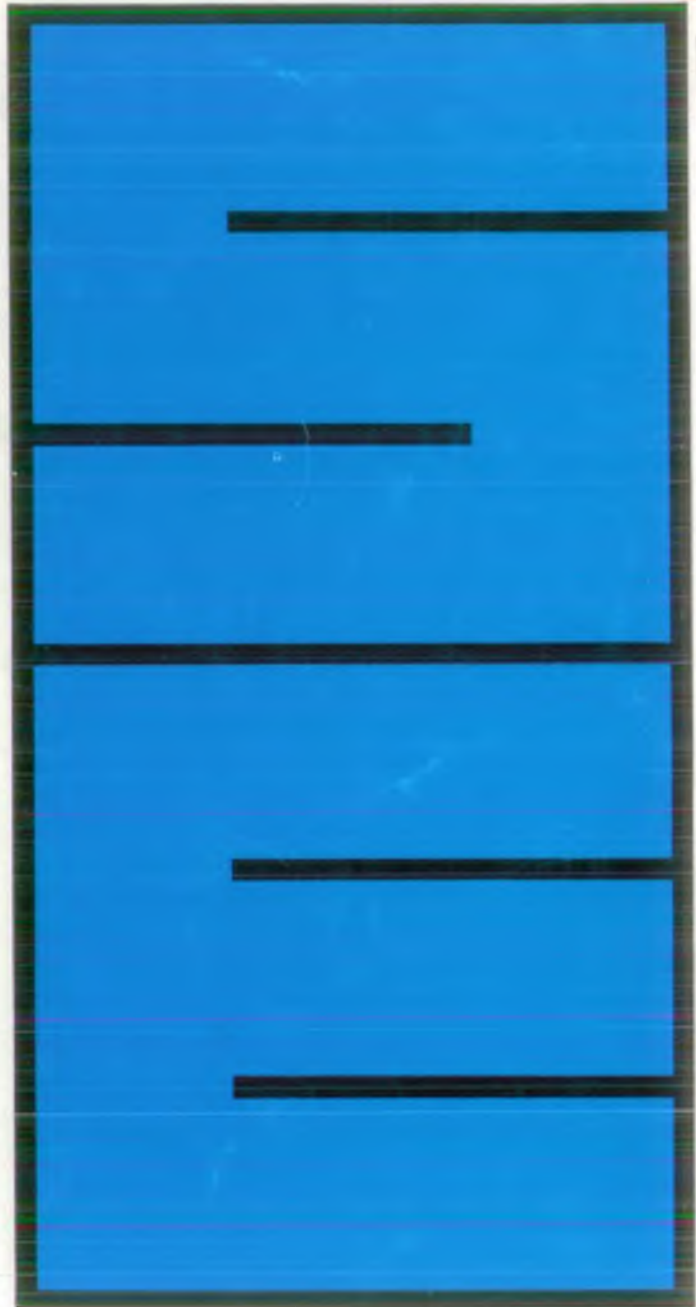


NRA-ANGLIAN 364

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Soils Engineering Limited

NATIONAL RIVERS AUTHORITY

ANGLIAN REGION

FACTUAL REPORT ON THE

BOREHOLES AND INSTALLATION OF STANDPIPES

FOR THE

COMBINED INVESTIGATIONS

IN CONNECTION WITH THE

EAST RUSTON COMMON S.S.S.I. ALLEVIATION SCHEME

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EAST RUSTON COMMON S.S.S.I. ALLEVIATION SCHEME

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Report Reference No.C.6023

June 1994

INTRODUCTION

The Anglian Region of the National Rivers Authority are undertaking a combined hydrogeological and ecological investigation in the area of the East Ruston Common Site of Special Scientific Interest.

At the request of Binnie & Partners, Consulting Engineers for the project, Soils Engineering Limited undertook the installation of 19 single standpipes at 8 locations on and around the S.S.S.I.

LOCATION AND GEOLOGY OF THE SITE

The village of East Ruston lies some 22 kilometres north-east of Norwich centred approximately on National Grid Reference TG 345 720. The East Ruston Common S.S.S.I. comprises Kings Fen to the north-west of the village, north of School Road and Mown Fen to the west of East Ruston.

Published geological information is rather sparse for this area. No current 1 inch or 1:50,000 scale map is available but the older Quarter Inch Scale Maps indicate the Common and surrounding areas to lie on Norwich Crag with the higher ground to the south being capped by Norwich Brickearth. Thin ribbons of alluvial deposits are shown edging the streams in this area, and some peat deposits are likely over the marked Fen areas.

The Norwich Crag is one on the divisions of the East Anglian Pliocene. The term "Crag" is a local word used in this area for any shell sand. The Norwich Crag division extends northwards from Aldeburgh in Suffolk for some 40 miles, and from east to west it extends for some 20 miles. The Crag varies considerably in lithic character from beds of sand to laminated clays and pebbly gravels.

Where the lower horizons of the Norwich Crag rest on the Upper Chalk, a "stone-bed" is often present, representing a basal bed of the Crag. This bed most often comprises mainly flints.

SITE WORK

Between the 13th April and the 12th May 1994, nineteen 200mm diameter boreholes were sunk to depths of between 1.5m and 25m from existing ground level. These boreholes were in groups of two or three at eight different locations in and around the S.S.S.I.. These locations are indicated on the site plan at the end of this report.

Boreholes were progressed by shell and claycutter techniques inside 200mm diameter temporary steel casings by means of a conventional, mobile, cable percussive tripod boring rig.

Undisturbed samples 100mm in diameter were taken in the more cohesive upper horizons of four of the boreholes, namely 2A, 4A, 5A and 8A. Two samples were attempted in each of these four boreholes but recovery was only achieved in five of the eight attempts. Both attempts in 4A failed and the deeper sample in 8A.

Large disturbed bulk samples were taken throughout the deepest, or 'A' hole, at each location. The remaining 'B' and 'C' holes were not sampled.

No in-situ penetration test were undertaken in any of the granular horizons.

At intervals throughout the depth of the boreholes in the Norwich Crag horizon in-situ rising head permeability tests were undertaken. Results of these tests are detailed on sheets following the borehole records.

On completion of boring, 75mm diameter U.P.V.C. standpipes were installed in each borehole to within 150mm of its full depth.

The standpipe was externally screw connected and the lower one metre was perforated with 5mm diameter holes at intervals of approximately 75mm.

This perforated section was wrapped with a 150 micron geotextile and installed in a pea-gravel filter zone topped with at least 300mm thickness of sand. The borehole was then grouted with a cement/bentonite mix (50:50 by weight) to within 750mm of ground level.

The standpipe was allowed to project at least 600mm above ground level and was protected by a 200mm diameter galvanised steel headworks with a bolted steel top flange and plate fitted with a 25mm diameter rodding eye and plug. This headworks was concreted into the ground.

The borehole records give the descriptions and depths of the various strata encountered, details of all samples taken, results of the in-situ tests and the groundwater conditions observed during boring.

The positions of boreholes were related to the National Grid. The ground level and top of headworks capping plate level were related to Ordnance Datum using the O.S.B.Ms on "Wayside", Chapel Road, East Ruston, No.10 School Road and New Bridge, School Road. This work was undertaken by E.D.I. Surveys Limited of Ipswich.

LABORATORY WORK

The samples were inspected in the laboratory and assessments of the soil characteristics have been taken into account during preparation of the borehole records.

The moisture contents of selected soil samples were determined by oven drying.

The particle size distributions of selected soil samples were obtained by sieve analyses. Results of these tests are given as particle size distribution curves at the end of this report. The gradings of the finer soil particles were determined by sedimentation using the pipette method.

The index properties of selected soil samples were determined as an aid to identification and classification. The liquid limit was determined by a cone penetrometer.

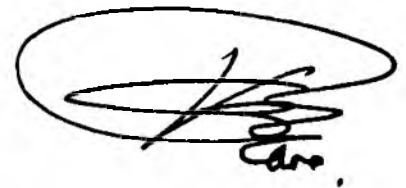
SOILS ENGINEERING LIMITED



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C.Eng., M.I.C.E.,

Contracts Director



K. M. PARE

M.Sc., C.Eng., M.I.C.E.,
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Managing Director

SITE EAST RUSTON							BOREHOLE 1A	
Date: 25/04/94 to 26/04/94			Hole Size: 150mm dia to 13.50 m.		Ground Level: 0.52 m. O.D.		Sheet 1 of 2	
					Coords: 634181 mE 327795 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
0.40	D1		☒		0.02	0.50	Firm grey brown sandy CLAY	
1.00-1.50	B1						Loose orange brown clayey and very silty gravelly SAND, with thin clay bands, becoming less silty at depth	
2.50-3.00	B2		☒				(NORWICH CRAG)	
5.00-5.50	B3							
6.00-6.50	B4				-4.48	5.00	Loose grey silty and gravelly medium to fine becoming fine SAND, at depth, with thin clay bands	
7.00-7.50	B5							
8.00-8.50	B6						(NORWICH CRAG)	
9.50-10.00	B7							
					-8.98	9.50	Dense grey slightly silty very sandy GRAVEL (NORWICH CRAG)	
					-9.48	10.00		
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration N - Blows for 0.3m in penetration test ☒ Water Met ☒ Depth to Water on completion ☒ () Depth, hours after completion						REMARKS 1. Level of top of borehole capping plate 0.92mOD 2. Water met at 1.6m, casing at 1.5m 3. Water not sealed out by casing 4. Water rose to 0.8m at start of shift, 26/4/94, casing at 11m 5. Borehole cased to 11.0m depth 6. Depth to water on completion and after casing removed 3m 7. Standpipe installed to 13.25m depth, perforated and 150micron geotextile wrapped over bottom 1m section 8. Pea gravel filter installed from 13.5m to 12.25m 9. Pea gravel topped with 0.35m thickness of sand 10. Borehole sealed from 11.9m to ground level with cement/bentonite grout and headworks concrete surround 11. Protective cover installed at ground level		
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153						6023		

SITE EAST RUSTON							BOREHOLE 1A	
Date: 25/04/94 to 26/04/94			Hole Size: 150mm dia to 13.50 m.		Ground Level: 0.52 m. O.D. Coords: 634181 mE 327795 mN		Sheet 2 of 2 Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
11.00-11.50	B8				-9.48	10.00	Dense grey slightly silty very sandy GRAVEL (NORWICH CRAG)	
					-9.98	10.50		
						-12.98	13.50	Grey white rubbly CHALK with some remoulded chalk and flints (UPPER CHALK)
							Borehole completed at 13.5m depth	

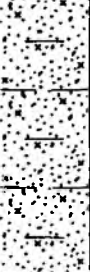
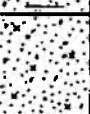
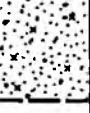
KEY

D - Disturbed Sample	M - Blows for 0.3m
B - Bulk Sample	In penetration test
U - Undisturbed Sample	☒ Water Met
W - Water Sample	☒ Depth to Water
M - Mackintosh Probe	on completion
S - Standard Penetration Test	☒ () Depth, hours
C - Cone Penetration Test	after completion
V - Vane Shear Test Cohesion () kN/m ²	
* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration	

REMARKS

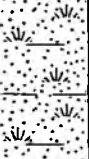
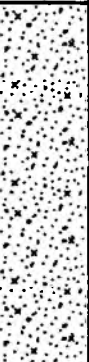
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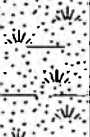
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PETERBOROUGH Tel: (0733) 68153

SITE EAST RUSTON							BOREHOLE 1B			
Date: 26/04/94			Hole Size: 150mm dia to 5.50 m.		Ground Level: 0.59 m. O.D.		Sheet 1 of 1			
					Coords: 634185 mE 327794 mN		Scale 1:50			
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata			
Depth m	Type	Blows								
					0.49	0.10	TOPSOIL			
					-0.41	1.00	Firm orange brown sandy CLAY			
							Loose orange brown clayey and silty gravelly SAND			
							(NORWICH CRAG)			
					-3.41	4.00	Loose grey silty and gravelly SAND			
							(NORWICH CRAG)			
					-4.91	5.50	Borehole completed at 5.5m depth			
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² • S.P.T./C.P.T. Where 0.3m penetration not achieved; blows given for quoted penetration			M - Blows for 0.3m in penetration test  Water Met  Depth to Water on completion  () Depth, hours after completion			REMARKS 1. Level of top of borehole capping plate 0.99mOD 2. Water met at 2.0m, level rose to 1.9m in 5 mins, 1.81m in 10 mins, 1.7m in 15 mins, casing at 3.0m 3. Borehole cased to 5.5m depth 4. Water not sealed out by casing 5. Standpipe installed at 5.35m depth, perforated and 150micron geotextile wrapped over bottom 1m section 6. Pea gravel filter installed from 5.5 to 4.35m 7. Pea gravel topped with 0.35m thickness of sand 8. Borehole sealed from 4m to ground level with cement/bentonite grout and headworks concrete surround 9. Protective cover installed at ground level 10. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN			6023	
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153										

