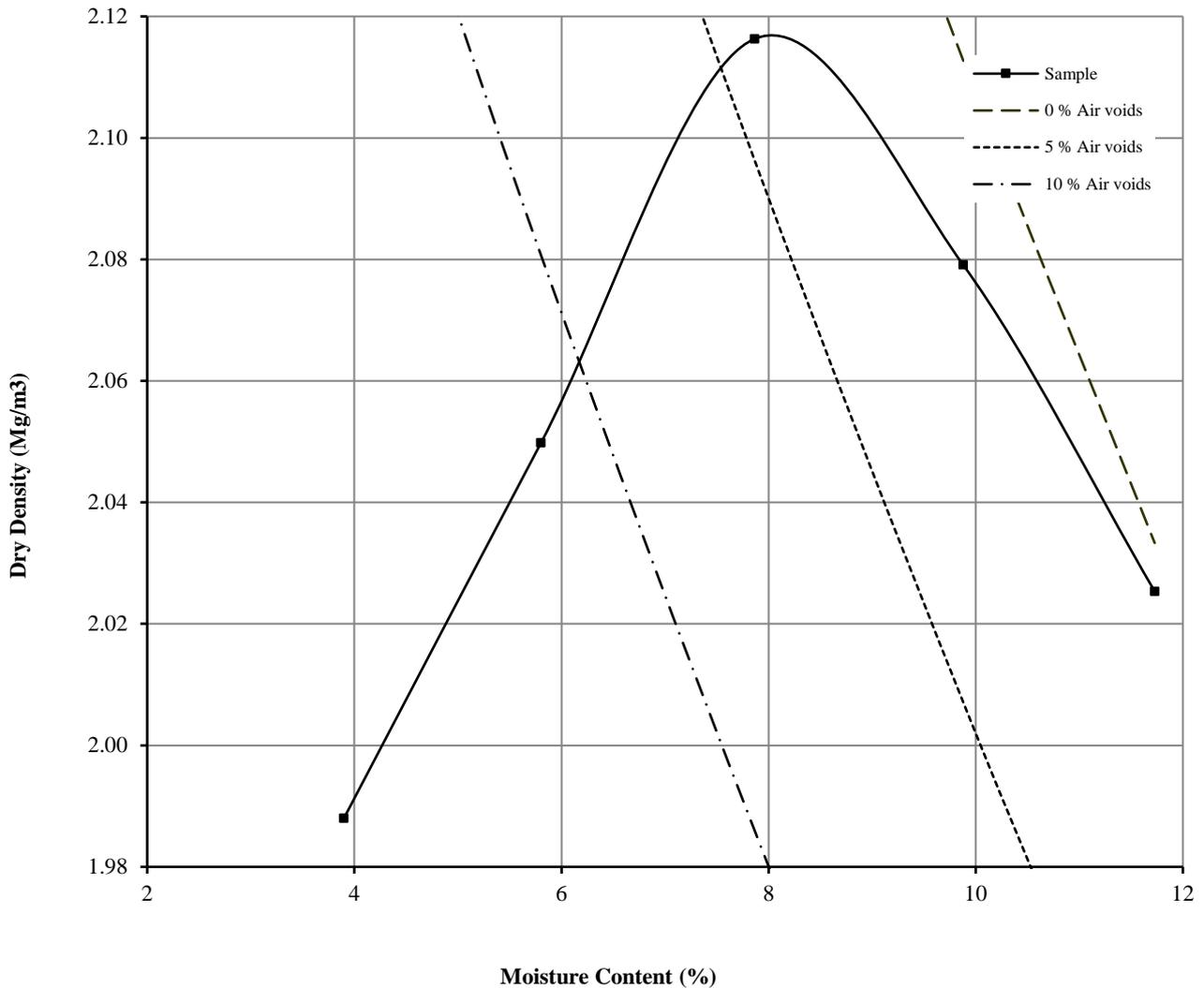
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP011 Top Depth (m) : 2.00

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	7.9	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):	46
Maximum Dry Density (Mg/m ³):	2.12		Material Retained on 20.0 mm Test Sieve (%):	20
Optimum Moisture Content (%):	8			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

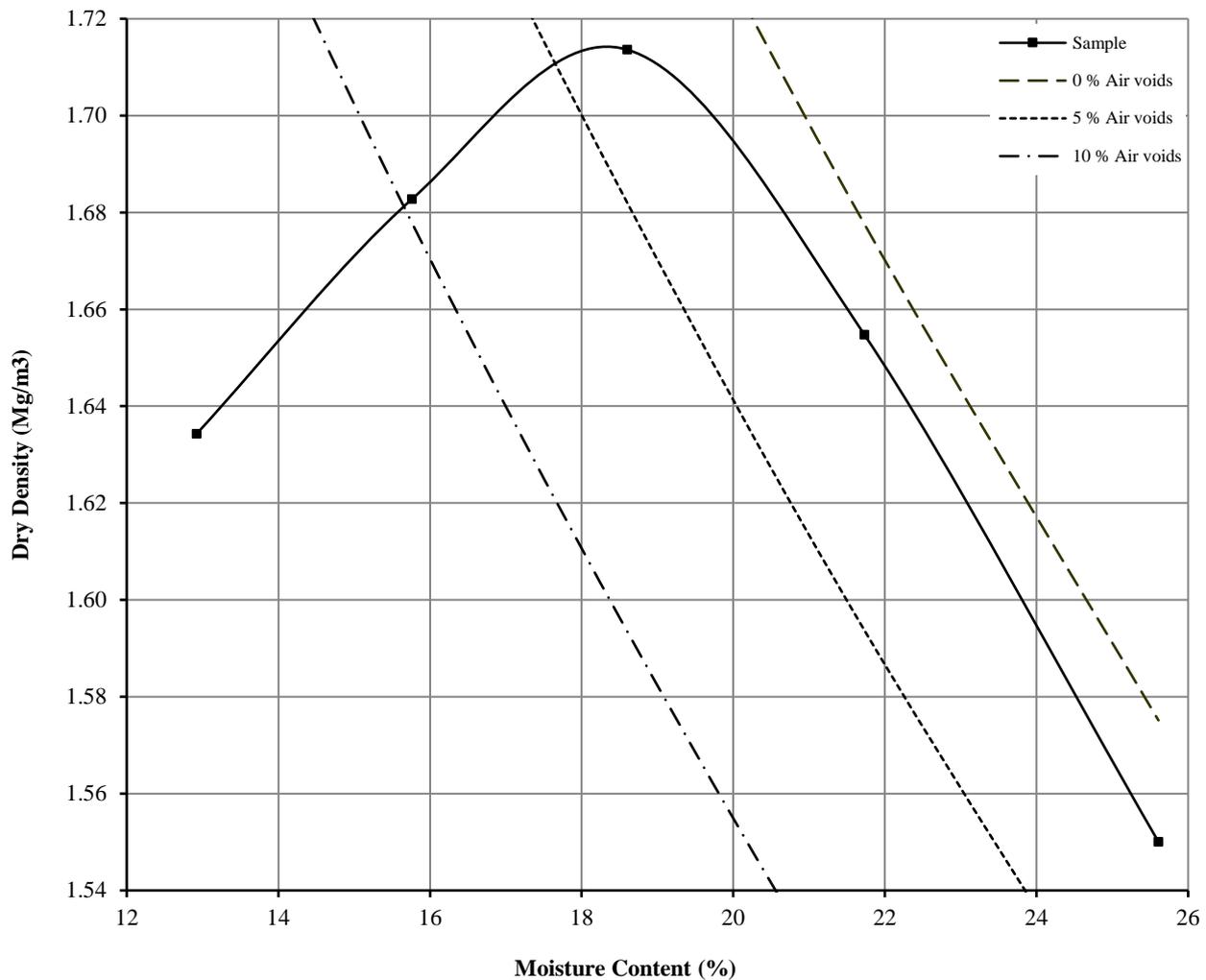
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP012 Top Depth (m) : 0.10

Sample Number: 1 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	31	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.64	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.71		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	19			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

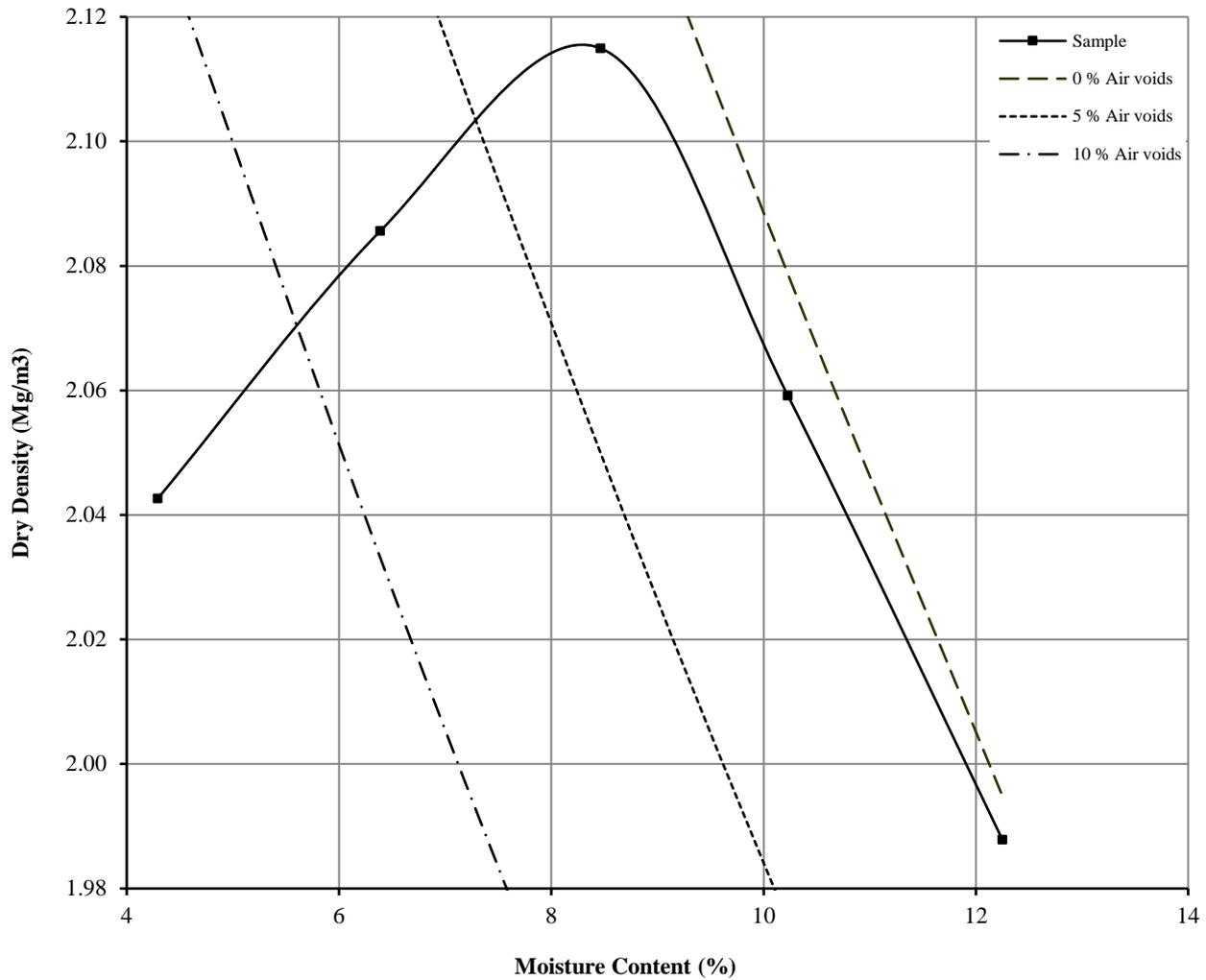
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **TP013** Top Depth (m) : **0.90**

Sample Number: **1** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	6.4	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.64	Measured	Material Retained on 37.5 mm Test Sieve (%):	33
Maximum Dry Density (Mg/m ³):	2.11		Material Retained on 20.0 mm Test Sieve (%):	12
Optimum Moisture Content (%):	8			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

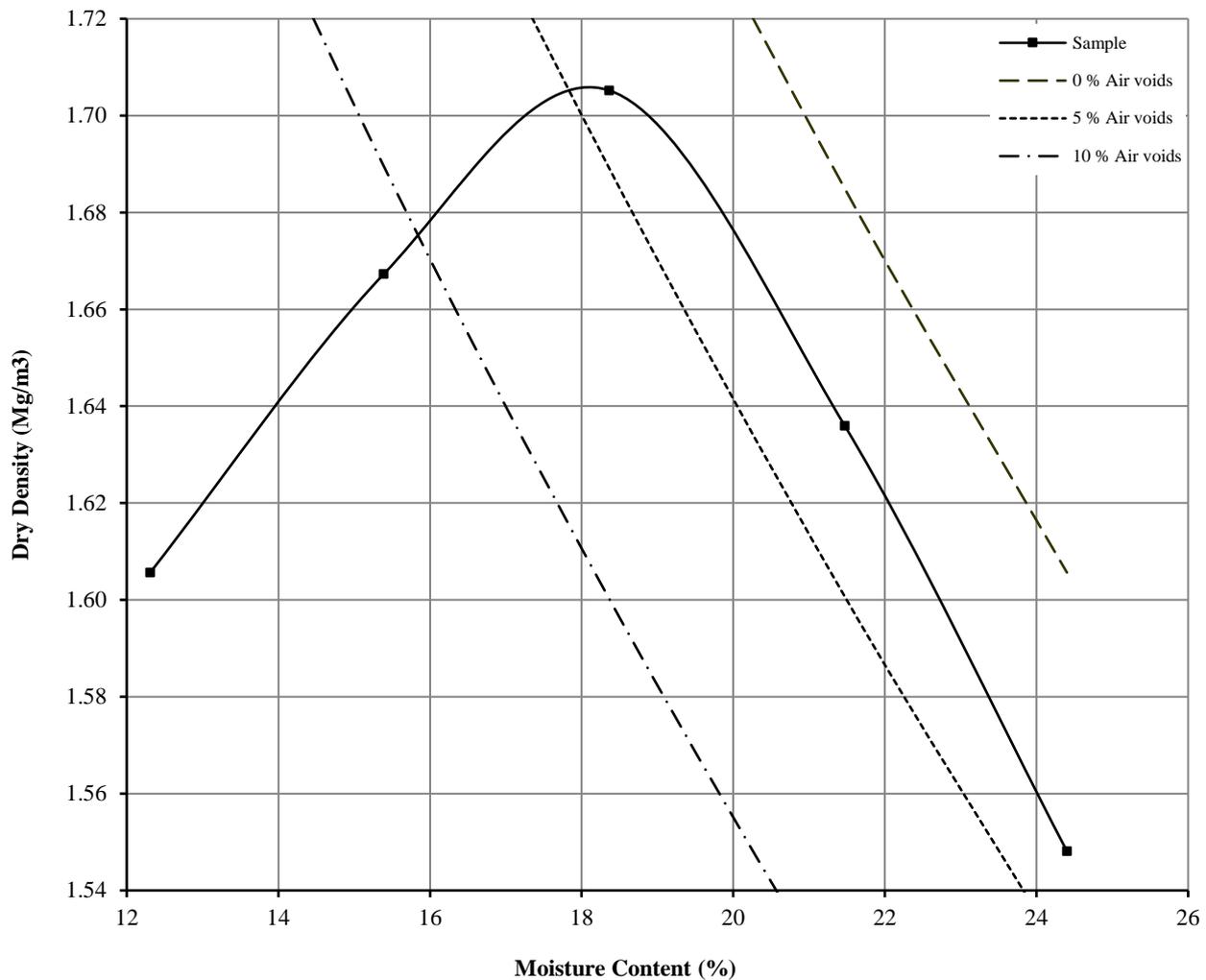
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP015 Top Depth (m) : 0.20

Sample Number: 1 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	33	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.64	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.71		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	18			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

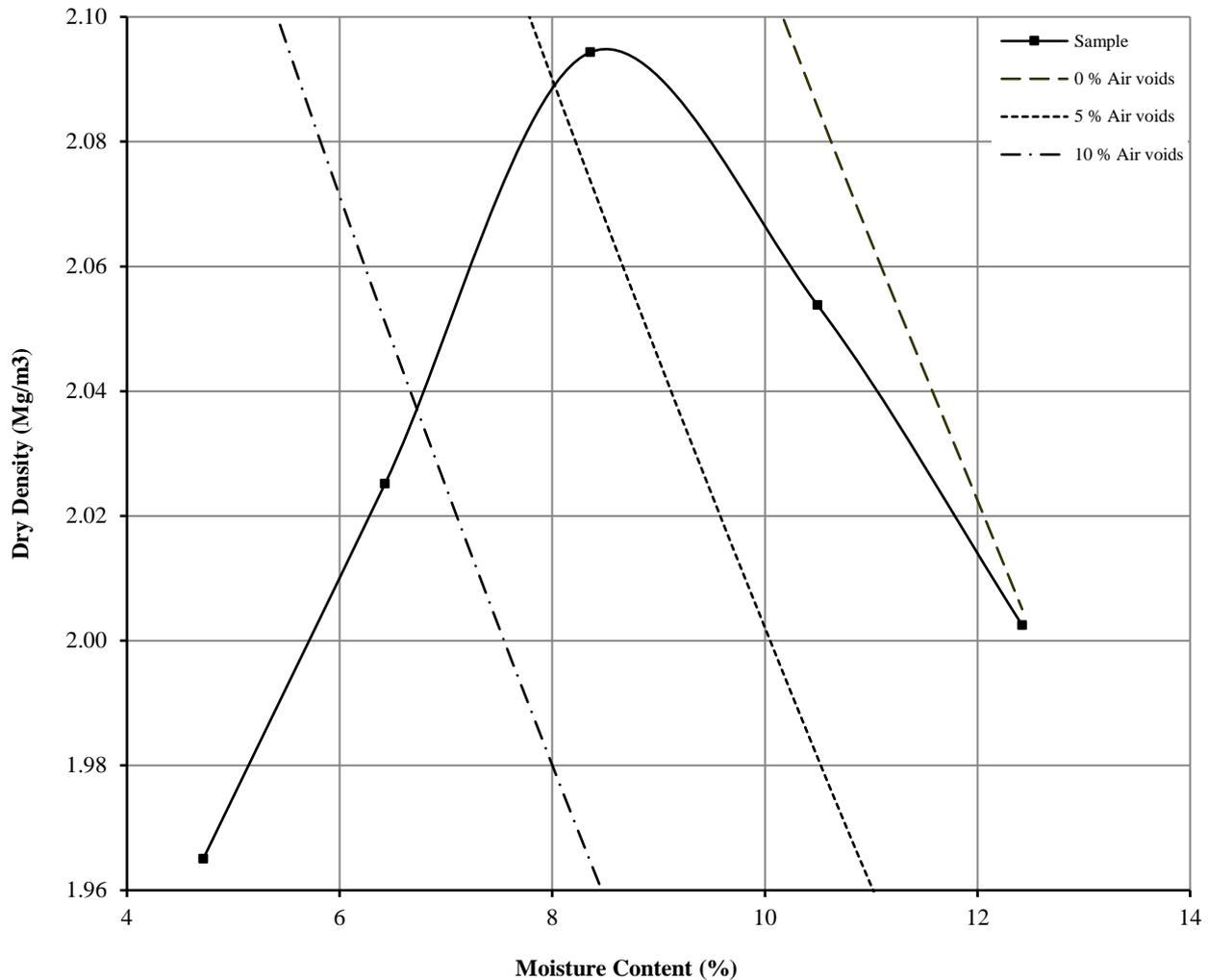
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP016 Top Depth (m) : 0.80

Sample Number: 1 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	10	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):	27
Maximum Dry Density (Mg/m ³):	2.09		Material Retained on 20.0 mm Test Sieve (%):	12
Optimum Moisture Content (%):	8			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

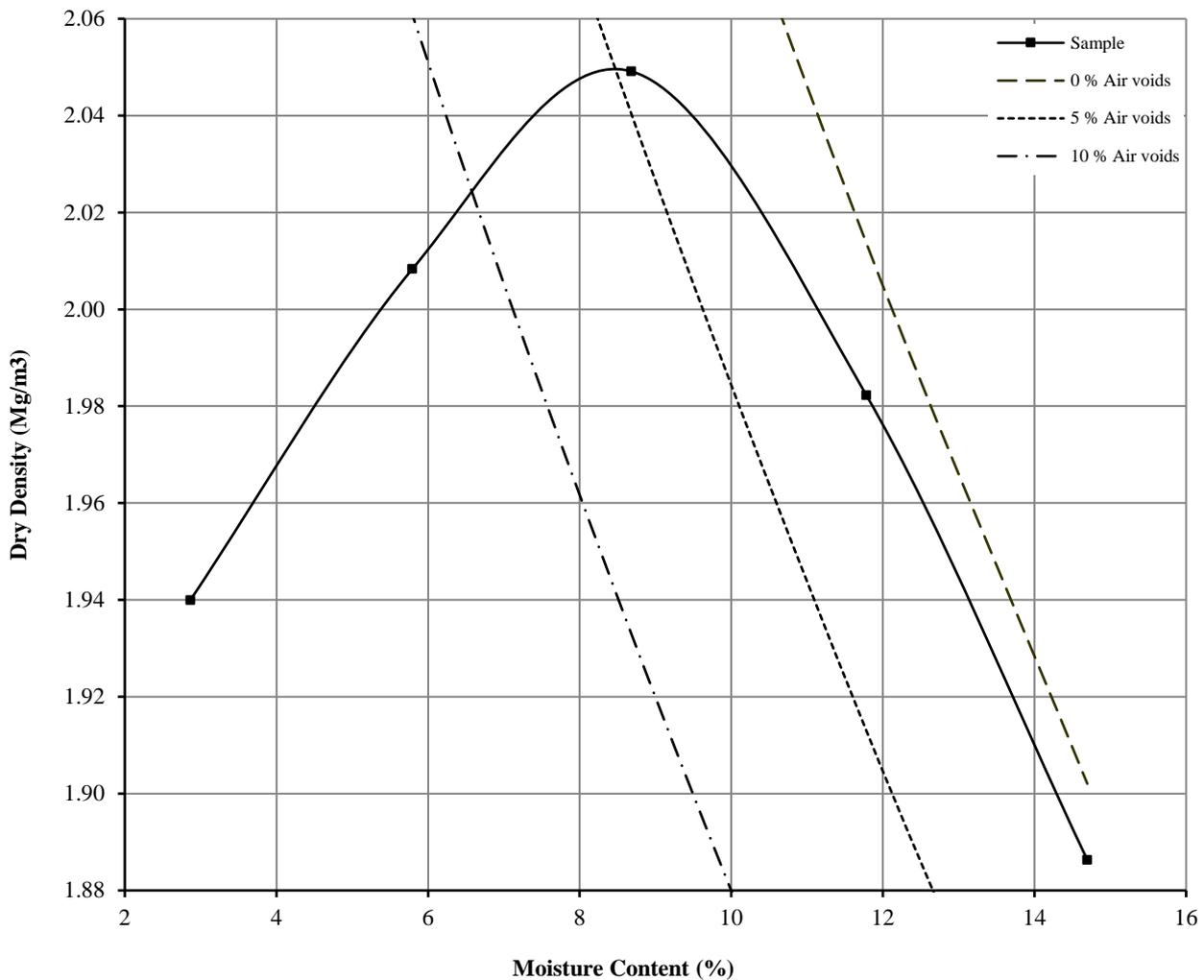
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP016 Top Depth (m) : 1.40

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.64	Measured	Material Retained on 37.5 mm Test Sieve (%):	8
Maximum Dry Density (Mg/m ³):	2.05	Material Retained on 20.0 mm Test Sieve (%):	11	
Optimum Moisture Content (%):	9			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

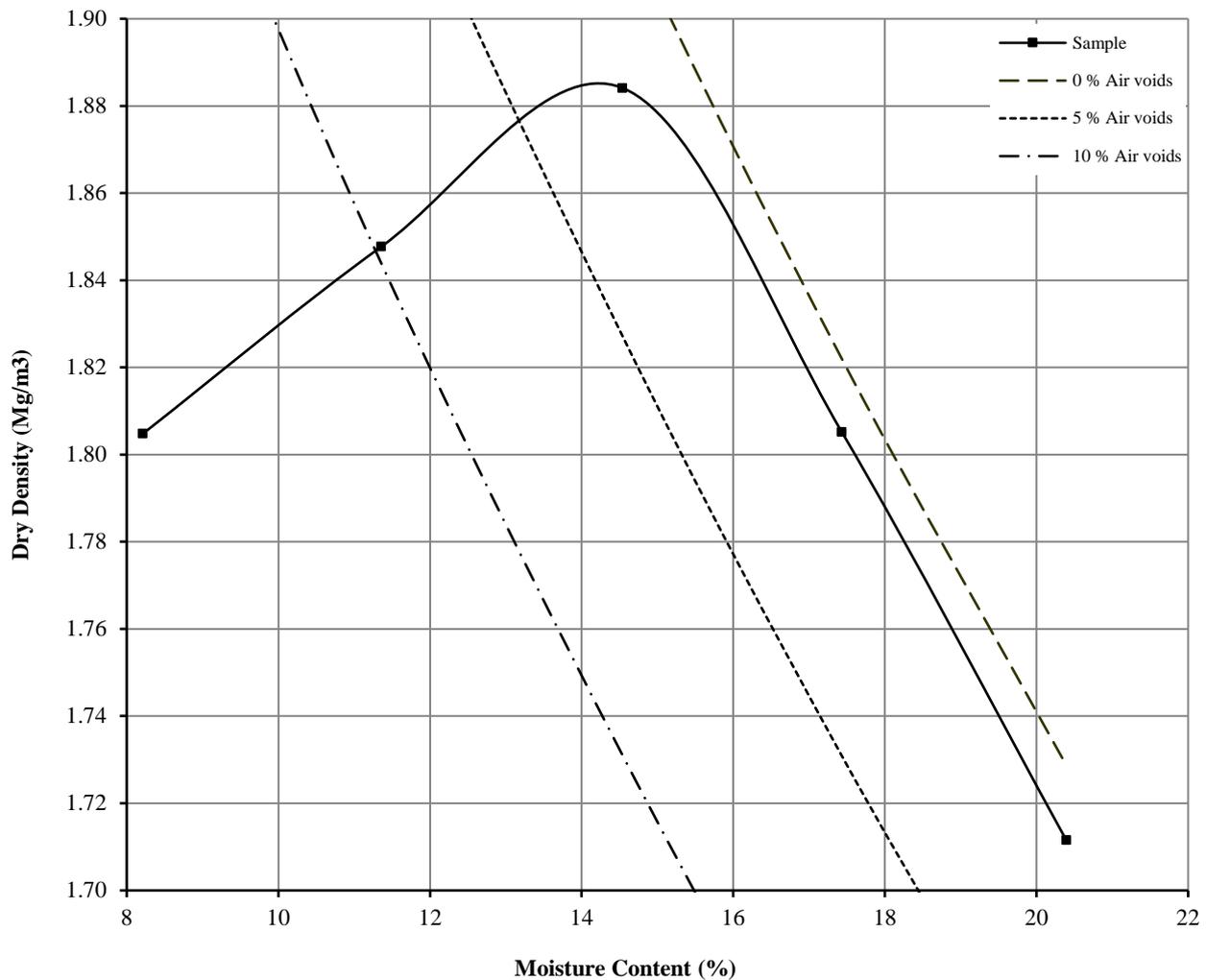
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP018 Top Depth (m) : 0.60

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.88		Material Retained on 20.0 mm Test Sieve (%):	3
Optimum Moisture Content (%):	15			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

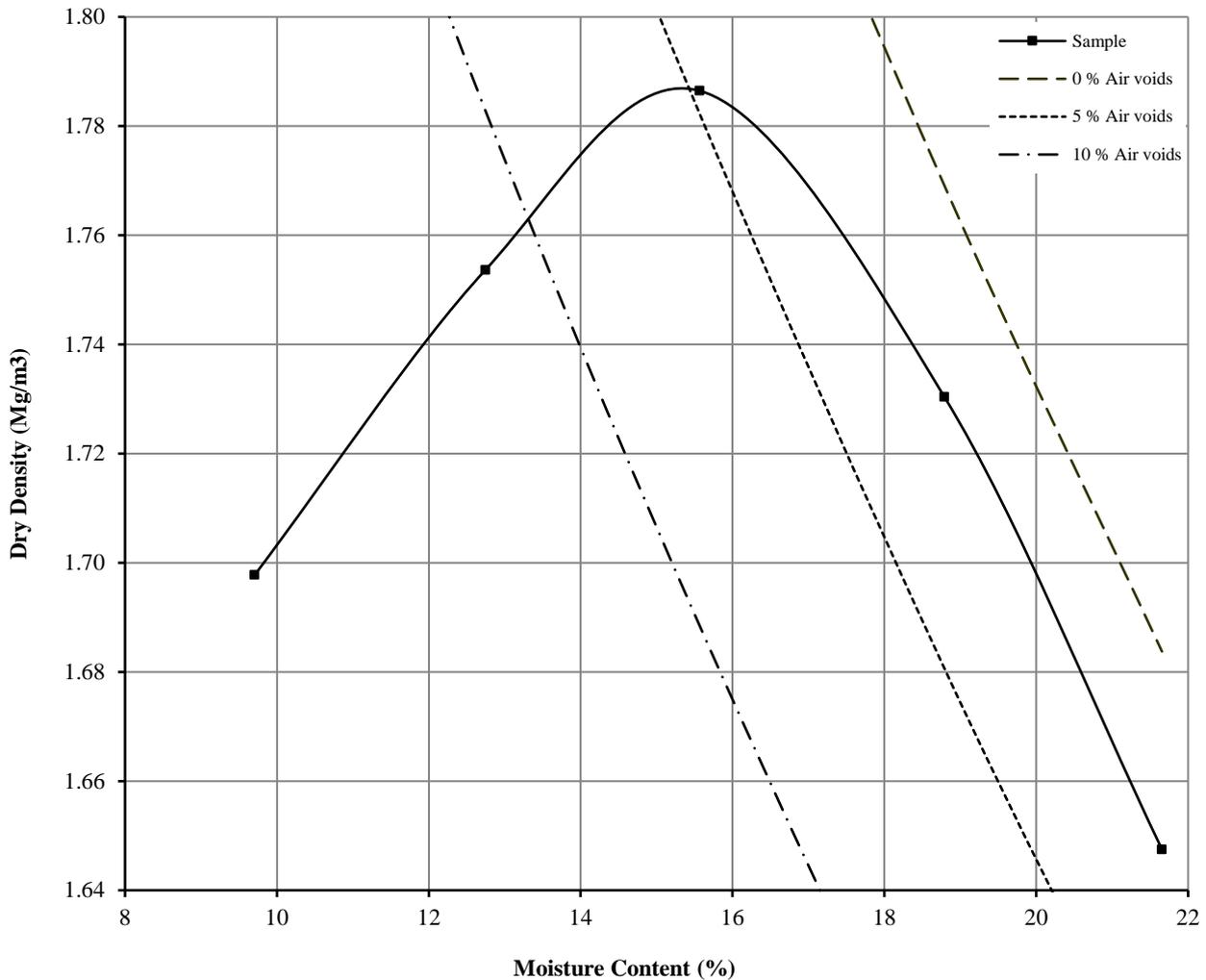
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP020 Top Depth (m) : 0.40

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	22	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.79		Material Retained on 20.0 mm Test Sieve (%):	3
Optimum Moisture Content (%):	16			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

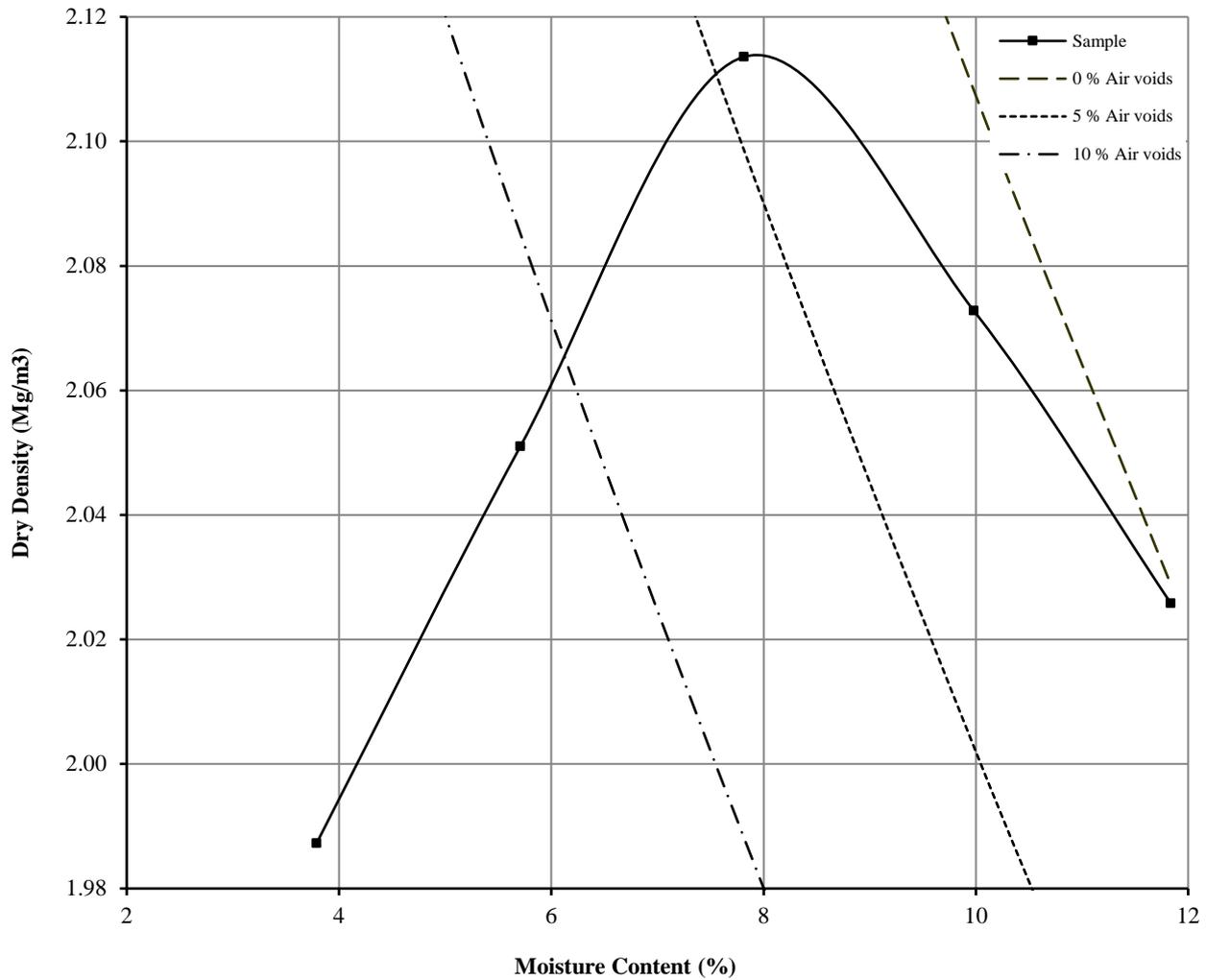
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP022 Top Depth (m) : 0.50

Sample Number: 1 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	7.8	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	2.11		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	8			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

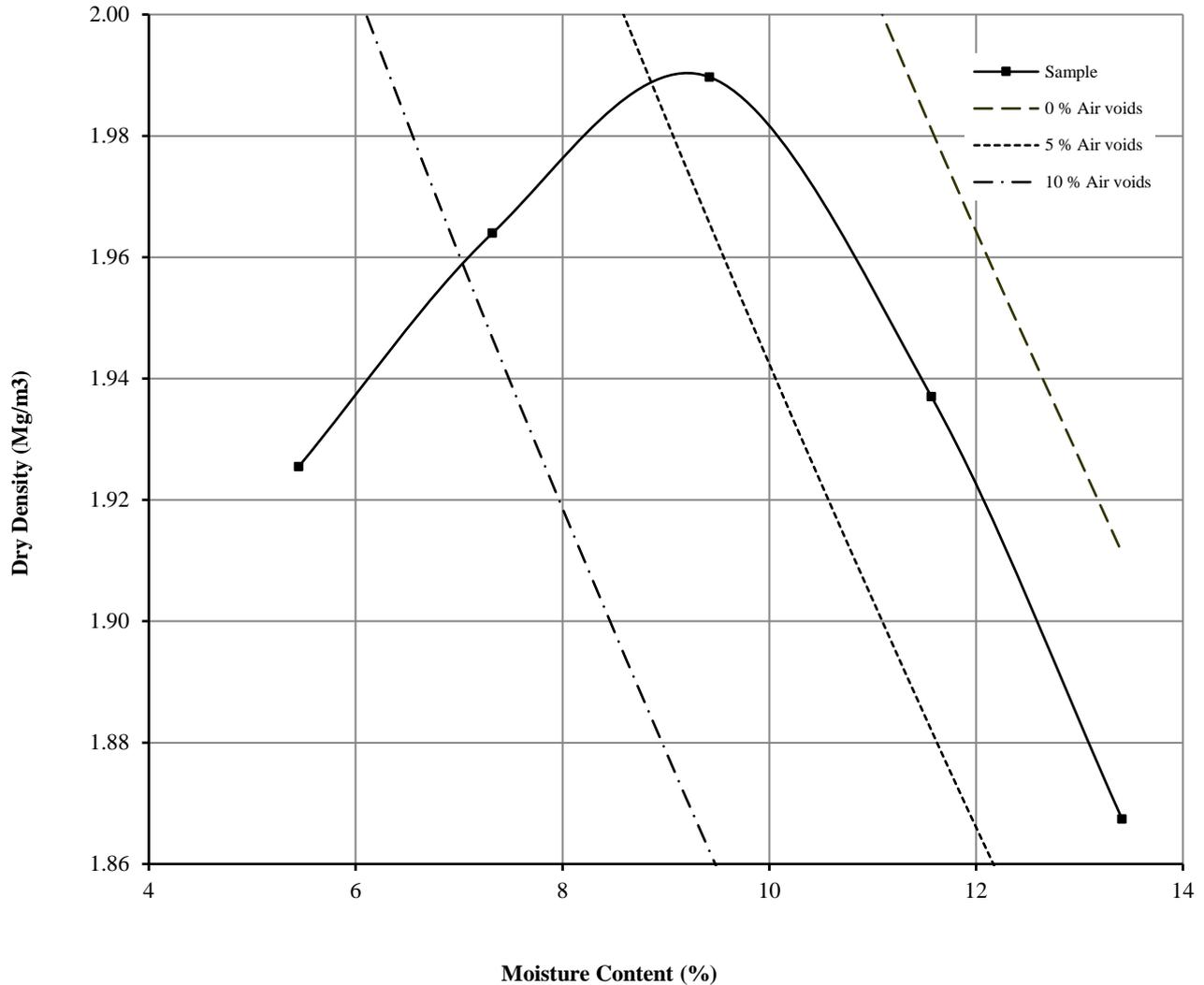
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP022 Top Depth (m) : 2.30

Sample Number: 5 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	9.4	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.57	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.99		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	9			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

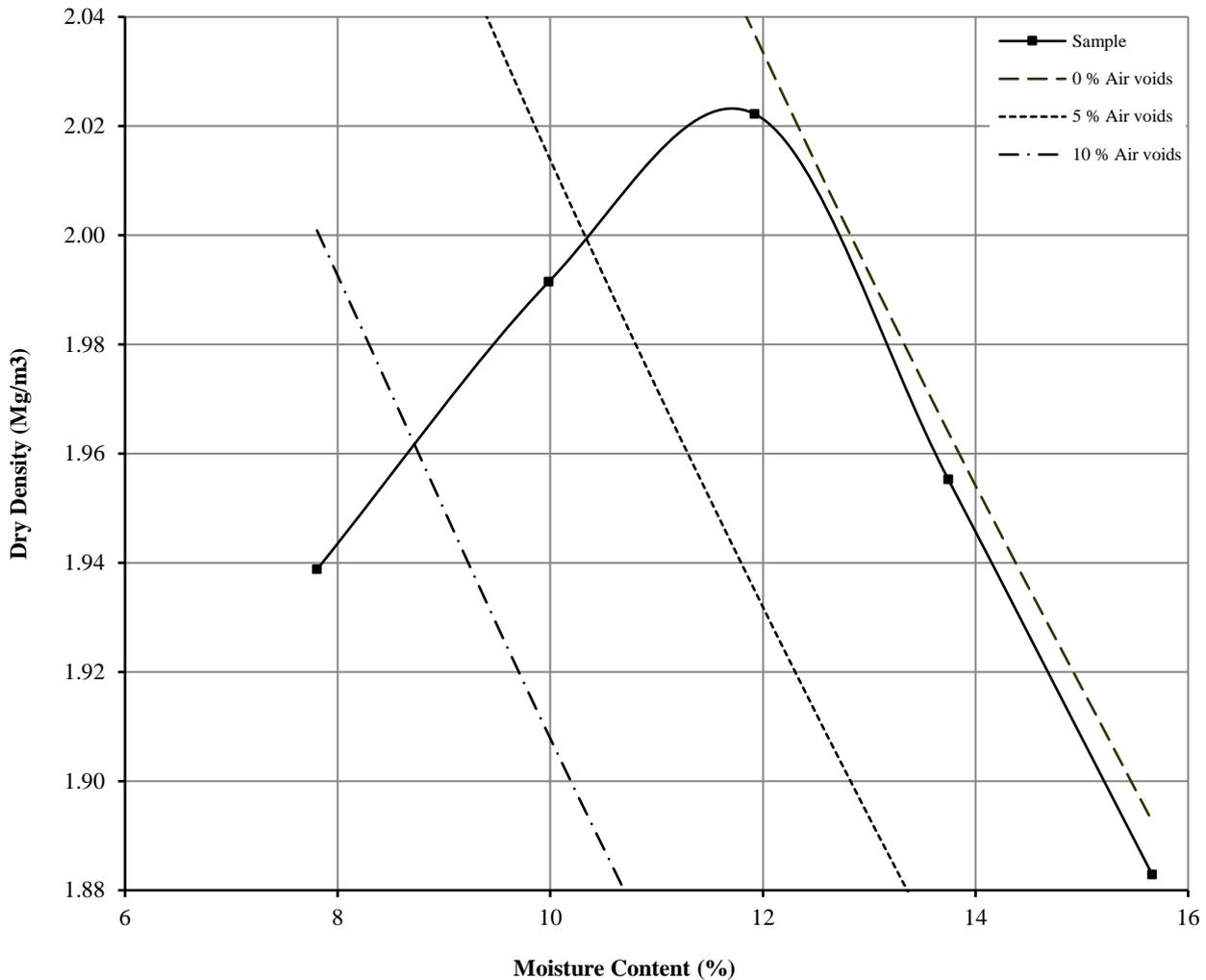
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP023 Top Depth (m) : 1.30

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	12	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):	28
Maximum Dry Density (Mg/m ³):	2.02		Material Retained on 20.0 mm Test Sieve (%):	7
Optimum Moisture Content (%):	12			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

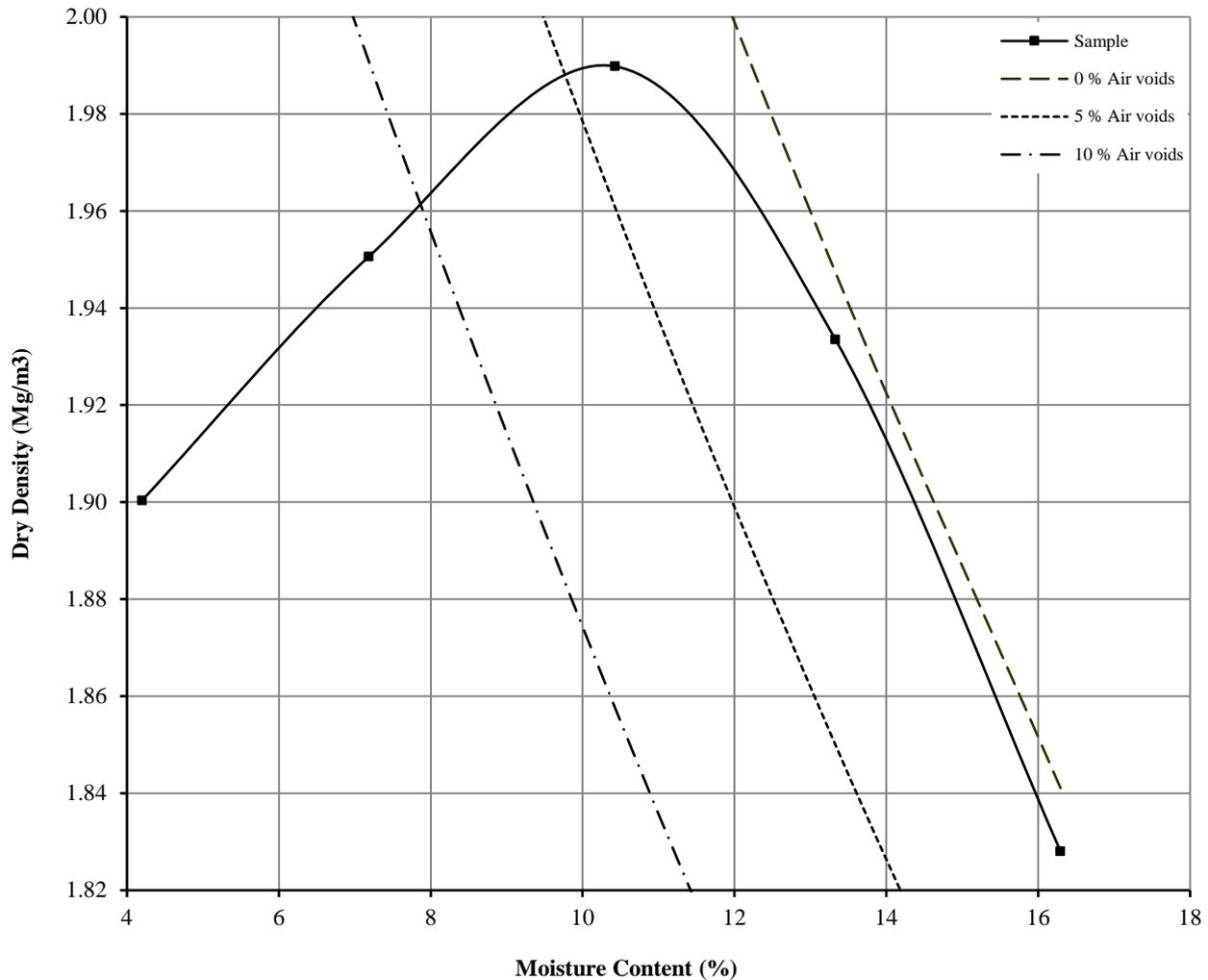
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP026 Top Depth (m) : 0.90

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	7.2	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	6
Maximum Dry Density (Mg/m ³):	1.99	Material Retained on 20.0 mm Test Sieve (%):	15	
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

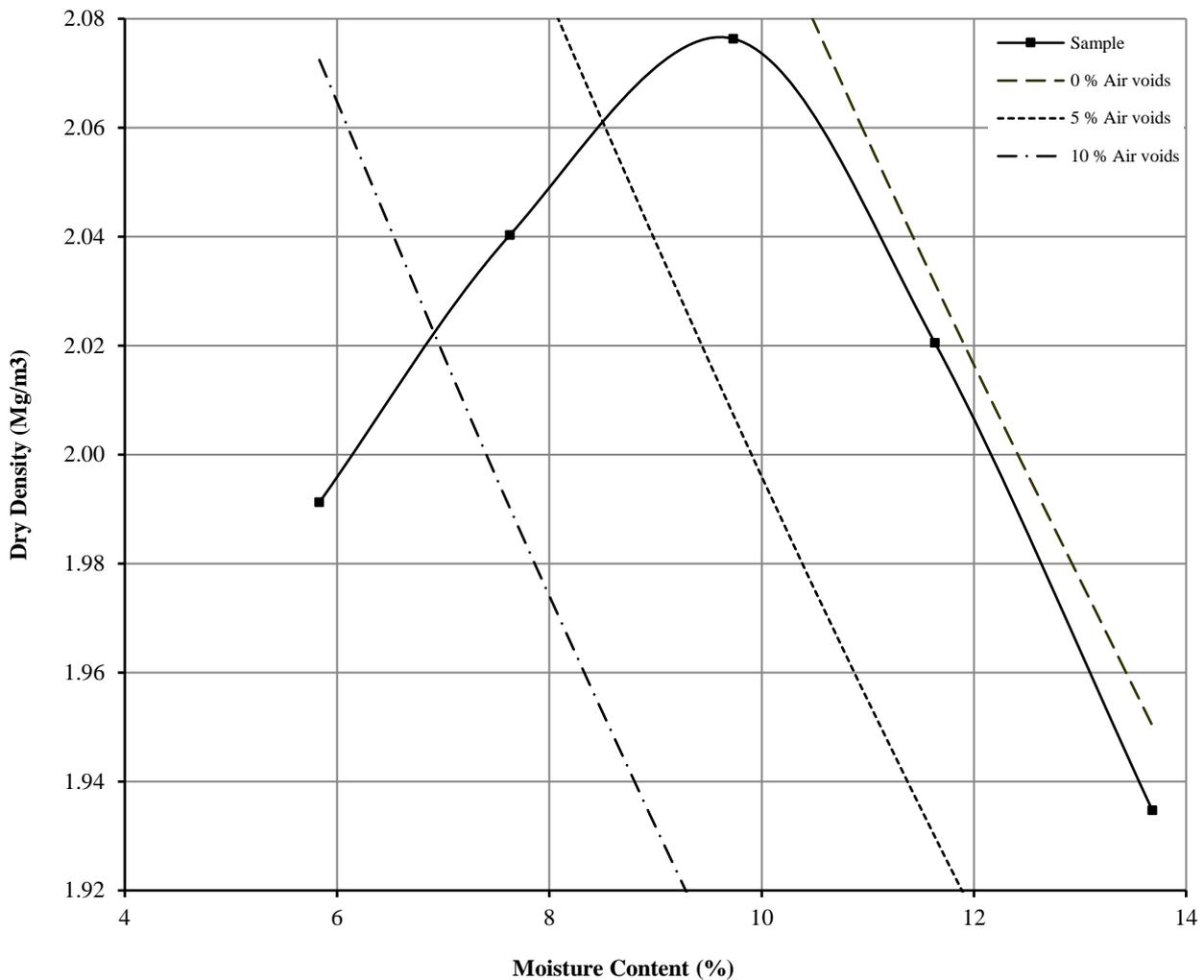
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP035 Top Depth (m) : 0.80

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	7.6	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.66	Measured	Material Retained on 37.5 mm Test Sieve (%):	34
Maximum Dry Density (Mg/m ³):	2.08		Material Retained on 20.0 mm Test Sieve (%):	15
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

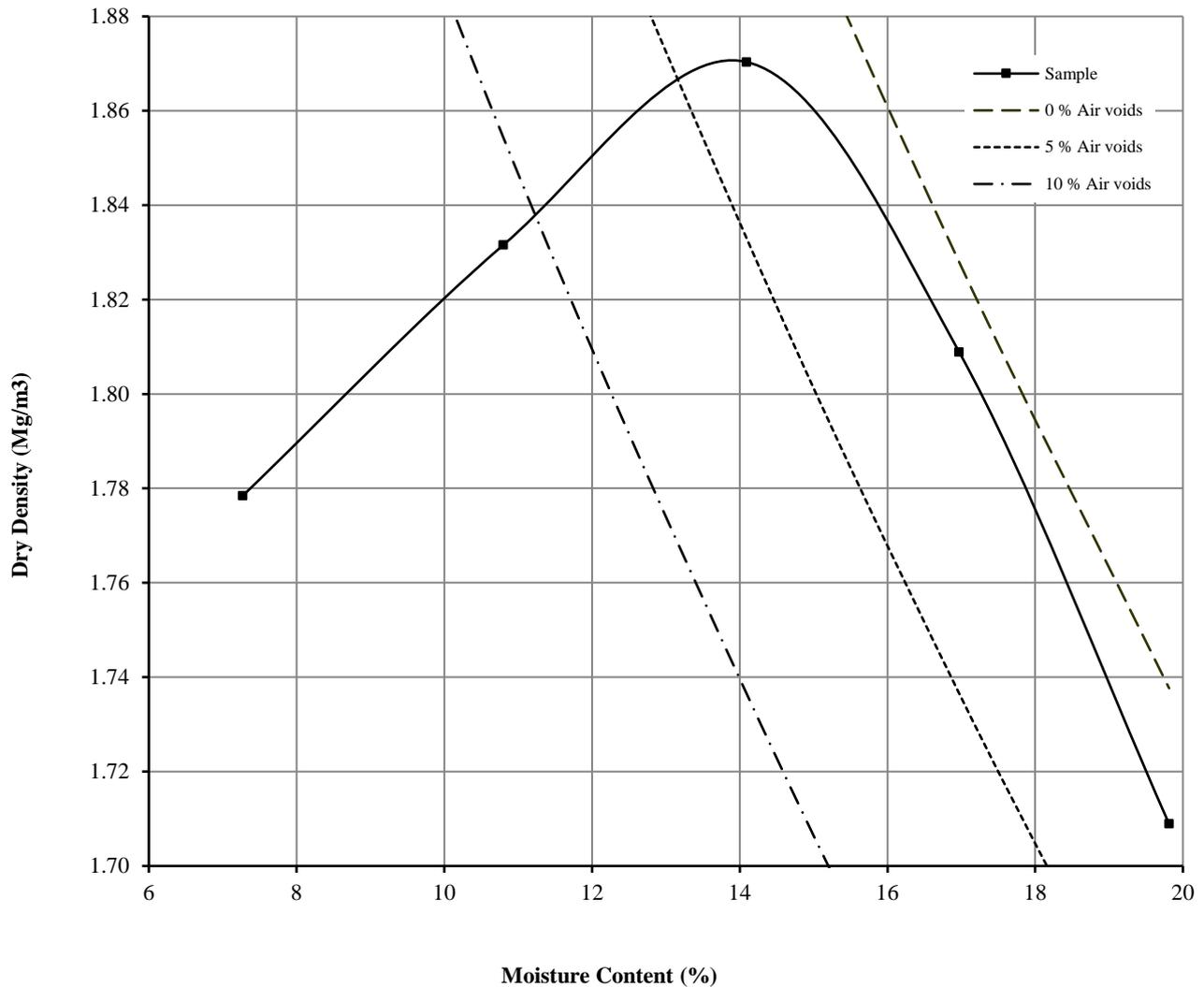
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP101 Top Depth (m) : 1.20

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	17	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.87		Material Retained on 20.0 mm Test Sieve (%):	7
Optimum Moisture Content (%):	14			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

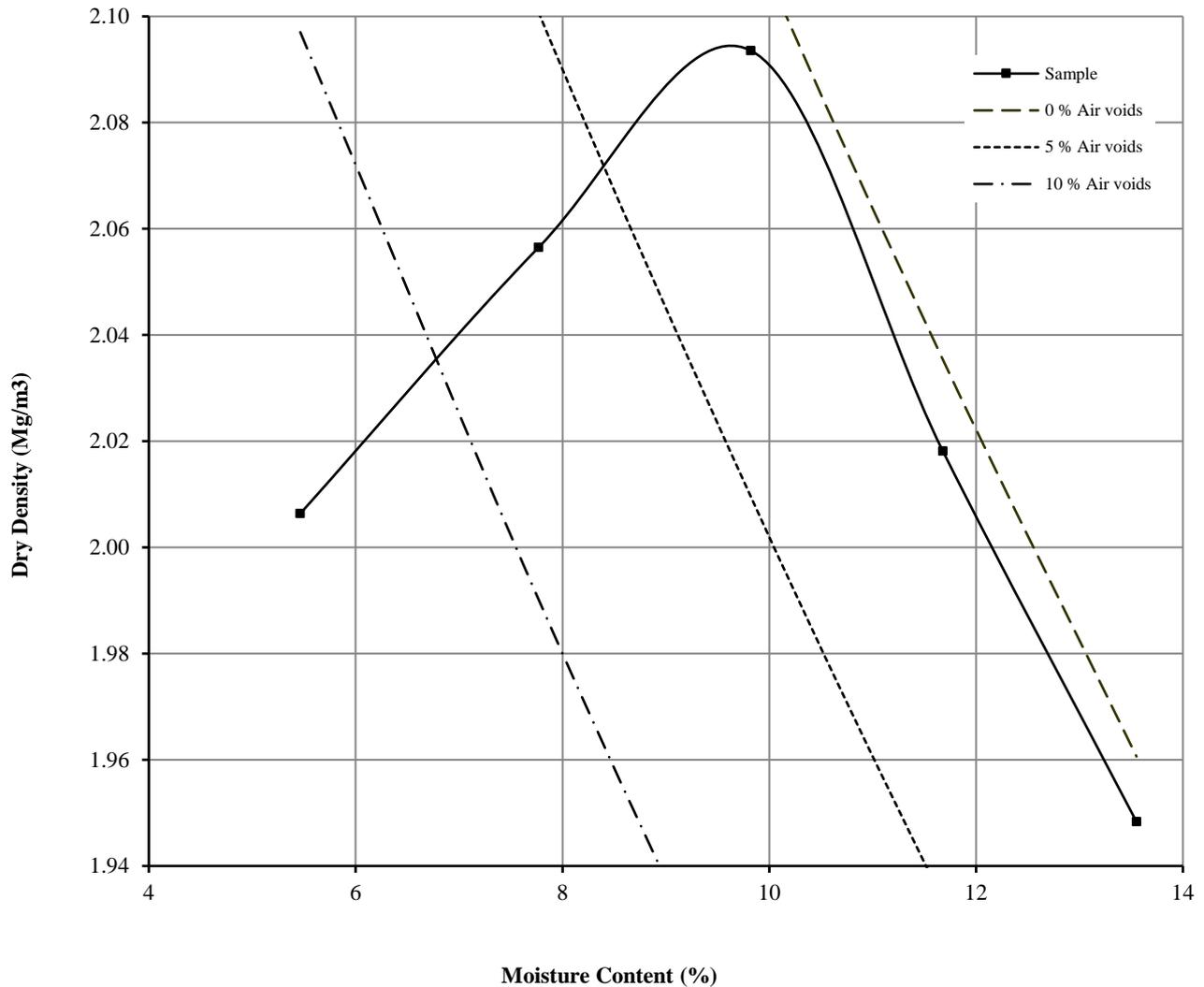
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP102 Top Depth (m) : 1.20

Sample Number: 4 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	7.8	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):	18
Maximum Dry Density (Mg/m ³):	2.09		Material Retained on 20.0 mm Test Sieve (%):	23
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104

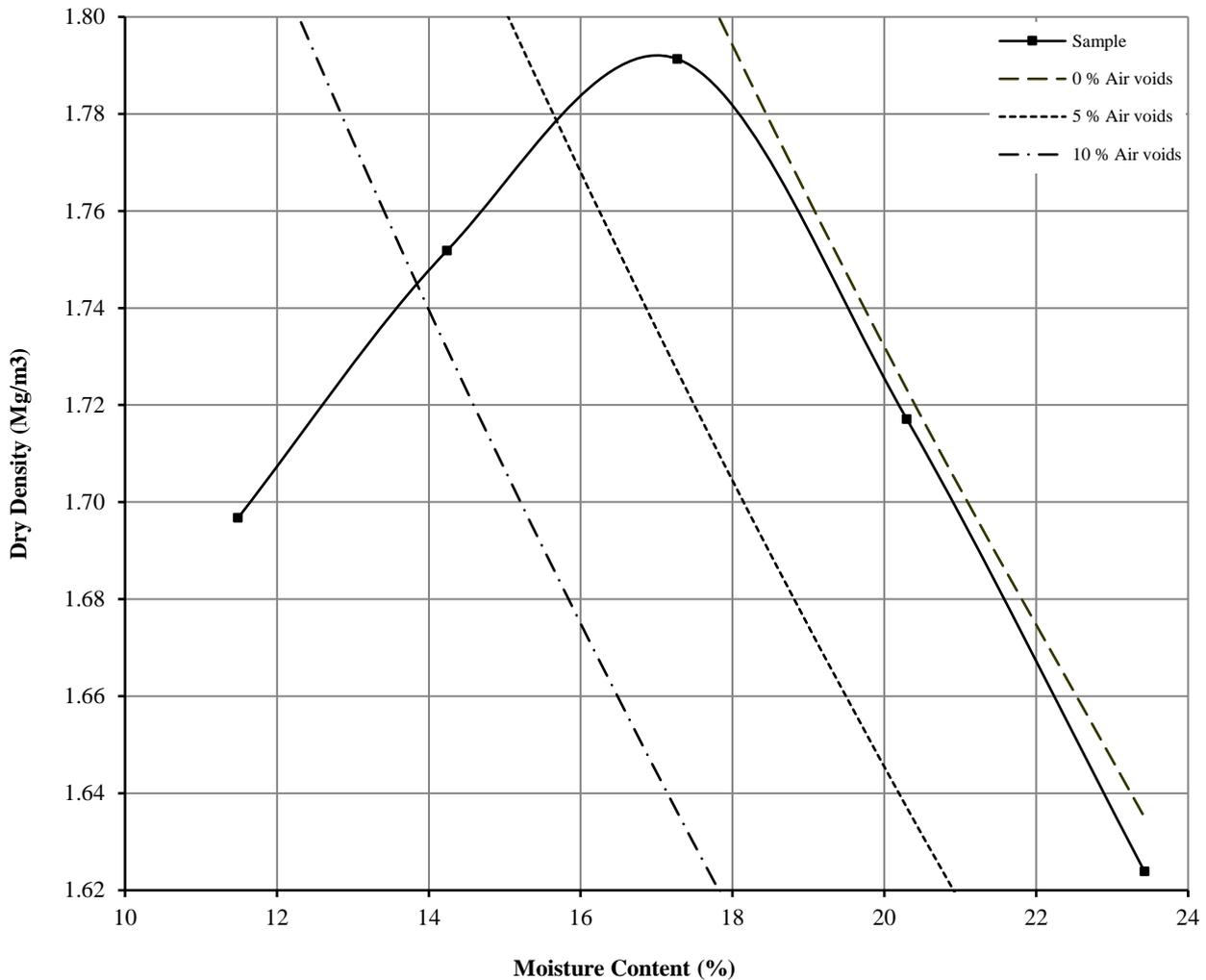
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP104 Top Depth (m) : 1.50

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	20	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.79		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	17			
Remarks See summary of soil descriptions				



Barnsley (West)

Contract
PSL21/9638
Client Ref
3104



ANALYTICAL TEST REPORT

Contract no: 104404

Contract name: Barnsley (West)

Client reference: PSL21/9638

Clients name: Professional Soils Laboratory

Clients address: 5/7 Hexthorpe Road
Doncaster
DN4 0AR

Samples received: 11 January 2022

Analysis started: 11 January 2022

Analysis completed: 17 January 2022

Report issued: 17 January 2022

Key

- U UKAS accredited test
- M MCERTS & UKAS accredited test
- \$ Test carried out by an approved subcontractor
- I/S Insufficient sample to carry out test
- N/S Sample not suitable for testing

Approved by:



Rachael Burton
Reporting Team Lead

Chemtech Environmental Limited

SOILS

Lab number			104404-1	104404-2	104404-3	104404-4	104404-5	104404-6
Sample id			BH002	BH004	BH006	BH007	BH007	BH010
Depth (m)			12.80	8.00	9.80	5.00	6.00	11.90
Sample Type			B	B	B	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	8.6	8.4	8.3	8.1	7.0	8.0
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	64	94	104	93	155	344

Chemtech Environmental Limited

SOILS

Lab number			104404-7	104404-8	104404-9	104404-10	104404-11	104404-12
Sample id			BH013	TP001	TP001	TP001	TP002	TP003
Depth (m)			9.10	0.50	0.80	1.40	1.00	2.70
Sample Type			D	D	D	D&B	D&B	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	8.0	7.6	7.5	7.6	7.6	7.5
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	72	56	47	46	48	76

Chemtech Environmental Limited

SOILS

Lab number			104404-13	104404-14	104404-15	104404-16	104404-17	104404-18
Sample id			TP009	TP009	TP010	TP017	TP022	TP023
Depth (m)			0.90	2.20	1.50	0.50	2.30	1.70
Sample Type			D	D	D	D	D&B	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	7.4	6.2	6.8	6.2	6.9	6.0
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	132	68	72	64	12	87

Chemtech Environmental Limited

SOILS

Lab number			104404-19	104404-20	104404-21
Sample id			TP025	TP027	TP104
Depth (m)			3.80	1.90	1.50
Sample Type			D	D	D&B
Date sampled			-	-	-
Test	Method	Units			
pH	CE004 ^u	un ts	6.6	6.6	6.4
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	142	112	230

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	pH	Based on BS 1377, pH Meter	As received	U	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
104404-1	BH002	12.80	Y	All (NSD)
104404-2	BH004	8.00	Y	All (NSD)
104404-3	BH006	9.80	Y	All (NSD)
104404-4	BH007	5.00	Y	All (NSD)
104404-5	BH007	6.00	Y	All (NSD)
104404-6	BH010	11.90	Y	All (NSD)
104404-7	BH013	9.10	Y	All (NSD)
104404-8	TP001	0.50	Y	All (NSD)
104404-9	TP001	0.80	Y	All (NSD)
104404-10	TP001	1.40	Y	All (NSD)
104404-11	TP002	1.00	Y	All (NSD)
104404-12	TP003	2.70	Y	All (NSD)
104404-13	TP009	0.90	Y	All (NSD)
104404-14	TP009	2.20	Y	All (NSD)
104404-15	TP010	1.50	Y	All (NSD)
104404-16	TP017	0.50	Y	All (NSD)
104404-17	TP022	2.30	Y	All (NSD)
104404-18	TP023	1.70	Y	All (NSD)
104404-19	TP025	3.80	Y	All (NSD)
104404-20	TP027	1.90	Y	All (NSD)
104404-21	TP104	1.50	Y	All (NSD)

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

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

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones, where applicable.



LABORATORY REPORT



4043

Contract Number: PSL21/9925

Report Date: 16 February 2022

Client's Reference: 3104

Client Name: Lithos Consulting
Parkhill
Walton Road
Wetherby
North Yorkshire
LS22 5DZ

For the attention of: George Morton

Contract Title: Barnsley West (LT1)

Date Received: 20/12/2021

Date Commenced: 20/12/2021

Date Completed: 16/2/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins
(Director)

R Berriman
(Quality Manager)

S Royle
(Laboratory Manager)

L Knight
(Assistant Laboratory Manager)

S Eyre
(Senior Technician)

T Watkins
(Senior Technician)

5 – 7 Hexthorpe Road, Hexthorpe,
Doncaster DN4 0AR

tel:

fax:

e-mail:

Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP049	1	D	0.60		Brown mottled grey slightly sandy CLAY.
TP064	3	D	0.70		Brown mottled grey slightly sandy CLAY.
TP202	2	D	0.40		Brown mottled grey slightly sandy CLAY.
TP212	1	D	0.50		Brown mottled grey slightly sandy CLAY.
TP223	1	D	0.50		Brown mottled grey slightly sandy CLAY.
TP43	2	D	0.60		Brown mottled grey slightly sandy CLAY.
TP050	2	D	1.00		Brown mottled grey sandy CLAY.
TP056	2	D	1.60		Brown mottled grey slightly sandy CLAY.
TP058	2	D	0.50		Brown mottled grey sandy CLAY.
TP059	2	D	0.50		Brown mottled grey slightly sandy CLAY.
TP060	1	D	0.80		Brown mottled grey sandy CLAY.
TP065	3	D	1.60		Brown mottled grey sandy CLAY.
TP105	6	D	3.10		Dark brown gravelly sandy CLAY.
TP211	4	D	1.50		Reddish brown mottled grey slightly sandy CLAY.
BH011	2	D	1.00		Dark grey sandy CLAY.
BH011	7	D	4.00		Dark grey sandy CLAY.
BH014	6	D	4.00		Brown slightly gravelly sandy CLAY.
BH015	2	D	1.00		Brown gravelly sandy CLAY.
BH015	7	D	5.00		Dark grey very sandy CLAY.



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Professional Soils Laboratory

Barnsley West (LT1)

Contract No:

PSL21/9925

Client Ref:

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH201	2	D	1.00		Brown gravelly sandy CLAY.
BH201	5	D	3.00		Dark grey gravelly sandy CLAY.
BH201	11	D	8.00		Dark grey gravelly sandy CLAY.
BH202	2	D	1.00		Brown very gravelly sandy CLAY.
BH202	10	D	8.00		Brown very gravelly sandy CLAY.
BH204	2	D	1.00		Brown mottled grey sandy CLAY.
BH204	9	D	6.50		Brown mottled grey sandy CLAY.
BH205	2	D	1.00		Grey gravelly sandy CLAY.
BH205	6	D	4.00		Brown sandy CLAY.
BH205	8	D	5.00		Brown sandy CLAY.
TP054	2	D	1.30		Brown gravelly sandy CLAY.
TP070	3	D	1.90		Brown very gravelly sandy CLAY.
TP203	2	D	0.90		Brown very gravelly sandy CLAY.
TP203	3	D	3.20		Brown gravelly sandy CLAY.
TP210	3	D	3.00		Brown very gravelly sandy CLAY.
TP214	2	D	0.50		Brown very gravelly sandy CLAY.
TP221	2	D	0.70		Brown very gravelly sandy CLAY.
TP40	2	D	0.70		Brown mottled grey sandy CLAY.
TP42	3	D	2.20		Brown mottled grey gravelly sandy CLAY.



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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP055	2	D	2.30		Brown mottled grey sandy CLAY.
TP066	2	D	2.70		Brown sandy CLAY.
BH203	7	D&B	5.00		Grey mottled brown slightly gravelly very sandy CLAY.
BH011	1	D&B	0.40		Brown very gravelly sandy CLAY.
BH014	1	D&B	0.40		Brown slightly gravelly sandy CLAY.
BH201	1	D&B	0.00		Brown slightly sandy CLAY.
BH202	1	D&B	0.00		Brown gravelly very sandy CLAY.
BH203	1	D&B	0.00		Brown slightly gravelly sandy CLAY.
BH204	1	D&B	0.00		Brown gravelly sandy CLAY.
BH205	1	D&B	0.00		Light brown slightly sandy CLAY.
TP048	2	D&B	0.40		Brown mottled grey slightly sandy CLAY.
TP105	2	D&B	0.50		Brown sandy CLAY.
TP207	2	D&B	0.70		Greyish brown gravelly very sandy CLAY.
TP210	1	D&B	0.50		Brown slightly gravelly sandy CLAY.
TP051	1	D&B	0.80		Grey slightly gravelly slightly sandy CLAY.
TP066	1	D&B	0.90		Reddish brown gravelly sandy CLAY.
TP106	5	D&B	2.80		Brown mottled grey gravelly sandy CLAY.
BH011	4	D&B	1.00		Dark grey gravelly sandy CLAY.
BH011	6	D&B	3.00		Grey very gravelly sandy CLAY.



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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
BH014	4	D&B	2.00		Grey gravelly sandy CLAY.
BH014	7	D&B	4.00		Brown very gravelly sandy CLAY.
BH015	5	D&B	3.00		Grey mottled brown sandy very gravelly CLAY.
BH015	8	D&B	5.00		Dark grey very gravelly sandy CLAY.
BH201	4	D&B	2.00		Grey very gravelly sandy CLAY.
BH201	10	D&B	6.50		Brown very gravelly sandy CLAY.
BH202	4	D&B	2.00		Grey gravelly sandy CLAY.
BH203	4	D&B	2.00		Grey very gravelly sandy CLAY.
BH204	4	D&B	2.00		Greyish brown very gravelly sandy CLAY.
BH204	8	D&B	5.00		Greyish brown very gravelly sandy CLAY.
BH205	7	D&B	4.00		Greyish brown gravelly sandy CLAY.
TP047	2	D&B	1.00		Brown very gravelly sandy CLAY.
TP049	2	D&B	2.50		Brown very gravelly sandy CLAY.
TP057	4	D&B	1.60		Brown slightly sandy clayey GRAVEL.
TP062	3	D&B	3.00		Grey mottled brown gravelly sandy CLAY.
TP064	4	D&B	2.00		Brown slightly sandy very clayey GRAVEL of cobbles.
TP067	2	D&B	0.90		Grey mottled brown very gravelly sandy CLAY.
TP069	2	D&B	0.70		Brown very clayey slightly sandy GRAVEL.
TP104	3	D&B	1.50		Grey very gravelly sandy CLAY.



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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP105	3	D&B	1.00		Brown very gravelly sandy CLAY.
TP201	3	D&B	0.80		Grey mottled brown very gravelly sandy CLAY.
TP205	3	D&B	0.80		Brown very gravelly sandy CLAY with cobbles.
TP213	3	D&B	0.60		Grey very gravelly sandy CLAY.
TP217	2	D&B	1.50		Brown gravelly sandy CLAY.
TP220	1	D&B	1.00		Grey very gravelly sandy CLAY.
TP223	2	D&B	2.00		Grey gravelly sandy CLAY.
TP39	2	D&B	1.00		Brown slightly sandy very clayey GRAVEL.
TP43	3	D&B	2.40		Brown very gravelly sandy CLAY.
TP44	1	D&B	0.80		Brown sandy very clayey GRAVEL.
TP46	2	D&B	1.00		Brown very gravelly sandy CLAY.
TP71	2	D&B	1.00		Brown very gravelly sandy CLAY.
TP71	3	D&B	2.00		Brown very gravelly sandy CLAY.
TP068	1	D&B	0.10		Brown TOPSOIL.
TP105	1	D&B	0.20		Brown TOPSOIL.
TP207	1	D&B	0.10		Brown TOPSOIL.
TP216	1	D&B	0.10		Brown TOPSOIL.
TP219	1	D&B	0.10		Brown TOPSOIL.
TP43	1	D&B	0.10		Brown TOPSOIL.