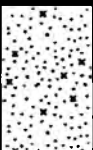
SITE EAST RUSTON							BOREHOLE 2A	
Date: 27/04/94			Hole Size: 150mm dia to 15.00 m.		Ground Level: 1.74 m. O.D.		Sheet 1 of 2	
					Coords: 633909 mE 327849 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
0.50	D1						Loose dark reddish brown clayey and peaty SAND with roots and occasional fine gravel	
1.00-1.40	U1	3					(ALLUVIUM)	
1.70	D2				0.04	1.70		
2.45	D3						Soft to firm dark brown PEAT	
3.00-3.40	U2	4						
3.45	D4							
4.00-4.50	B1		W		-2.06	3.80	Loose grey silty and gravelly medium fine SAND	
5.00-5.50	B2				-3.26	5.00	(NORWICH CRAG)	
6.00-6.50	B3						Loose grey slightly silty very sandy GRAVEL	
7.00-7.50	B4						(NORWICH CRAG)	
8.00-8.50	B5				-6.16	7.90	Dense light grey very silty very sandy GRAVEL	
9.00-9.50	B6						(NORWICH CRAG)	
9.50-10.00	B7				-7.76	9.50		
					-8.26	10.00	Grey white sandy and very chalky GRAVEL and flints (NORWICH CRAG)	
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration							REMARKS 1. Level of top of borehole capping plate 2.50mOD 2. Water met at 3.8m, level rose to 3.0m in 5 mins, 2.45m in 10 mins, 2.05m in 15 mins, casing at 3.0m 3. Borehole cased to 12.0m depth 4. Water not sealed out by casing 5. Standpipe installed to 14.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section 6. Pea gravel filter installed from 15.0m to 13.85m 7. Pea gravel topped with 0.45m thickness of sand 8. Borehole sealed from 13.4m to ground level with cement bentonite grout and headworks concrete surround 9. Protective cover installed at ground level	
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153							6023	

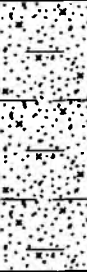
SITE EAST RUSTON										BOREHOLE 2A	
Date: 27/04/94			Hole Size: 150mm dia to 15.00 m.			Ground Level: 1.74 m. O.D.		Sheet 2 of 2			
						Coords: 633909 mE 327849 mN		Scale 1:50			
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata				
Depth m	Type	Blows									
					-8.26	10.00	Grey white rubbly CHALK, some remoulded chalk and flints				
							(UPPER CHALK)				
					-13.26	15.00	Borehole completed at 15m depth				
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS 					
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153						6023					

SITE EAST RUSTON							BOREHOLE 2B	
Date: 28/04/94			Hole Size: 150mm dia to 7.00 m.		Ground Level: 1.74 m. O.D.		Sheet 1 of 1	
					Coords: 633908 mE 327852 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
					0.64	1.10	Loose dark reddish brown clayey and peaty SAND with roots and occasional fine gravel (ALLUVIUM)	
			X				Soft to firm dark brown PEAT	
			X		-2.76	4.50	Dense grey silty and sandy GRAVEL (NORWICH CRAG)	
					-5.26	7.00	Borehole completed at 7m depth	
KEY. D - Disturbed Sample M - Blows for 0.3m in penetration test B - Bulk Sample X - Water Met U - Undisturbed Sample X - Depth to Water on completion W - Water Sample X - () Depth, hours after completion H - Mackintosh Probe V - Vane Shear Test Cohesion () kN/m ² S - Standard Penetration Test C - Cone Penetration Test * S.P.T./C.P.T. where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS 1. Level of top of borehole capping plate 2.59mOD 2. Water met at 4.5m, level rose to 2.8m in 5 mins, 1.7m in 10 mins, and 1.6m in 15 mins, casing at 4.0m 3. Water not sealed out by casing 4. Depth to water on completion 1.47m 5. Standpipe installed to 6.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section 6. Pea gravel filter installed from 7.0m to 5.85m 7. Pea gravel topped with 0.45m thickness of sand 8. Borehole sealed from 5.4m to ground level with cement/bentonite and headworks concrete surround 9. Protective cover installed at ground level 10. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN		
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153						6023		

SITE EAST RUSTON							BOREHOLE 2C		
Date: 28/04/94			Hole Size: 150mm dia to 3.00 m.		Ground Level: 1.54 m. O.D.		Sheet 1 of 1		
					Coords: 633908 mE 327855 mN		Scale 1:50		
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata		
Depth m	Type	Blows							
					0.54	1.00	Loose dark reddish brown clayey and peaty SAND with roots and occasional fine gravel (ALLUVIUM)		
							Soft to firm dark brown PEAT		
					-1.46	3.00	Borehole completed at 3m depth		
KEY D - Disturbed Sample H - Blows for 0.3m B - Bulk Sample in penetration test U - Undisturbed Sample X Water Met W - Water Sample Y Depth to Water M - Mackintosh Probe on completion S - Standard Penetration Test () Depth, hours C - Cone Penetration Test after completion V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. where 0.3m penetration not achieved, blows given for quoted penetration			REMARKS 1. Level of top of borehole capping plate 2.49mOD 2. Borehole dry throughout boring and on completion 3. Standpipe installed to 3.0m depth, perforated and 150micron geotextile wrapped over bottom 1m section 4. Pea gravel filter installed from 3.0m to 2.0m 5. Pea gravel topped with 0.4m thickness of sand 6. Borehole sealed from 1.6m to ground level with cement/bentonite grout and headworks concrete surround 7. Protective cover installed at ground level 8. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN						6023
 SOILS ENGINEERING LIMITED. PETERBOROUGH Tel: (0733) 68153									

SITE EAST RUSTON							BOREHOLE 3A	
Date: 29/04/94 to 03/05/94			Hole Size: 150mm dia to 14.00 m.		Ground Level: 1.69 m. O.D.		Sheet 1 of 2	
					Coords: 633987 mE 327565 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
1.00-1.50	B1				1.59	0.10	Brown sandy TOPSOIL	
2.00-2.50	B2						Loose brown clayey, silty and very gravelly medium SAND	
3.00-3.50	B3		▼		-1.31	3.00	(NORWICH CRAG)	
4.00-4.50	B4						Medium dense orange brown very sandy GRAVEL	
5.50-6.00	B5				-3.81	5.50	(NORWICH CRAG)	
6.50-7.00	B6				-4.81	6.50	Medium dense slightly gravelly medium SAND (NORWICH CRAG)	
8.00-8.50	B7						Medium dense grey silty medium fine SAND with thin clay bands	
9.00	D1				-7.31	9.00	(NORWICH CRAG)	
10.00	D2				-8.31	10.00	Loose grey silty medium fine SAND (NORWICH CRAG)	
KEY					REMARKS			
D - Disturbed Sample					1. Level of top of borehole capping plate 2.53mOD			
B - Bulk Sample					2. Water met at 3.0m, level rose to 2.8m in 5 mins, 2.65m in 10 mins, 2.52m in 15 mins, casing at 3.0m			
U - Undisturbed Sample					3. Water not sealed out by casing			
W - Water Sample					4. Depth to water at start of shift 3/5/94, 1.1m, casing at 9.0m			
M - Mackintosh Probe					5. Chiselling from 13.0m to 14.0m (1 hr)			
S - Standard Penetration Test					6. Borehole cased to 11.5m depth			
C - Cone Penetration Test					7. Depth to water on completion 3.0m depth			
V - Vane Shear Test Cohesion () kN/m ²					8. Standpipe installed to 13.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section			
* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration					9. Pea gravel filter installed from 14.0m to 12.85m			
					10. Pea gravel topped with 0.45m thickness of sand			
					11. Borehole sealed from 12.4m to ground level with cement/bentonite grout and headworks concrete surround			
					12. Protective cover installed at ground level			
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153					6023			

SITE EAST RUSTON										BOREHOLE 3A	
Date: 29/04/94 to 03/05/94			Hole Size: 150mm dia to 14.00 m.			Ground Level: 1.69 m. O.D.		Sheet 2 of 2			
						Coords: 633987 mE 327565 mN		Scale 1:50			
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata				
Depth m	Type	Blows									
11.00	D3				-8.31	10.00	Loose grey silty medium fine SAND (NORWICH CRAG)				
					-9.31	11.00	Grey white rubbly CHALK, some remoulded chalk and flints				
							(UPPER CHALK)				
					-12.31	14.00	Borehole completed at 14m depth				
KEY D - Disturbed Sample M - Blows for 0.3m B - Bulk Sample in penetration test U - Undisturbed Sample W - Water Met W - Water Sample D - Depth to Water M - Mackintosh Probe on completion S - Standard Penetration Test () Depth, hours C - Cone Penetration Test after completion V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS					
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153						6023					

SITE EAST RUSTON							BOREHOLE 3B	
Date: 03/05/94			Hole Size: 150mm dia to 5.50 m.		Ground Level: 1.66 m. O.D.		Sheet 1 of 1	
					Coords: 633985 mE 327568 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
					1.46	0.20	Brown sandy TOPSOIL	
					-0.34	2.00	Loose orange brown clayey silty and gravelly SAND (NORWICH CRAG)	
				-3.84	5.50	Medium dense orange brown gravelly SAND (NORWICH CRAG)		
							Borehole completed at 5.5m depth	

KEY

- D - Disturbed Sample - B - Bulk Sample - U - Undisturbed Sample - W - Water Sample - M - Mackintosh Probe - S - Standard Penetration Test - C - Cone Penetration Test - V - Vane Shear Test Cohesion () kN/m² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration	- N - Blows for 0.3m in penetration test - W - Water Met - W - Depth to Water on completion () Depth, hours after completion
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REMARKS

1. Level of top of borehole capping plate 2.54mOD
 2. Water met at 3.0m, level rose to 2.8m in 5 mins, 2.49m in 10 mins, 2.4m in 15 mins, casing at 2.6m
 3. Borehole cased to 5.5m depth
 4. Water not sealed out by casing
 5. Standpipe installed to 5.35m depth, perforated and 150micron geotextile wrapped over bottom 1m section
 6. Pea gravel filter installed from 5.5m to 4.35m
 7. Pea gravel topped with 0.35m thickness of sand
 8. Borehole sealed from 4m to ground level with cement/bentonite grout and headworks concrete surround
 9. Protective cover installed at ground level
 10. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN