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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP049	1	D	0.60		20			57	24	33	100	High Plasticity CH
TP064	3	D	0.70		22			60	25	35	100	High Plasticity CH
TP202	2	D	0.40		19			56	24	32	100	High Plasticity CH
TP212	1	D	0.50		24			66	29	37	100	High Plasticity CH
TP223	1	D	0.50		23			55	26	29	100	High Plasticity CH
TP43	2	D	0.60		24			59	25	34	100	High Plasticity CH
TP050	2	D	1.00		20			46	23	23	100	Intermediate Plasticity CI
TP056	2	D	1.60		18			51	26	25	100	High Plasticity CH
TP058	2	D	0.50		21			44	22	22	100	Intermediate Plasticity CI
TP059	2	D	0.50		21			58	25	33	100	High Plasticity CH
TP060	1	D	0.80		17			48	24	24	100	Intermediate Plasticity CI
TP065	3	D	1.60		17			47	24	23	100	Intermediate Plasticity CI
TP105	6	D	3.10		14			48	23	25	86	Intermediate Plasticity CI
TP211	4	D	1.50		38			67	28	39	100	High Plasticity CH
BH011	2	D	1.00		4.7			36	18	18	96	Intermediate Plasticity CI
BH011	7	D	4.00		5.9			37	18	19	91	Intermediate Plasticity CI
BH014	6	D	4.00		13			43	21	22	94	Intermediate Plasticity CI
BH015	2	D	1.00		9.7			37	18	19	88	Intermediate Plasticity CI
BH015	7	D	5.00		14			30	17	13	99	Low Plasticity CL

SYMBOLS : NP : Non Plastic

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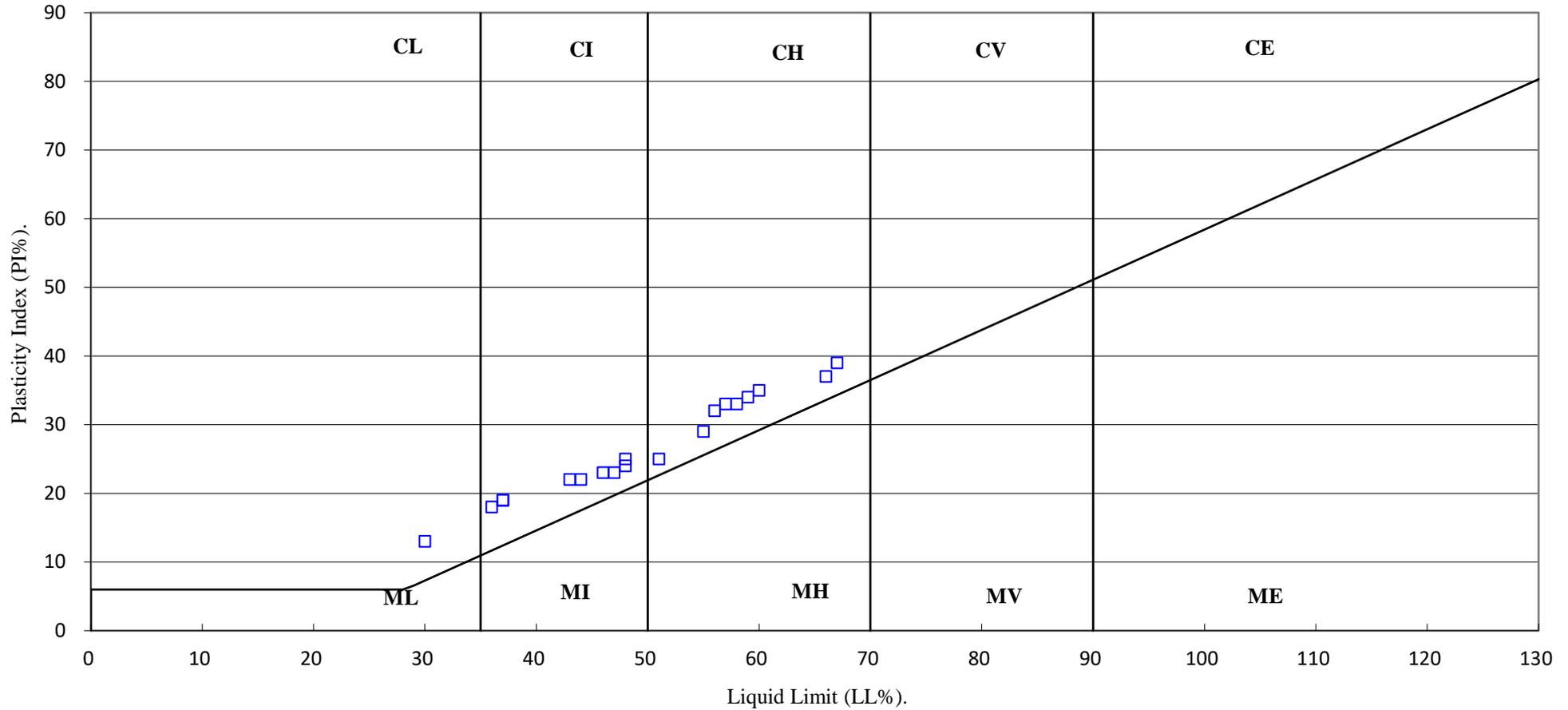
Contract No:

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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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Contract No:

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH201	2	D	1.00		9.4			43	20	23	84	Intermediate Plasticity CI
BH201	5	D	3.00		15			40	19	21	88	Intermediate Plasticity CI
BH201	11	D	8.00		15			39	19	20	89	Intermediate Plasticity CI
BH202	2	D	1.00		9.6			42	20	22	65	Intermediate Plasticity CI
BH202	10	D	8.00		11			36	18	18	74	Intermediate Plasticity CI
BH204	2	D	1.00		23			49	24	25	100	Intermediate Plasticity CI
BH204	9	D	6.50		14			47	23	24	100	Intermediate Plasticity CI
BH205	2	D	1.00		14			42	20	22	84	Intermediate Plasticity CI
BH205	6	D	4.00		21			47	23	24	100	Intermediate Plasticity CI
BH205	8	D	5.00		20			48	24	24	100	Intermediate Plasticity CI
TP054	2	D	1.30		10			39	20	19	82	Intermediate Plasticity CI
TP070	3	D	1.90		15			40	20	20	73	Intermediate Plasticity CI
TP203	2	D	0.90		13			43	22	21	70	Intermediate Plasticity CI
TP203	3	D	3.20		19			41	20	21	88	Intermediate Plasticity CI
TP210	3	D	3.00		8.7			43	22	21	62	Intermediate Plasticity CI
TP214	2	D	0.50		12			44	22	22	46	Intermediate Plasticity CI
TP221	2	D	0.70		11			48	24	24	51	Intermediate Plasticity CI
TP40	2	D	0.70		14			42	23	19	99	Intermediate Plasticity CI
TP42	3	D	2.20		12			37	19	18	82	Intermediate Plasticity CI

SYMBOLS : NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.



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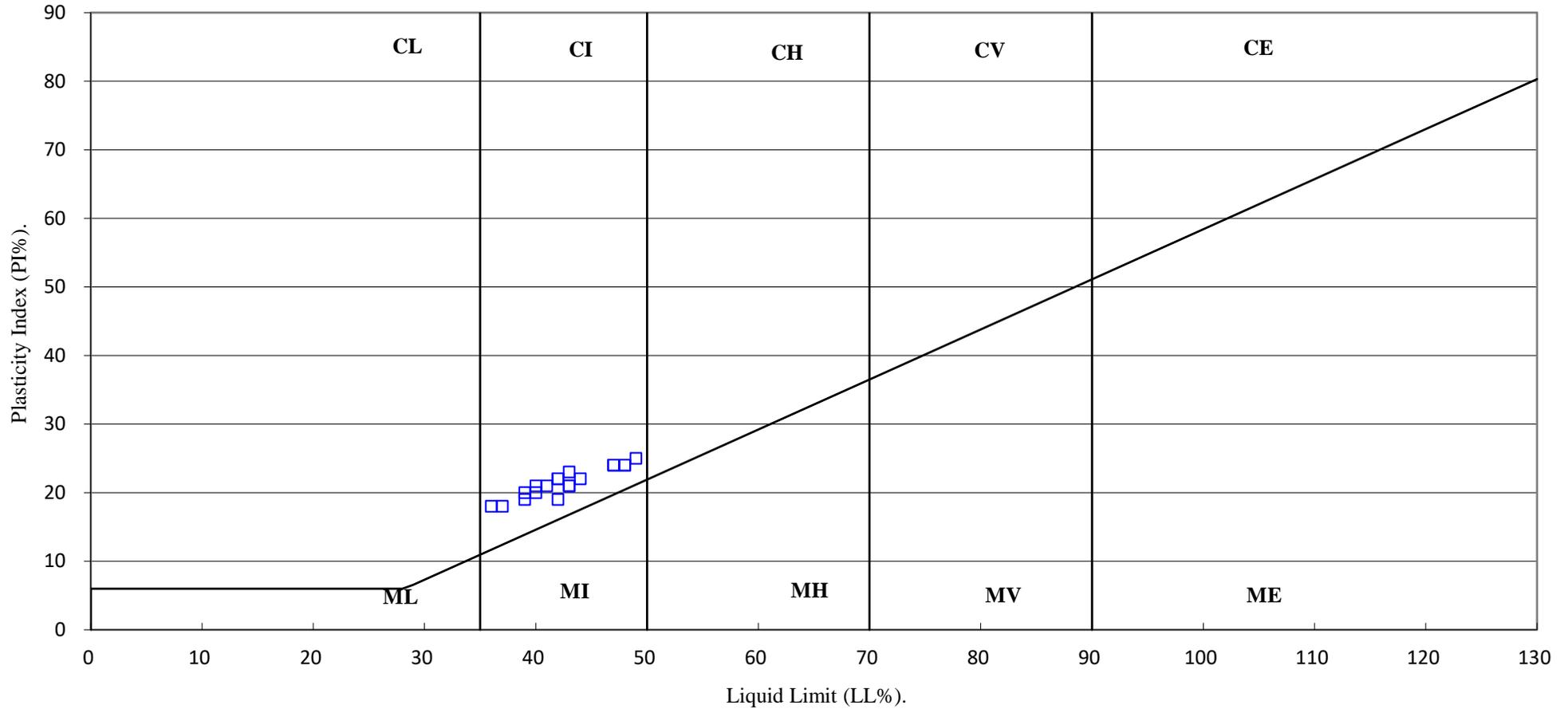
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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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Professional Soils Laboratory

Barnsley West (LT1)

Contract No:

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP055	2	D	2.30		10							
TP066	2	D	2.70		13							
BH203	7	D&B	5.00		14		2.63	25	14	11	91	Low Plasticity CL
BH014	1	D&B	0.40		23		2.66	45	21	24	88	Intermediate Plasticity CI
BH201	1	D&B	0.00		23		2.63	51	24	27	100	High Plasticity CH
BH203	1	D&B	0.00		24			57	27	30	92	High Plasticity CH
BH205	1	D&B	0.00		27			55	26	29	100	High Plasticity CH
TP048	2	D&B	0.40		23			54	26	28	100	High Plasticity CH
TP105	2	D&B	0.50		22		2.63					
TP207	2	D&B	0.70		14		2.62					
TP210	1	D&B	0.50		19		2.65	39	20	19	93	Intermediate Plasticity CI
TP051	1	D&B	0.80		21			64	27	37	91	High Plasticity CH
TP066	1	D&B	0.90		25		2.63	47	24	23	84	Intermediate Plasticity CI
TP106	5	D&B	2.80		21		2.62	41	22	19	82	Intermediate Plasticity CI
BH011	4	D&B	1.00		12			38	20	18	96	Intermediate Plasticity CI
BH014	4	D&B	2.00		17		2.65	39	20	19	84	Intermediate Plasticity CI
BH015	5	D&B	3.00		15		2.62	37	19	18	56	Intermediate Plasticity CI
BH015	8	D&B	5.00		14		2.59	33	18	15	60	Low Plasticity CL
BH201	4	D&B	2.00		11		2.59	41	20	21	41	Intermediate Plasticity CI

SYMBOLS : NP : Non Plastic

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Barnsley West (LT1)

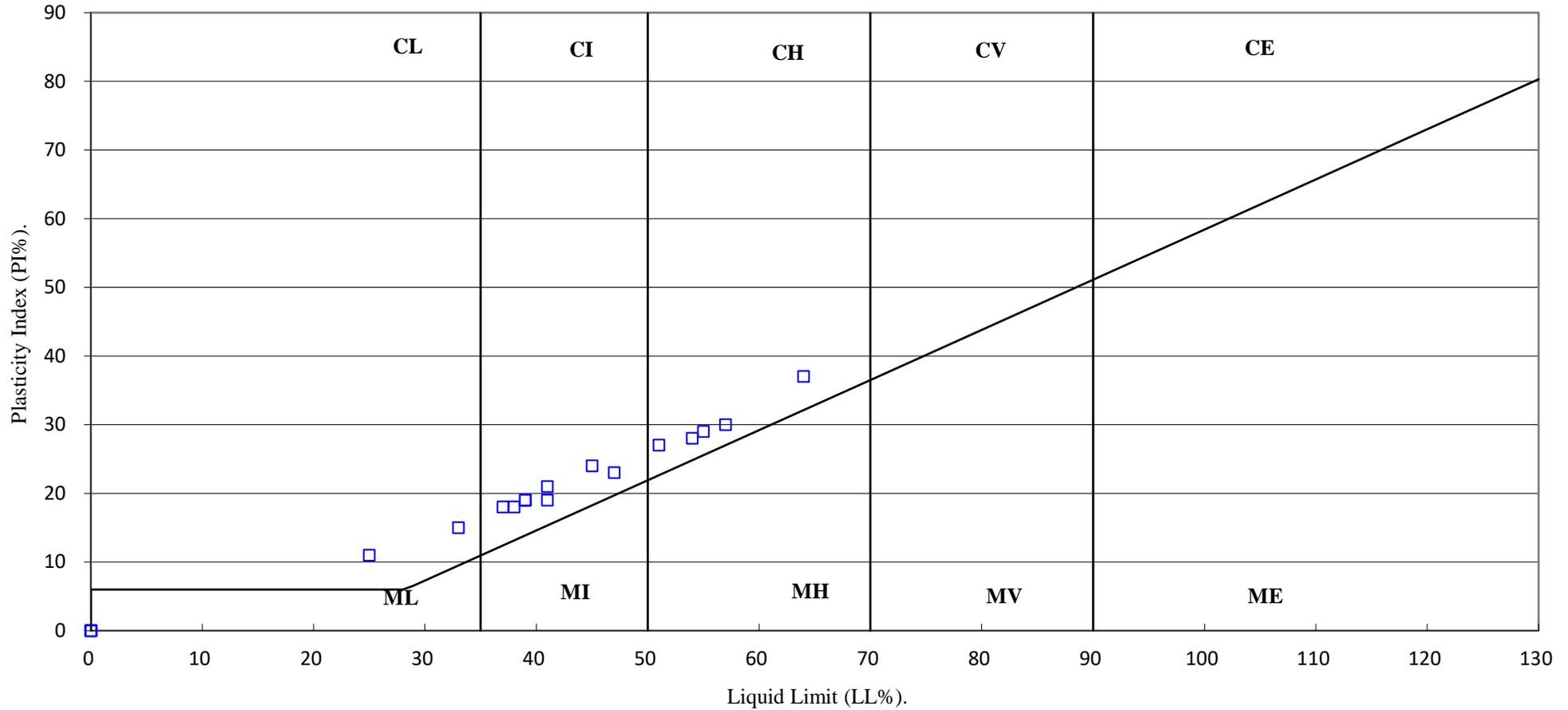
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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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Barnsley West (LT1)

Contract No:

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
BH201	10	D&B	6.50		19			44	21	23	65	Intermediate Plasticity CI
BH202	4	D&B	2.00		8.2			45	22	23	88	Intermediate Plasticity CI
BH203	4	D&B	2.00		16		2.62	44	22	22	82	Intermediate Plasticity CI
BH204	8	D&B	5.00		15		2.63	39	20	19	42	Intermediate Plasticity CI
BH205	7	D&B	4.00		20		2.63	47	23	24	82	Intermediate Plasticity CI
TP049	2	D&B	2.50		14		2.60	43	21	22	71	Intermediate Plasticity CI
TP062	3	D&B	3.00		16		2.59	40	20	20	83	Intermediate Plasticity CI
TP067	2	D&B	0.90		14		2.60	41	20	21	68	Intermediate Plasticity CI
TP104	3	D&B	1.50		13		2.59	37	19	18	65	Intermediate Plasticity CI
TP201	3	D&B	0.80		14		2.64	40	20	20	63	Intermediate Plasticity CI
TP213	3	D&B	0.60		16		2.63	44	22	22	59	Intermediate Plasticity CI
TP220	1	D&B	1.00		14		2.64	38	19	19	75	Intermediate Plasticity CI
TP223	2	D&B	2.00		12			40	20	20	82	Intermediate Plasticity CI
TP43	3	D&B	2.40		12		2.60	43	22	21	63	Intermediate Plasticity CI
TP71	2	D&B	1.00		14		2.61	49	24	25	70	Intermediate Plasticity CI
TP71	3	D&B	2.00		18		2.68	40	20	20	76	Intermediate Plasticity CI

SYMBOLS : NP : Non Plastic

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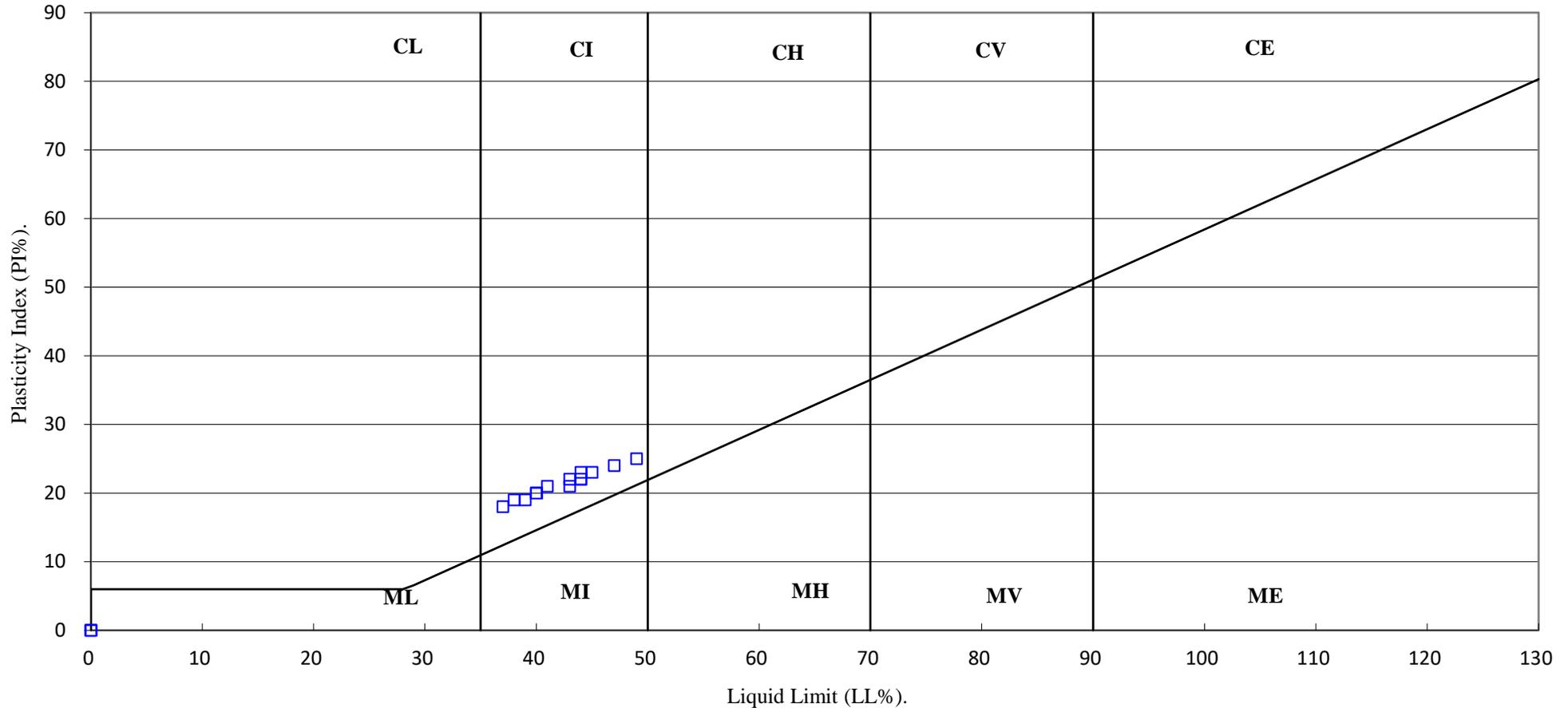
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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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PARTICLE SIZE DISTRIBUTION TEST

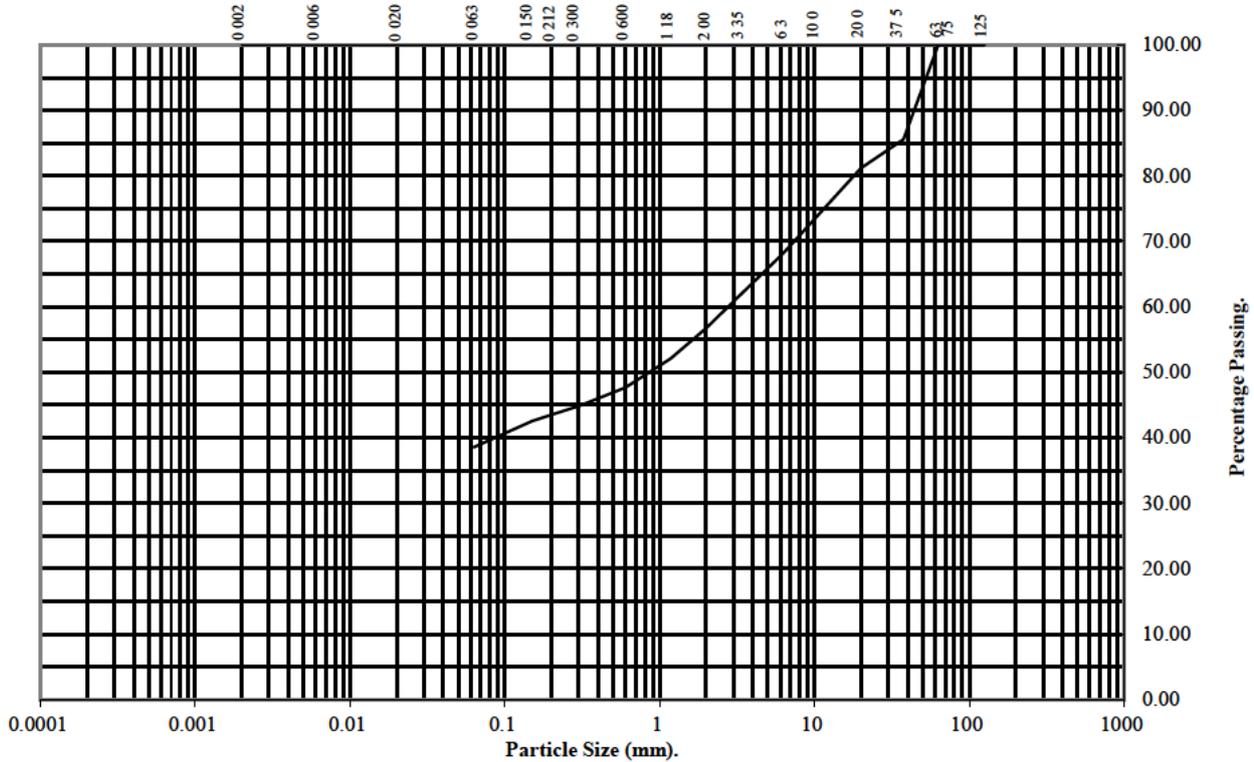
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH011 **Top Depth (m):** 3.00

Sample Number: 6 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	86
20	81
10	73
6.3	68
3.35	62
2	57
1.18	52
0.6	48
0.3	45
0.212	44
0.15	43
0.063	39

Soil Fraction	Total Percentage
Cobbles	0
Gravel	43
Sand	18
Silt/Clay	39

Remarks:
See Summary of Soil Descriptions



Barnsley West (LT1)

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PARTICLE SIZE DISTRIBUTION TEST

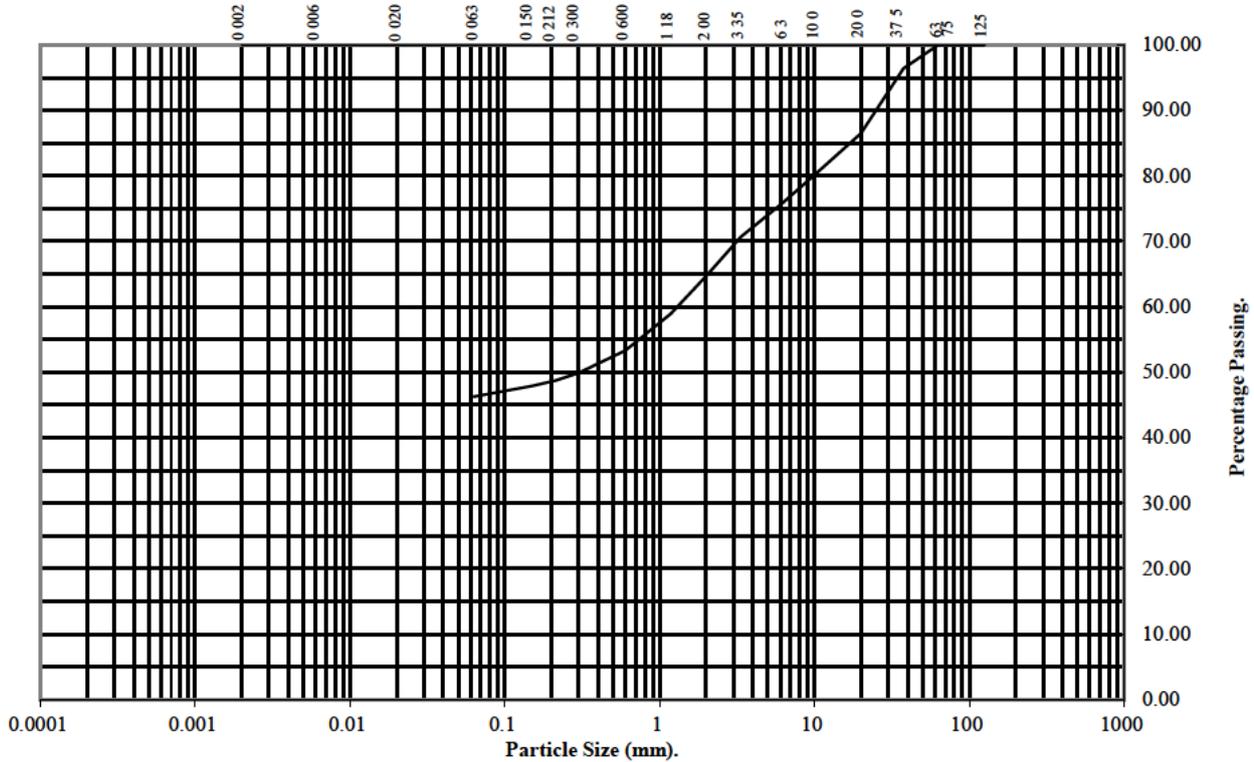
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH014 **Top Depth (m):** 4.00

Sample Number: 7 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	96
20	86
10	80
6.3	76
3.35	71
2	65
1.18	59
0.6	53
0.3	50
0.212	49
0.15	48
0.063	46

Soil Fraction	Total Percentage
Cobbles	0
Gravel	35
Sand	19
Silt/Clay	46

Remarks:
See Summary of Soil Descriptions



Barnsley West (LT1)

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PARTICLE SIZE DISTRIBUTION TEST

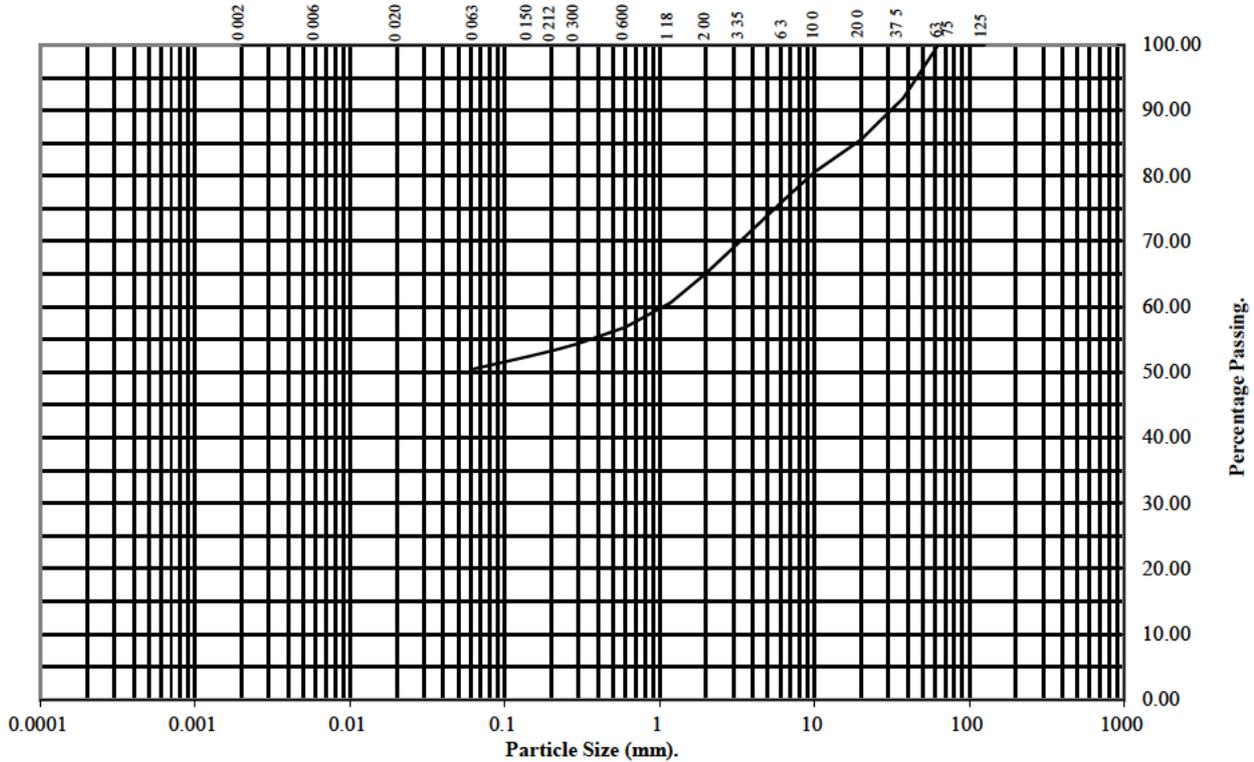
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH015 **Top Depth (m):** 3.00

Sample Number: 5 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	92
20	86
10	81
6.3	76
3.35	70
2	65
1.18	61
0.6	57
0.3	54
0.212	53
0.15	53
0.063	51

Soil Fraction	Total Percentage
Cobbles	0
Gravel	35
Sand	14
Silt/Clay	51

Remarks:
See Summary of Soil Descriptions



Barnsley West (LT1)

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PARTICLE SIZE DISTRIBUTION TEST

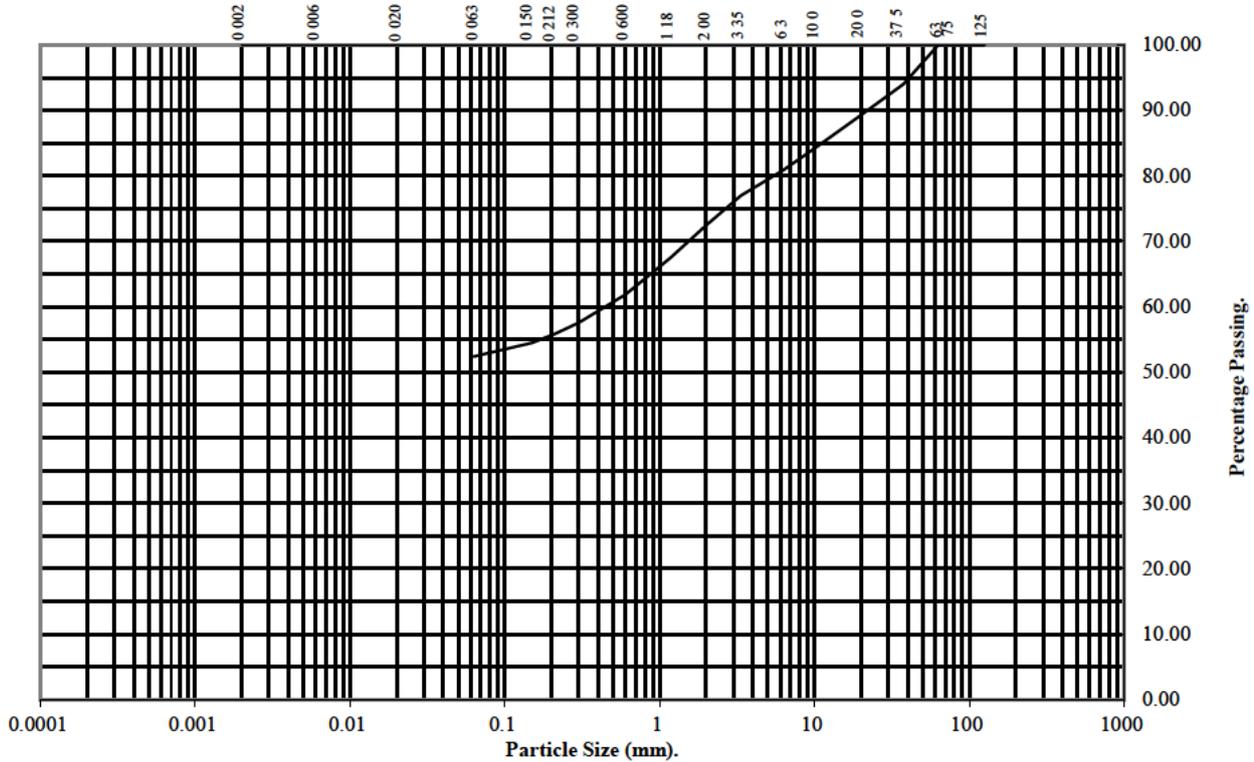
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH015** Top Depth (m): **5.00**

Sample Number: **8** Base Depth(m):

Sample Type: **D&B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	94
20	89
10	84
6.3	81
3.35	77
2	72
1.18	68
0.6	62
0.3	58
0.212	56
0.15	54
0.063	52

Soil Fraction	Total Percentage
Cobbles	0
Gravel	28
Sand	20
Silt/Clay	52

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

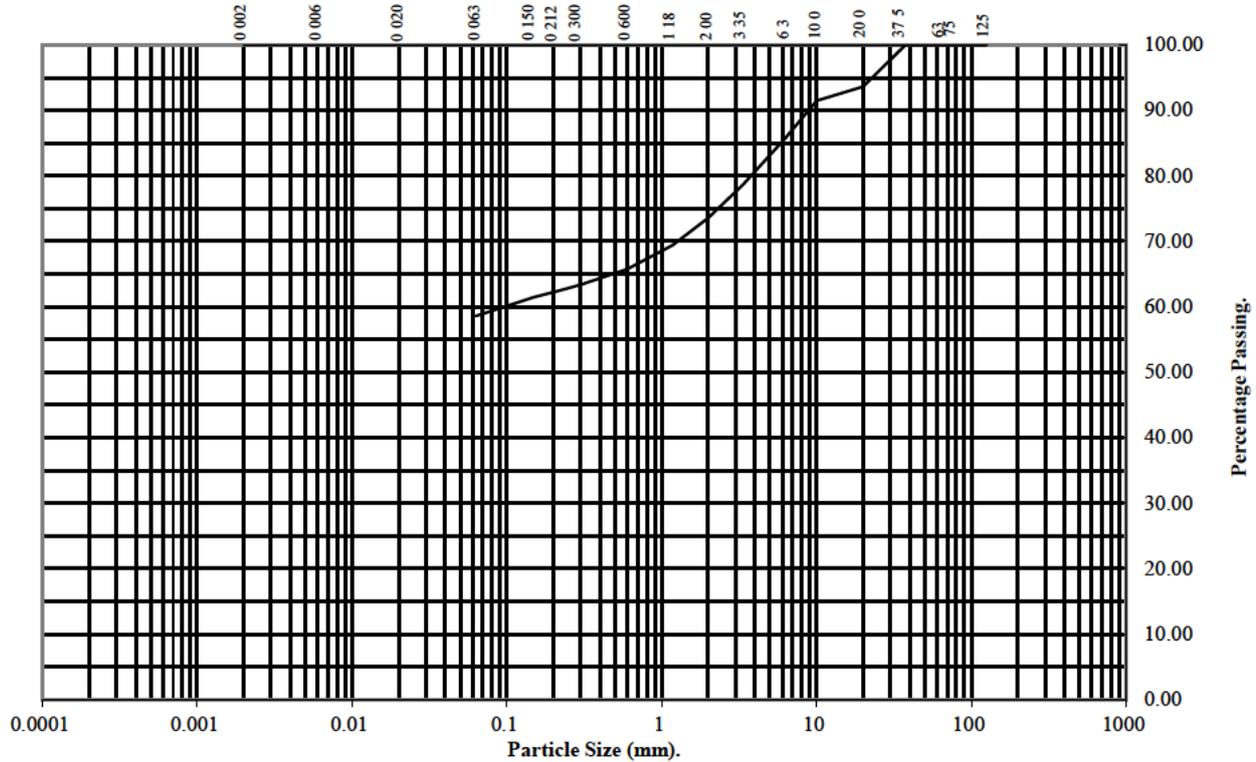
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH201** Top Depth (m): **6.50**

Sample Number: **10** Base Depth(m):

Sample Type: **D&B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	94
10	91
6.3	86
3.35	79
2	74
1.18	69
0.6	66
0.3	63
0.212	62
0.15	61
0.063	59

Soil Fraction	Total Percentage
Cobbles	0
Gravel	26
Sand	15
Silt/Clay	59

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

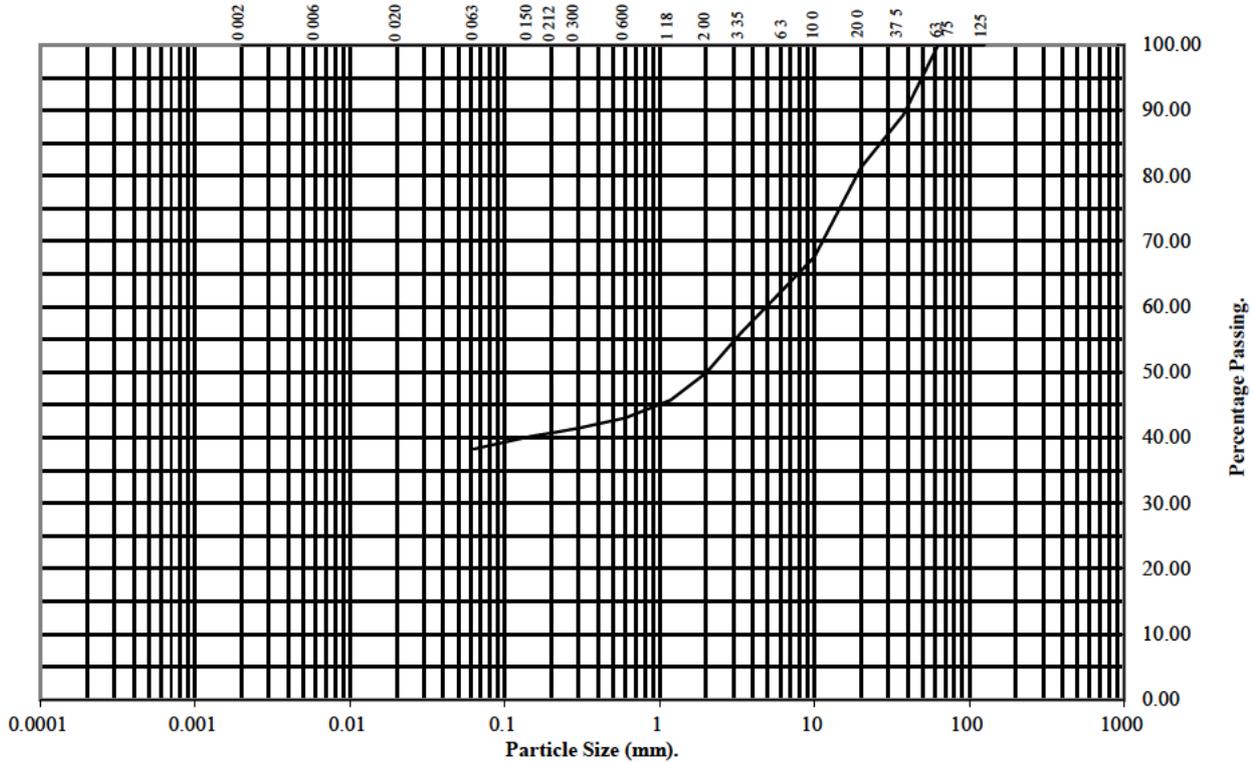
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: BH204 **Top Depth (m):** 5.00

Sample Number: 8 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	89
20	81
10	68
6.3	63
3.35	56
2	50
1.18	46
0.6	43
0.3	41
0.212	41
0.15	40
0.063	38

Soil Fraction	Total Percentage
Cobbles	0
Gravel	50
Sand	12
Silt/Clay	38

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

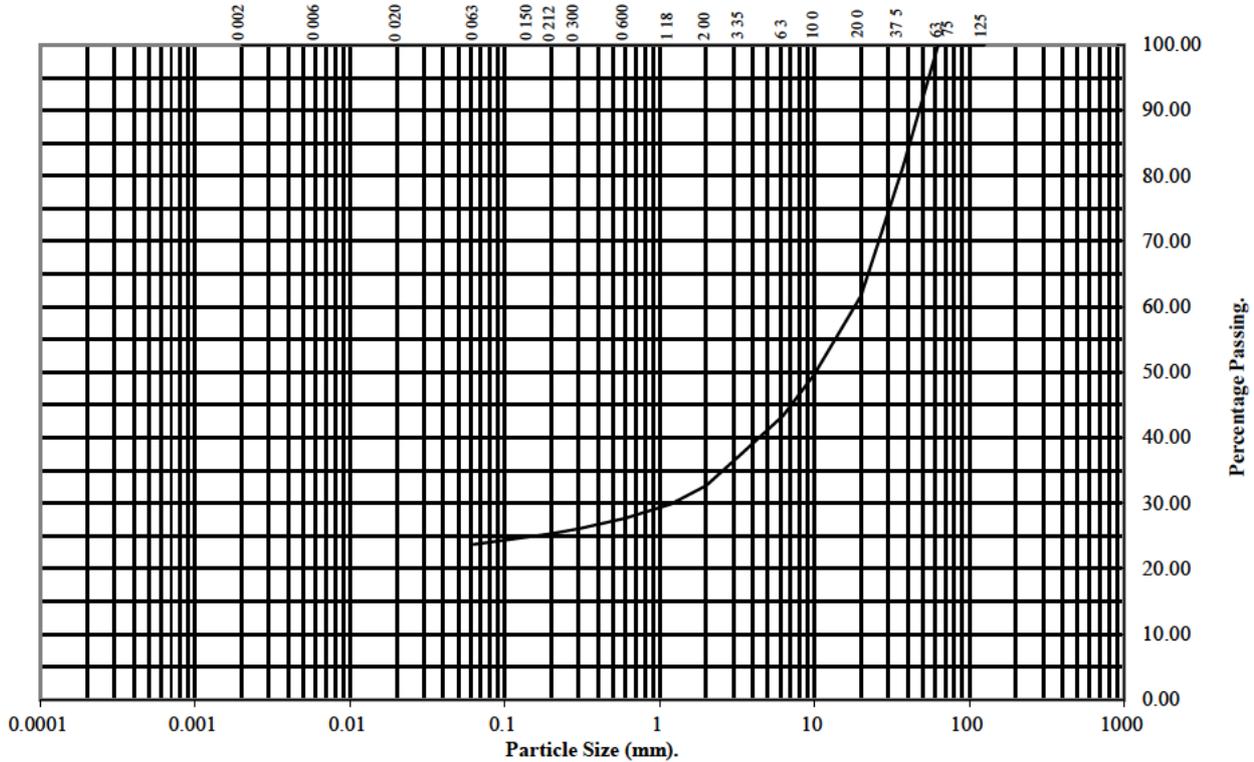
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP39 Top Depth (m): 1.00

Sample Number: 2 Base Depth(m):

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	82
20	62
10	50
6.3	43
3.35	37
2	33
1.18	30
0.6	28
0.3	26
0.212	25
0.15	25
0.063	24

Soil Fraction	Total Percentage
Cobbles	0
Gravel	67
Sand	9
Silt/Clay	24

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

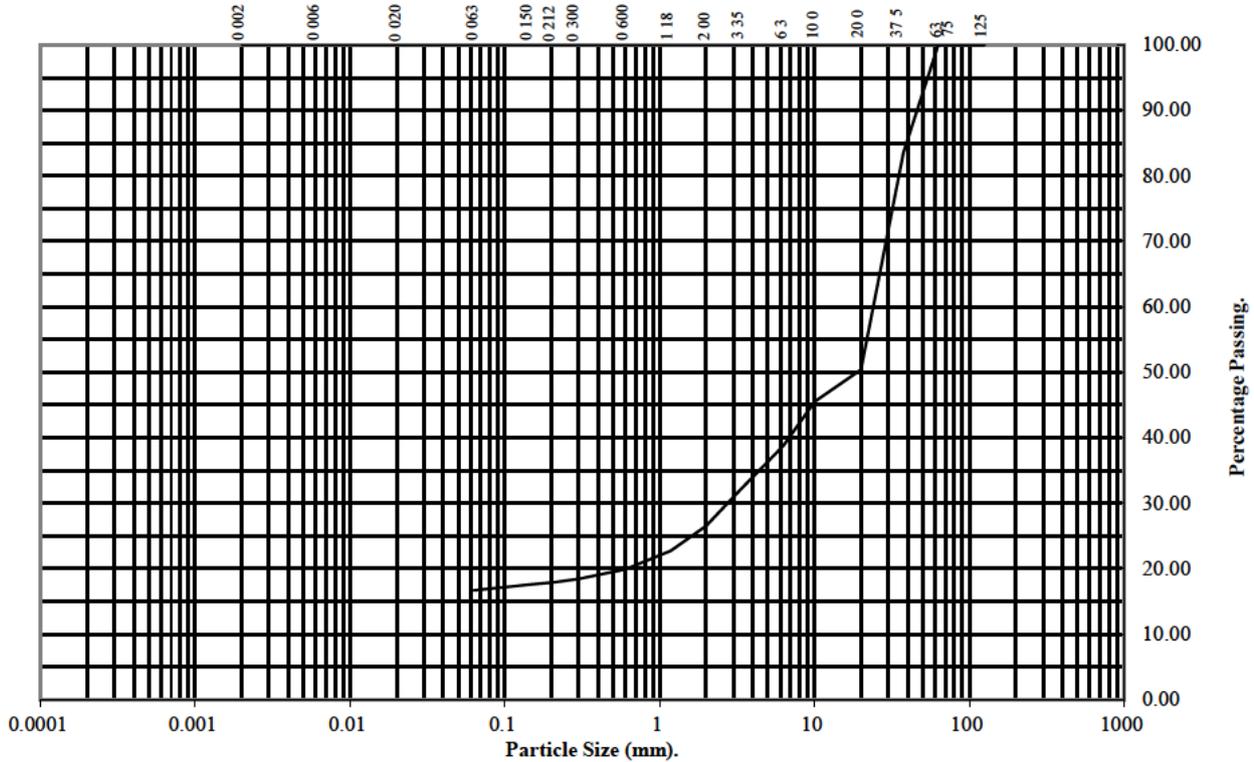
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP44 **Top Depth (m):** 0.80

Sample Number: 1 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	84
20	50
10	46
6.3	39
3.35	32
2	27
1.18	23
0.6	20
0.3	18
0.212	18
0.15	18
0.063	17

Soil Fraction	Total Percentage
Cobbles	0
Gravel	73
Sand	10
Silt/Clay	17

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

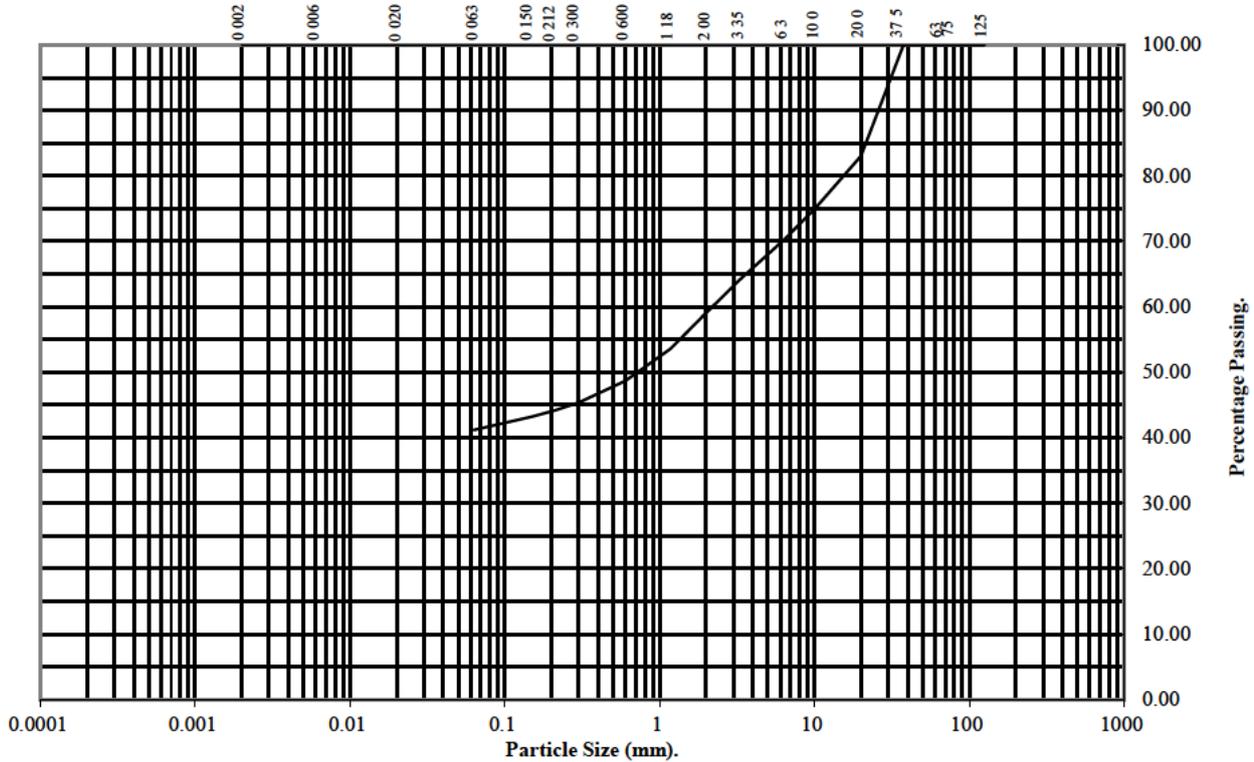
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP46 **Top Depth (m):** 1.00

Sample Number: 2 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	83
10	75
6.3	70
3.35	64
2	59
1.18	54
0.6	49
0.3	45
0.212	44
0.15	43
0.063	41

Soil Fraction	Total Percentage
Cobbles	0
Gravel	41
Sand	18
Silt/Clay	41

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

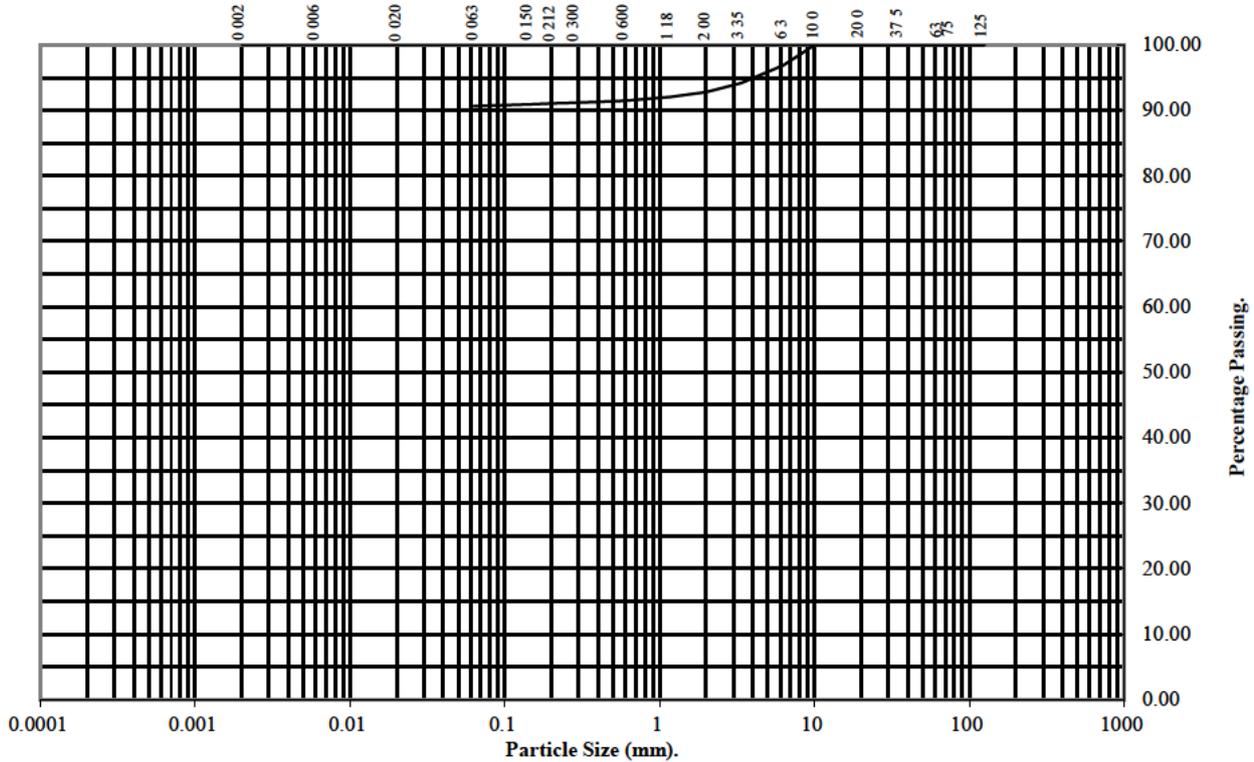
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP51 **Top Depth (m):** 0.80

Sample Number: 1 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	97
3.35	94
2	93
1.18	92
0.6	92
0.3	91
0.212	91
0.15	91
0.063	91

Soil Fraction	Total Percentage
Cobbles	0
Gravel	7
Sand	2
Silt/Clay	91

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

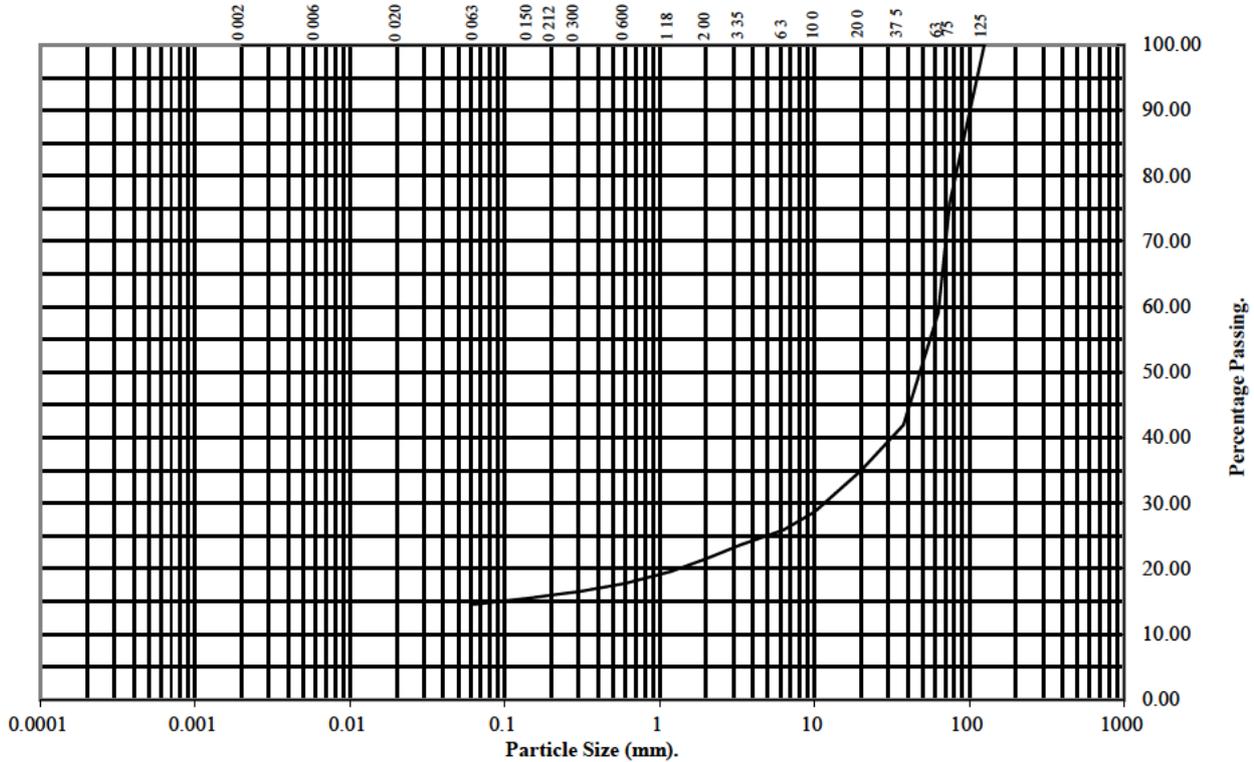
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP064 **Top Depth (m):** 2.00

Sample Number: 4 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	76
63	59
37.5	42
20	35
10	29
6.3	26
3.35	24
2	22
1.18	20
0.6	18
0.3	16
0.212	16
0.15	16
0.063	15

Soil Fraction	Total Percentage
Cobbles	41
Gravel	37
Sand	7
Silt/Clay	15

Remarks:
See Summary of Soil Descriptions



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Client Ref:
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PARTICLE SIZE DISTRIBUTION TEST

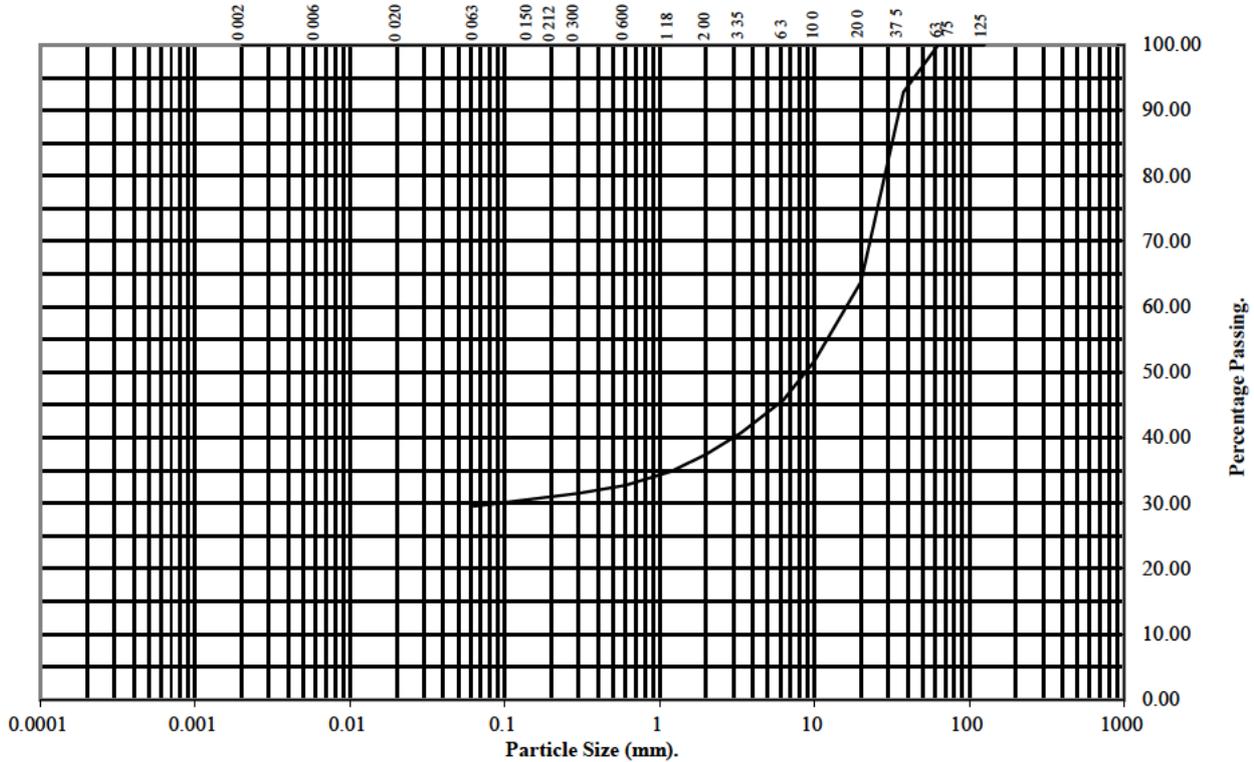
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP069 **Top Depth (m):** 0.70

Sample Number: 2 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	93
20	64
10	52
6.3	46
3.35	41
2	37
1.18	35
0.6	33
0.3	32
0.212	31
0.15	31
0.063	30

Soil Fraction	Total Percentage
Cobbles	0
Gravel	63
Sand	7
Silt/Clay	30

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

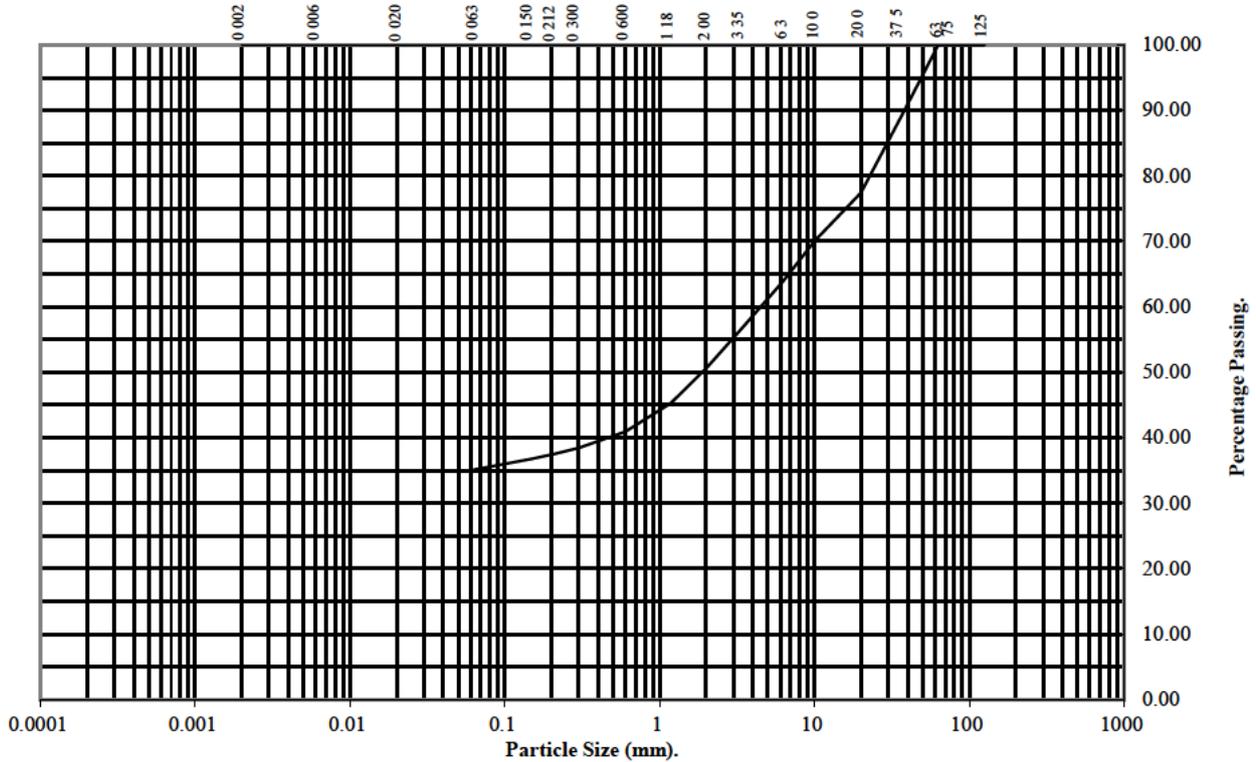
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP105 **Top Depth (m):** 1.00

Sample Number: 3 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	90
20	77
10	70
6.3	64
3.35	57
2	51
1.18	45
0.6	41
0.3	38
0.212	38
0.15	37
0.063	35

Soil Fraction	Total Percentage
Cobbles	0
Gravel	49
Sand	16
Silt/Clay	35

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

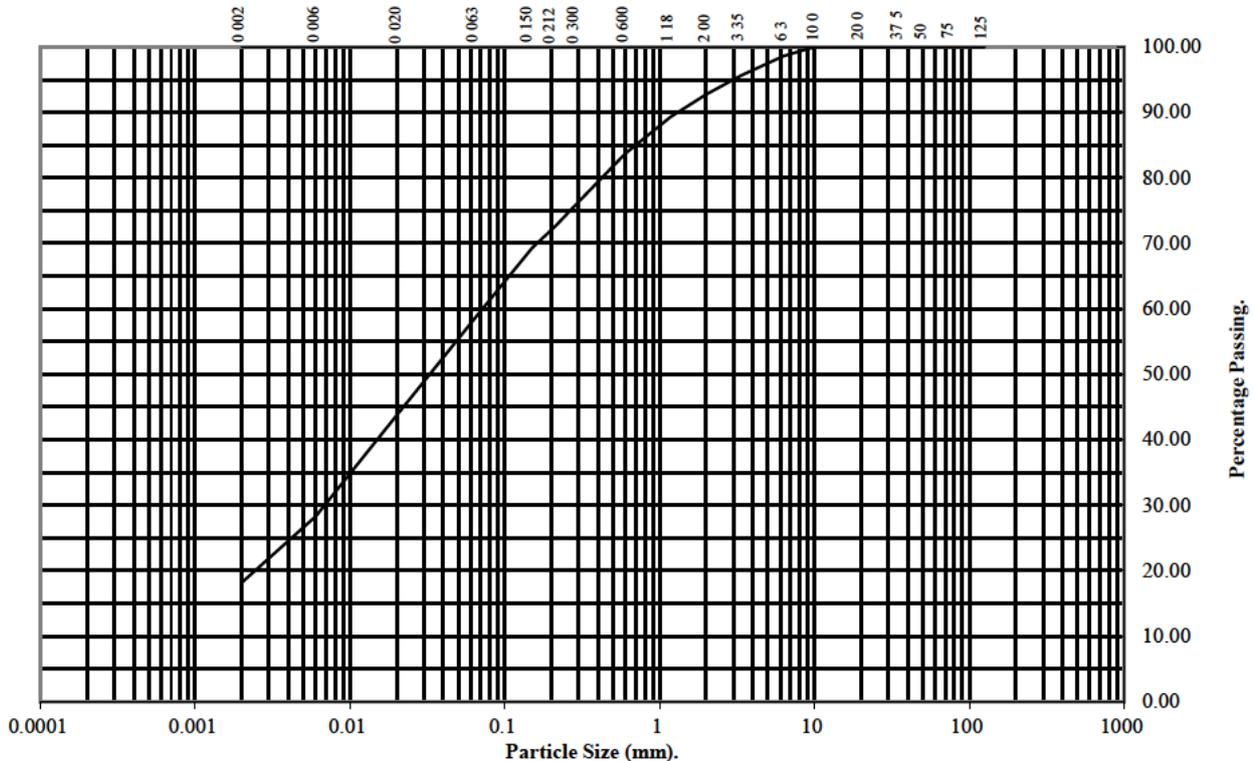
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP068 **Top Depth (m):** 0.10

Sample Number: 1 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	100
10	100
6.3	99
3.35	96
2	93
1.18	89
0.6	84
0.3	76
0.212	73
0.15	69
0.063	58

Particle Diameter	Percentage Passing
0.02	44
0.006	28
0.002	18

Soil Fraction	Total Percentage
Cobbles	0
Gravel	7
Sand	35
Silt	40
Clay	18

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

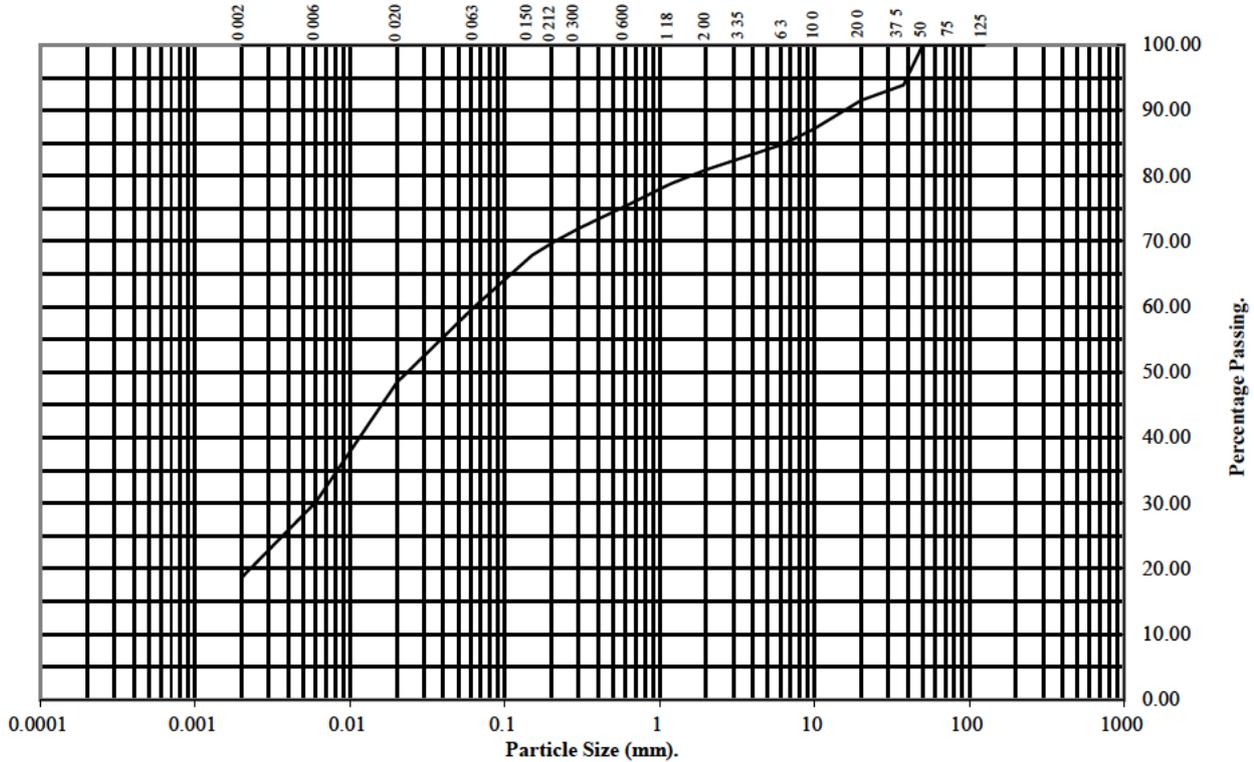
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP71 **Top Depth (m):** 0.10

Sample Number: 1 **Base Depth(m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	94
20	92
10	87
6.3	85
3.35	83
2	81
1.18	79
0.6	75
0.3	72
0.212	70
0.15	68
0.063	60

Particle Diameter	Percentage Passing
0.02	48
0.006	30
0.002	19

Soil Fraction	Total Percentage
Cobbles	0
Gravel	19
Sand	21
Silt	41
Clay	19

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

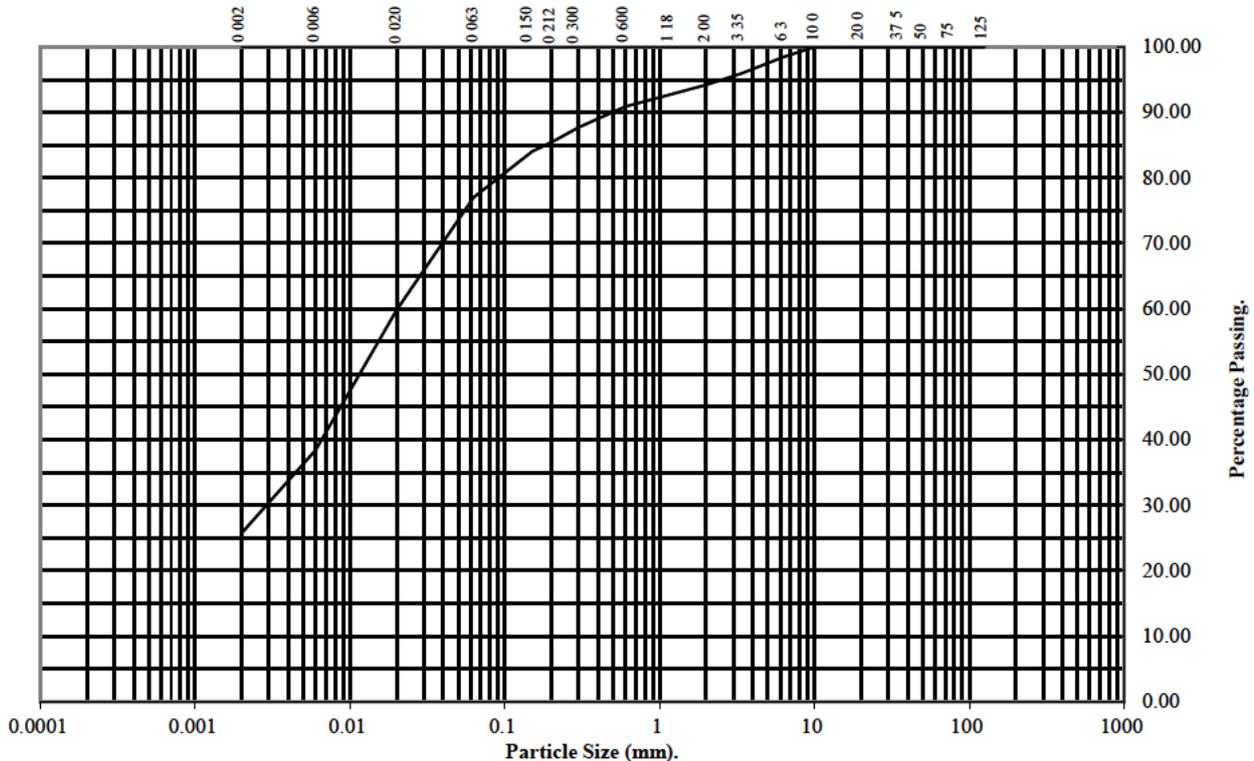
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP105 Top Depth (m): 0.20

Sample Number: 1 Base Depth(m):

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	100
10	100
6.3	98
3.35	96
2	94
1.18	93
0.6	91
0.3	88
0.212	86
0.15	84
0.063	77