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SITE EAST RUSTON							BOREHOLE 4A	
Date: 09/05/94 to 11/05/94			Hole Size: 150mm dia to 25.00 m.		Ground Level: 8.37 m. O.D.		Sheet 1 of 3	
					Coords: 634807 mE 327603 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
1.00-1.50	B1						Soft orange brown and brown mottled sandy and very silty CLAY	
							(NORWICH BRICKEARTH)	
2.50	D1				5.87	2.50	Soft to firm light grey brown very sandy and very silty CLAY	
2.50-2.90	U1	6						
2.95	D2							
3.50-3.75	U2	19					(NORWICH BRICKEARTH)	
3.95	D3				4.47	3.90		
4.50-5.00	B2						Dense orange brown clayey and silty gravelly medium fine SAND	
5.50-6.00	B3						(NORWICH CRAG)	
6.50-7.00	B4		✓		2.07	6.30	Dense orange brown slightly silty very gravelly coarse to medium SAND	
7.50-8.00	B5		✓					
8.50-9.00	B6						(NORWICH CRAG)	
9.50-10.00	B7							
					-1.63	10.00		
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² • S.P.T./C.P.T. where 0.3m penetration not achieved, blows given for quoted penetration N - Blows for 0.3m in penetration test ☒ - Water Met ☒ - Depth to Water on completion ☒ - () Depth, hours after completion							REMARKS 1. Level of top of borehole capping plate 8.84mOD 2. Water was added to assist progress from 6.0m to 7.0m 3. Water met at 6.3m, level rose to 6.2m in 5 mins, 6.1m in 10 mins, 6.05m in 15 mins, casing at 5.5m 4. Water not sealed out by casing 5. Water stood at 6m at start of shift, 10/5/94, casing at 10m 6. Water stood at 6.3m at start of shift, 11/5/94, casing at 16m 7. Chiselling from 22.1m to 23.0m (1 hr) 8. Borehole cased to 22.5m depth 9. Standpipe installed to 25.35m depth, perforated and 150micron geotextile wrapped over bottom 1m section 10. Pea gravel filter installed from 25.5m to 24.35m 11. Pea gravel topped with 0.35m thickness of sand 12. Borehole sealed from 24.0m to ground level with cement/bentonite grout and headworks concrete surround 13. Protective over installed at ground level	
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SITE EAST RUSTON							BOREHOLE 4A	
Date: 09/05/94 to 11/05/94			Hole Size: 150mm dia to 25.00 m.		Ground Level: 8.37 m. O.D.		Sheet 2 of 3	
					Coords: 634807 mE 327603 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
10.50-11.00	B8				-1.63	10.00	Dense orange brown slightly silty very gravelly coarse to medium SAND (NORWICH CRAG)	
					-2.13	10.50		
11.50-12.00	B9						Dense grey slightly silty and gravelly medium SAND (NORWICH CRAG)	
12.50-13.00	B10							
13.50-14.00	B11							
15.50-16.00	B12				-5.03	13.40	Dense grey slightly silty medium SAND, traces of gravel and thin bands of clay (NORWICH CRAG)	
17.00-17.50	B13							
18.00-18.50	B14							
19.50-20.00	B15				-8.63	17.00	Dense grey very shelly medium SAND (NORWICH CRAG)	
					-9.53	17.90		
							Dense grey slightly gravelly very silty medium fine SAND with thin bands of sandy clay (NORWICH CRAG)	
					-11.13	19.50	Dense grey sandy and silty GRAVEL, shell traces (NORWICH CRAG)	
					-11.63	20.00		

KEY

D - Disturbed Sample	N - Blows for 0.3m in penetration test
B - Bulk Sample	W - Water Met
U - Undisturbed Sample	W - Depth to Water on completion
M - Water Sample	() Depth, hours after completion
M - Mackintosh Probe	
S - Standard Penetration Test	
C - Cone Penetration Test	
V - Vane Shear Test Cohesion () kN/m ²	

* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration

REMARKS

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SITE EAST RUSTON							BOREHOLE 4A	
Date: 09/05/94 to 11/05/94			Hole Size: 150mm dia to 25.00 m.		Ground Level: 8.37 m. O.D. Coords: 634807 mE 327603 mN		Sheet 3 of 3 Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
20.50-21.00	B16				-11.63	20.00	Dense grey sandy and silty GRAVEL, shell traces (NORWICH CRAG)	
					-12.13	20.50		
22.10-22.50	B17				-13.73	22.10	Dense grey clayey and very silty medium fine SAND, traces of fine gravel (NORWICH CRAG)	
					-14.13	22.50		
23.00-24.00	B18				-16.63	25.00	Dense grey flints mainly cobble to small boulder sized Grey white rubbly CHALK and flints (UPPER CHALK) Borehole completed at 25m depth	

KEY

D - Disturbed Sample	N - Blows for 0.3m
B - Bulk Sample	in penetration test
U - Undisturbed Sample	☒ Water Met
W - Water Sample	☒ Depth to Water
M - Mackintosh Probe	on completion
S - Standard Penetration Test	☒ () Depth, hours
C - Cone Penetration Test	after completion
V - Vane Shear Test Cohesion () kN/m ²	
* S.P.T./C.P.T. where 0.3m penetration not achieved, blows given for quoted penetration	

REMARKS

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SITE EAST RUSTON							BOREHOLE 4B	
Date: 12/05/94			Hole Size: 150mm dia to 10.00 m.		Ground Level: 8.35 m. O.D.		Sheet 1 of 1	
					Coords: 634806 mE 327604 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
				✕	6.15	2.20	Soft orange brown mottled sandy and silty CLAY (NORWICH BRICEARTH)	
				✕	4.55	3.80	Soft to firm light grey brown sandy and silty CLAY (NORWICH BRICEARTH)	
				✕	2.15	6.20	Dense orange brown clayey silty and gravelly SAND (NORWICH CRAG)	
			☒	✕			Dense orange brown gravelly SAND (NORWICH CRAG)	
					-1.65	10.00		
KEY D - Disturbed Sample M - Blows for 0.3m in penetration test B - Bulk Sample W - Water Met U - Undisturbed Sample W - Water Met W - Water Sample W - Depth to Water on completion M - Mackintosh Probe W - () Depth, hours after completion S - Standard Penetration Test W - () Depth, hours after completion C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS Borehole completed at 10.0m depth 1. Level of top of borehole capping plate 8.87mOD 2. Water met at 6.2m, level rose to 6.05m in 5 mins, casing at 6.2m 3. Borehole cased to 10.0m depth 4. Water not sealed out by casing 5. Standpipe installed to 9.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section 6. Pea gravel filter installed from 10.0m to 8.85m 7. Pea gravel topped with 0.35m thickness of sand 8. Borehole sealed from 8.5m to ground level with cement/bentonite grout and headworks concrete surround 9. Protective cover installed at ground level 10. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN		
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SITE EAST RUSTON							BOREHOLE 5A	
Date: 04/05/94 to 05/05/94			Hole Size: 150mm dia to 13.00 m.		Ground Level: 1.11 m. O.D. Coords: 634021 mE 327954 mN		Sheet 1 of 2 Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
0.50	D1						Soft brown mottled peaty, very sandy and clayey SILT (ALLUVIUM)	
1.00-1.50 1.00-1.00	B1 U1	2	X					
2.00-2.00 2.10-2.50	U2 B2	5			-0.99	2.10	Medium dense grey clayey and very silty gravelly medium fine SAND, becoming very clayey and silty at depth (NORWICH CRAG)	
3.50-4.00	B3				-2.89	4.00		
5.00-5.50	B4						Loose grey clayey, silty and gravelly medium fine SAND (NORWICH CRAG)	
7.50-8.00	B5				-6.39	7.50		
					-8.49	9.60	Medium dense grey silty medium fine SAND (NORWICH CRAG)	
10.00-10.50	B6				-8.89	10.00		
							Grey white rubbly CHALK and flints (UPPER CHALK)	

KEY

D - Disturbed Sample	N - Blows for 0.3m in penetration test
B - Bulk Sample	W - Water Met
U - Undisturbed Sample	D - Depth to Water on completion
M - Mackintosh Probe	S - Standard Penetration Test
C - Cone Penetration Test	V - Vane Shear Test Cohesion () kN/m ²
* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration	

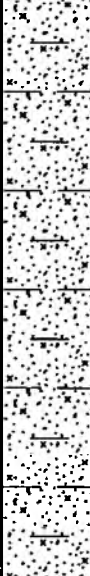
REMARKS

1. Level of top of borehole capping plate 2.04mOD
2. Digging pit from GL to 1.4m (1 hr)
3. Water met at 1.0m, level rose to 0.9m in 5 mins, 0.85m in 10 mins, 0.8m in 15 mins, no casing in hole
4. Water not sealed out by casing
5. Depth to water at start of shift, 5/5/94, 0.8m, casing at 4m
6. Chiselling from 11.0m to 13.0m (1 hr)
7. Borehole cased to 10.0m depth
8. Water stood at 1.5m on completion
9. Standpipe installed to 12.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section
10. Pea gravel filter installed from 13.0m to 11.85m
11. Pea gravel topped with 0.45m thickness of sand
12. Borehole sealed from 11.4m to ground level with cement/bentonite grout and headworks concrete surround
13. Protective cover installed at ground level

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SITE EAST RUSTON							BOREHOLE 5A	
Date: 04/05/94 to 05/05/94			Hole Size: 150mm dia to 13.00 m.		Ground Level: 1.11 m. O.D.		Sheet 2 of 2	
					Coords: 634021 mE 327954 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. (Level) m	Depth m	Description of Strata	
Depth m	Type	Blows						
					-8.89	10.00	Grey white rubbly CHALK and flints	
					-11.89	13.00	(UPPER CHALK)	
							Borehole completed at 13m depth	
KEY D - Disturbed Sample N - Blows for 0.3m B - Bulk Sample in penetration test U - Undisturbed Sample ☒ Water Met. W - Water Sample ☒ Depth to Water M - Mackintosh Probe on completion S - Standard Penetration Test ☒ () Depth, hours C - Cone Penetration Test after completion V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS 6023		
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SITE EAST RUSTON							BOREHOLE 5B	
Date: 06/05/94			Hole Size: 150mm dia to 6.00 m.		Ground Level: 1.26 m. O.D.		Sheet 1 of 1	
					Coords: 634022 mE 327955 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
			X		-0.74	2.00	Soft brown mottled peaty, sandy and clayey SILT (ALLUVIUM)	
			Y		-4.74	6.00	Loose grey clayey silty and gravelly SAND (NORWICH CRAG)	
							Borehole completed at 6m depth	

KEY

D - Disturbed Sample	N - Blows for 0.3m in penetration test
B - Bulk Sample	W - Water Met
U - Undisturbed Sample	X - Depth to Water on completion
M - Mackintosh Probe	Y - () Depth, hours after completion
S - Standard Penetration Test	
C - Cone Penetration Test	
V - Vane Shear Test Cohesion () kN/m ²	

* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration

REMARKS

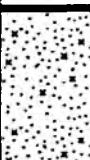
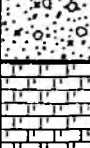
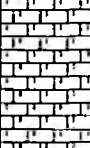
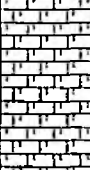
1. Level of top of borehole capping plate 2.05m00
 2. Water met at 1.5m, level rose to 1.2m in 5 mins, 0.9m in 10 mins, 0.75m in 15 mins, casing at 1.5m
 3. Water not sealed out by casing
 4. Borehole cased to 6.0m depth
 5. Depth to water on completion 2.5m depth
 6. Standpipe installed to 5.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section
 7. Pea gravel filter installed from 6.0m to 4.85m
 8. Pea gravel topped with 0.45m thickness of sand
 9. Borehole sealed from 4.4m to ground level with cement/bentonite grout and headworks concrete surround
 10. Protective cover installed at ground level
 11. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN

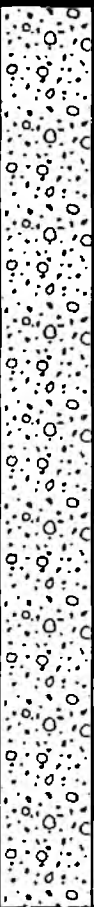
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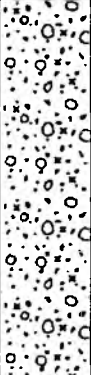
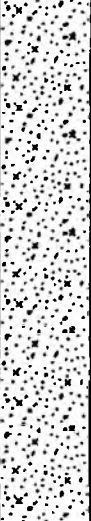
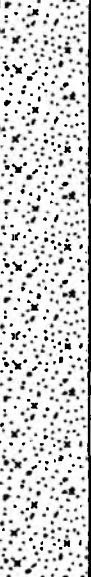
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SITE EAST RUSTON							BOREHOLE 5C	
Date: 13/05/94			Hole Size: 150mm dia to 1.70 m.		Ground Level: 1.43 m. O.D.		Sheet 1 of 1	
					Coords: 634023 mE 327956 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
			 	 	-0.27	1.70	Soft brown mottled peaty sandy and clayey SILT (ALLUVIUM) Borehole completed at 1.7m depth	
KEY D - Disturbed Sample M - Blows for 0.3m in penetration test B - Bulk Sample U - Undisturbed Sample U - Undisturbed Sample W - Water Sample W - Water Sample H - Mackintosh Probe H - Mackintosh Probe S - Standard Penetration Test S - Standard Penetration Test C - Cone Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² V - Vane Shear Test Cohesion () kN/m ² • S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration			REMARKS 1. Level of top of borehole capping plate 2.39mOD 2. Water met at 1.0m, level rose to 0.8m in 5 mins, no casing in hole 3. Borehole cased to 1.5m depth 4. Depth to water on completion and after casing removed 0.8m 5. Standpipe installed to 1.55m depth, perforated and 150micron geotextile wrapped over bottom 1m section 6. Pea gravel filter installed from 1.7m to 0.55m 7. Borehole sealed with headworks concrete surround from 0.55m to ground level 8. Protective cover installed at ground level 9. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN			6023		
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SITE EAST RUSTON							BOREHOLE 6A	
Date: 13/04/94 to 14/04/94			Hole Size: 150mm dia to 15.50 m.		Ground Level: 2.85 m. O.D.		Sheet 1 of 2	
					Coords: 634382 mE 328223 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
1.00	D1					7.00	Medium dense orange brown very sandy GRAVEL, considerably more sandy around 5m depth	
2.00-2.50	B1							
3.00-3.50	B2							
4.00-4.50	B3						(NORWICH CRAG)	
5.00-5.50	B4							
6.00-6.50	B5							
7.00-7.20	B6							
8.00-8.50	B7						Loose grey silty medium fine SAND, with thin bands of clay	
9.00-9.50	B8						(NORWICH CRAG)	
10.00-10.50	B9		-7.15	10.00				
KEY O - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion (.) kN/m² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration N - Blows for 0.3m in penetration test Σ Water Met Σ Depth to Water on completion Σ (.) Depth, hours after completion							REMARKS 6023 1. Level of top of borehole capping plate 3.40mOD 2. Water met at 2.5m, level rose to 2.0m in 5 mins, 1.75m in 10 mins, 1.5m in 15 mins, casing at 2.5m 3. Water not sealed out by casing 4. Depth to water at start of shift, 14/4/94, 4m, casing at 12m 5. Chiselling from 12.5m to 15.5m (1 hr) 6. Borehole cased to 13.0m depth 7. Standpipe installed to 15.35m depth, perforated and 150micron geotextile wrapped over bottom 1m section 8. Pea gravel filter installed from 15.5m to 14.35m 9. Pea gravel topped with 0.65m thickness of sand 10. Borehole sealed from 13.7m to ground level with cement/bentonite grout and headworks concrete surround 11. Protective cover installed at ground level	
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SITE EAST RUSTON							BOREHOLE 6A	
Date: 13/04/94 to 14/04/94			Hole Size: 150mm dia to 15.50 m.		Ground Level: 2.85 m. O.D. Coords: 634382 mE 328223 mN		Sheet 2 of 2 Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
11.10-11.50	B10				-7.15	10.00	Loose grey silty medium fine SAND, with thin bands of clay (NORWICH CRAG)	
					-8.25	11.10		
					-9.15	12.00		
					-9.65	12.50		
							Grey white rubbly CHALK, some remoulded chalk and flints (UPPER CHALK)	
				-12.65	15.50			
							Borehole completed at 15.5m depth	
KEY D - Disturbed Sample M - Blows for 0.3m in penetration test B - Bulk Sample  Water Met U - Undisturbed Sample  Depth to Water on completion W - Water Sample  () Depth, hours after completion H - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS		6023
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SITE EAST RUSTON						BOREHOLE 6B	
Date: 15/04/94			Hole Size: 150mm dia to 6.00 m.		Ground Level: 2.87 m. O.D.		Sheet 1 of 1
					Coords: 634378 mE 328221 mN		Scale 1:50
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata
Depth m	Type	Blows					
			X		-3.13	6.00	Medium dense orange brown sandy GRAVEL (NORWICH CRAG)
							Borehole completed at 6m depth
KEY D - Disturbed Sample N - Blows for 0.3m in penetration test B - Bulk Sample W - Water Met U - Undisturbed Sample X - Depth to Water on completion M - Water Sample Y - () Depth, hours after completion S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS 1. Level of top of borehole capping plate 3.46mOD 2. Water met at 2.5m, level rose to 2.1m in 5 mins, 1.91m in 10 mins, 1.8m in 15 mins, casing at 2.5m 3. Borehole cased to 6.0m depth 4. Water not sealed out by casing 5. Standpipe installed to 5.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section 6. Pea gravel filter installed from 6m to 4.85m 7. Pea gravel topped with 0.35m thickness of sand 8. Borehole sealed from 4.5m to ground level with cement/bentonite grout and headworks concrete surround 9. Protective cover installed at ground level 10. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN	
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SITE EAST RUSTON							BOREHOLE 7A	
Date: 18/04/94 to 19/04/94			Hole Size: 150mm dia to 15.50 m.		Ground Level: 2.53 m. O.D.		Sheet 1 of 2	
					Coords: 634370 mE 328366 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
0.50-1.00	B1				0.03	2.50	Medium dense orange brown slightly silty very sandy GRAVEL	
1.50-2.00	B2						(NORWICH CRAG)	
2.50-3.00	B3		☒				Medium dense orange brown slightly silty and gravelly medium SAND	
3.50-4.00	B4				-3.47	6.00	Medium dense orange brown slightly silty and gravelly medium SAND	
4.50-5.00	B5						(NORWICH CRAG)	
6.00-6.50	B6		☒				Loose grey silty and gravelly medium fine SAND. More gravelly in upper horizons. Thin bands of clay	
7.00-7.50	B7				-7.47	10.00	(NORWICH CRAG)	
8.00-8.50	B8						(NORWICH CRAG)	
9.00-9.50	B9						(NORWICH CRAG)	

KEY

D - Disturbed Sample	M - Blows for 0.3m in penetration test
B - Bulk Sample	☒ Water Met
U - Undisturbed Sample	☒ Depth to Water on completion
W - Water Sample	☒ Depth, hours after completion
H - Mackintosh Probe	
S - Standard Penetration Test	
C - Cone Penetration Test	
V - Vane Shear Test Cohesion () kN/m ²	

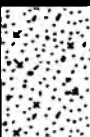
* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration

REMARKS

1. Level of top of borehole capping plate 3.15mOD
 2. Water was added to assist progress from 1.5m to 2.0m
 3. Water met at 2.0m, level rose to 1.55m in 5 mins, casing at 2.0m
 4. Water not sealed out by casing
 5. Water rose to stand at 3.1m at start of shift, 19/4/94, casing at 12.3m
 6. Borehole cased to 12.4m
 7. Depth to water on completion 3.0m depth
 8. Standpipe installed to 15.35m depth, perforated and 150micron geotextile wrapped over bottom 1m section
 9. Pea gravel filter installed from 15.5m to 14.35m
 10. Pea gravel topped with 0.55m thickness of sand
 11. Borehole sealed from 13.8m to ground level with cement/bentonite grout and headworks concrete surround
 12. Protective cover installed at ground level

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SITE EAST RUSTON							BOREHOLE 7A	
Date: 18/04/94 to 19/04/94			Hole Size: 150mm dia to 15.50 m.		Ground Level: 2.53 m. O.D.		Sheet 2 of 2	
					Coords: 634370 mE 328366 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
11.00-11.50	B10				-7.47	10.00	Loose grey silty and gravelly medium fine SAND. More gravelly in upper horizons. Thin bands of clay (NORWICH CRAG)	
					-8.37	10.90		
12.00-12.30	B11						Dense grey very sandy GRAVEL, with occasional cobble sized flints (NORWICH CRAG)	
12.50-13.00	B12			-9.77	12.30			
14.50-15.00	B13						Grey white rubbly and remoulded CHALK with abundant flints (UPPER CHALK)	
					-12.97	15.50		
						Borehole completed at 15.5m depth		

KEY

D - Disturbed Sample	N - Blows for 0.3m in penetration test
B - Bulk Sample	W - Water Met
U - Undisturbed Sample	W - Depth to Water on completion
M - Water Sample	W - () Depth, hours after completion
M - Mackintosh Probe	
S - Standard Penetration Test	
C - Cone Penetration Test	
V - Vane Shear Test Cohesion () kN/m ²	

* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration

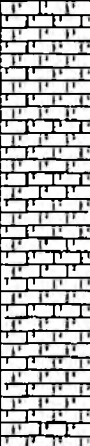
REMARKS

6023

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SITE EAST RUSTON							BOREHOLE 7B	
Date: 19/04/94			Hole Size: 150mm dia to 6.00 m.		Ground Level: 2.78 m. O.D.		Sheet 1 of 1	
					Coords: 634374 mE 328367 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
			 	2.68 -0.32 -3.02 -3.22	0.10 3.10 5.80 6.00	Loose black sandy TOPSOIL Medium dense orange brown silty and sandy GRAVEL (NORWICH CRAG) Loose orange brown silty gravelly SAND (NORWICH CRAG) Loose grey silty and gravelly SAND (NORWICH CRAG) Borehole completed at 6m depth		
KEY D - Disturbed Sample N - Blows for 0.3m in penetration test B - Bulk Sample X Water Met U - Undisturbed Sample W Depth to Water on completion M - Water Sample V () Depth, hours after completion S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² • S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration					REMARKS 1. Level of top of borehole capping plate 3.44mOD 2. Water met at 2.0m, level rose to 1.9m in 5 mins, 1.8m in 10 mins, 1.78m in 15 mins, casing at 2.0m 3. Water not sealed out by casing 4. Borehole cased to 6.0m depth 5. Depth to water on completion 3.0m depth 6. Standpipe installed to 5.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section 7. Pea gravel filter installed from 6m to 4.85m 8. Pea gravel topped with 0.35m thickness of sand 9. Borehole sealed from 4.5m to ground level with cement/bentonite grout and headworks concrete surround 10. Protective cover installed at ground level 11. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN			
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153					6023			

SITE EAST RUSTON							BOREHOLE 8A	
Date: 20/04/94 to 21/04/94			Hole Size: 150mm dia to 13.50 m.		Ground Level: 1.13 m. O.D.		Sheet 1 of 2	
					Coords: 634114 mE 328174 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
0.50	D1		☒	☒			Very soft dark brown black PEAT	
1.00-1.25	U1	1	☒	☒				
1.45	D2			☒				
2.00-2.00	U2	4		☒				
2.20	D3			☒	-1.07	2.20	Soft grey clayey SILT with peaty root traces (ALLUVIUM)	
2.50-3.00	B1			☒	-1.17	2.30		
3.50-4.00	B2			☒			Medium dense grey brown becoming grey very sandy GRAVEL (NORWICH CRAG)	
4.50-5.00	B3			☒				
5.50-6.00	B4			☒				
6.50-7.00	B5			☒				
7.50-8.00	B6			☒	-6.37	7.50		
8.50-9.00	B7			☒	-7.17	8.30	Medium dense grey silty fine SAND with thin bands of clay (NORWICH CRAG)	
9.50-10.00	B8			☒			Dense grey sandy GRAVEL (NORWICH CRAG)	
				☒	-8.87	10.00		
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² * S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration							REMARKS 1. Level of top of borehole capping plate 1.93mOD 2. Water met at 1.1m, level rose to 0.9m in 5 mins, remained at 0.9m for 10 mins, casing at 1.0m 3. Water not sealed out by casing 4. Water stood at 4.5m at end of shift, 20/4/94, casing at 10.0m 5. Water rose to stand at 0.52 at beginning of shift the next day 21/4/94 6. Borehole cased to 10.5m depth 7. Standpipe installed to 13.35m depth, perforated and 150micron geotextile wrapped over bottom 1m section 8. Pea gravel filter installed from 13.5m to 12.35m 9. Pea gravel topped with 0.4m thickness of sand 10. Borehole sealed from 11.95m to ground level with cement/bentonite grout and headworks concrete surround 11. Protective cover installed at ground level	
SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153							6023	

SITE EAST RUSTON							BOREHOLE 8A	
Date: 20/04/94 to 21/04/94			Hole Size: 150mm dia to 13.50 m.		Ground Level: 1.13 m. O.D.		Sheet 2 of 2	
					Coords: 634114 mE 328174 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
11.00-11.50	B9				-8.87	10.00	Dense grey sandy GRAVEL (NORWICH CRAG)	
					-9.37	10.50		
12.50-13.00	B10						Grey white remoulded CHALK, some rubbly chalk fragments and occasional flints (UPPER CHALK)	
					-12.37	13.50	Borehole completed at 13.5m depth	

KEY

D - Disturbed Sample	N - Blows for 0.3m
B - Bulk Sample	in penetration test
U - Undisturbed Sample	☒ Water Met
W - Water Sample	☒ Depth to Water
M - Mackintosh Probe	on completion
S - Standard Penetration Test	☒ () Depth, hours
C - Cone Penetration Test	after completion
V - Vane Shear Test Cohesion () kN/m ²	
* S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration	