Particle Diameter	Percentage Passing
0.02	60
0.006	38
0.002	26

Soil Fraction	Total Percentage
Cobbles	0
Gravel	6
Sand	17
Silt	51
Clay	26

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

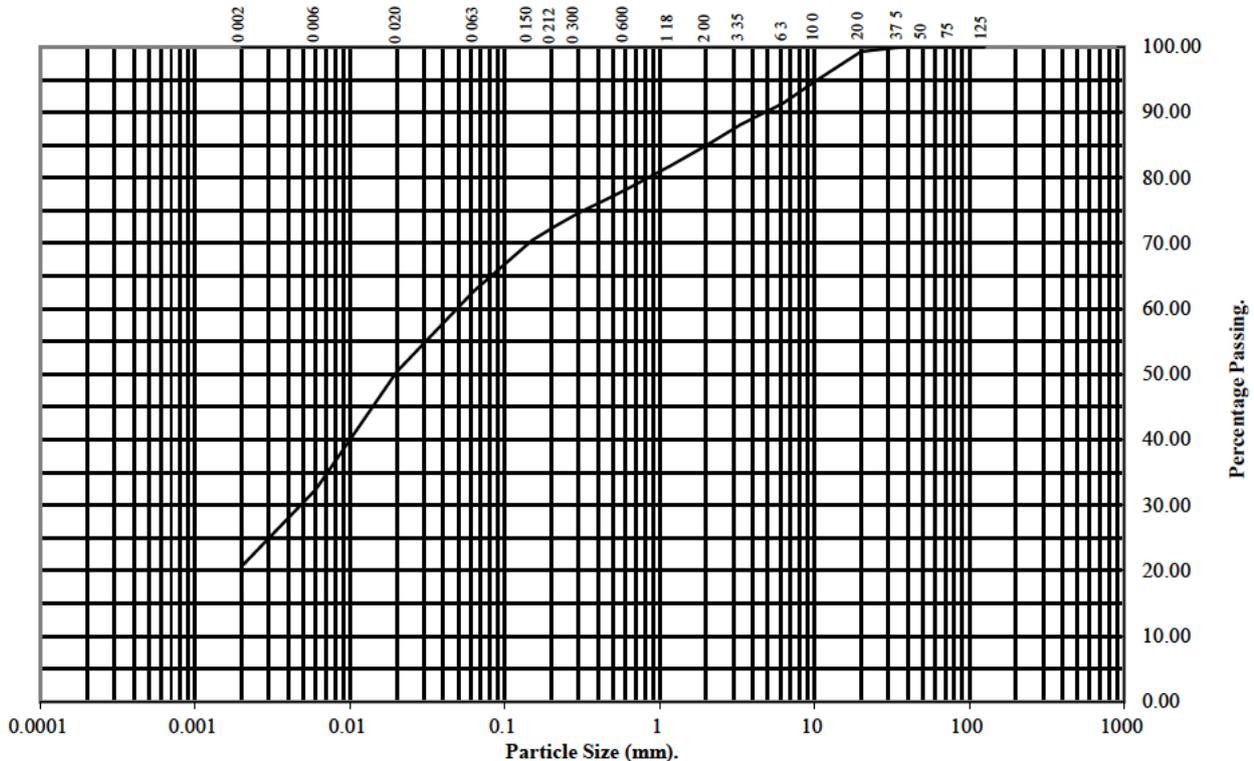
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP219 Top Depth (m): 0.10

Sample Number: 1 Base Depth(m):

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	99
10	95
6.3	91
3.35	88
2	85
1.18	82
0.6	78
0.3	75
0.212	73
0.15	70
0.063	63

Particle Diameter	Percentage Passing
0.02	50
0.006	32
0.002	21

Soil Fraction	Total Percentage
Cobbles	0
Gravel	15
Sand	22
Silt	42
Clay	21

Remarks:
See Summary of Soil Descriptions



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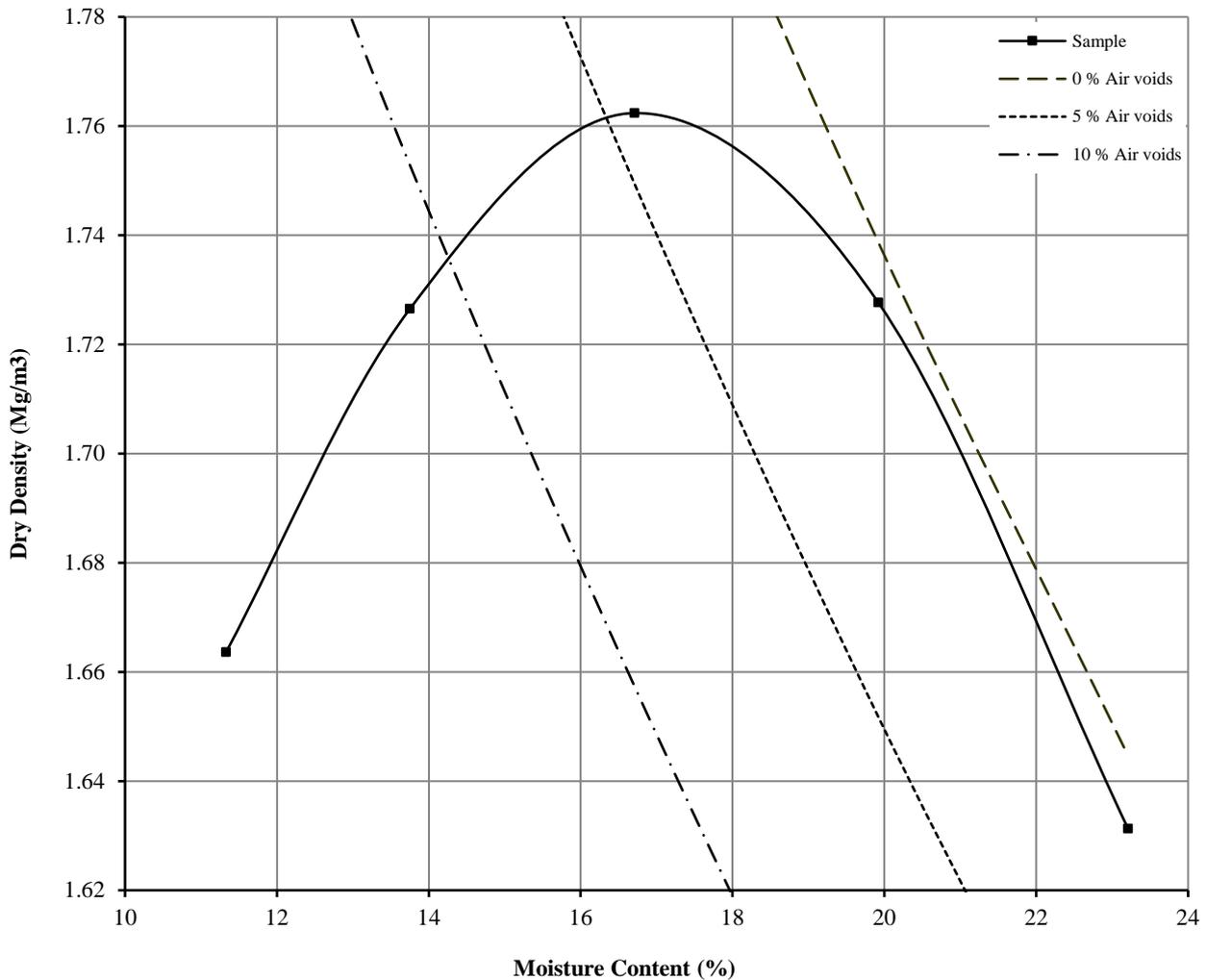
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: **BH014** Top Depth (m) : **0.40**

Sample Number: **1** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	23	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.66	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.76		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	17			
Remarks See summary of soil descriptions				



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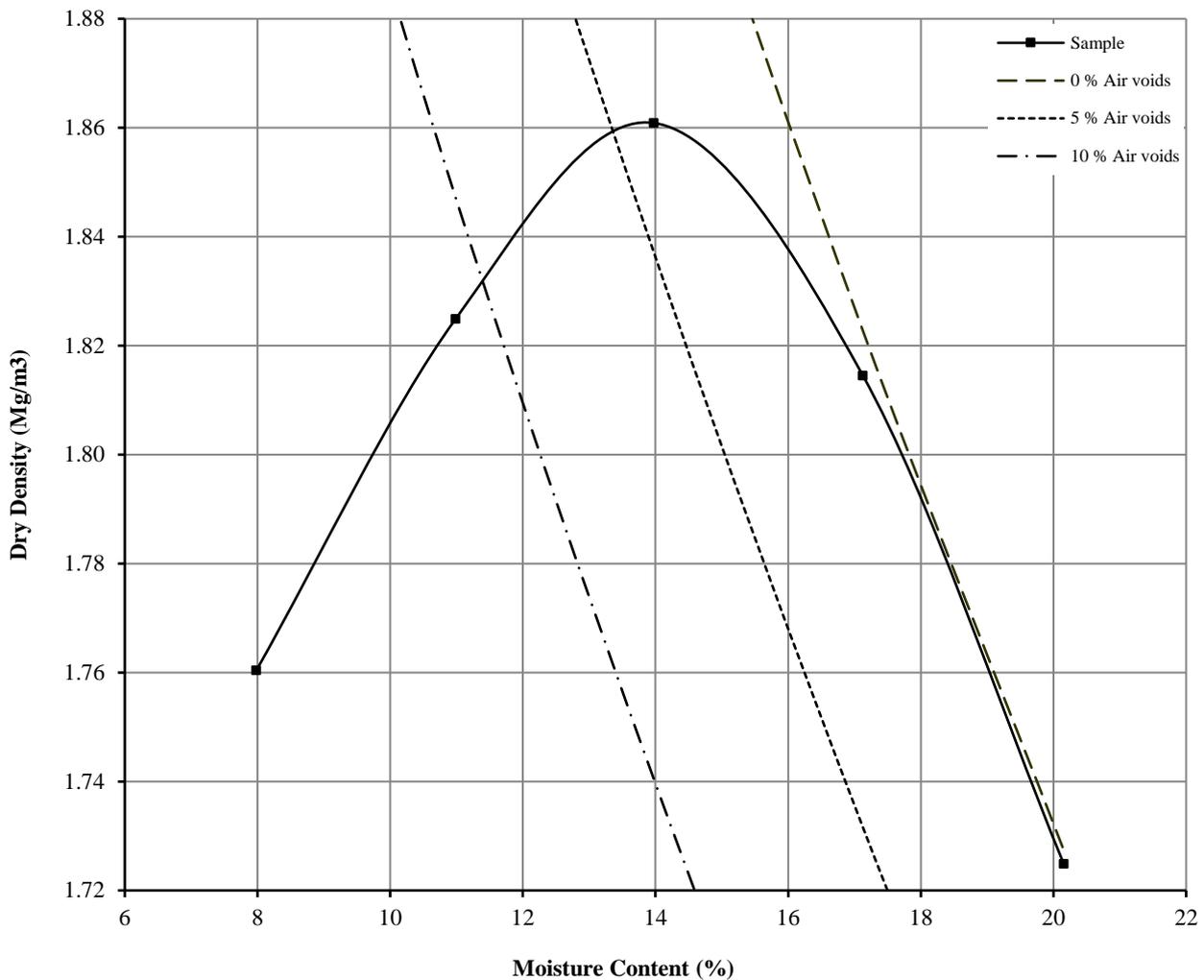
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **BH014** Top Depth (m) : **2.00**

Sample Number: **4** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	17	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.86		Material Retained on 20.0 mm Test Sieve (%):	9
Optimum Moisture Content (%):	14			
Remarks See summary of soil descriptions				



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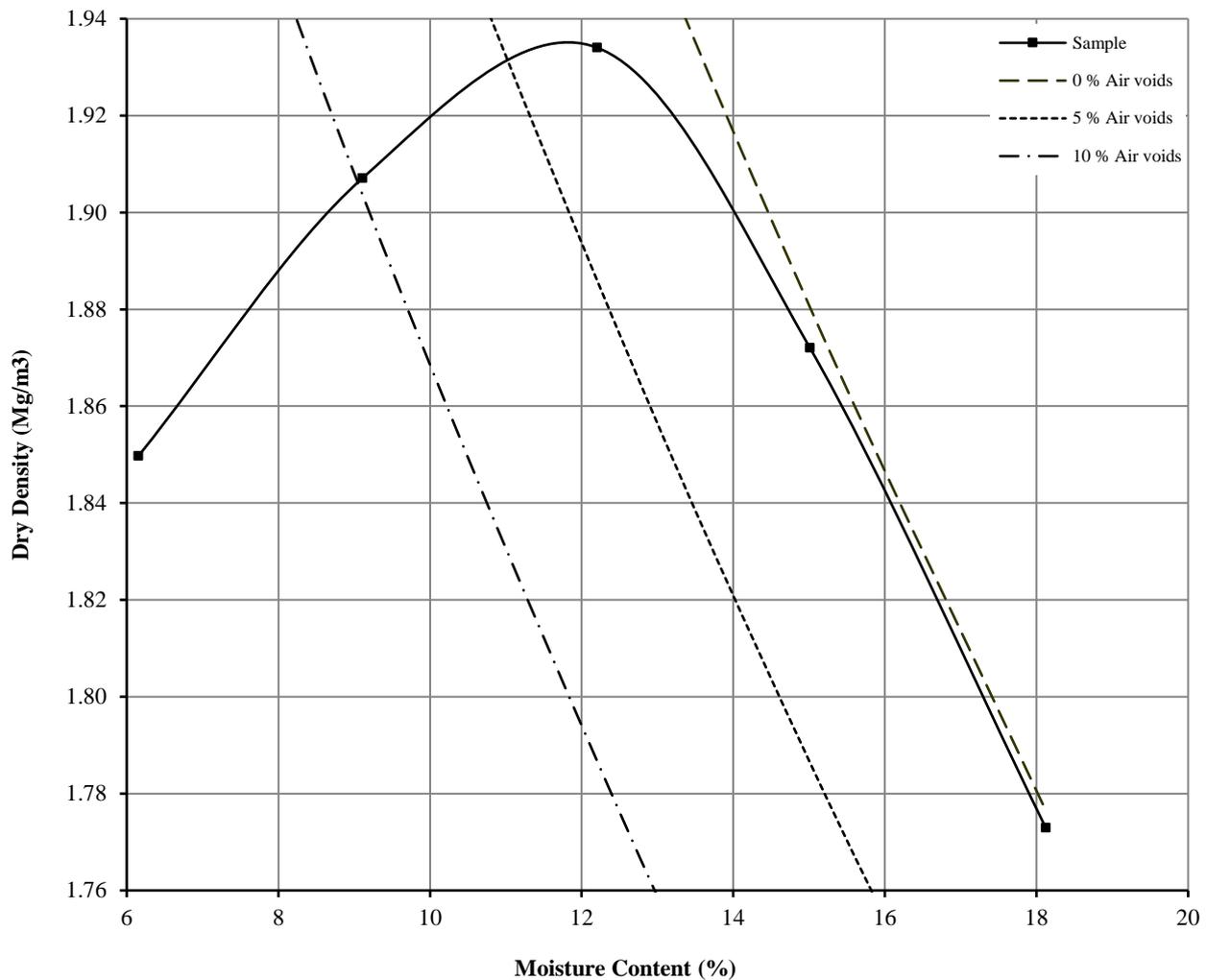
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **BH015** Top Depth (m) : **3.00**

Sample Number: **5** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.62	Measured	Material Retained on 37.5 mm Test Sieve (%):	8
Maximum Dry Density (Mg/m ³):	1.93		Material Retained on 20.0 mm Test Sieve (%):	6
Optimum Moisture Content (%):	12			
Remarks See summary of soil descriptions				



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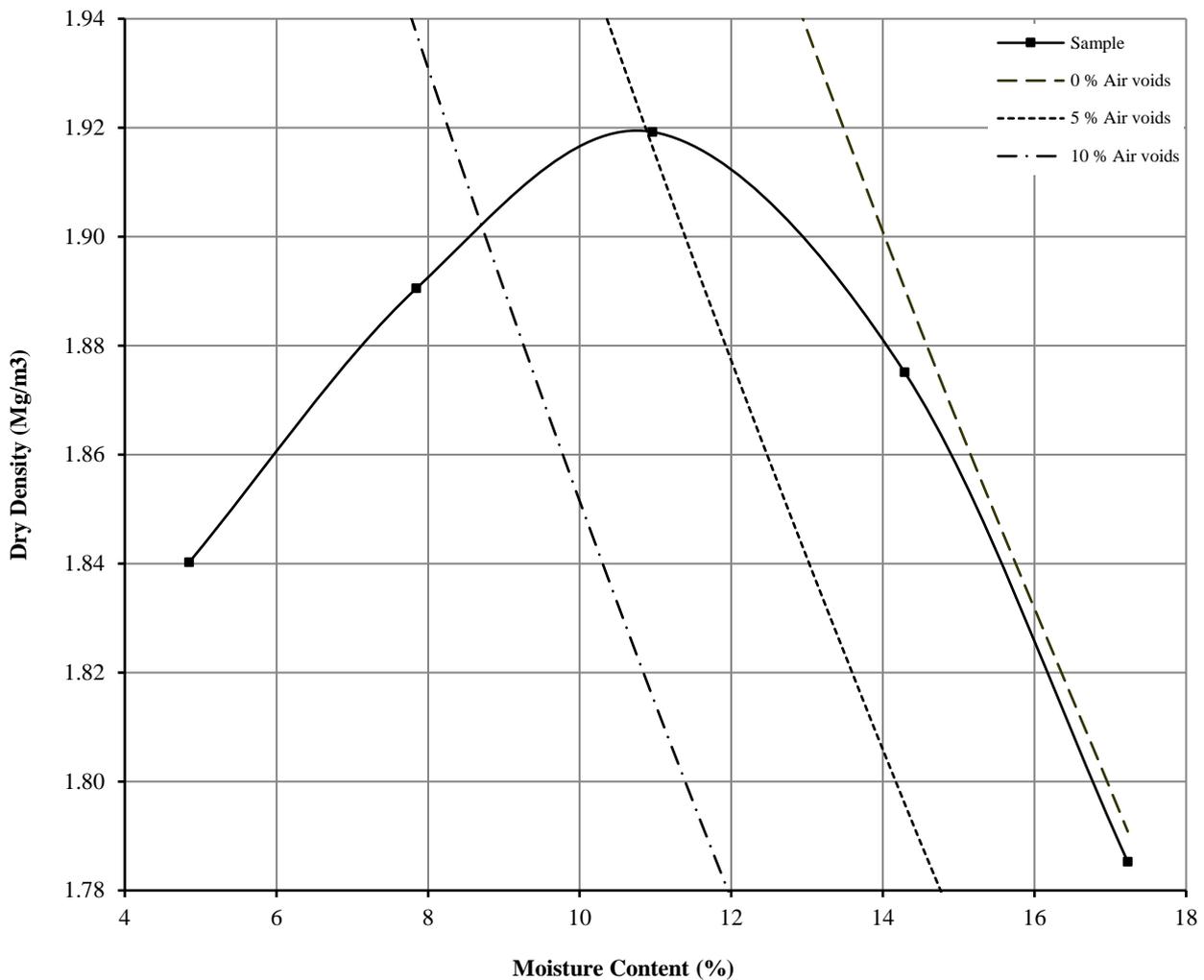
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **BH015** Top Depth (m) : **5.00**

Sample Number: **8** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.59	Measured	Material Retained on 37.5 mm Test Sieve (%):	6
Maximum Dry Density (Mg/m ³):	1.92		Material Retained on 20.0 mm Test Sieve (%):	5
Optimum Moisture Content (%):	11			
Remarks See summary of soil descriptions				



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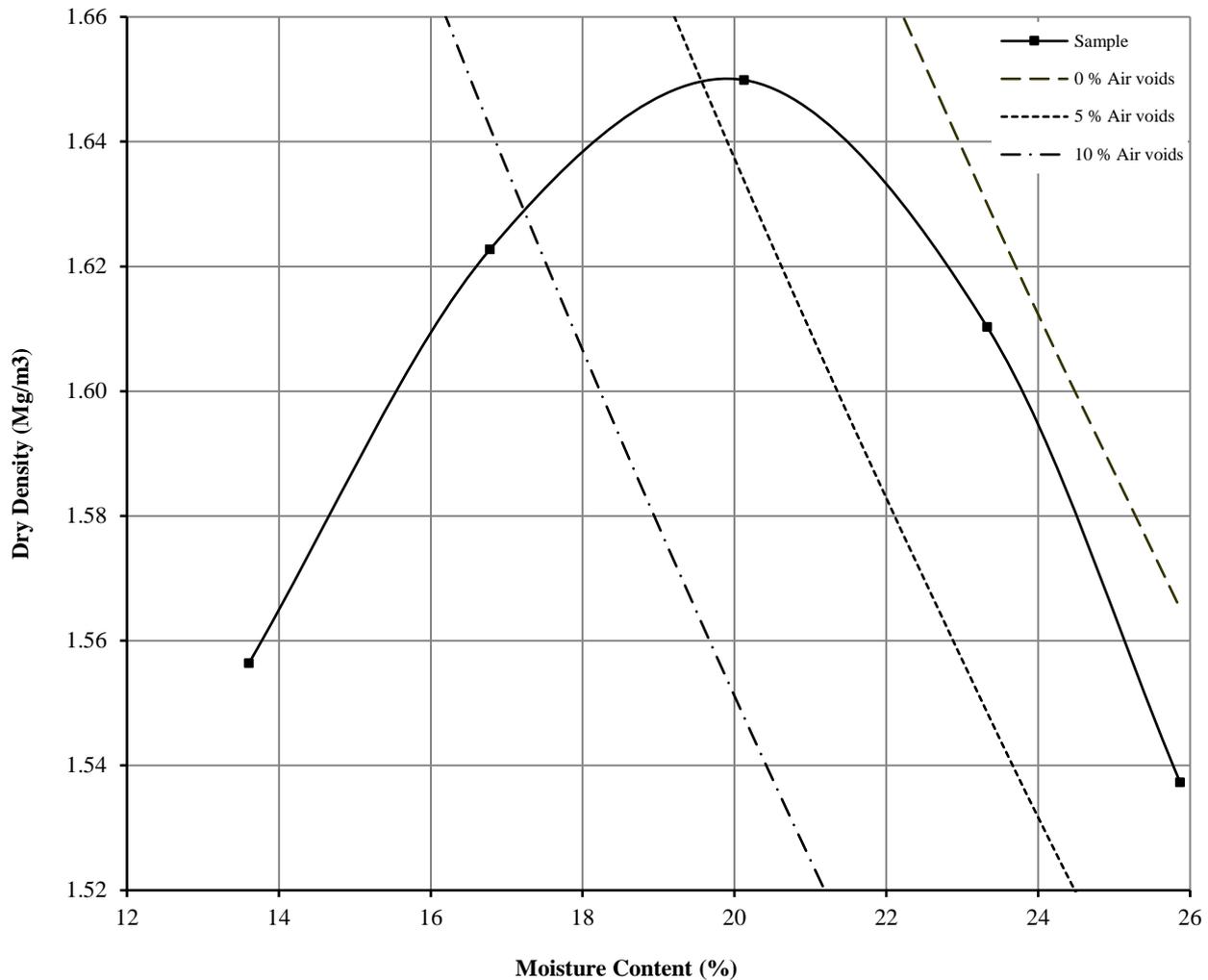
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: **BH201** Top Depth (m) : **0.00**

Sample Number: **1** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	23	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.65		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	20			
Remarks See summary of soil descriptions				



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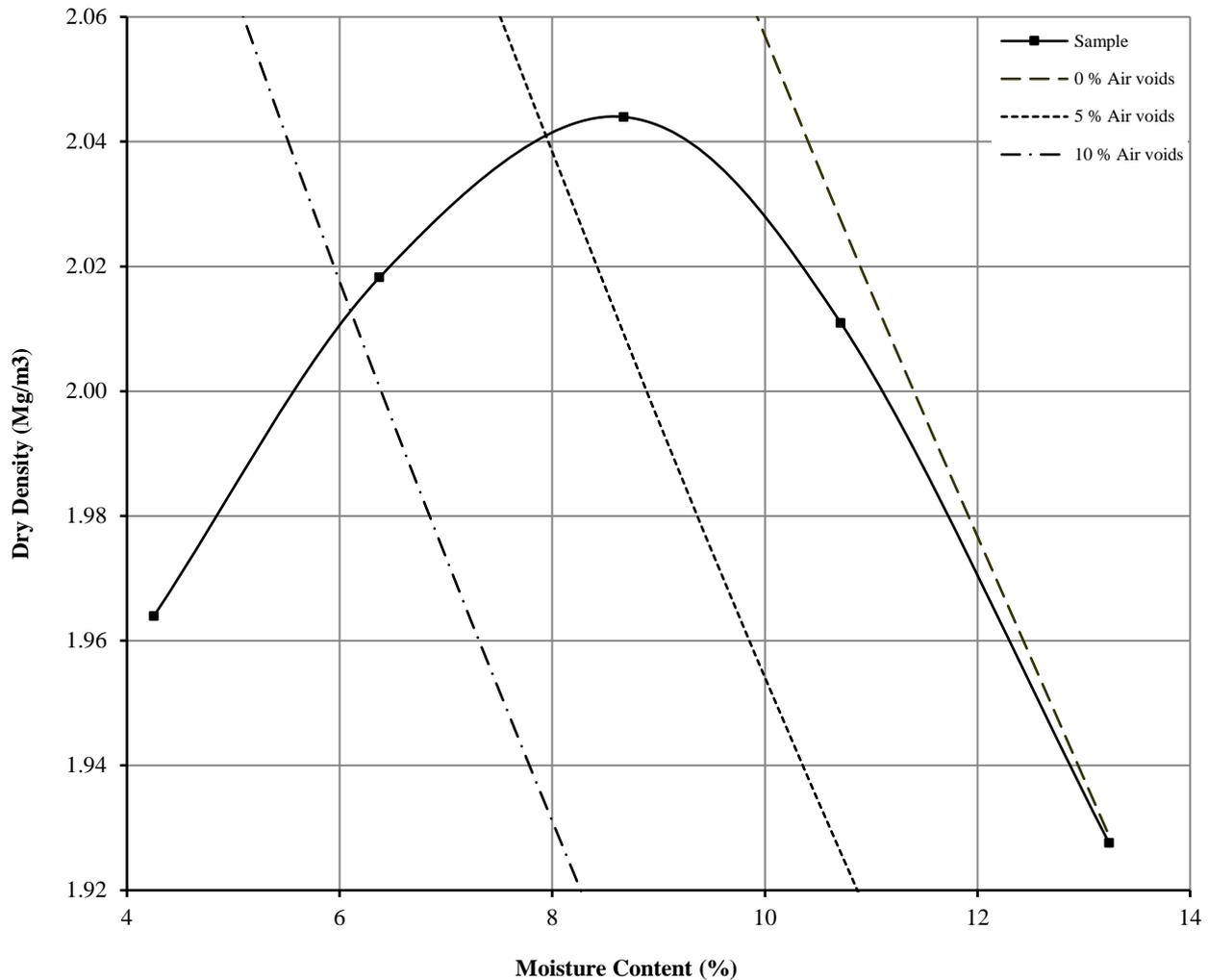
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **BH201** Top Depth (m) : **2.00**

Sample Number: **4** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	11	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.59	Measured	Material Retained on 37.5 mm Test Sieve (%):	5
Maximum Dry Density (Mg/m ³):	2.04	Material Retained on 20.0 mm Test Sieve (%):	8	
Optimum Moisture Content (%):	9			
Remarks See summary of soil descriptions				



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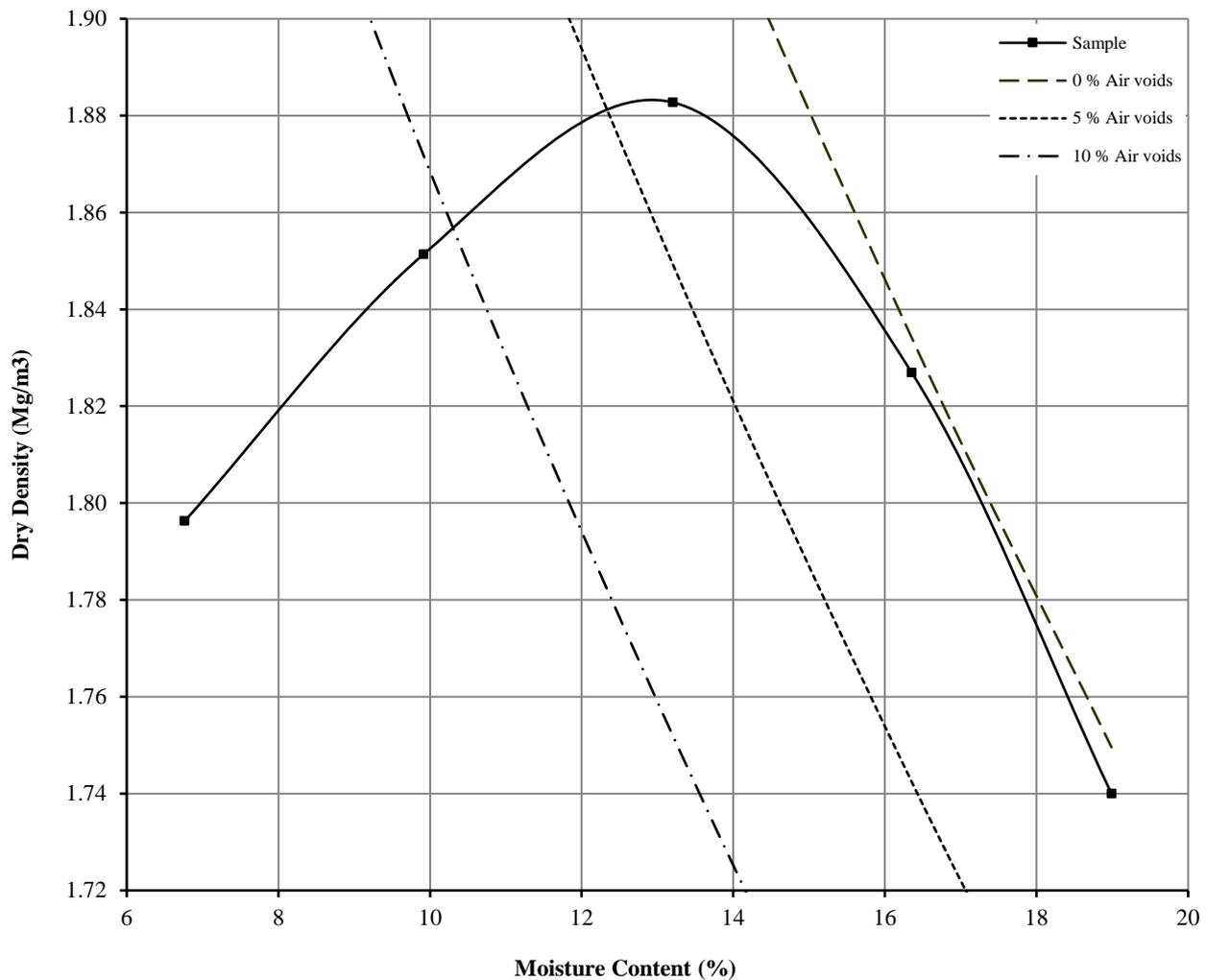
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **BH203** Top Depth (m) : **2.00**

Sample Number: **4** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	16	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.62	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.88	Material Retained on 20.0 mm Test Sieve (%):	15	
Optimum Moisture Content (%):	13			
Remarks See summary of soil descriptions				



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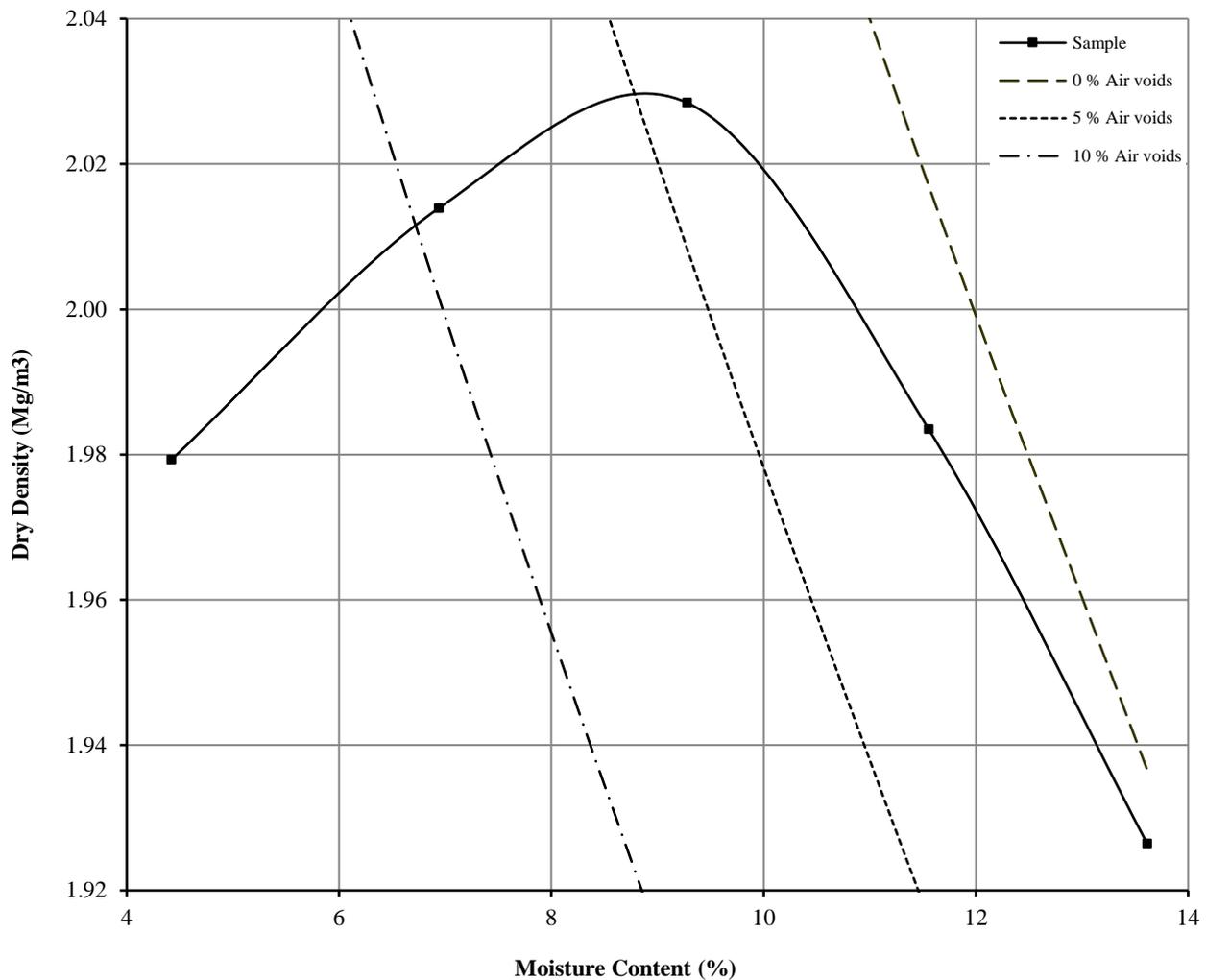
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: **BH203** Top Depth (m) : **5.00**

Sample Number: **7** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	2.03		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	9			
Remarks See summary of soil descriptions				



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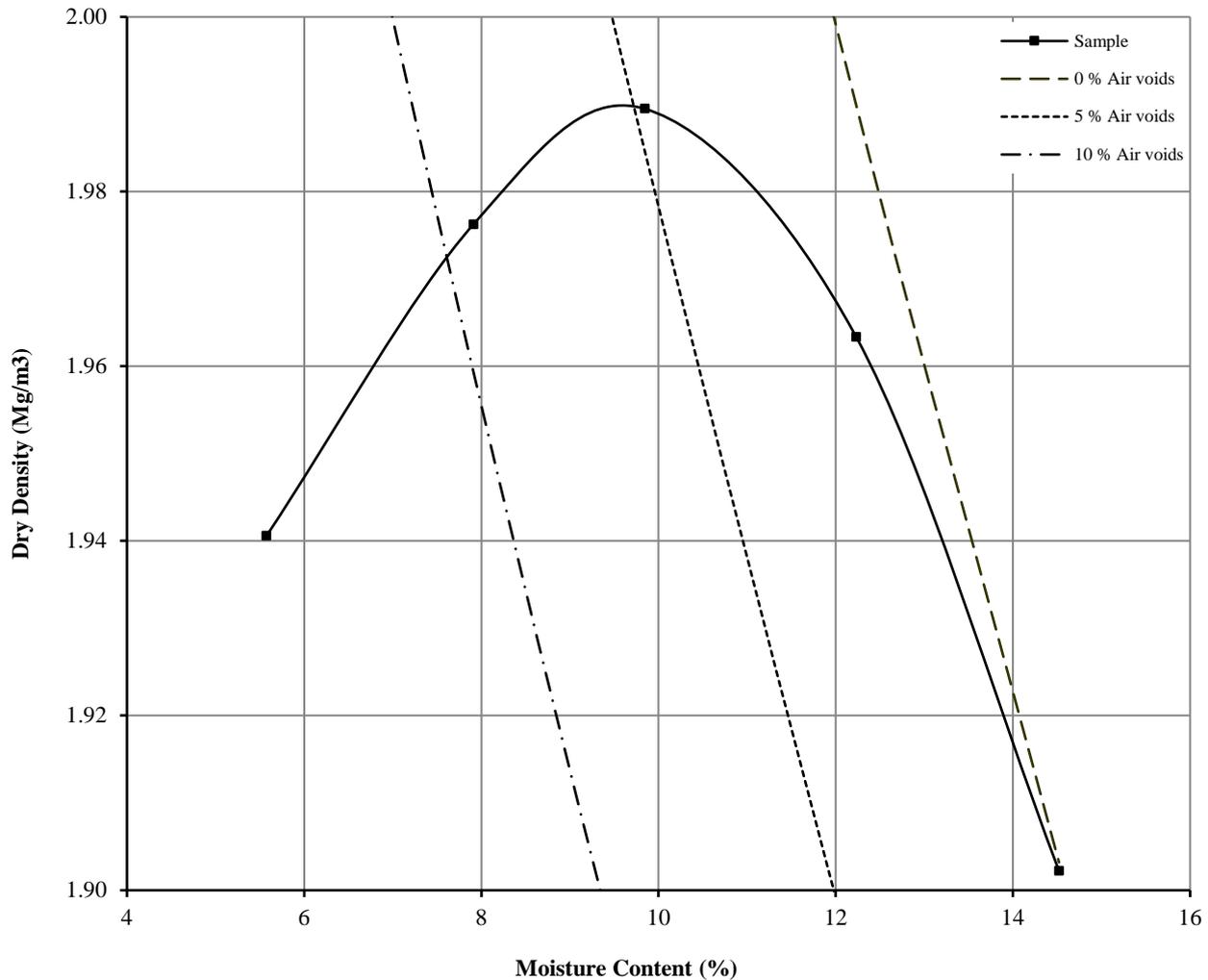
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: **BH204** Top Depth (m) : **5.00**

Sample Number: **8** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	11
Maximum Dry Density (Mg/m ³):	1.99		Material Retained on 20.0 mm Test Sieve (%):	8
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



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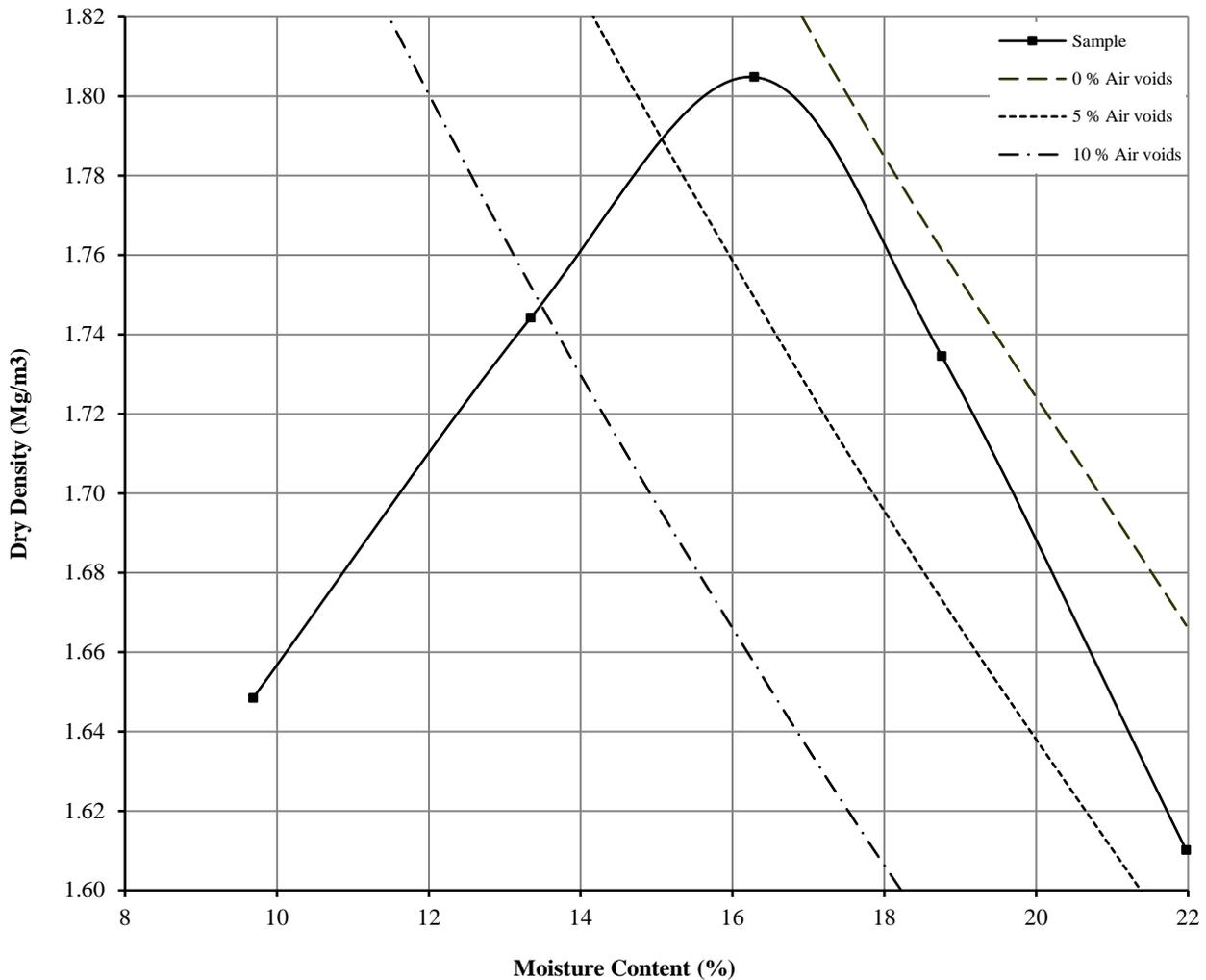
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: **BH205** Top Depth (m) : **4.00**

Sample Number: **7** Base Depth (m) :

Sample Type: **D&B**



Initial Moisture Content:	20	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.80		Material Retained on 20.0 mm Test Sieve (%):	3
Optimum Moisture Content (%):	16			
Remarks See summary of soil descriptions				



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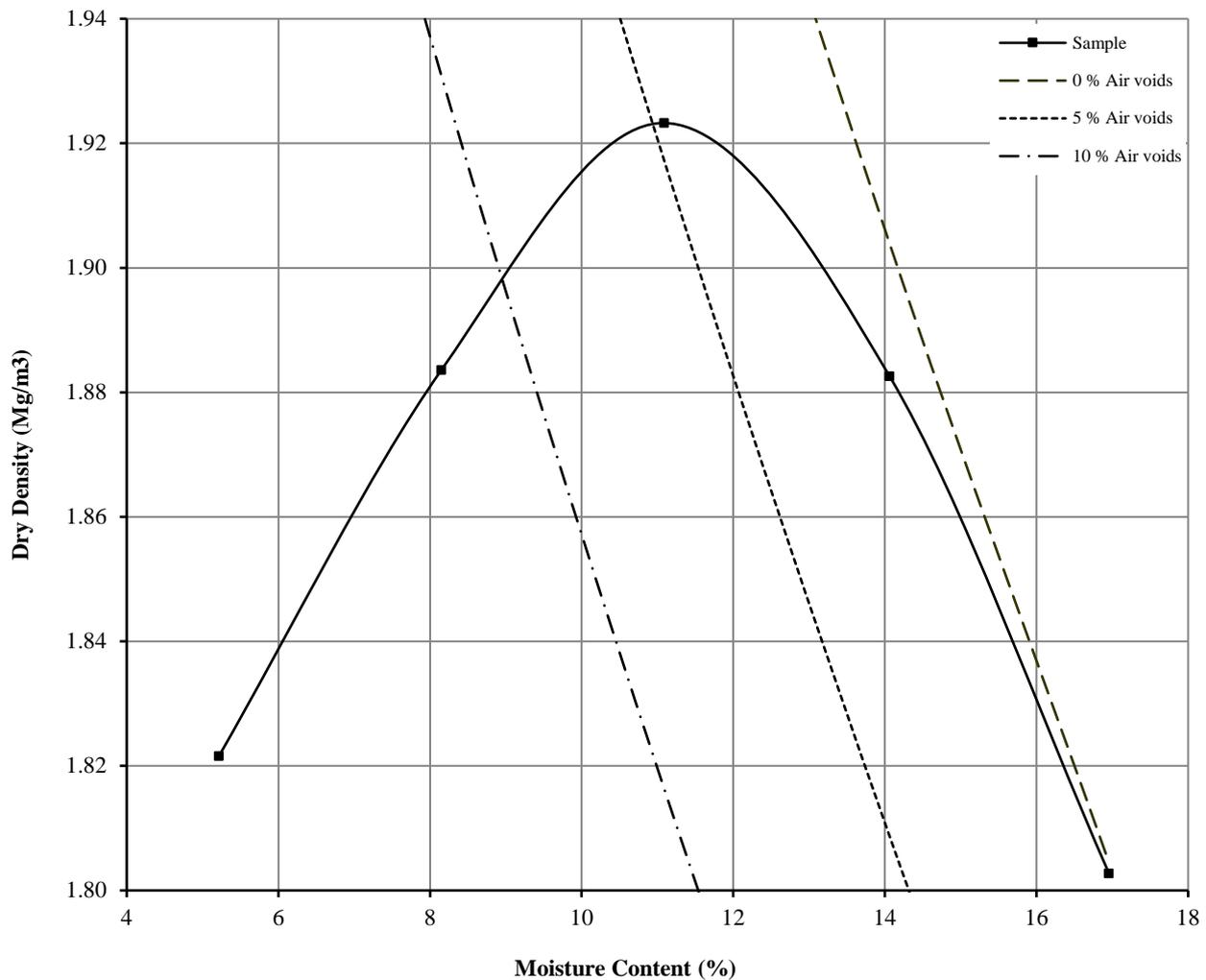
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP43 Top Depth (m) : 2.40

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	12	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.6	Measured	Material Retained on 37.5 mm Test Sieve (%):	13
Maximum Dry Density (Mg/m ³):	1.92		Material Retained on 20.0 mm Test Sieve (%):	12
Optimum Moisture Content (%):	11			
Remarks See summary of soil descriptions				



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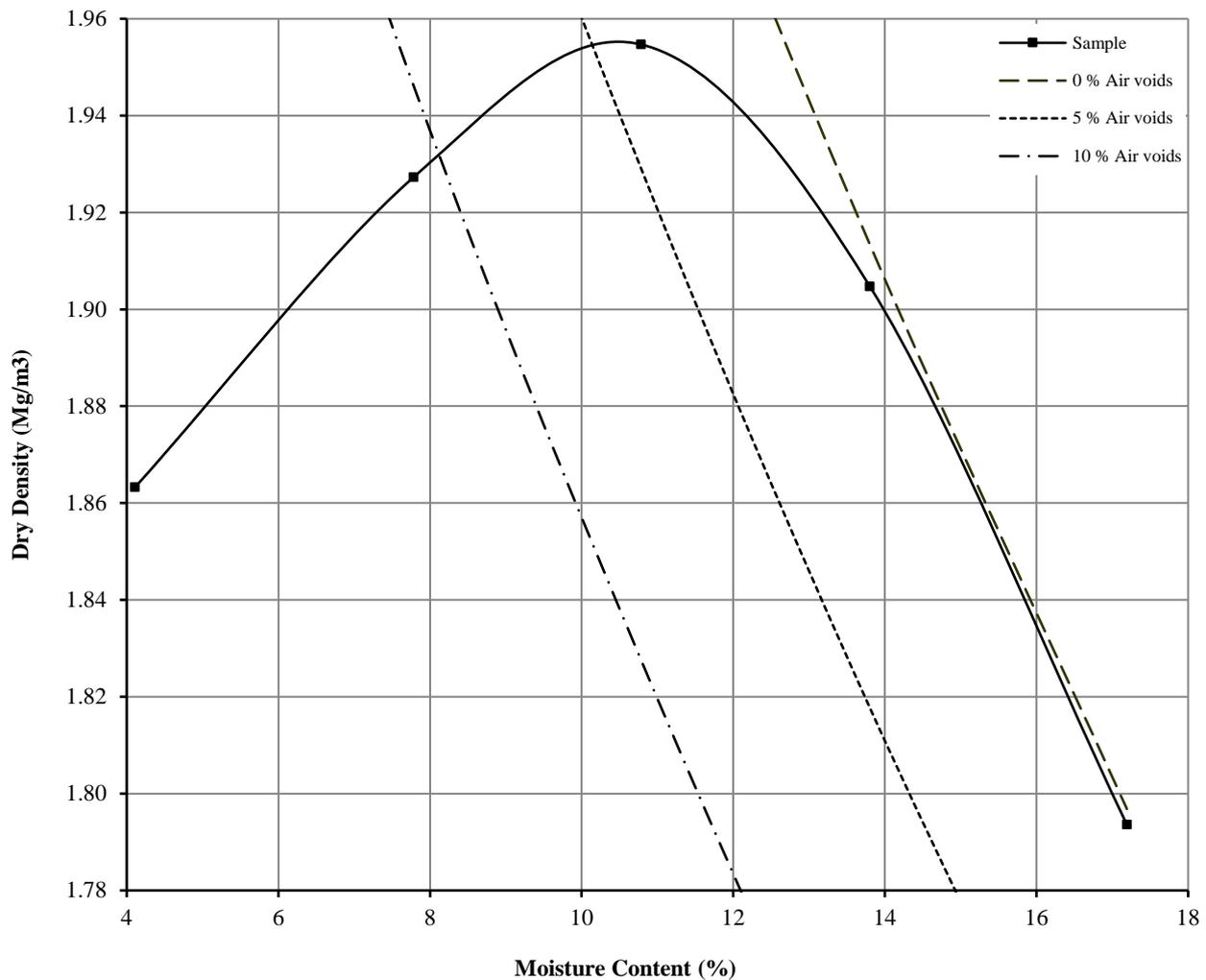
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP049 Top Depth (m) : 2.50

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.6	Measured	Material Retained on 37.5 mm Test Sieve (%):	9
Maximum Dry Density (Mg/m ³):	1.95		Material Retained on 20.0 mm Test Sieve (%):	19
Optimum Moisture Content (%):	11			
Remarks See summary of soil descriptions				



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Client Ref
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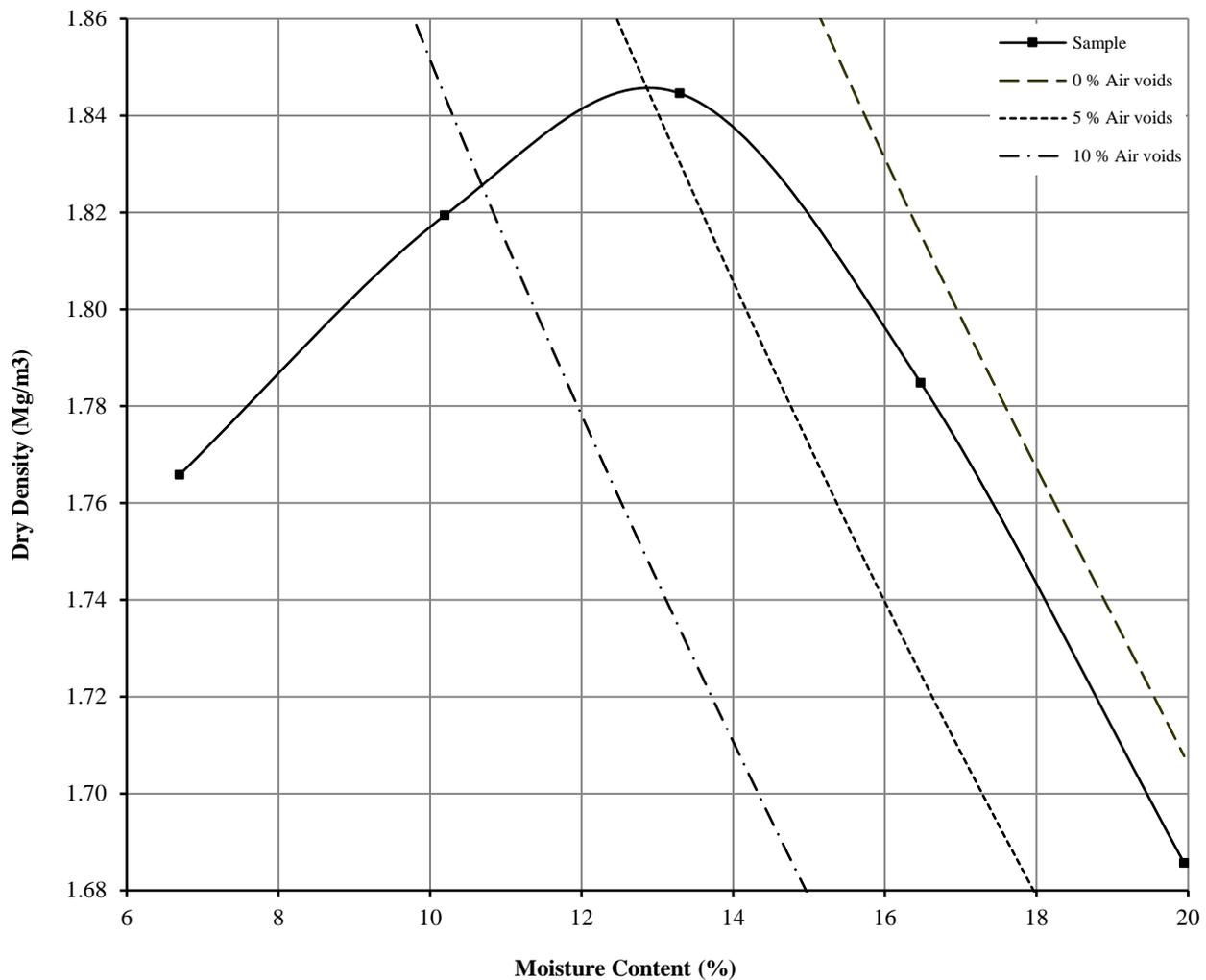
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP062 Top Depth (m) : 3.00

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	16	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.59	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.84		Material Retained on 20.0 mm Test Sieve (%):	5
Optimum Moisture Content (%):	13			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

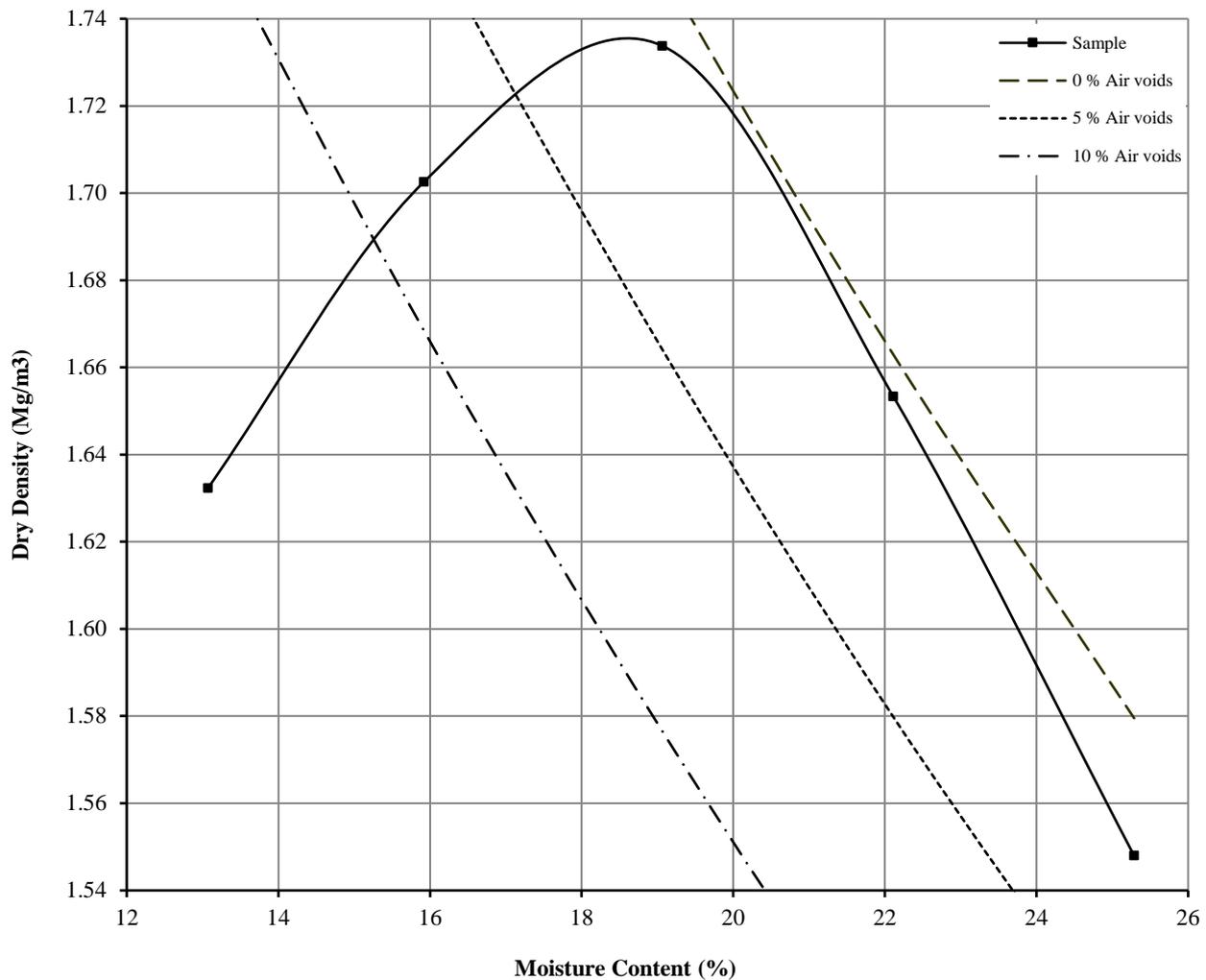
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP066 Top Depth (m) : 0.90

Sample Number: 1 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	25	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	4
Maximum Dry Density (Mg/m ³):	1.73		Material Retained on 20.0 mm Test Sieve (%):	6
Optimum Moisture Content (%):	19			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

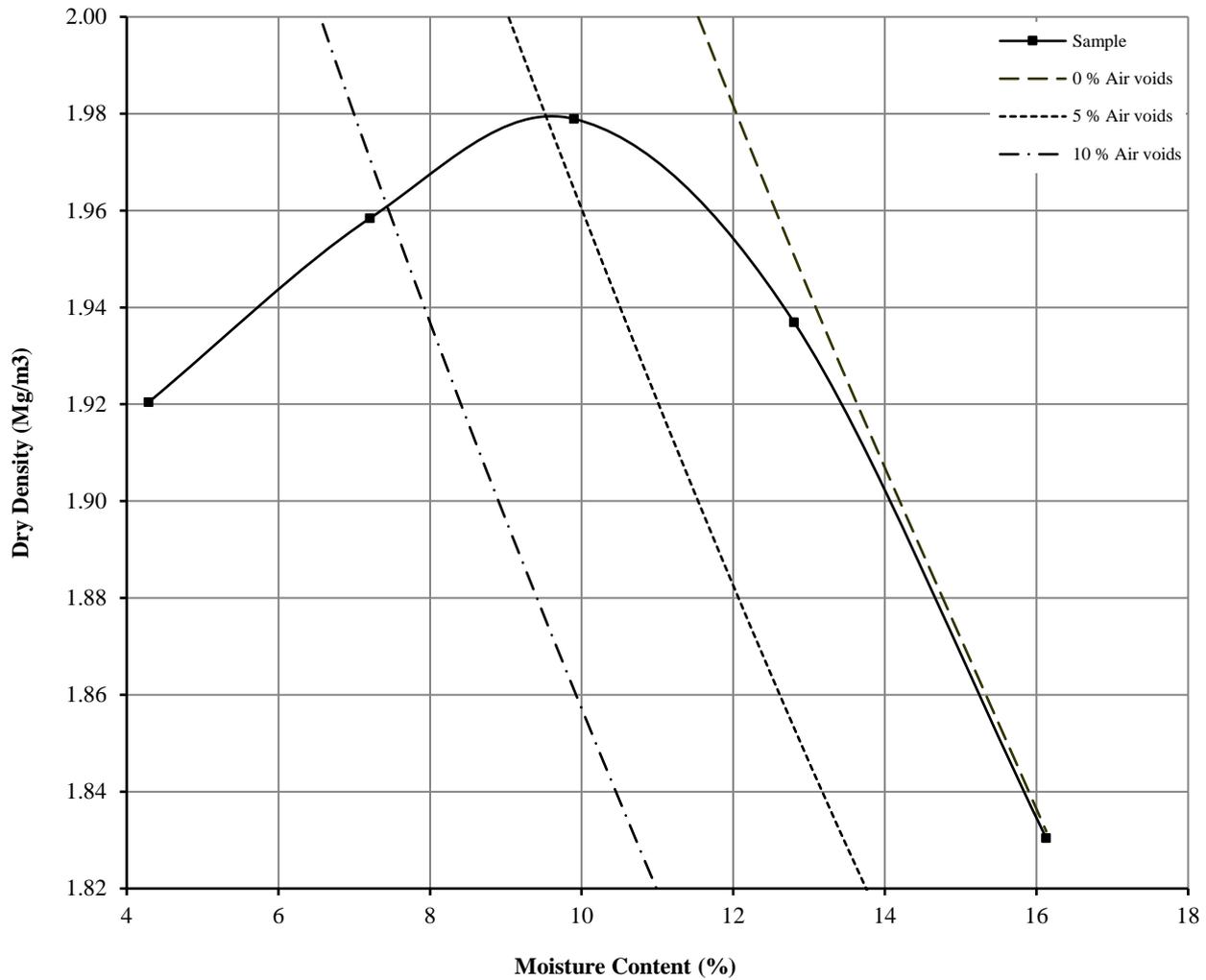
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP067 Top Depth (m) : 0.90

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.6	Measured	Material Retained on 37.5 mm Test Sieve (%):	10
Maximum Dry Density (Mg/m ³):	1.98		Material Retained on 20.0 mm Test Sieve (%):	7
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

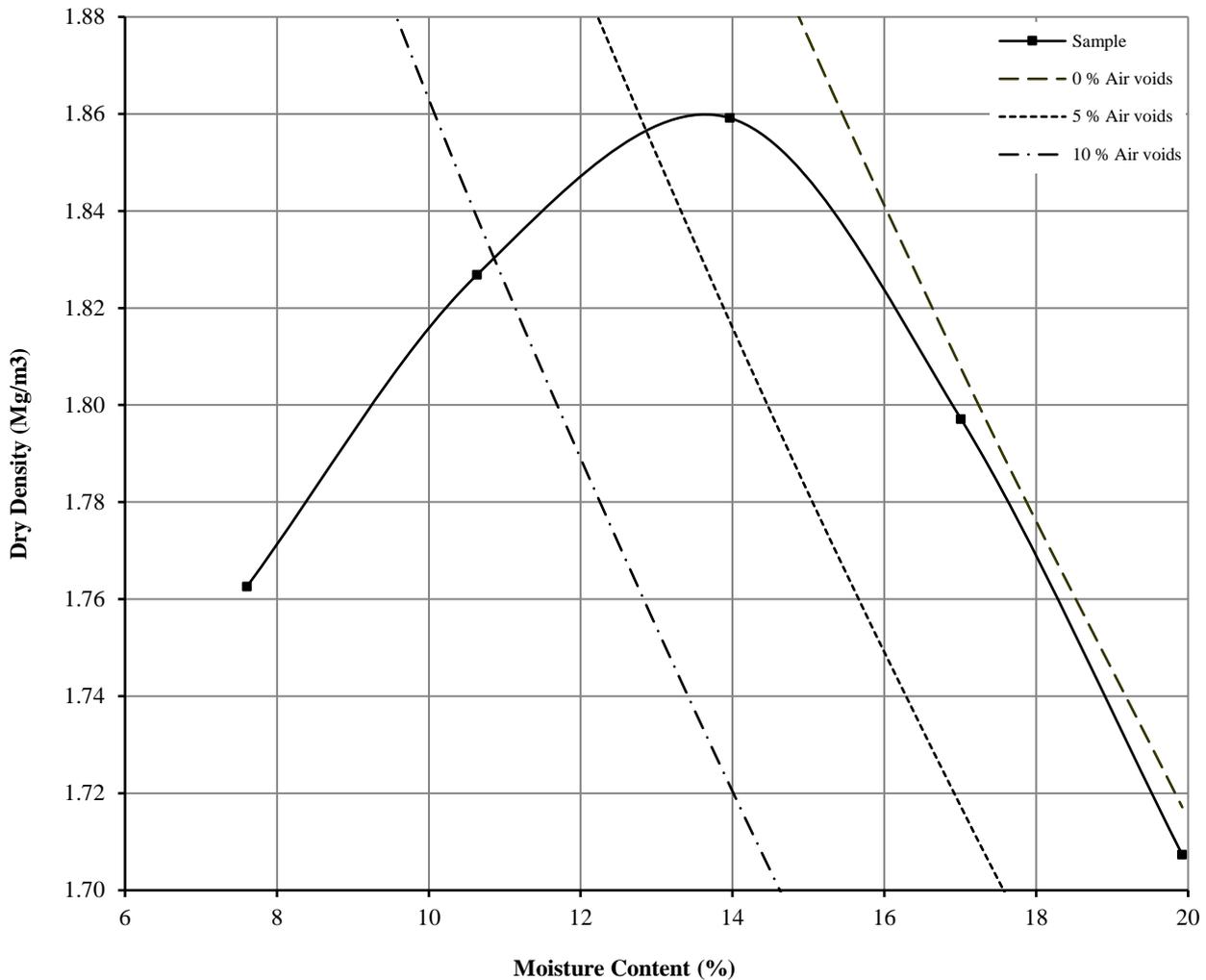
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP71 Top Depth (m) : 1.00

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.61	Measured	Material Retained on 37.5 mm Test Sieve (%):	18
Maximum Dry Density (Mg/m ³):	1.86		Material Retained on 20.0 mm Test Sieve (%):	9
Optimum Moisture Content (%):	14			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

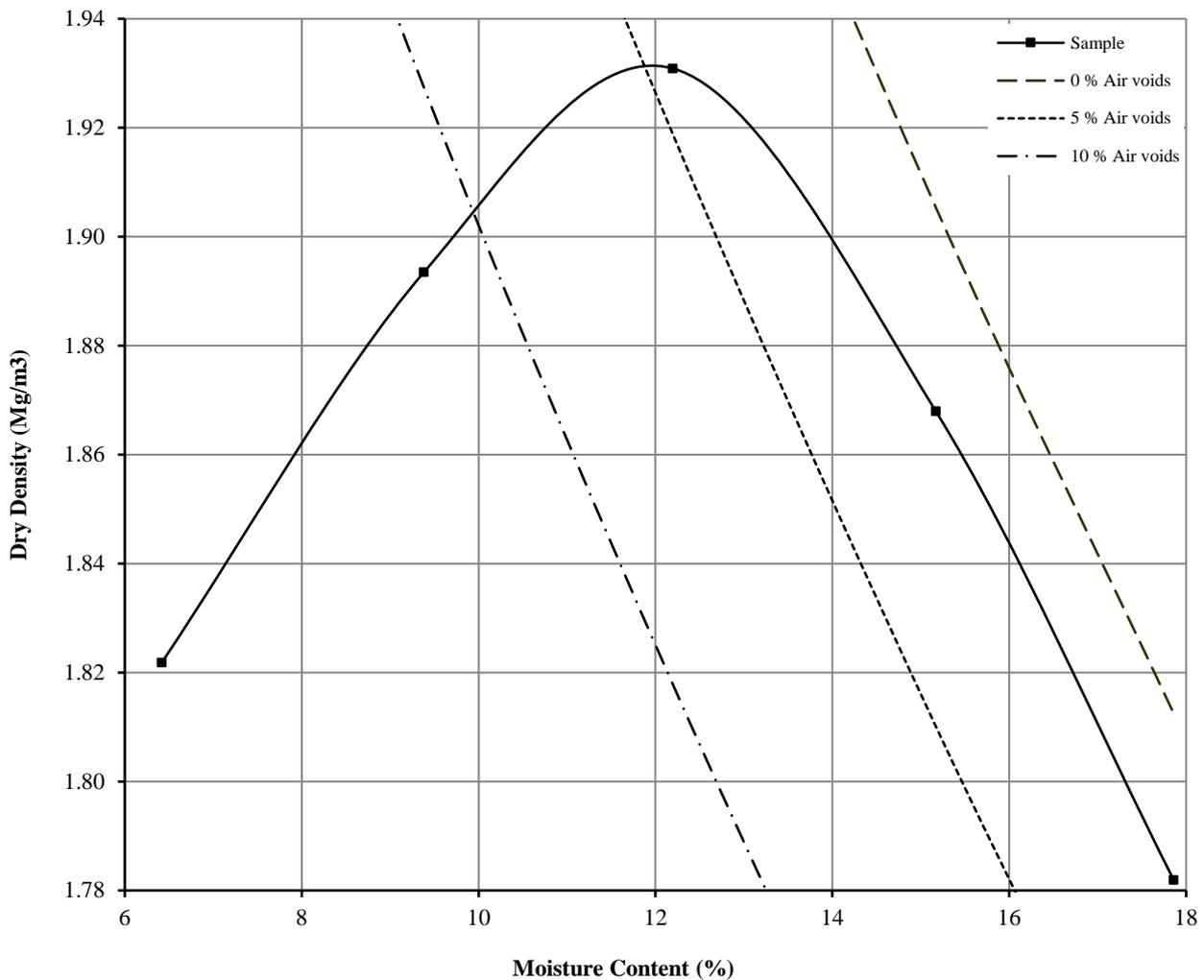
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP71 Top Depth (m) : 2.00

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	18	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.93		Material Retained on 20.0 mm Test Sieve (%):	13
Optimum Moisture Content (%):	12			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

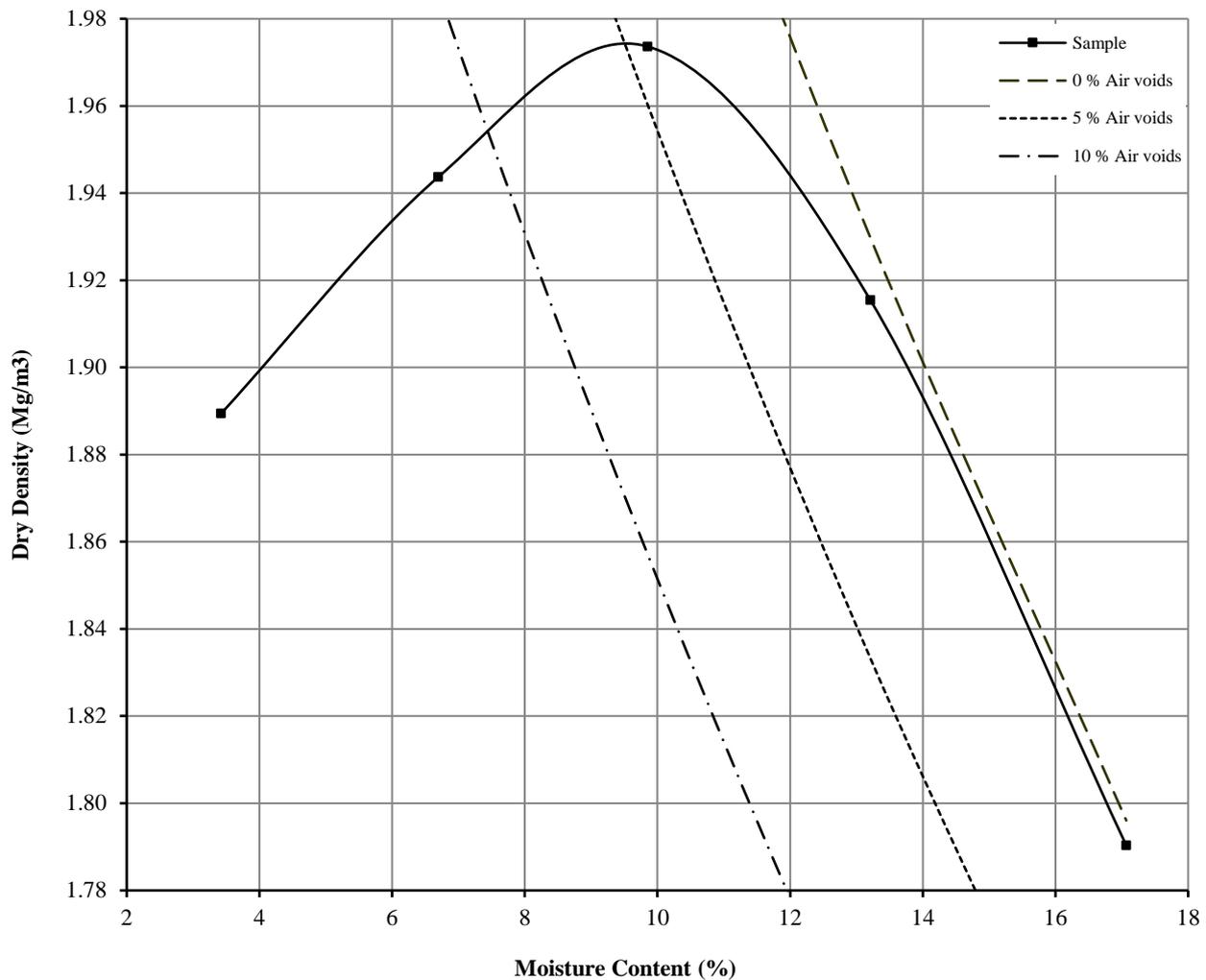
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP104 Top Depth (m) : 1.50

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	13	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.59	Measured	Material Retained on 37.5 mm Test Sieve (%):	4
Maximum Dry Density (Mg/m ³):	1.97		Material Retained on 20.0 mm Test Sieve (%):	9
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