REMARKS

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SITE EAST RUSTON						BOREHOLE 8B	
Date: 21/04/94			Hole Size: 150mm dia to 5.00 m.		Ground Level: 0.97 m. O.D.		Sheet 1 of 1
					Coords: 634117 mE 328179 mN		Scale 1:50
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata
Depth m	Type	Blows					
			W	W	-0.83	1.80	Soft to very soft dark brown black PEAT
			W	W	-1.13	2.10	Soft grey clayey SILT, with peat traces (ALLUVIUM)
				W			Medium dense grey brown very sandy GRAVEL
				W			(NORWICH CRAG)
				W	-4.03	5.00	Borehole completed at 5m depth
KEY D - Disturbed Sample N - Blows for 0.3m in penetration test B - Bulk Sample W - Water Met U - Undisturbed Sample W - Depth to Water on completion W - Water Sample W - () Depth, hours after completion M - Mackintosh Probe W - S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion (c) kN/m ²						REMARKS 1. Level of top of borehole capping plate 1.88mOD 2. Water met at 0.7m, level rose to 0.6m in mins, 0.55m in 10 mins, 0.5m in 15 mins, no casing in hole 3. Water not sealed out by casing 4. Borehole cased to 5.0m depth 5. Depth to water on completion 0.48m depth 6. Standpipe installed to 4.85m depth, perforated and 150micron geotextile wrapped over bottom 1m section 7. Pea gravel filter installed from 5.0m to 3.85m 8. Pea gravel topped with 0.35m thickness of sand 9. Borehole sealed from 3.5m to ground level with cement/bentonite grout and headworks concrete surround 10. Protective cover installed at ground level 11. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN	
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SITE EAST RUSTON							BOREHOLE 8C	
Date: 22/04/94			Hole Size: 150mm dia to 1.50 m.		Ground Level: 0.97 m. O.D.		Sheet 1 of 1	
					Coords: 634116 mE 328177 mN		Scale 1:50	
Samples and in-situ Tests			Water	Legend	O.D. Level m	Depth m	Description of Strata	
Depth m	Type	Blows						
			☒		-0.53	1.50	Soft dark brown black PEAT	
							Borehole completed at 1.5m depth	
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed Sample W - Water Sample M - Mackintosh Probe S - Standard Penetration Test C - Cone Penetration Test V - Vane Shear Test Cohesion () kN/m ² • S.P.T./C.P.T. Where 0.3m penetration not achieved, blows given for quoted penetration						REMARKS 1. Level of top of borehole capping plate 2.02mOD 2. Water met at 0.8m, level rose to 0.6m in 5 mins, 0.52m in 10 mins, no casing in hole 3. Standpipe installed to 1.5m depth, perforated and 150micron geotextile wrapped over bottom 1m section 4. Pea gravel filter installed from 1.5m to 0.5m 5. Borehole sealed from 0.5m with headworks to concrete surround 6. Protective cover installed at ground level 7. STRATA DESCRIPTIONS DERIVED MAINLY FROM DRILLERS LOG, NO SAMPLING OR TESTING UNDERTAKEN		
 SOILS ENGINEERING LIMITED PETERBOROUGH Tel: (0733) 68153						6023		

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 25/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 5.00 m

Depth to equilibrium watertable, b : 1.10 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 5.00 m

Length of response zone, Z : 0.00 m

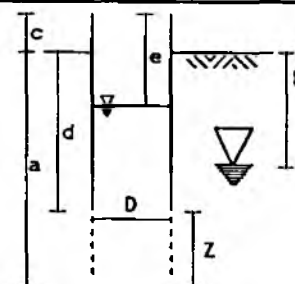
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Loose grey fine sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

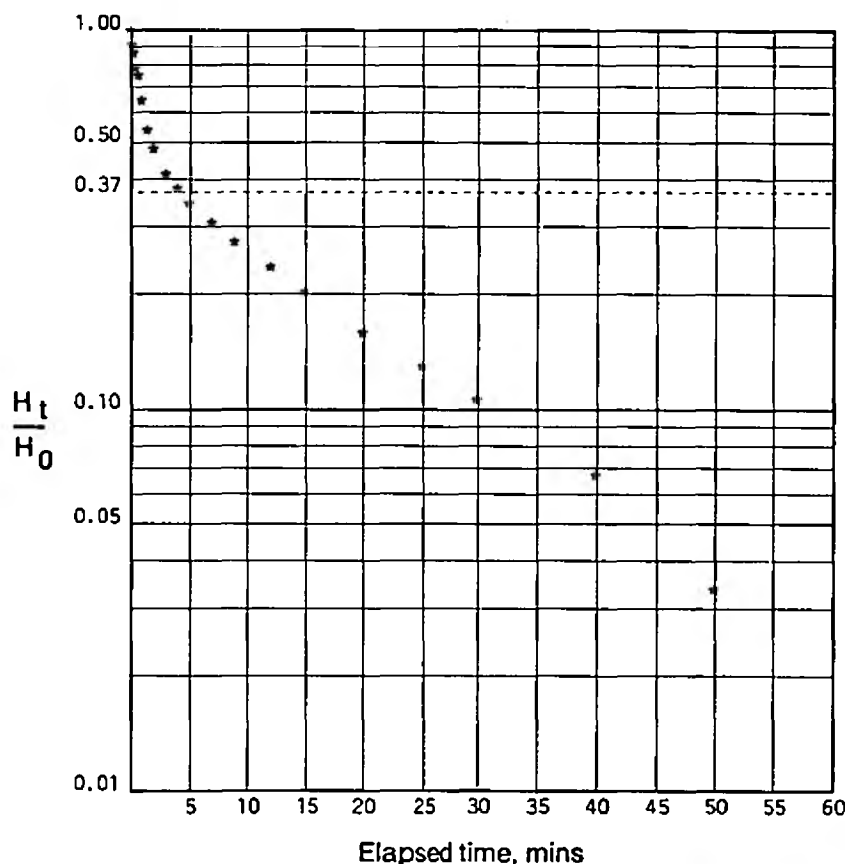
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 2.38E-4 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.38	-2.08	1.000
0.16	3.20	-1.90	0.913
0.33	3.10	-1.80	0.865
0.50	2.94	-1.64	0.788
0.75	2.86	-1.56	0.750
1.00	2.64	-1.34	0.644
1.50	2.42	-1.12	0.538
2.00	2.30	-1.00	0.481
3.00	2.16	-0.86	0.413
4.00	2.09	-0.79	0.380
5.00	2.02	-0.72	0.346
7.00	1.94	-0.64	0.308
9.00	1.87	-0.57	0.274
12.00	1.79	-0.49	0.236
15.00	1.72	-0.42	0.202
20.00	1.63	-0.33	0.159
25.00	1.57	-0.27	0.130
30.00	1.52	-0.22	0.106
40.00	1.44	-0.14	0.067
50.00	1.37	-0.07	0.034
60.00	1.30	0.00	0.000



REMARKS:

6023

In-Situ Permeability Test

Bh No

1A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 25/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 8.00 m

Depth to equilibrium watertable, b : 2.70 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 8.00 m

Length of response zone, Z : 0.00 m

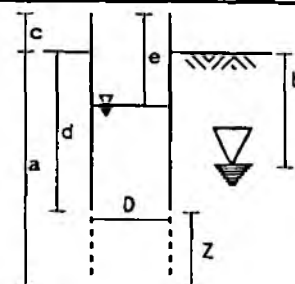
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Loose grey fine sand with layers of clay



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

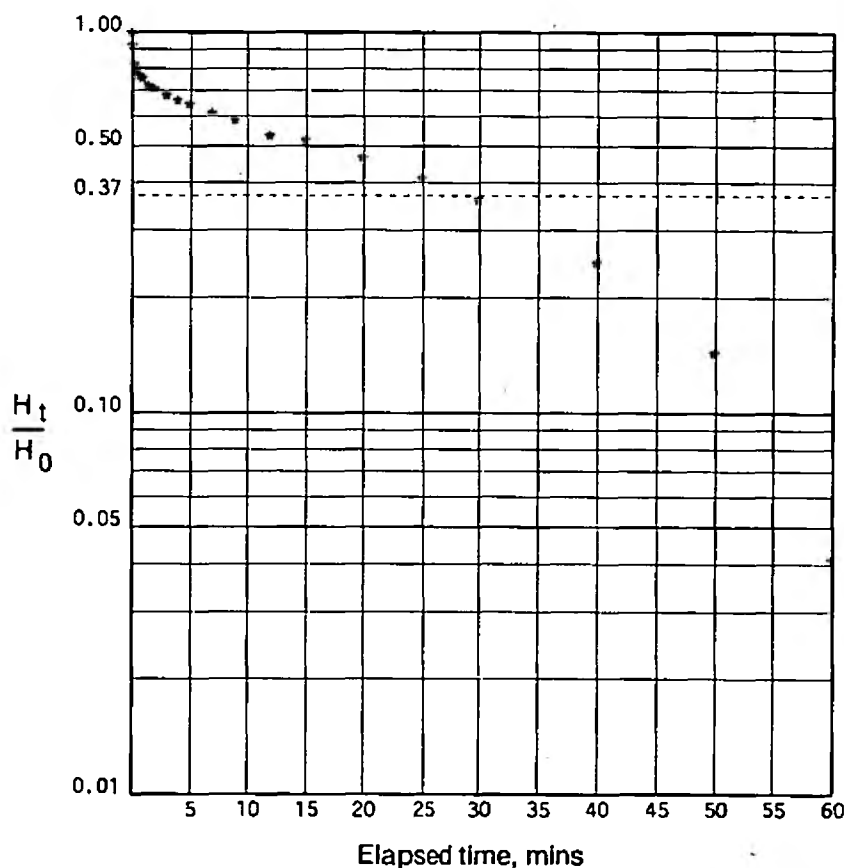
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 3.17E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	4.85	-1.95	1.000
0.16	4.70	-1.80	0.923
0.33	4.50	-1.60	0.821
0.50	4.45	-1.55	0.795
0.75	4.40	-1.50	0.769
1.00	4.37	-1.47	0.754
1.50	4.31	-1.41	0.723
2.00	4.28	-1.38	0.708
3.00	4.23	-1.33	0.682
4.00	4.19	-1.29	0.662
5.00	4.16	-1.26	0.646
7.00	4.09	-1.19	0.610
9.00	4.04	-1.14	0.585
12.00	3.94	-1.04	0.533
15.00	3.91	-1.01	0.518
20.00	3.81	-0.91	0.467
25.00	3.70	-0.80	0.410
30.00	3.60	-0.70	0.359
40.00	3.38	-0.48	0.246
50.00	3.18	-0.28	0.144
60.00	2.98	-0.08	0.041



REMARKS:

6023

In-Situ Permeability Test

Bh No

1A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 25/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 11.00 m

Depth to equilibrium watertable, b : 1.60 m Assumed

Height of casing above ground level, c : 0.75 m

Depth of casing below ground level, d : 10.50 m

Length of response zone, Z : 0.50 m

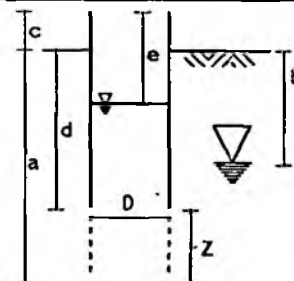
Diameter of response zone, D : 0.20 m

Intake factor, F : 1.9072

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flints



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

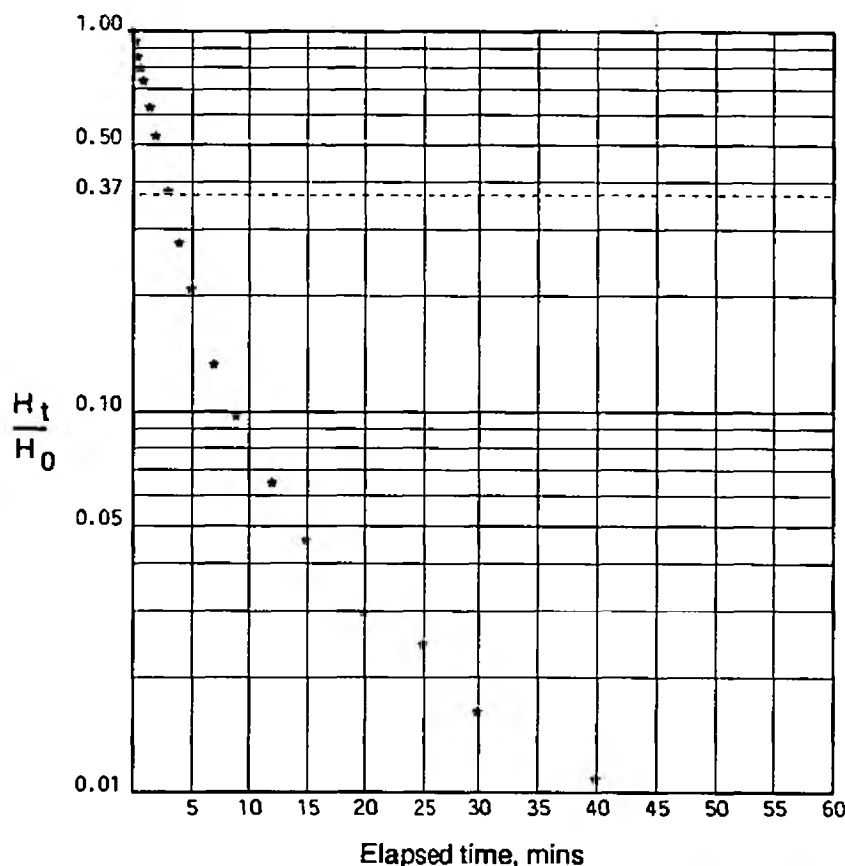
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 9.16E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	6.05	-3.70	1.000
0.16	5.97	-3.62	0.978
0.33	5.80	-3.45	0.932
0.50	5.50	-3.15	0.851
0.75	5.30	-2.95	0.797
1.00	5.08	-2.73	0.738
1.50	4.67	-2.32	0.627
2.00	4.30	-1.95	0.527
3.00	3.75	-1.40	0.378
4.00	3.37	-1.02	0.276
5.00	3.12	-0.77	0.208
7.00	2.84	-0.49	0.132
9.00	2.71	-0.36	0.097
12.00	2.59	-0.24	0.065
15.00	2.52	-0.17	0.046
20.00	2.46	-0.11	0.030
25.00	2.44	-0.09	0.024
30.00	2.41	-0.06	0.016
40.00	2.39	-0.04	0.011
50.00	2.37	-0.02	0.005
60.00	2.35	0.00	0.000



REMARKS:

6023

In-Situ Permeability Test

Bh No

1A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 26/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 5.50 m

Depth to equilibrium watertable, b : 1.10 m Assumed

Height of casing above ground level, c : 0.15 m

Depth of casing below ground level, d : 5.50 m

Length of response zone, Z : 0.00 m

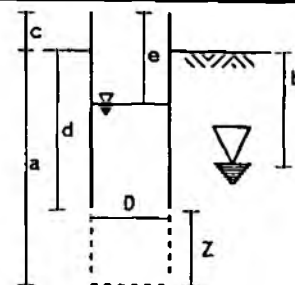
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Loose grey fine sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

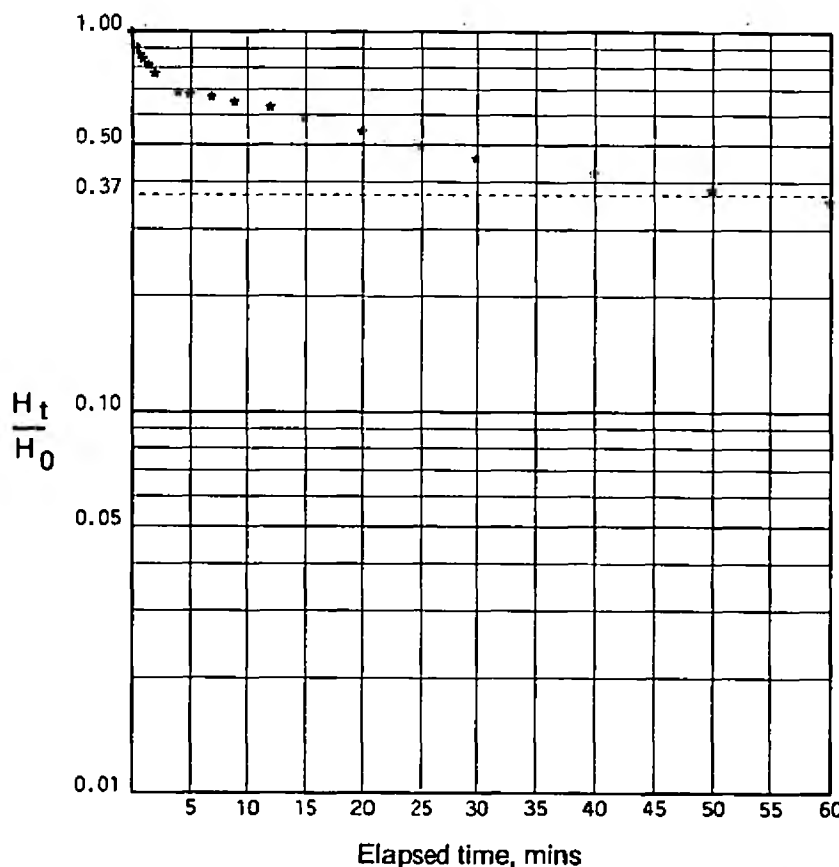
Plot $\log \frac{H_t}{H_0}$ v t

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.81E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.22	-1.97	1.000
0.16	3.20	-1.95	0.990
0.33	3.05	-1.80	0.914
0.50	3.02	-1.77	0.898
0.75	2.95	-1.70	0.863
1.00	2.91	-1.66	0.843
1.50	2.85	-1.60	0.812
2.00	2.77	-1.52	0.772
4.00	2.61	-1.36	0.690
5.00	2.59	-1.34	0.680
7.00	2.57	-1.32	0.670
9.00	2.53	-1.28	0.650
12.00	2.49	-1.24	0.629
15.00	2.41	-1.16	0.589
20.00	2.32	-1.07	0.543
25.00	2.23	-0.98	0.497
30.00	2.16	-0.91	0.462
40.00	2.08	-0.83	0.421
50.00	2.00	-0.75	0.381
60.00	1.95	-0.70	0.355



REMARKS:

6023

In-Situ Permeability Test

Bh No

18

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 27/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 7.00 m

Depth to equilibrium watertable, b : 1.20 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 7.00 m

Length of response zone, Z : 0.00 m

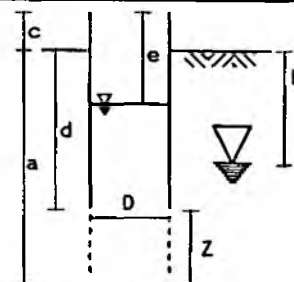
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Loose grey sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

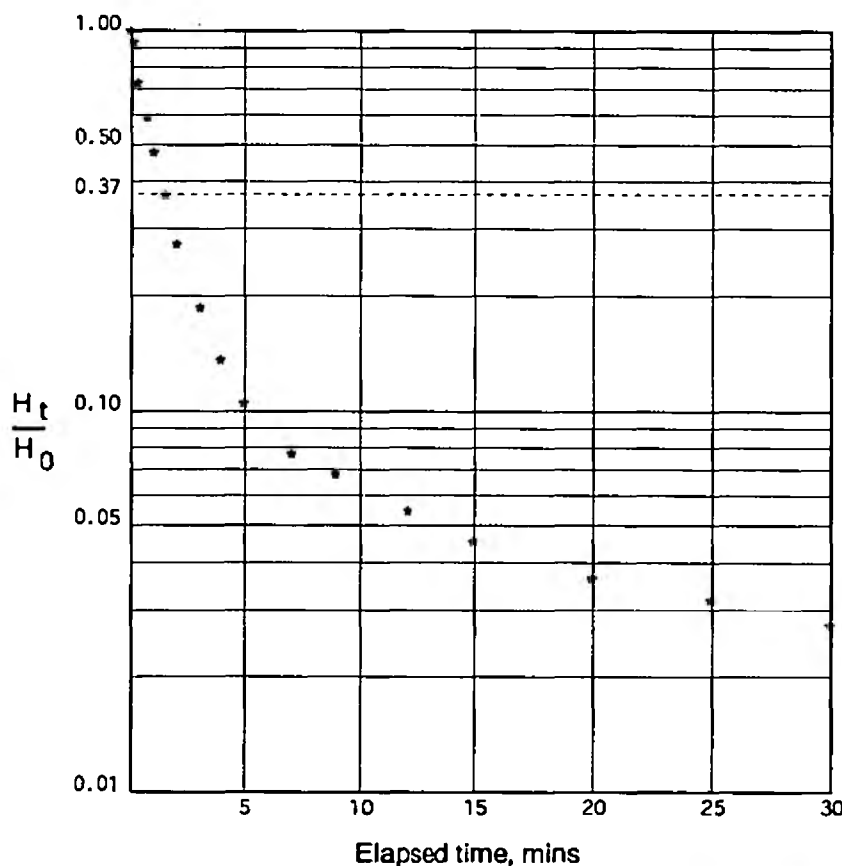
Plot $\log \frac{H_t}{H_0}$ v t *.....*

then $\frac{H_t}{H_0}$

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 6.35E-4 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.60	-2.20	1.000
0.16	3.45	-2.05	0.932
0.33	3.00	-1.60	0.727
0.75	2.70	-1.30	0.591
1.00	2.45	-1.05	0.477
1.50	2.21	-0.81	0.368
2.00	2.00	-0.60	0.273
3.00	1.81	-0.41	0.186
4.00	1.70	-0.30	0.136
5.00	1.63	-0.23	0.105
7.00	1.57	-0.17	0.077
9.00	1.55	-0.15	0.068
12.00	1.52	-0.12	0.055
15.00	1.50	-0.10	0.045
20.00	1.48	-0.08	0.036
25.00	1.47	-0.07	0.032
30.00	1.45	-0.06	0.027



REMARKS:

6023

In-Situ Permeability Test

Bh No

2A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 27/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 10.00 m

Depth to equilibrium watertable, b : 2.50 m Assumed

Height of casing above ground level, c : 0.65 m

Depth of casing below ground level, d : 9.00 m

Length of response zone, Z : 1.00 m

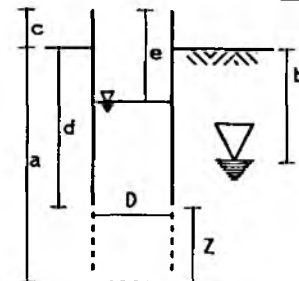
Diameter of response zone, D : 0.20 m

Intake factor, F : 2.7171

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flints



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

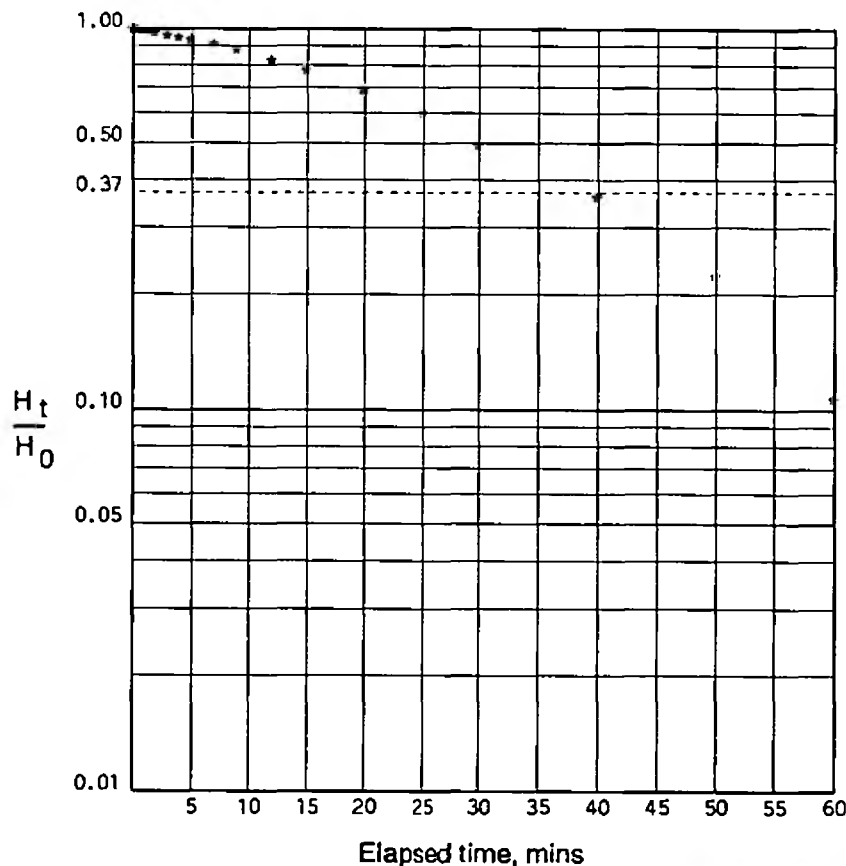
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 4.8E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	8.30	-5.15	1.000
0.16	8.29	-5.14	0.998
0.33	8.28	-5.13	0.996
0.50	8.27	-5.12	0.994
0.75	8.25	-5.10	0.990
1.00	8.24	-5.09	0.988
1.50	8.21	-5.06	0.983
2.00	8.17	-5.02	0.975
3.00	8.10	-4.95	0.961
4.00	8.04	-4.89	0.950
5.00	7.97	-4.82	0.936
7.00	7.84	-4.69	0.911
9.00	7.69	-4.54	0.882
12.00	7.41	-4.26	0.827
15.00	7.15	-4.00	0.777
20.00	6.70	-3.55	0.689
25.00	6.25	-3.10	0.602
30.00	5.69	-2.54	0.493
40.00	5.00	-1.85	0.359
50.00	4.30	-1.15	0.223
60.00	3.70	-0.55	0.107