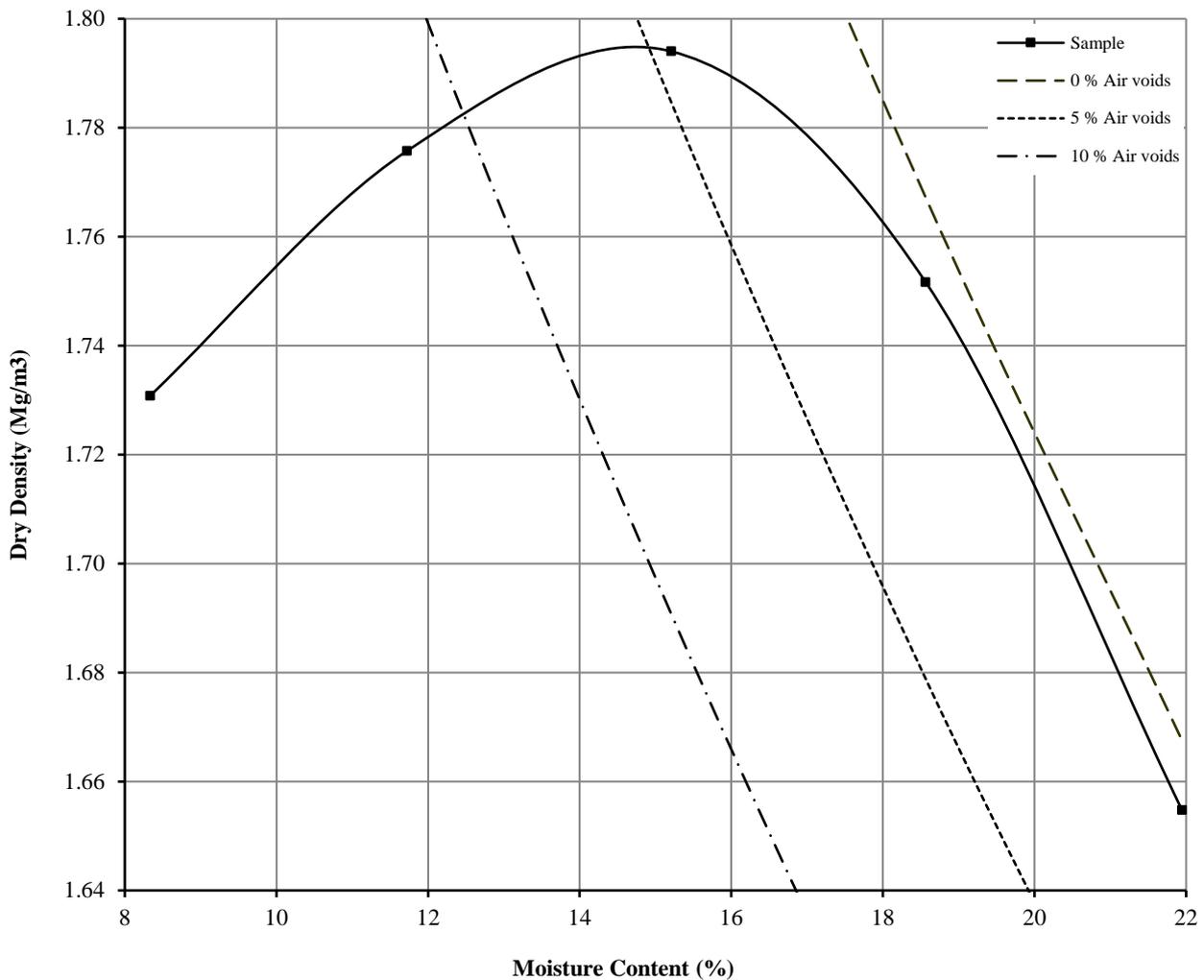
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP105 Top Depth (m) : 0.50

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	22	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.79		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	15			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

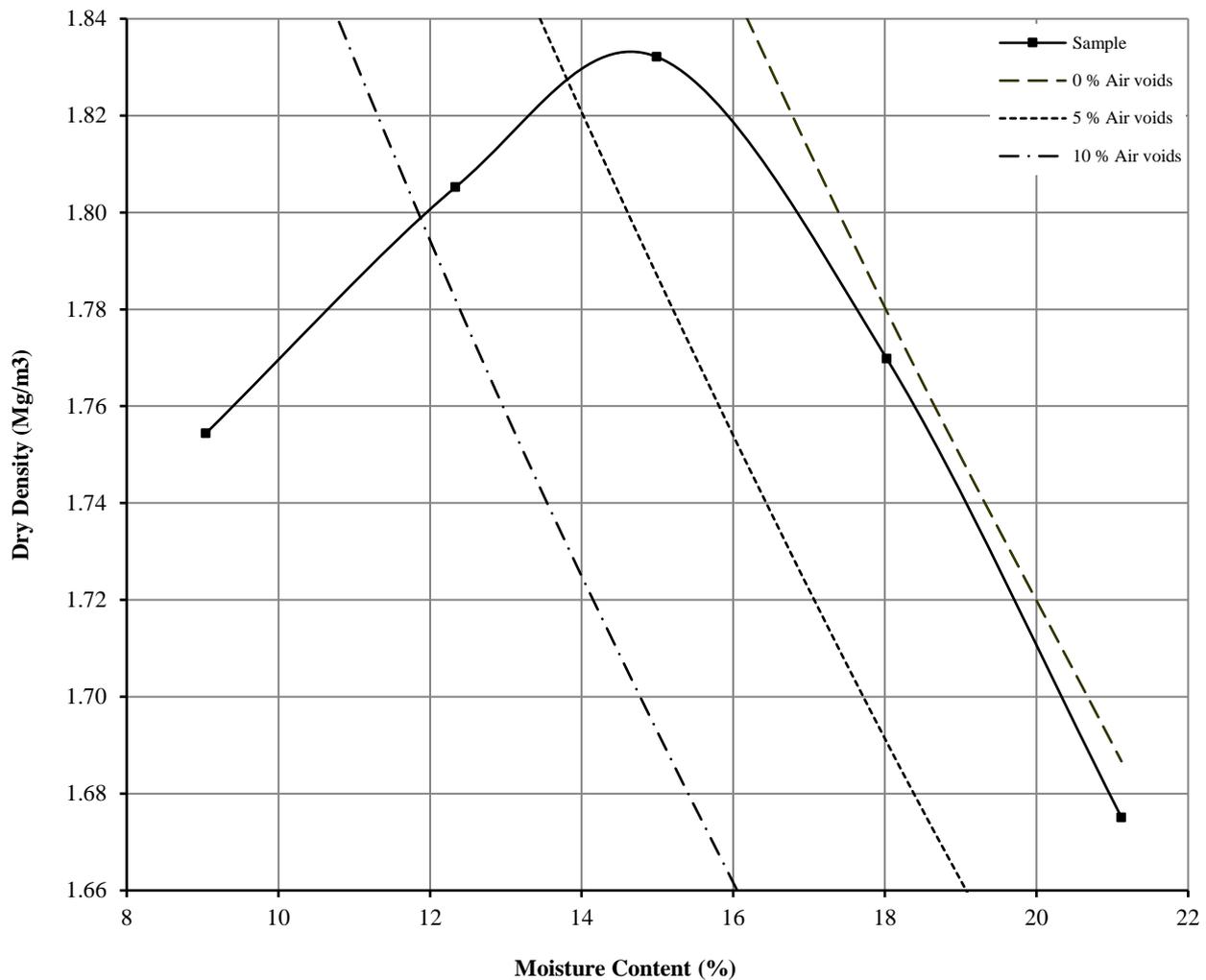
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP106 Top Depth (m) : 2.80

Sample Number: 5 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	21	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.62	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.83		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	15			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
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3104

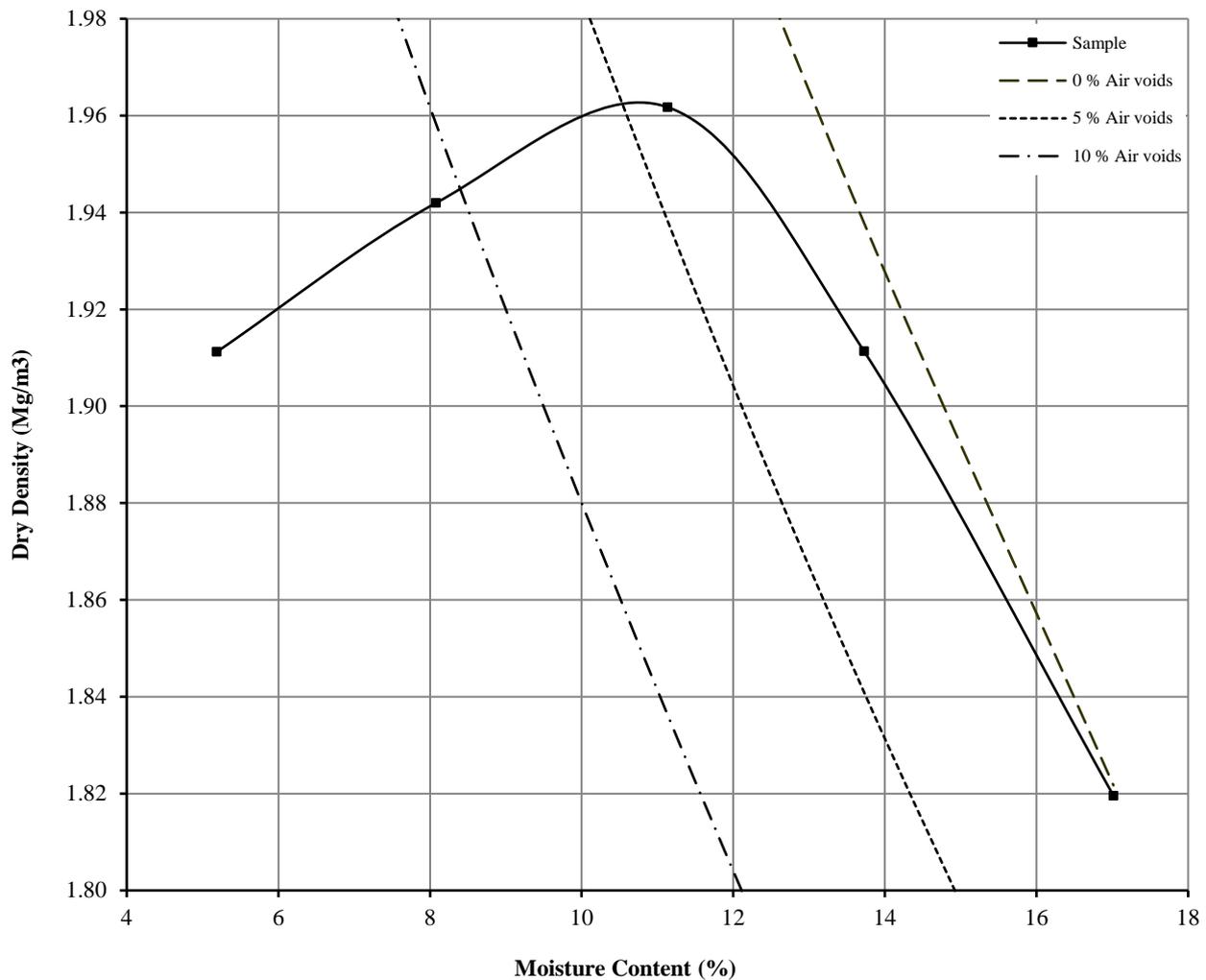
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP201 Top Depth (m) : 0.80

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.64	Measured	Material Retained on 37.5 mm Test Sieve (%):	6
Maximum Dry Density (Mg/m ³):	1.96		Material Retained on 20.0 mm Test Sieve (%):	9
Optimum Moisture Content (%):	11			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

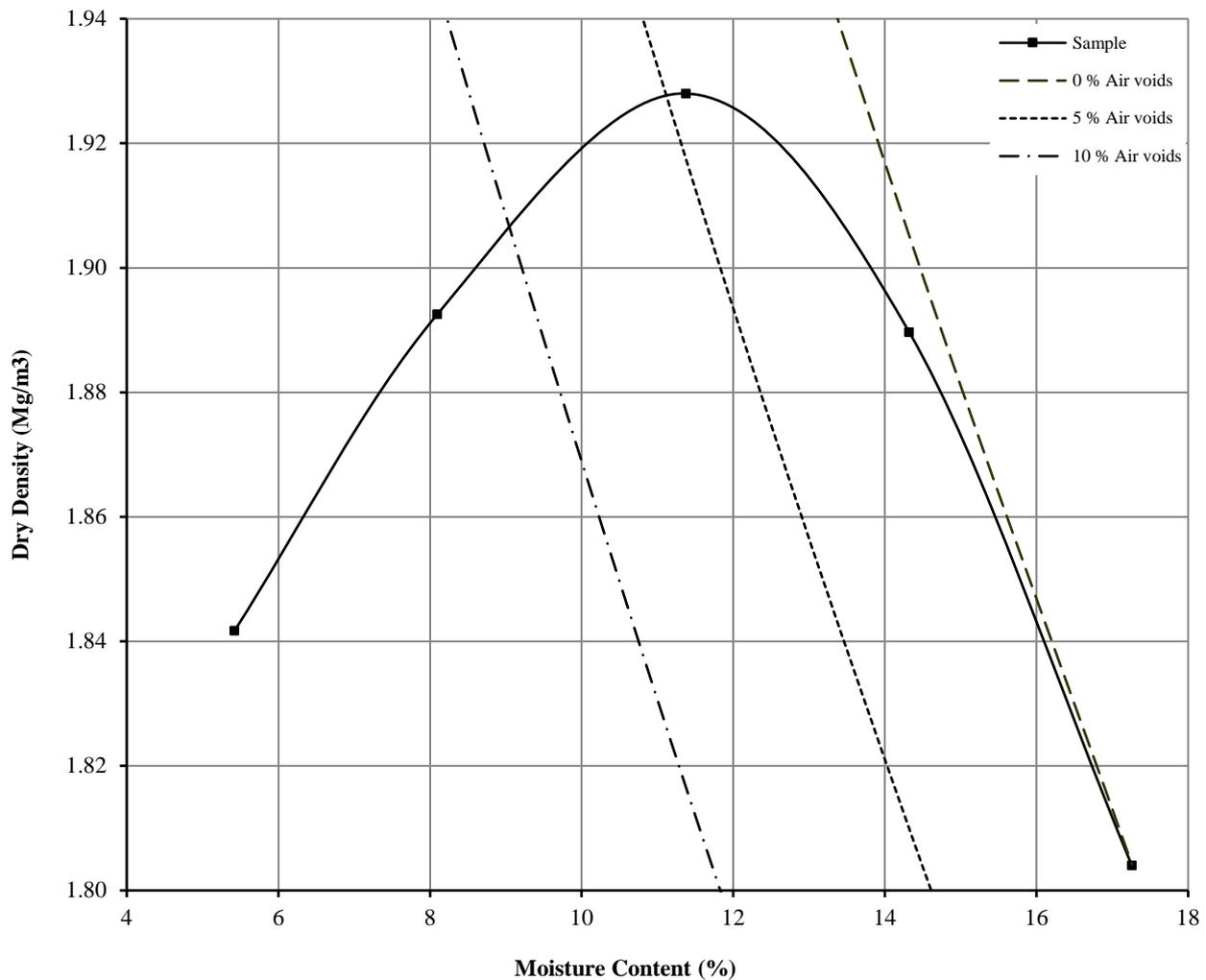
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP207 Top Depth (m) : 0.70

Sample Number: 2 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.62	Assumed	Material Retained on 37.5 mm Test Sieve (%):	9
Maximum Dry Density (Mg/m ³):	1.93		Material Retained on 20.0 mm Test Sieve (%):	6
Optimum Moisture Content (%):	11			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

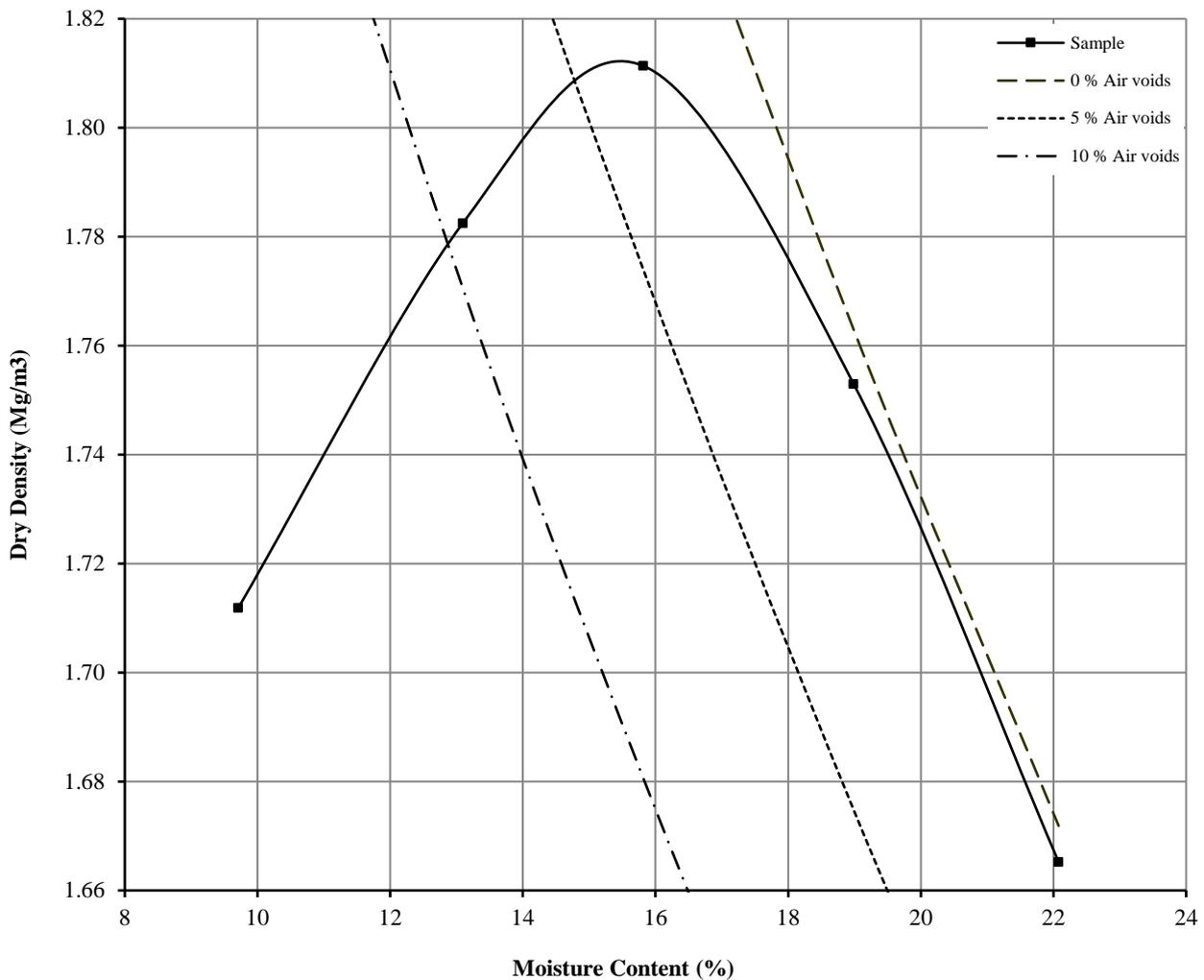
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP210 Top Depth (m) : 0.50

Sample Number: 1 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	19	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.65	Assumed	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.81		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	16			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

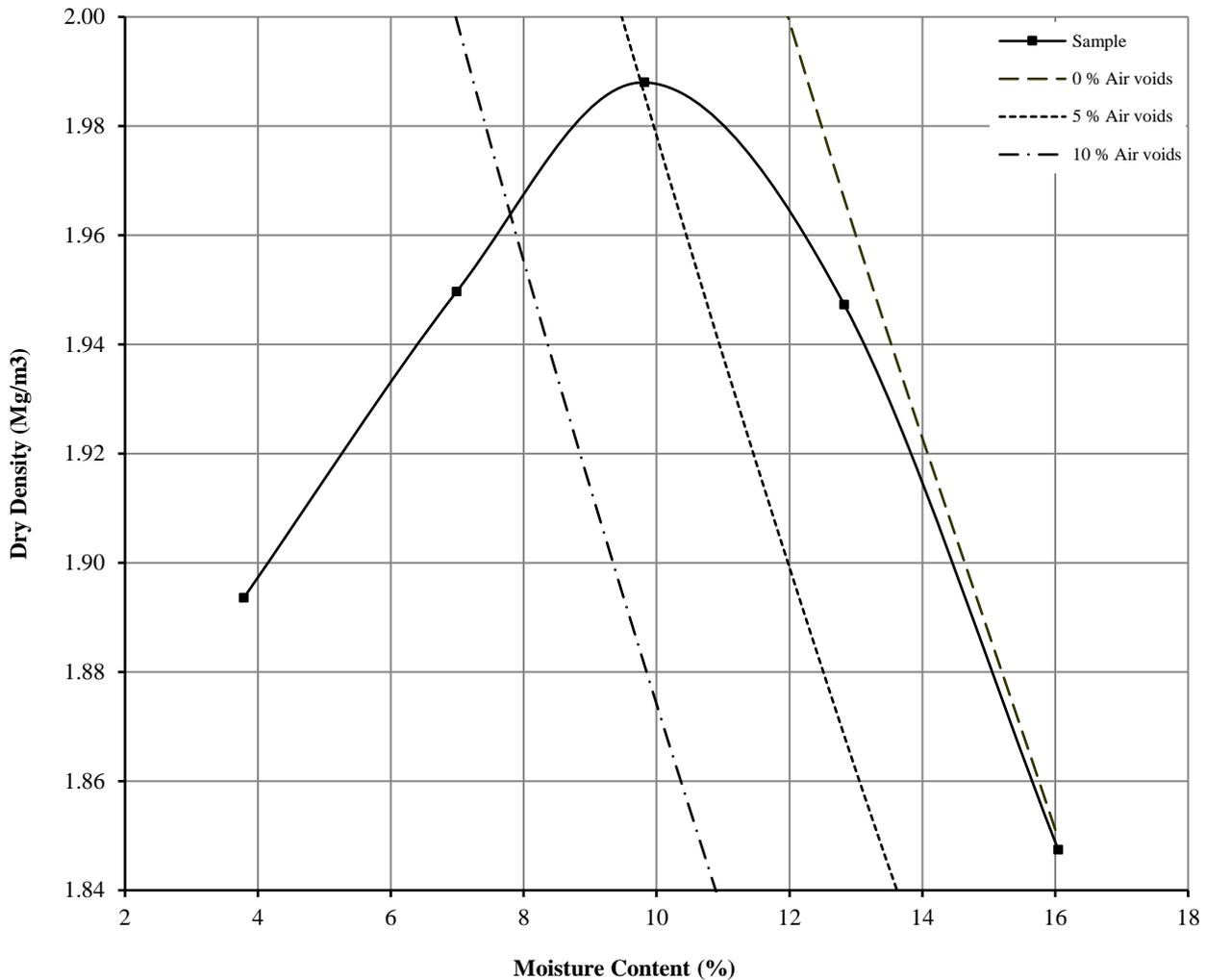
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number: TP213 Top Depth (m) : 0.60

Sample Number: 3 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	16	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):	20
Maximum Dry Density (Mg/m ³):	1.99		Material Retained on 20.0 mm Test Sieve (%):	10
Optimum Moisture Content (%):	10			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104

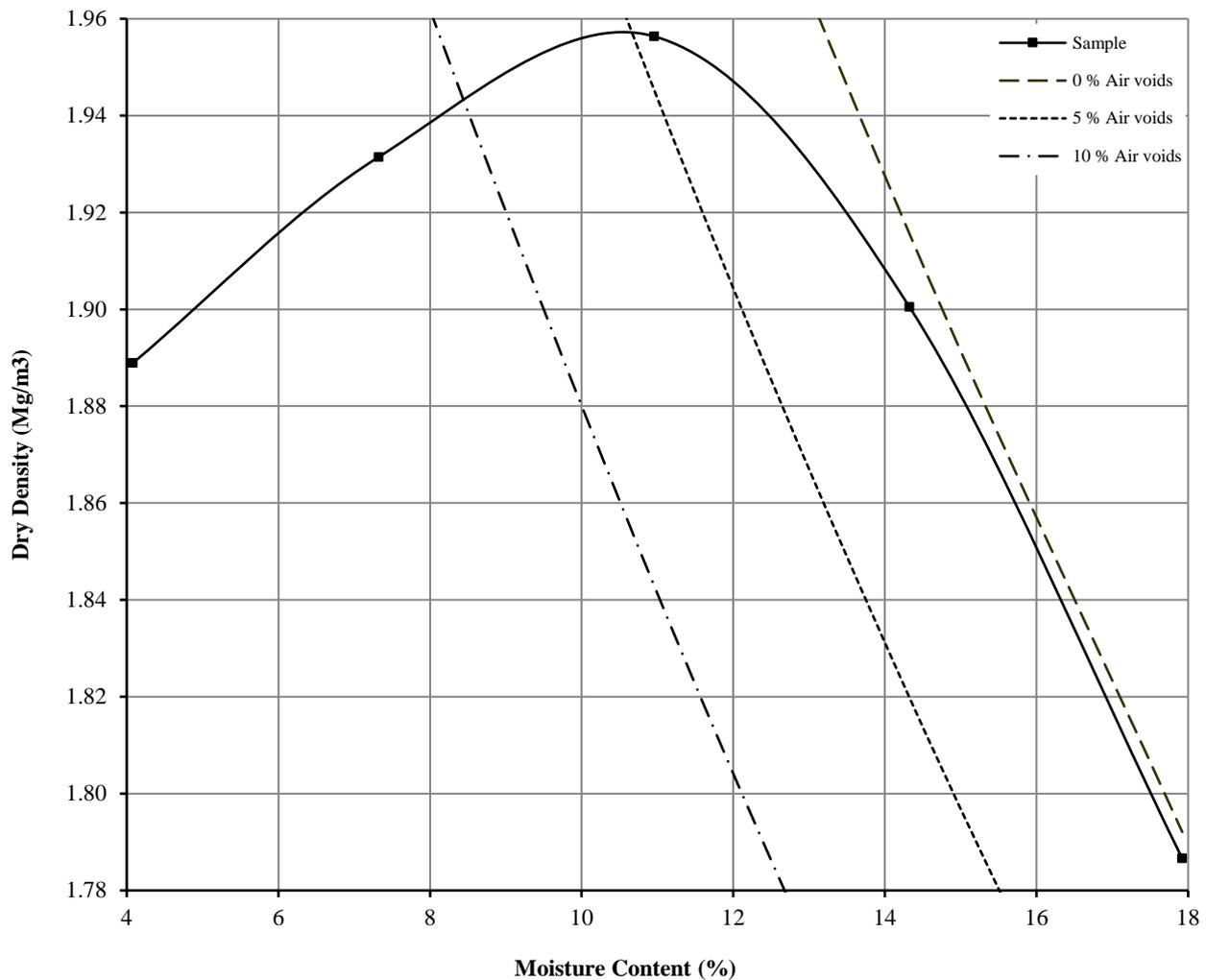
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number: TP220 Top Depth (m) : 1.00

Sample Number: 1 Base Depth (m) :

Sample Type: D&B



Initial Moisture Content:	14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m ³):	2.64	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.96		Material Retained on 20.0 mm Test Sieve (%):	4
Optimum Moisture Content (%):	11			
Remarks See summary of soil descriptions				



Barnsley West (LTI)

Contract
PSL21/9925
Client Ref
3104



ANALYTICAL TEST REPORT

Contract no: 104992

Contract name: Barnsley West (LT1)

Client reference: PSL21/9925

Clients name: Professional Soils Laboratory

Clients address: 5/7 Hexthorpe Road
Doncaster
DN4 0AR

Samples received: 25 January 2022

Analysis started: 25 January 2022

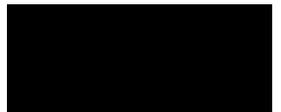
Analysis completed: 01 February 2022

Report issued: 01 February 2022

Key

- U UKAS accredited test
- M MCERTS & UKAS accredited test
- \$ Test carried out by an approved subcontractor
- I/S Insufficient sample to carry out test
- N/S Sample not suitable for testing

Approved by:



Rachael Burton
Reporting Team Lead

Chemtech Environmental Limited

SOILS

Lab number			104992-1	104992-2	104992-3	104992-4	104992-5	104992-6
Sample id			BH011	BH011	BH011	BH011	BH014	BH014
Depth (m)			1.00	4.00	6.50	11.00	2.00	7.20
Sample Type			D	D	D	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	8.5	8.1	8.2	8.3	8.5	8.3
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	56	980	1322	429	68	145

Chemtech Environmental Limited

SOILS

Lab number			104992-7	104992-8	104992-9	104992-10	104992-11	104992-12
Sample id			BH015	BH015	BH015	BH201	BH201	BH201
Depth (m)			1.00	5.00	7.80	1.00	8.00	9.50
Sample Type			D	D	D	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	8.4	8.2	8.0	8.2	8.1	7.9
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	28	84	86	36	166	69

Chemtech Environmental Limited

SOILS

Lab number			104992-13	104992-14	104992-15	104992-16	104992-17	104992-18
Sample id			BH202	BH202	BH203	BH203	BH204	BH204
Depth (m)			1.00	8.00	2.00	5.40	1.00	2.00
Sample Type			D	D	D	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	8.2	7.7	7.8	7.9	8.0	8.0
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	16	58	127	48	26	21

Chemtech Environmental Limited

SOILS

Lab number			104992-19	104992-20	104992-21	104992-22	104992-23	104992-24
Sample id			BH205	TP007	TP026	TP42	TP43	TP049
Depth (m)			1.00	1.80	2.00	0.90	0.60	0.60
Sample Type			D	D	D	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	7.7	8.0	6.5	7.3	7.2	7.4
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	243	116	215	109	184	28

Chemtech Environmental Limited

SOILS

Lab number			104992-25	104992-26	104992-27	104992-28	104992-29	104992-30
Sample id			TP050	TP050	TP053	TP056	TP056	TP058
Depth (m)			1.00	2.40	2.10	1.60	2.80	0.50
Sample Type			D	D	D	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	7.5	7.5	8.0	7.5	7.5	7.5
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	<10	12	169	27	<10	<10

Chemtech Environmental Limited

SOILS

Lab number			104992-31	104992-32	104992-33	104992-34	104992-35	104992-36
Sample id			TP059	TP059	TP060	TP064	TP065	TP066
Depth (m)			0.50	2.00	0.80	0.70	1.60	2.70
Sample Type			D	D	D	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	7.2	8.9	7.1	7.6	7.7	7.9
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	70	33	42	58	42	21

Chemtech Environmental Limited

SOILS

Lab number			104992-37	104992-38	104992-39	104992-40	104992-41	104992-42
Sample id			TP103	TP105	TP105	TP202	TP203	TP206
Depth (m)			3.60	1.50	3.10	0.40	0.90	0.80
Sample Type			D	D	D	D	D	D
Date sampled			-	-	-	-	-	-
Test	Method	Units						
pH	CE004 ^u	un ts	5.9	6.8	7.0	7.0	7.7	7.6
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	210	220	71	111	28	<10

Chemtech Environmental Limited

SOILS

Lab number			104992-43	104992-44	104992-45	104992-46
Sample id			TP221	TP211	TP212	TP223
Depth (m)			0.70	1.50	0.50	0.50
Sample Type			D	D	D	D
Date sampled			-	-	-	-
Test	Method	Units				
pH	CE004 ^u	un ts	7.5	5.3	7.2	7.3
Sulphate (2:1 water soluble)	CE061 ^u	mg/l SO ₄	23	121	20	13

Chemtech Environmental Limited

METHOD DETAILS

METHOD	SOILS	METHOD SUMMARY	SAMPLE	STATUS	LOD	UNITS
CE004	pH	Based on BS 1377, pH Meter	As received	U	-	units
CE061	Sulphate (2:1 water soluble)	Aqueous extraction, ICP-OES	Dry	U	10	mg/l SO ₄

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
104992-1	BH011	1.00	Y	All (NSD)
104992-2	BH011	4.00	Y	All (NSD)
104992-3	BH011	6.50	Y	All (NSD)
104992-4	BH011	11.00	Y	All (NSD)
104992-5	BH014	2.00	Y	All (NSD)
104992-6	BH014	7.20	Y	All (NSD)
104992-7	BH015	1.00	Y	All (NSD)
104992-8	BH015	5.00	Y	All (NSD)
104992-9	BH015	7.80	Y	All (NSD)
104992-10	BH201	1.00	Y	All (NSD)
104992-11	BH201	8.00	Y	All (NSD)
104992-12	BH201	9.50	Y	All (NSD)
104992-13	BH202	1.00	Y	All (NSD)
104992-14	BH202	8.00	Y	All (NSD)
104992-15	BH203	2.00	Y	All (NSD)
104992-16	BH203	5.40	Y	All (NSD)
104992-17	BH204	1.00	Y	All (NSD)
104992-18	BH204	2.00	Y	All (NSD)
104992-19	BH205	1.00	Y	All (NSD)
104992-20	TP007	1.80	Y	All (NSD)
104992-21	TP026	2.00	Y	All (NSD)
104992-22	TP42	0.90	Y	All (NSD)
104992-23	TP43	0.60	Y	All (NSD)
104992-24	TP049	0.60	Y	All (NSD)
104992-25	TP050	1.00	Y	All (NSD)
104992-26	TP050	2.40	Y	All (NSD)
104992-27	TP053	2.10	Y	All (NSD)
104992-28	TP056	1.60	Y	All (NSD)
104992-29	TP056	2.80	Y	All (NSD)
104992-30	TP058	0.50	Y	All (NSD)

Chemtech Environmental Limited

DEVIATING SAMPLE INFORMATION

Comments

Sample deviation is determined in accordance with the UKAS note "Guidance on Deviating Samples" and based on reference standards and laboratory trials.

For samples identified as deviating, test result(s) may be compromised and may not be representative of the sample at the time of sampling.

Chemtech Environmental Ltd cannot be held responsible for the integrity of sample(s) received if Chemtech Environmental Ltd did not undertake the sampling. Such samples may be deviating.

Key

N	No (not deviating sample)
Y	Yes (deviating sample)
NSD	Sampling date not provided
NST	Sampling time not provided (waters only)
EHT	Sample exceeded holding time(s)
IC	Sample not received in appropriate containers
HP	Headspace present in sample container
NCF	Sample not chemically fixed (where appropriate)
OR	Other (specify)

Lab ref	Sample id	Depth (m)	Deviating	Tests (Reason for deviation)
104992-31	TP059	0.50	Y	All (NSD)
104992-32	TP059	2.00	Y	All (NSD)
104992-33	TP060	0.80	Y	All (NSD)
104992-34	TP064	0.70	Y	All (NSD)
104992-35	TP065	1.60	Y	All (NSD)
104992-36	TP066	2.70	Y	All (NSD)
104992-37	TP103	3.60	Y	All (NSD)
104992-38	TP105	1.50	Y	All (NSD)
104992-39	TP105	3.10	Y	All (NSD)
104992-40	TP202	0.40	Y	All (NSD)
104992-41	TP203	0.90	Y	All (NSD)
104992-42	TP206	0.80	Y	All (NSD)
104992-43	TP221	0.70	Y	All (NSD)
104992-44	TP211	1.50	Y	All (NSD)
104992-45	TP212	0.50	Y	All (NSD)
104992-46	TP223	0.50	Y	All (NSD)

Chemtech Environmental Limited

ADDITIONAL INFORMATION

Notes

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

Unless otherwise stated, Chemtech Environmental Ltd was not responsible for sampling.

All testing carried out at Unit 6 Parkhead, Stanley, DH9 7YB, except for subcontracted testing.

Methods, procedures and performance data are available on request.

Results reported herein relate only to the material supplied to the laboratory.

This report shall not be reproduced except in full, without prior written approval.

Samples will be disposed of 6 weeks from initial receipt unless otherwise instructed.

For soils and solids, all results are reported on a dry basis. Samples dried at no more than 30°C in a drying cabinet.

Analytical results are inclusive of stones, where applicable.