REMARKS:

6023

In-Situ Permeability Test

Bh No

2A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 27/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 13.00 m

Depth to equilibrium watertable, b : 2.20 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 11.00 m

Length of response zone, Z : 2.00 m

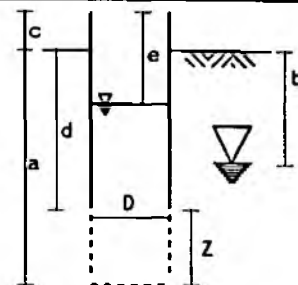
Diameter of response zone, D : 0.20 m

Intake factor, F : 4.1913

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flints



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

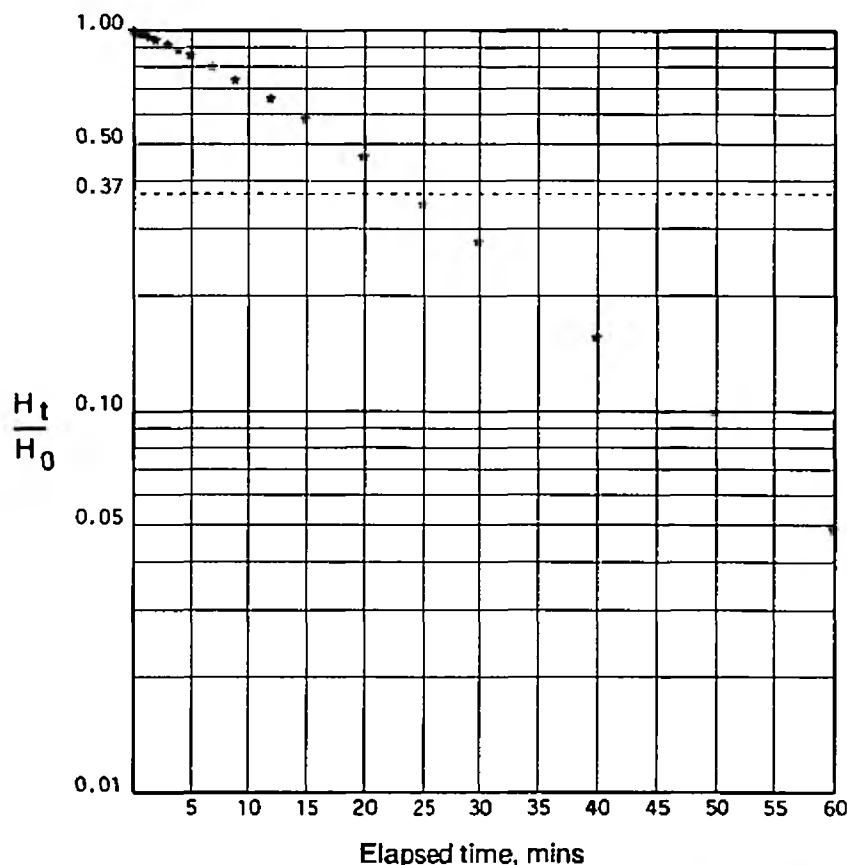
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 5.2E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	6.52	-4.12	1.000
0.16	6.50	-4.10	0.995
0.33	6.48	-4.08	0.990
0.50	6.45	-4.05	0.983
0.75	6.42	-4.02	0.976
1.00	6.40	-4.00	0.971
1.50	6.34	-3.94	0.956
2.00	6.28	-3.88	0.942
3.00	6.17	-3.77	0.915
4.00	6.06	-3.66	0.888
5.00	5.94	-3.54	0.859
7.00	5.70	-3.30	0.801
9.00	5.45	-3.05	0.740
12.00	5.12	-2.72	0.660
15.00	4.80	-2.40	0.583
20.00	4.31	-1.91	0.464
25.00	3.83	-1.43	0.347
30.00	3.54	-1.14	0.277
40.00	3.04	-0.64	0.155
50.00	2.81	-0.41	0.100
60.00	2.60	-0.20	0.049



REMARKS:

6023

In-Situ Permeability Test

Bh No

2A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 27/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 7.00 m

Depth to equilibrium watertable, b : 1.20 m Assumed

Height of casing above ground level, c : 0.00 m

Depth of casing below ground level, d : 7.00 m

Length of response zone, Z : 0.00 m

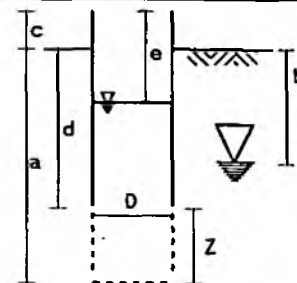
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Loose grey sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

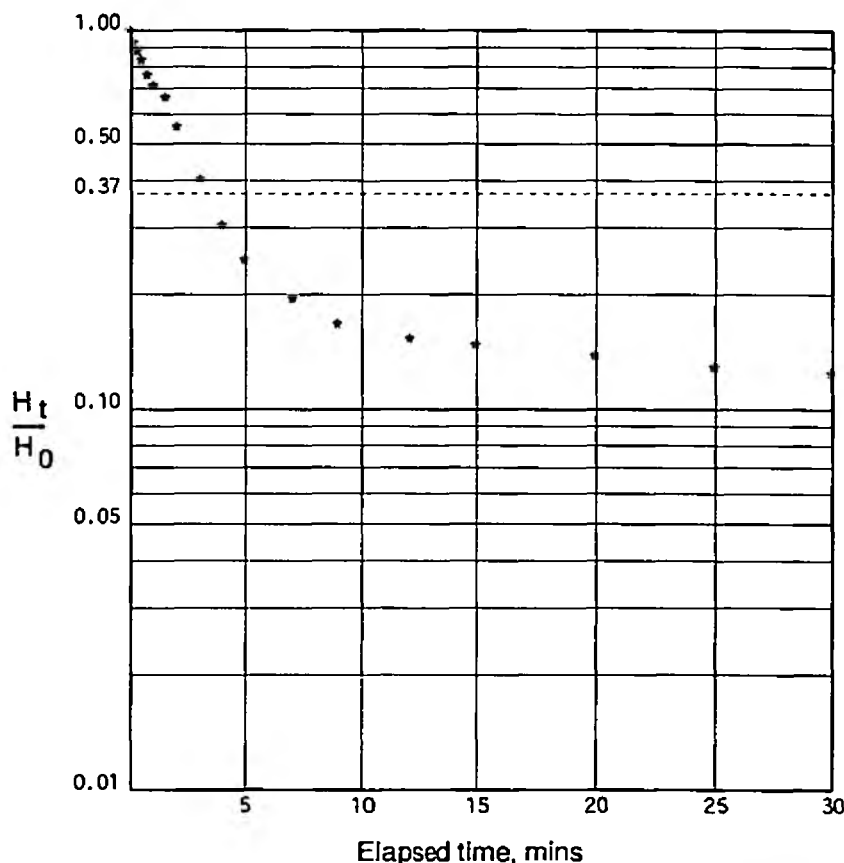
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 2.86E-4 \text{ m/sec.}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.30	-2.10	1.000
0.16	3.15	-1.95	0.929
0.33	3.05	-1.85	0.881
0.50	2.95	-1.75	0.833
0.75	2.80	-1.60	0.762
1.00	2.70	-1.50	0.714
1.50	2.60	-1.40	0.667
2.00	2.37	-1.17	0.557
3.00	2.05	-0.85	0.405
4.00	1.84	-0.64	0.305
5.00	1.72	-0.52	0.248
7.00	1.61	-0.41	0.195
9.00	1.55	-0.35	0.167
12.00	1.52	-0.32	0.152
15.00	1.51	-0.31	0.148
20.00	1.49	-0.29	0.138
25.00	1.47	-0.27	0.129
30.00	1.46	-0.26	0.124



REMARKS:

6023

In-Situ Permeability Test

Bh No

28

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 29/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 6.00 m

Depth to equilibrium watertable, b : 1.90 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 6.00 m

Length of response zone, Z : 0.00 m

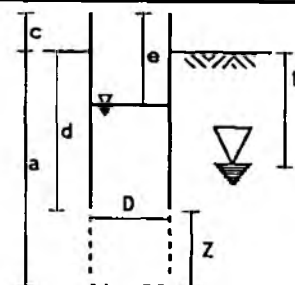
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense orange brown fine sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

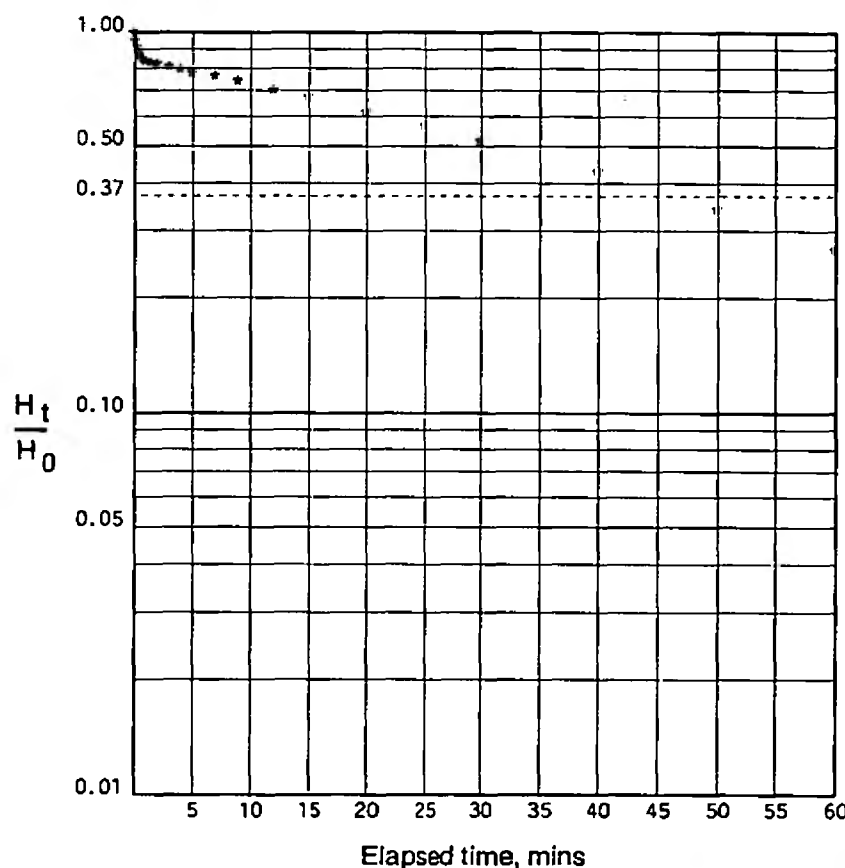
Plot $\log \frac{H_t}{H_o}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 2.06E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.70	-1.60	1.000
0.16	3.62	-1.52	0.950
0.33	3.56	-1.46	0.913
0.50	3.50	-1.40	0.875
0.75	3.46	-1.36	0.850
1.00	3.44	-1.34	0.838
1.50	3.43	-1.33	0.831
2.00	3.42	-1.32	0.825
3.00	3.40	-1.30	0.813
4.00	3.38	-1.28	0.800
5.00	3.35	-1.25	0.781
7.00	3.33	-1.23	0.769
9.00	3.29	-1.19	0.744
12.00	3.23	-1.13	0.706
15.00	3.18	-1.08	0.675
20.00	3.09	-0.99	0.619
25.00	3.01	-0.91	0.569
30.00	2.93	-0.83	0.519
40.00	2.79	-0.69	0.431
50.00	2.65	-0.55	0.344
60.00	2.53	-0.43	0.269