LABORATORY REPORT



4043

Contract Number: PSL21/9933

Report Date: 02 February 2022

Client's Reference: 3104

Client Name: Lithos Consulting
Parkhill
Walton Road
Wetherby
North Yorkshire
LS22 5DZ

For the attention of: George Morton

Contract Title: Barnsley West (LT1)

Date Received: 20/12/2021

Date Commenced: 20/12/2021

Date Completed: 2/2/2022

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins
(Director)

R Berriman
(Quality Manager)

S Royle
(Laboratory Manager)

L Knight
(Assistant Laboratory Manager)

S Eyre
(Senior Technician)

T Watkins
(Senior Technician)

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Page 1 of

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation Par / Perp	Dimensions (mm)		Area (mm ²)	D _c ²	D _c (mm)	Failure Load (P)		I _s (MPa)	Corr Fac F	I _{s50} (MPa)	Failure Type	Remarks
					W	D				(Mpa)	(kN)					
RC203	9.60	2	A	Perp	87	34	2958	3766.24	61.37	-	9.76	2.59	1.097	2.84	Valid	
RC203	10.90	3	A	Perp	87	39	3393	4320.10	65.73	-	1.87	0.43	1.131	0.49	Valid	
RC203	11.00	4	A	Perp	87	39	3393	4320.10	65.73	-	1.43	0.33	1.131	0.37	Valid	
RC203	12.60	5	A	Perp	87	40	3480	4430.87	66.56	-	2.26	0.51	1.137	0.58	Valid	
RC203	13.10	6	A	Perp	87	38	3306	4209.33	64.88	-	3.15	0.75	1.124	0.84	Valid	
RC203	14.50	8	A	Perp	87	45	3915	4984.73	70.60	-	7.10	1.42	1.168	1.66	Valid	
RC003	9.60	1	A	Perp	87	42	3654	4652.42	68.21	-	17.08	3.67	1.150	4.22	Valid	
RC003	10.50	3	A	Perp	87	44	3828	4873.96	69.81	-	7.70	1.58	1.162	1.84	Valid	
RC003	12.10	4	A	Perp	87	45	3915	4984.73	70.60	-	3.84	0.77	1.168	0.90	Valid	
RC003	12.80	5	A	Perp	87	44	3828	4873.96	69.81	-	4.04	0.83	1.162	0.96	Valid	
RC003	14.70	8	A	Perp	87	40	3480	4430.87	66.56	-	5.29	1.19	1.137	1.36	Valid	
RC001	9.50	1	A	Perp	87	39	3393	4320.10	65.73	-	0.95	0.22	1.131	0.25	Valid	
RC001	9.70	2	A	Perp	87	40	3480	4430.87	66.56	-	1.28	0.29	1.137	0.33	Valid	
RC001	10.40	4	A	Perp	87	43	3741	4763.19	69.02	-	1.58	0.33	1.156	0.38	Valid	
RC001	11.50	5	A	Perp	87	35	3045	3877.01	62.27	-	3.61	0.93	1.104	1.03	Valid	
RC001	13.80	8	A	Perp	87	43	3741	4763.19	69.02	-	3.36	0.71	1.156	0.82	Valid	
RC104	8.20	2	A	Perp	87	43	3741	4763.19	69.02	-	6.43	1.35	1.156	1.56	Valid	
RC104	8.60	3	A	Perp	87	42	3654	4652.42	68.21	-	2.11	0.45	1.150	0.52	Valid	
RC104	9.50	4	A	Perp	87	42	3654	4652.42	68.21	-	8.03	1.73	1.150	1.98	Valid	
RC104	12.50	5	A	Perp	87	42	3654	4652.42	68.21	-	10.08	2.17	1.150	2.49	Valid	
RC104	11.50	6	A	Perp	87	38	3306	4209.33	64.88	-	0.42	0.10	1.124	0.11	Valid	

*Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

A = Axial, D = Diametral, I = Irregular



Barnsley West (LT1)

Contract No:

PSL21/9933

Client Ref:

3104

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		D _c ²	D _e (mm)	Failure Load		I _s (MPa)	Corr Fac F	I ₅₀ (MPa)	Failure Type	Remarks
					Par / Perp	L			D	(Mpa)					
RC203	9.60	2	D	Par	-	87	7569	87.00	-	11.35	1.500	1.283	1.92	Valid	
RC203	10.90	3	D	Par	-	87	7569	87.00	-	1.16	0.153	1.283	0.20	Valid	
RC203	11.00	4	D	Par	-	87	7569	87.00	-	0.89	0.118	1.283	0.15	Valid	
RC203	12.60	5	D	Par	-	87	7569	87.00	-	1.88	0.248	1.283	0.32	Valid	
RC203	13.10	6	D	Par	-	87	7569	87.00	-	2.42	0.320	1.283	0.41	Valid	
RC203	14.50	8	D	Par	-	87	7569	87.00	-	5.61	0.741	1.283	0.95	Valid	
RC003	9.60	1	D	Par	-	87	7569	87.00	-	15.53	2.052	1.283	2.63	Valid	
RC003	10.50	3	D	Par	-	87	7569	87.00	-	6.91	0.913	1.283	1.17	Valid	
RC003	12.10	4	D	Par	-	87	7569	87.00	-	2.67	0.353	1.283	0.45	Valid	
RC003	12.80	5	D	Par	-	87	7569	87.00	-	2.82	0.373	1.283	0.48	Valid	
RC003	14.70	8	D	Par	-	87	7569	87.00	-	3.15	0.416	1.283	0.53	Valid	
RC001	9.50	1	D	Par	-	87	7569	87.00	-	0.28	0.037	1.283	0.05	Valid	
RC001	9.70	2	D	Par	-	87	7569	87.00	-	0.35	0.046	1.283	0.06	Valid	
RC001	10.40	4	D	Par	-	87	7569	87.00	-	0.71	0.094	1.283	0.12	Valid	
RC001	11.50	5	D	Par	-	87	7569	87.00	-	4.72	0.624	1.283	0.80	Valid	
RC001	13.80	8	D	Par	-	87	7569	87.00	-	2.54	0.336	1.283	0.43	Valid	
RC104	8.20	2	D	Par	-	87	7569	87.00	-	7.92	1.046	1.283	1.34	Valid	
RC104	8.60	3	D	Par	-	87	7569	87.00	-	0.93	0.123	1.283	0.16	Valid	
RC104	9.50	4	D	Par	-	87	7569	87.00	-	6.25	0.826	1.283	1.06	Valid	
RC104	12.50	5	D	Par	-	87	7569	87.00	-	9.63	1.272	1.283	1.63	Valid	
RC104	11.50	6	D	Par	-	87	7569	87.00	-	0.31	0.041	1.283	0.05	Valid	

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Par = parallel, Perp = perpendicular, U = Random



Barnsley West (LT1)

Contract No:

PSL21/9933

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3104

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation Par / Perp	Dimensions (mm)		Area (mm ²)	D _c ²	D _c (mm)	Failure Load (P)		I _s (MPa)	Corr Fac F	I _{s50} (MPa)	Failure Type	Remarks
					W	D				(Mpa)	(kN)					
RC002	8.00	1	A	Perp	87	39	3393	4320.10	65.73	-	1.48	0.34	1.131	0.39	Valid	
RC002	8.60	2	A	Perp	87	38	3306	4209.33	64.88	-	1.35	0.32	1.124	0.36	Valid	
RC002	9.40	3	A	Perp	87	44	3828	4873.96	69.81	-	1.27	0.26	1.162	0.30	Valid	
RC002	9.80	4	A	Perp	87	35	3045	3877.01	62.27	-	1.09	0.28	1.104	0.31	Valid	
RC002	10.40	5	A	Perp	87	40	3480	4430.87	66.56	-	2.03	0.46	1.137	0.52	Valid	
RC002	11.40	6	A	Perp	87	37	3219	4098.56	64.02	-	1.82	0.44	1.118	0.50	Valid	
RC002	11.60	7	A	Perp	87	35	3045	3877.01	62.27	-	1.80	0.46	1.104	0.51	Valid	
RC002	12.30	8	A	Perp	87	41	3567	4541.65	67.39	-	3.58	0.79	1.144	0.90	Valid	
RC002	13.00	9	A	Perp	87	40	3480	4430.87	66.56	-	3.18	0.72	1.137	0.82	Valid	
RC002	11.30	10	A	Perp	87	36	3132	3987.79	63.15	-	1.11	0.28	1.111	0.31	Valid	
RC201	8.80	1	A	Perp	87	43	3741	4763.19	69.02	-	1.71	0.36	1.156	0.42	Valid	
RC201	11.20	2	A	Perp	87	36	3132	3987.79	63.15	-	1.73	0.43	1.111	0.48	Valid	
RC201	11.50	3	A	Perp	87	37	3219	4098.56	64.02	-	1.43	0.35	1.118	0.39	Valid	
RC201	12.20	4	A	Perp	87	38	3306	4209.33	64.88	-	2.32	0.55	1.124	0.62	Valid	
RC201	13.50	6	A	Perp	87	46	4002	5095.50	71.38	-	2.58	0.51	1.174	0.59	Valid	
RC201	15.60	7	A	Perp	87	34	2958	3766.24	61.37	-	4.19	1.11	1.097	1.22	Valid	
RC201	15.90	8	A	Perp	87	42	3654	4652.42	68.21	-	1.69	0.36	1.150	0.42	Valid	
RC202	7.90	2	A	Perp	87	36	3132	3987.79	63.15	-	0.56	0.14	1.111	0.16	Valid	
RC202	8.50	3	A	Perp	87	31	2697	3433.93	58.60	-	0.22	0.06	1.074	0.07	Valid	
RC202	9.40	4	A	Perp	87	35	3045	3877.01	62.27	-	0.36	0.09	1.104	0.10	Valid	
RC202	11.20	5	A	Perp	87	38	3306	4209.33	64.88	-	0.96	0.23	1.124	0.26	Valid	
RC202	13.90	6	A	Perp	87	40	3480	4430.87	66.56	-	23.29	5.26	1.137	5.98	Valid	

*Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random

A = Axial, D = Diametral, I = Irregular



Barnsley West (LT1)

Contract No:

PSL21/9933

Client Ref:

3104

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		D _c ²	D _c (mm)	Failure Load		I _s (MPa)	Corr Fac F	I _{s50} (MPa)	Failure Type	Remarks
					Par / Perp	L			D	(Mpa)					
RC002	8.00	1	D	Par	-	87	7569	87.00	-	0.63	0.083	1.283	0.11	Valid	
RC002	8.60	2	D	Par	-	87	7569	87.00	-	0.64	0.085	1.283	0.11	Valid	
RC002	9.40	3	D	Par	-	87	7569	87.00	-	0.51	0.067	1.283	0.09	Valid	
RC002	9.80	4	D	Par	-	87	7569	87.00	-	0.43	0.057	1.283	0.07	Valid	
RC002	10.40	5	D	Par	-	87	7569	87.00	-	1.17	0.155	1.283	0.20	Valid	
RC002	11.40	6	D	Par	-	87	7569	87.00	-	0.75	0.099	1.283	0.13	Valid	
RC002	11.60	7	D	Par	-	87	7569	87.00	-	1.04	0.137	1.283	0.18	Valid	
RC002	12.30	8	D	Par	-	87	7569	87.00	-	2.44	0.322	1.283	0.41	Valid	
RC002	13.00	9	D	Par	-	87	7569	87.00	-	2.09	0.276	1.283	0.35	Valid	
RC002	11.30	10	D	Par	-	87	7569	87.00	-	0.22	0.029	1.283	0.04	Valid	
RC201	8.80	1	D	Par	-	87	7569	87.00	-	0.46	0.061	1.283	0.08	Valid	
RC201	11.20	2	D	Par	-	87	7569	87.00	-	1.12	0.148	1.283	0.19	Valid	
RC201	11.50	3	D	Par	-	87	7569	87.00	-	0.89	0.118	1.283	0.15	Valid	
RC201	12.20	4	D	Par	-	87	7569	87.00	-	1.47	0.194	1.283	0.25	Valid	
RC201	13.50	6	D	Par	-	87	7569	87.00	-	0.67	0.089	1.283	0.11	Valid	
RC201	15.60	7	D	Par	-	87	7569	87.00	-	1.04	0.137	1.283	0.18	Valid	
RC201	15.90	8	D	Par	-	87	7569	87.00	-	0.22	0.029	1.283	0.04	Valid	
RC202	7.90	2	D	Par	-	87	7569	87.00	-	0.29	0.038	1.283	0.05	Valid	
RC202	8.50	3	D	Par	-	87	7569	87.00	-	0.08	0.011	1.283	0.01	Valid	
RC202	9.40	4	D	Par	-	87	7569	87.00	-	0.09	0.012	1.283	0.02	Valid	
RC202	11.20	5	D	Par	-	87	7569	87.00	-	0.30	0.040	1.283	0.05	Valid	
RC202	13.90	6	D	Par	-	87	7569	87.00	-	26.56	3.509	1.283	4.50	Valid	

***Note** All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random



Barnsley West (LT1)

Contract No:

PSL21/9933

Client Ref:

3104

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation Par / Perp	Dimensions (mm)		Area (mm ²)	D _c ²	D _c (mm)	Failure Load (P)		I _s (MPa)	Corr Fac F	I _{s50} (MPa)	Failure Type	Remarks
					W	D				(Mpa)	(kN)					
RC202	15.50	8	A	Perp	87	36	3132	3987.79	63.15	-	1.74	0.44	1.111	0.48	Valid	
RC005	7.80	1	A	Perp	87	38	3306	4209.33	64.88	-	1.13	0.27	1.124	0.30	Valid	
RC005	9.00	3	A	Perp	87	46	4002	5095.50	71.38	-	14.28	2.80	1.174	3.29	Valid	
RC005	11.10	5	A	Perp	87	45	3915	4984.73	70.60	-	12.34	2.48	1.168	2.89	Valid	
RC005	12.20	6	A	Perp	87	43	3741	4763.19	69.02	-	0.86	0.18	1.156	0.21	Valid	
RC005	12.60	8	A	Perp	87	43	3741	4763.19	69.02	-	3.02	0.63	1.156	0.73	Valid	
RC005	12.90	9	A	Perp	87	39	3393	4320.10	65.73	-	2.10	0.49	1.131	0.55	Valid	
RC005	13.40	10	A	Perp	87	39	3393	4320.10	65.73	-	2.52	0.58	1.131	0.66	Valid	
RC006	13.10	3	A	Perp	87	38	3306	4209.33	64.88	-	2.41	0.57	1.124	0.64	Valid	
RC006	13.60	4	A	Perp	87	40	3480	4430.87	66.56	-	2.66	0.60	1.137	0.68	Valid	
RC006	14.70	6	A	Perp	87	46	4002	5095.50	71.38	-	4.08	0.80	1.174	0.94	Valid	
RC006	15.10	7	A	Perp	87	44	3828	4873.96	69.81	-	3.70	0.76	1.162	0.88	Valid	
RC006	15.50	8	A	Perp	87	43	3741	4763.19	69.02	-	2.94	0.62	1.156	0.71	Valid	
RC006	16.40	9	A	Perp	87	42	3654	4652.42	68.21	-	2.83	0.61	1.150	0.70	Valid	
RC004	11.10	1	A	Perp	87	33	2871	3655.47	60.46	-	0.28	0.08	1.089	0.08	Valid	
RC004	11.20	2	A	Perp	87	38	3306	4209.33	64.88	-	0.62	0.15	1.124	0.17	Valid	
RC004	11.70	3	A	Perp	87	40	3480	4430.87	66.56	-	0.38	0.09	1.137	0.10	Valid	
RC004	14.40	5	A	Perp	87	41	3567	4541.65	67.39	-	11.47	2.53	1.144	2.89	Valid	
RC004	16.00	7	A	Perp	87	40	3480	4430.87	66.56	-	1.95	0.44	1.137	0.50	Valid	
RC004	16.10	8	A	Perp	87	39	3393	4320.10	65.73	-	2.88	0.67	1.131	0.75	Valid	

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Par = parallel, Perp = perpendicular, U = Random

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Barnsley West (LT1)

Contract No:

PSL21/9933

Client Ref:

3104

SUMMARY OF POINT LOAD TEST RESULTS

ISRM Suggested Methods : 2007

Borehole Number	Depth (m)	Sample Ref	Test Type	Orientation	Dimensions (mm)		D _c ²	D _e (mm)	Failure Load		I _s (MPa)	Corr Fac F	I _{s50} (MPa)	Failure Type	Remarks
					Par / Perp	L			D	(Mpa)					
RC202	15.50	8	D	Par	-	87	7569	87.00	-	1.28	0.169	1.283	0.22	Valid	
RC005	7.80	1	D	Par	-	87	7569	87.00	-	0.47	0.062	1.283	0.08	Valid	
RC005	9.00	3	D	Par	-	87	7569	87.00	-	12.05	1.592	1.283	2.04	Valid	
RC005	11.10	5	D	Par	-	87	7569	87.00	-	10.88	1.437	1.283	1.84	Valid	
RC005	12.20	6	D	Par	-	87	7569	87.00	-	0.33	0.044	1.283	0.06	Valid	
RC005	12.60	8	D	Par	-	87	7569	87.00	-	1.17	0.155	1.283	0.20	Valid	
RC005	12.90	9	D	Par	-	87	7569	87.00	-	1.42	0.188	1.283	0.24	Valid	
RC005	13.40	10	D	Par	-	87	7569	87.00	-	1.85	0.244	1.283	0.31	Valid	
RC006	13.10	3	D	Par	-	87	7569	87.00	-	1.70	0.225	1.283	0.29	Valid	
RC006	13.60	4	D	Par	-	87	7569	87.00	-	1.78	0.235	1.283	0.30	Valid	
RC006	14.70	6	D	Par	-	87	7569	87.00	-	2.42	0.320	1.283	0.41	Valid	
RC006	15.10	7	D	Par	-	87	7569	87.00	-	2.65	0.350	1.283	0.45	Valid	
RC006	15.50	8	D	Par	-	87	7569	87.00	-	1.10	0.145	1.283	0.19	Valid	
RC006	16.40	9	D	Par	-	87	7569	87.00	-	1.99	0.263	1.283	0.34	Valid	
RC004	11.10	1	D	Par	-	87	7569	87.00	-	0.05	0.007	1.283	0.01	Valid	
RC004	11.20	2	D	Par	-	87	7569	87.00	-	0.16	0.021	1.283	0.03	Valid	
RC004	11.70	3	D	Par	-	87	7569	87.00	-	0.16	0.021	1.283	0.03	Valid	
RC004	14.40	5	D	Par	-	87	7569	87.00	-	10.98	1.451	1.283	1.86	Valid	
RC004	16.00	7	D	Par	-	87	7569	87.00	-	1.43	0.189	1.283	0.24	Valid	
RC004	16.10	8	D	Par	-	87	7569	87.00	-	2.07	0.273	1.283	0.35	Valid	

*Note All testing carried out on samples at as received water content

Par = parallel, Perp = perpendicular, U = Random



Barnsley West (LT1)

Contract No:

PSL21/9933

Client Ref:

3104

DETERMINATION OF UNCONFINED COMPRESSIVE STRENGTH

ISRM Suggested Methods, pp 111 –116, 1981.

Hole Number	Sample Number	Sample Type	Top Depth (m)	Base Depth (m)	Sample Diameter (mm)	Sample Length (mm)	Height Ratio	Initial Mass (g)	Bulk Density (Mg/m)	Moisture Content (%)	Dry Density (Mg/m)	Load Failure (kN)	UCS (MPa)	Failure Mode	Date Tested	Remarks
RC203	1	UCS	9.40		87	137	1.6	2003	2.46	3.8	2.37	161.4	27.1	Brittle	31/01/22	
RC203	7	UCS	14.00		87	162	1.9	2500	2.60	2.0	2.54	126.7	21.3	Brittle	31/01/22	
RC003	2	UCS	9.70		87	138	1.6	2038	2.48	4.4	2.38	151.4	25.5	Brittle	31/01/22	
RC003	6	UCS	13.60		87	129	1.5	1985	2.59	2.3	2.53	73.6	12.4	Brittle	31/01/22	
RC003	7	UCS	14.30		87	126	1.4	1963	2.62	2.6	2.55	62.3	10.5	Brittle	31/01/22	
RC001	3	UCS	10.00		87	151	1.7	2276	2.54	2.4	2.48	85.3	14.3	Brittle	31/01/22	
RC001	6	UCS	11.70		87	125	1.4	1859	2.50	3.5	2.42	169.3	28.5	Brittle	31/01/22	
RC001	7	UCS	13.50		87	147	1.7	2247	2.57	3.2	2.49	103.6	17.4	Brittle	31/01/22	
RC104	1	UCS	8.30		87	143	1.6	2102	2.47	4.2	2.37	284.8	47.9	Brittle	31/01/22	
RC104	7	UCS	12.30		87	130	1.5	1950	2.52	3.9	2.43	291.4	49.0	Brittle	31/01/22	
RC201	5	UCS	13.00		87	130	1.5	1961	2.54	2.1	2.48	100.8	17.0	Brittle	31/01/22	
RC202	1	UCS	7.80		87	142	1.6	2165	2.56	2.4	2.50	79.3	13.3	Brittle	31/01/22	
RC202	7	UCS	14.00		87	156	1.8	2427	2.62	1.4	2.58	526.4	88.5	Brittle	31/01/22	
RC005	2	UCS	8.20		87	136	1.6	1945	2.41	4.4	2.30	333.8	56.1	Brittle	31/01/22	
RC005	4	UCS	9.20		87	140	1.6	2032	2.44	4.7	2.33	142.6	24.0	Brittle	31/01/22	
RC005	7	UCS	12.30		87	136	1.6	2063	2.55	3.1	2.47	88.8	14.9	Brittle	31/01/22	
RC006	1	UCS	11.20		87	135	1.6	1901	2.37	4.5	2.27	114.0	19.2	Brittle	31/01/22	
RC006	2	UCS	12.20		87	152	1.7	2256	2.50	4.0	2.40	28.6	4.8	Brittle	31/01/22	
RC006	5	UCS	13.70		87	133	1.5	2005	2.54	2.9	2.46	42.2	7.1	Brittle	31/01/22	



Barnsley West (LT1)

Contract No:

PSL21/9933

Client Ref:

3104

Appendix L
Gas Monitoring Results

Visit 1			
Job Title:			Job No:
Barnsley West			3104
Client:			Sheet :
Strata Homes Ltd			1 of 3
Date:	Arrival Time:	Depart Time:	Operator:
05/01/2021	07:50	16:30	Cameron Daniel



Gas Monitoring Results:							
Ambient Concentration (% Volume):		CH ₄ :	ND	CO ₂ :	ND	O ₂ :	20.6

Monitoring Point	Groundwater level (m) bgl	Concentrations					Gas Flow Rates			Bottom of well m	Remarks
		Initial / Highest		Steady concentrations		Lowest concn	Initial / Maximum	Steady	Time to fall from highest to steady		
		CH ₄ % v/v	CO ₂ (%)	CH ₄ % v/v	CO ₂ (%)	O ₂ (%)	litre/hr	litre/hr	secs		
BH001	4.51	ND	8.4	ND	8.4	0.1	ND	ND	ND	4.60	
BH002	1.49	ND	2.9	ND	2.9	19.1	-59.8	-0.3	60.0	8.38	Flooded. Bung briefly removed before monitoring. Flow fluctuating -0.3 to ND. *
BH003	4.97	ND	5.2	ND	5.2	12.2	-3.4	ND	60.0	6.46	
BH004	6.25	ND	ND	ND	ND	20.1	-17.0	-14.9	510.0	6.64	Flooded. Bung removed briefly before monitoring. Flow fluctuating -14.9 to -13.2.
BH005	4.65	ND	1.8	ND	1.8	16.5	-26.3	-22.9	300.0	5.44	Flooded. Bung removed briefly before monitoring. Flow fluctuating -22.9 to -22.5.
BH006	ND	ND	1.7	ND	1.7	17.8	-13.0	-13.0	360.0	8.46	Flow fluctuating -13.0 to -12.4.
BH007	4.56	ND	7.2	ND	7.2	5.8	-60.6	-1.5	240.0	4.57	Flow fluctuating -1.5 to -1.0.
BH008	10.95	ND	ND	ND	ND	20.1	-13.2	-13.2	360.0	11.10	Flooded. Bung removed briefly before monitoring. Flow fluctuating -13.2 to -12.1.
BH009	3.71	ND	5.4	ND	5.4	6.4	ND	ND	ND	5.62	Flooded. Bung removed briefly before monitoring.
BH010	ND	ND	0.2	ND	ND	20.0	ND	ND	ND	10.93	Flooded. Bung removed briefly before monitoring.
BH011	ND	ND	3.6	ND	3.6	16.6	ND	ND	ND	10.75	
BH012	ND	ND	6.0	ND	6.0	13.8	-2.0	-2.0	210.0	7.56	Flow fluctuating -2.0 to -1.2.
BH013	7.41	ND	0.9	ND	0.9	19.3	ND	ND	ND	7.45	Flooded. Bung removed briefly before monitoring.
BH014	ND	ND	2.3	ND	2.3	19.7	ND	ND	ND	5.39	
BH015	4.36	ND	21.8	ND	21.8	0.5	ND	ND	ND	6.63	
BH201	5.61	ND	3.5	ND	3.5	13.5	43.0	ND	60.0	8.68	Flooded. Bung removed briefly before monitoring. *
BH202	5.18	ND	16.9	ND	16.9	7.3	-10.0	ND	20.0	7.02	Flooded. Bung removed briefly before monitoring.
BH203	4.47	ND	11.3	ND	11.3	6.3	ND	ND	ND	4.50	Flooded. Bung removed briefly before monitoring.
BH204	ND	ND	9.3	ND	9.3	14.4	ND	ND	ND	5.83	
BH205	ND	ND	9.6	ND	9.6	4.5	-5.3	-3.5	240.0	5.43	Flooded. Bung removed briefly before monitoring. Flow fluctuating -3.5 to -3.0.
PH034	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well in puddle.
PH035	2.98	NR	NR	NR	NR	NR	NR	NR	NR	3.04	Flooded. Bung removed briefly before monitoring. Water re-covering well too quickly to monitor.
PH036	0.88	ND	0.1	ND	0.1	18.1	30.4	ND	30.0	2.96	Flooded. Bung removed briefly before monitoring. *
PH037	2.85	ND	7.2	ND	7.2	6.5	ND	ND	ND	3.00	Flooded. Bung removed briefly before monitoring. Oxygen still falling slowly.
PH038	ND	ND	0.8	ND	0.8	19.0	-13.0	-13.0	300.0	3.07	Flooded. Bung removed briefly before monitoring. Flow fluctuating -13.0 to -12.7.
PH039	0.87	ND	14.1	ND	14.1	15.0	123.5	ND	90.0	2.91	*
PH040	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well in puddle.
PH041	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well in puddle.
PH042	1.89	ND	2.4	ND	2.4	16.1	33.9	ND	45.0	2.99	Flooded. Bung removed briefly before monitoring.
PH108	2.27	ND	7.6	ND	7.6	10.7	-24.1	-24.0	180.0	2.48	Flooded. Bung removed briefly before monitoring.
PH109	2.64	ND	11.4	ND	11.4	4.7	ND	ND	ND	2.76	Flooded. Bung removed briefly before monitoring.
PH217	2.25	ND	0.2	ND	0.2	19.9	-1.2	-1.2	120.0	3.05	Flooded. Bung removed briefly before monitoring. Flow fluctuating -1.2 to -1.0.
PH218	1.15	ND	0.3	ND	0.3	19.9	-65.0	ND	120.0	2.97	Flooded. Bung removed briefly before monitoring. *
PH219	2.81	ND	4.7	ND	4.7	4.7	-0.6	-0.6	30.0	3.02	Flooded. Bung removed briefly before monitoring. Flow fluctuating -0.6 to -0.1.

Equipment Used:	Next Calibration Date
Gas Data GM436 Infrared Gas Analyser	22/02/2021
Geotechnical Instruments Dipmeter	

Key	ND	None Detected
	NR	Not Recorded
	1.0	Recorded value does not breach trigger levels
	5.0	Recorded value breaches trigger level 1
	10.0	Recorded value breaches trigger level 2

Site Data:		Weather Station Data (sid - IBARNS27 Station)							
Temp (°C):	2 to 5	Barometric Pressure Trend:				Rising			
Time:	08:10	12:21	16:16	00:04	05:59	08:09	12:19	16:14	19:59
Pressure (mb):	993	1000	998	992	996	998	1002	1005	1007
Weather Conditions:	Clear sky/ Moderate breeze								
Surface Ground Conditions:	Wet.								

	CH ₄	CO ₂	O ₂
Trigger level 1	1.0	5.0	16.0
Trigger level 2	5.0	10.0	10.0

Remarks: Wells marked with * had water fully covering response zone.

Job Title:				Job No:	
Barnsley West				3104	
Client:				Sheet :	
Strata Homes Ltd				2 of 3	
Date:	Arrival Time:	Depart Time:	Operator:		
02/02/2022	08:00	16:00	Cameron Daniel and Dean Wileman		



Gas Monitoring Results:							
Ambient Concentration (% Volume):		CH ₄ :	ND	CO ₂ :	ND	O ₂ :	20.6

Monitoring Point	Groundwater level (m) bgl	Concentrations					Gas Flow Rates			Bottom of well m	Remarks
		Initial / Highest		Steady concentrations		Lowest concn	Initial / Maximum	Steady	Time to fall from highest to steady		
		CH ₄ % v/v	CO ₂ (%)	CH ₄ % v/v	CO ₂ (%)	O ₂ (%)	litre/hr	litre/hr	secs		
BH001	ND	ND	7.0	ND	7.0	0.4	1.5	1.5	60.0	4.60	Flow fluctuating -0.7 to 1.5.
BH002	1.84	-	-	-	-	-	-	-	-	8.53	Bailed.
BH003	5.47	ND	0.4	ND	0.4	19.9	1.8	0.8	60.0	6.46	Flow fluctuating -0.2 to 0.8.
BH004	6.27	ND	8.9	ND	8.9	10.6	-7.2	-7.2	180.0	6.66	Flow fluctuating -7.2 to -5.2.
BH005	4.66	ND	5.6	ND	5.6	6.3	-10.9	-9.3	270.0	5.46	Well flooded. Bung briefly removed before monitoring. Flow fluctuating -9.3 to -8.2.
BH006	ND	ND	ND	ND	ND	20.4	-10.5	-10.5	300.0	8.47	Flow fluctuating -4.5 to -10.5.
BH007	ND	ND	6.9	ND	6.9	7.5	-28.2	0.9	60.0	4.58	Flow fluctuating -1.0 to 0.9.
BH008	ND	ND	ND	ND	ND	20.2	-0.5	-0.4	30.0	11.09	Well flooded. Bung briefly removed before monitoring. Flow fluctuating -0.4 to -0.1.
BH009	3.70	ND	8.8	ND	8.8	1.2	-7.7	-0.8	120.0	5.61	Flow fluctuating -0.8 to -0.3.
BH010	ND	ND	6.1	ND	6.1	15.2	-9.2	-8.2	120.0	10.88	Flow fluctuating -8.2 to -7.6.
BH011	ND	ND	ND	ND	ND	20.4	-0.4	-0.4	30.0	10.78	Flow fluctuating -0.4 to ND.
BH012	ND	ND	0.1	ND	0.1	20.1	ND	ND	ND	7.56	
BH013	ND	ND	18.5	ND	18.5	1.8	ND	ND	ND	7.45	
BH014	ND	ND	10.2	ND	10.2	10.6	1.6	ND	30.0	5.39	
BH015	4.54	-	-	-	-	-	-	-	-	6.80	Bailed.
BH201	5.62	-	-	-	-	-	-	-	-	8.85	Bailed.
BH202	5.35	ND	18.6	ND	18.6	6.1	-2.1	ND	30.0	6.79	
BH203	4.45	ND	12.2	ND	12.2	2.8	-0.3	-0.3	30.0	4.48	Flow fluctuating -0.3 to ND.
BH204	ND	ND	8.9	ND	8.9	13.6	ND	ND	ND	5.63	
BH205	ND	ND	12.5	ND	12.5	0.5	-8.7	-0.4	120.0	5.43	
PH034	0.82	-	-	-	-	-	-	-	-	3.05	Bailed.
PH035	2.99	ND	NR	NR	NR	NR	NR	NR	NR	3.02	Well flooded. Bung briefly removed before monitoring but water quickly re-entering well.
PH036	0.98	-	-	-	-	-	-	-	-	2.94	Bailed.
PH037	2.98	ND	10.8	ND	10.8	0.3	ND	ND	ND	3.00	Well flooded. Bung briefly removed before monitoring.
PH038	ND	ND	17.2	ND	17.2	0.2	ND	ND	ND	3.07	
PH039	1.01	-	-	-	-	-	-	-	-	2.93	Bailed.
PH040	1.40	-	-	-	-	-	-	-	-	3.03	Bailed.
PH041	2.43	ND	3.6	ND	3.6	6.7	25.9	-0.5	60.0	2.99	Ditch dug. Well flooded - bung removed before mon. Flow fluctuating -0.5 to -0.1. O2 still falling but mon stopped as water en
PH042	1.66	-	-	-	-	-	-	-	-	3.00	Bailed.
PH108	1.96	ND	9.1	ND	9.1	5.9	26.2	0.6	120.0	2.48	Well flooded. Bung briefly removed before monitoring. Flow fluctuating 0.3 to 0.6.
PH109	2.65	ND	8.7	ND	8.7	8.4	-0.3	ND	10.0	2.76	Well flooded. Bung briefly removed before monitoring.
PH217	2.45	ND	0.5	ND	0.5	19.5	5.8	4.5	180.0	3.07	Flow fluctuating 4.1 to 4.5.
PH218	2.21	-	-	-	-	-	-	-	-	2.98	Bailed.
PH219	ND	ND	8.2	ND	8.2	0.3	-0.4	ND	20.0	3.02	

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser	22/02/2021
Geotechnical Instruments Dipmeter	

Key	ND	None Detected
	NR	Not Recorded
	1.0	Recorded value does not breach trigger levels
	5.0	Recorded value breaches trigger level 1
	10.0	Recorded value breaches trigger level 2

	Site Data:			Weather Station Data (sid - IBARNS27 Station)					
	Temp (°C): 9 to 11			Barometric Pressure Trend:			Steady		
Time:	08:54	13:20	15:28	00:04	05:59	08:54	13:19	15:29	17:59
Pressure (mb):	1001	1006	1002	1007	1007	1007	1008	1009	1008
	Weather Conditions:			Overcast/ Strong gusts (dropping off in afternoon)					
	Surface Ground Conditions:			Wet					

Remarks:	
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Job Title:				Job No:	
Barnsley West				3104	
Client:				Sheet :	
Strata Homes Ltd				3 of 3	
Date:	Arrival Time:	Depart Time:	Operator:		
02/02/2022	08:00	16:00	Cameron Daniel and Dean Wileman		



Gas Monitoring Results:							
Ambient Concentration (% Volume):		CH ₄ :	ND	CO ₂ :	ND	O ₂ :	20.6

Monitoring Point	Groundwater level (m) bgl	Concentrations					Gas Flow Rates			Bottom of well m	Remarks
		Initial / Highest		Steady concentrations		Lowest concn	Initial / Maximum	Steady	Time to fall from highest to steady		
		CH ₄ % v/v	CO ₂ (%)	CH ₄ % v/v	CO ₂ (%)	O ₂ (%)	litre/hr	litre/hr	secs		
BH001	-	-	-	-	-	-	-	-	-	-	
BH002	-	-	-	-	-	-	-	-	-	-	Bailed at 10:10 to 2.10 m (10 L).
BH003	-	-	-	-	-	-	-	-	-	-	
BH004	-	-	-	-	-	-	-	-	-	-	
BH005	-	-	-	-	-	-	-	-	-	-	
BH006	-	-	-	-	-	-	-	-	-	-	
BH007	-	-	-	-	-	-	-	-	-	-	
BH008	-	-	-	-	-	-	-	-	-	-	
BH009	-	-	-	-	-	-	-	-	-	-	
BH010	-	-	-	-	-	-	-	-	-	-	
BH011	-	-	-	-	-	-	-	-	-	-	
BH012	-	-	-	-	-	-	-	-	-	-	
BH013	-	-	-	-	-	-	-	-	-	-	
BH014	-	-	-	-	-	-	-	-	-	-	
BH015	4.54	ND	8.4	ND	8.4	12.5	ND	ND	ND	6.63	Bailed at 11:52 to 4 58 m (9 L). Remonitored 14:18.
BH201	6.16	ND	0.8	ND	0.8	18.7	32.8	0.1	90.0	8.68	Bailed at 11:37 to 6.91 m (10 L). Remonitored 14:13. Bung briefly removed before monitoring.
BH202	-	-	-	-	-	-	-	-	-	-	
BH203	-	-	-	-	-	-	-	-	-	-	
BH204	-	-	-	-	-	-	-	-	-	-	
BH205	-	-	-	-	-	-	-	-	-	-	
PH034	0.62	ND	0.8	ND	0.8	20.0	102.6	5.5	270.0	3.01	Bailed at 11:11 to 2 57 m (6 5 L). Remonitored 14:44. Well flooded. Bung briefly reoved before monitoring. Flow still falling gra
PH035	-	-	-	-	-	-	-	-	-	-	
PH036	2.41	ND	0.1	ND	0.1	20.3	76.1	0.4	120.0	2.96	Bailed at 10:53 to 2 51 m (6 L). Remonitored 14:56. Flow fluctuating -0.1 to 0.4
PH037	-	-	-	-	-	-	-	-	-	-	
PH038	-	-	-	-	-	-	-	-	-	-	
PH039	-	-	-	-	-	-	-	-	-	-	Bailed at 10:30 to 1 32 m (10 L).
PH040	1.47	ND	3.3	ND	3.3	17.9	30.1	0.9	150.0	3.01	Bailed at 09:40 to 2.40 m (3 5 L). Remonitored 15:23. Well flooded. Bung briefly removed before monitoring.
PH041	-	-	-	-	-	-	-	-	-	-	
PH042	2.35	ND	0.4	ND	0.4	19.6	32.6	0.3	60.0	2.99	Bailed at 09:55 to 2.41 m (4 L). Remonitored 15:15.
PH108	-	-	-	-	-	-	-	-	-	-	
PH109	-	-	-	-	-	-	-	-	-	-	
PH217	-	-	-	-	-	-	-	-	-	-	
PH218	2.20	ND	0.8	ND	0.8	18.4	ND	ND	ND	2.97	Bailed at 11:25 to 2 23 m (0 5 L). Remonitored 14:09.
PH219	-	-	-	-	-	-	-	-	-	-	

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/02/2021

Key	ND	None Detected
	NR	Not Recorded
	1.0	Recorded value does not breach trigger levels
	5.0	Recorded value breaches trigger level 1
	10.0	Recorded value breaches trigger level 2

	Site Data:			Weather Station Data (sid - IBARNS27 Station)					
	Temp (°C):	9 to 11		Barometric Pressure Trend:			Steady		
Time:	08:54	13:20	15:28	00:04	05:59	08:54	13:19	15:29	17:59
Pressure (mb):	1001	1006	1002	1007	1007	1007	1008	1009	1008
	Weather Conditions:			Overcast/ Strong gusts (dropping off in afternoon)					
	Surface Ground Conditions:			Wet					

Remarks:	
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