REMARKS:

6023

In-Situ Permeability Test

Bh No

3A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 29/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 9.00 m

Depth to equilibrium watertable, b : 3.00 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 9.00 m

Length of response zone, Z : 9.00 m

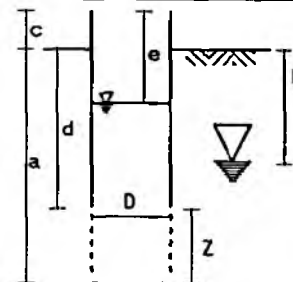
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense grey fine sand with some layers of clay



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

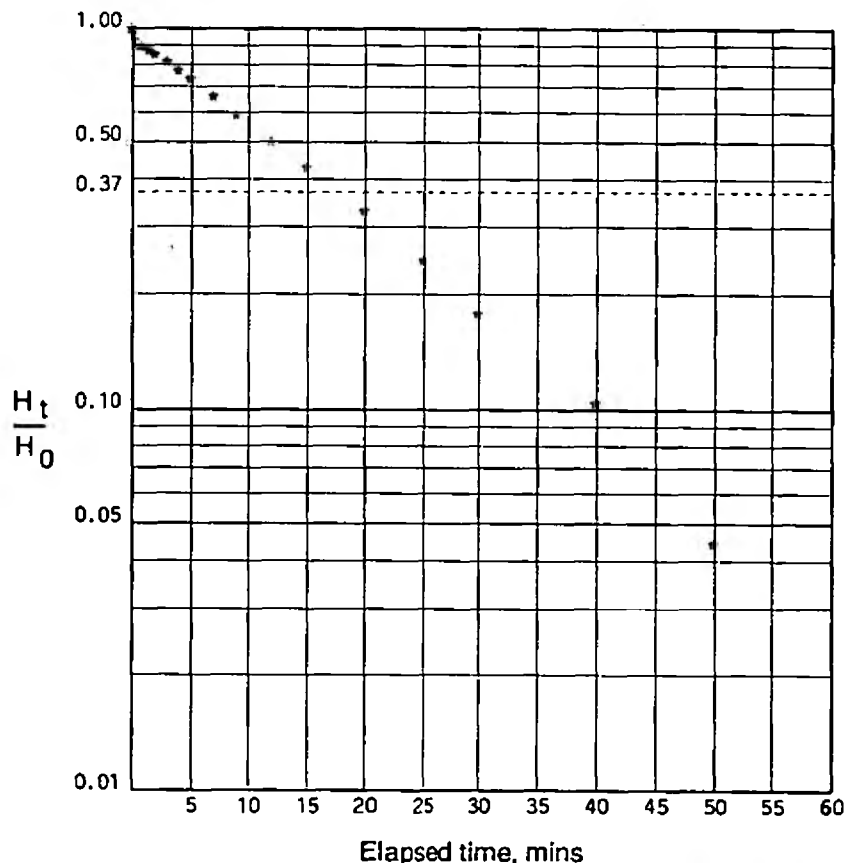
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 5.28E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	5.90	-2.70	1.000
0.16	5.80	-2.60	0.963
0.33	5.70	-2.50	0.926
0.50	5.64	-2.44	0.904
0.75	5.61	-2.41	0.893
1.00	5.62	-2.42	0.896
1.50	5.55	-2.35	0.870
2.00	5.50	-2.30	0.852
3.00	5.40	-2.20	0.815
4.00	5.28	-2.08	0.770
5.00	5.19	-1.99	0.737
7.00	4.98	-1.78	0.659
9.00	4.79	-1.59	0.589
12.00	4.56	-1.36	0.504
15.00	4.36	-1.16	0.430
20.00	4.09	-0.89	0.330
25.00	3.86	-0.66	0.244
30.00	3.68	-0.48	0.178
40.00	3.48	-0.28	0.104
50.00	3.32	-0.12	0.044
60.00	3.18	0.02	-0.007



REMARKS:

6023

In-Situ Permeability Test

Bh No

3A

F1g No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 03/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 12.00 m

Depth to equilibrium watertable, b : 1.40 m Assumed

Height of casing above ground level, c : 0.50 m

Depth of casing below ground level, d : 11.50 m

Length of response zone, Z : 0.50 m

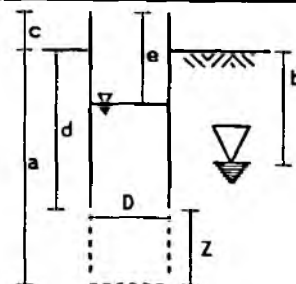
Diameter of response zone, D : 0.20 m

Intake factor, F : 1.9072

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

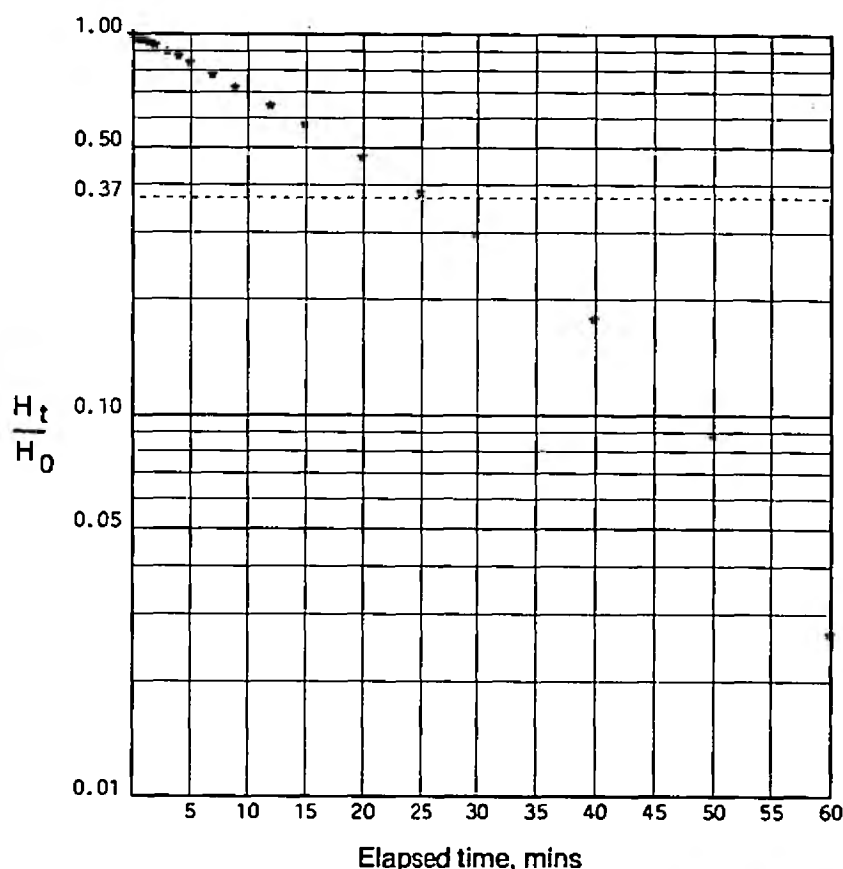
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.09E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	6.40	-4.50	1.000
0.16	6.40	-4.50	1.000
0.33	6.28	-4.38	0.973
0.50	6.26	-4.36	0.969
0.75	6.24	-4.34	0.964
1.00	6.23	-4.33	0.962
1.50	6.17	-4.27	0.949
2.00	6.10	-4.20	0.933
3.00	5.94	-4.04	0.898
4.00	5.83	-3.93	0.873
5.00	5.69	-3.79	0.842
7.00	5.41	-3.51	0.780
9.00	5.15	-3.25	0.722
12.00	4.81	-2.91	0.647
15.00	4.49	-2.59	0.576
20.00	4.03	-2.13	0.473
25.00	3.62	-1.72	0.382
30.00	3.24	-1.34	0.298
40.00	2.70	-0.80	0.178
50.00	2.30	-0.40	0.089
60.00	2.02	-0.12	0.027



REMARKS:

6023

In-Situ Permeability Test

Bh No

3A

F1g No

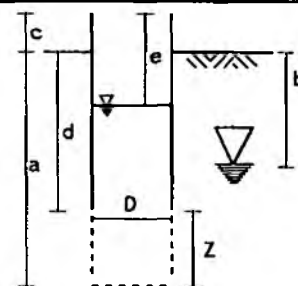
Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 04/05/94 Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 5.50 m
 Depth to equilibrium watertable, b : 1.80 m Assumed
 Height of casing above ground level, c : 0.20 m
 Depth of casing below ground level, d : 5.50 m
 Length of response zone, Z : 0.00 m
 Diameter of response zone, D : 0.20 m
 Intake factor, F : 0.55
 (From condition B of fig. 7 BS5930)



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

Plot $\log \frac{H_t}{H_0}$ v t *-----*

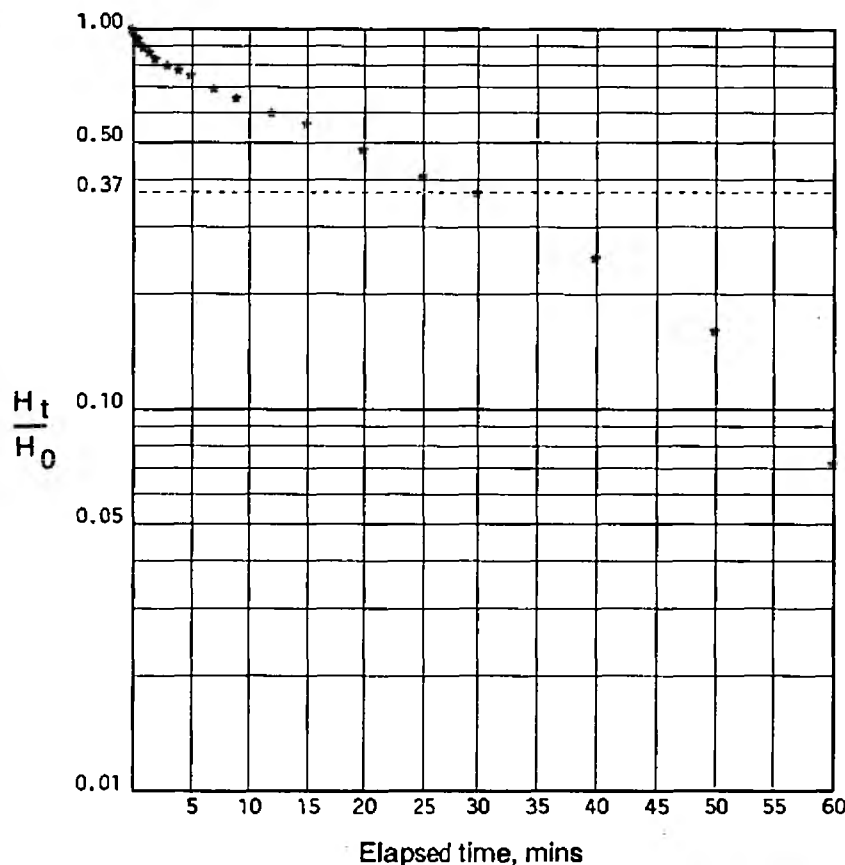
then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 3.17E-5 \text{ m/sec}$$

Soil Type at test level
 Loose orange fine sand

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.25	-1.25	1.000
0.16	3.22	-1.22	0.976
0.33	3.19	-1.19	0.952
0.50	3.17	-1.17	0.936
0.75	3.13	-1.13	0.904
1.00	3.11	-1.11	0.888
1.50	3.08	-1.08	0.864
2.00	3.04	-1.04	0.832
3.00	3.00	-1.00	0.800
4.00	2.97	-0.97	0.776
5.00	2.94	-0.94	0.752
7.00	2.87	-0.87	0.696
9.00	2.82	-0.82	0.656
12.00	2.75	-0.75	0.600
15.00	2.70	-0.70	0.560
20.00	2.60	-0.60	0.480
25.00	2.51	-0.51	0.408
30.00	2.46	-0.46	0.368
40.00	2.31	-0.31	0.248
50.00	2.20	-0.20	0.160
60.00	2.09	-0.09	0.072



REMARKS:

6023

In-Situ Permeability Test

Bh No

38

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 10/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 10.00 m

Depth to equilibrium watertable, b : 6.00 m Assumed

Height of casing above ground level, c : 0.45 m

Depth of casing below ground level, d : 10.00 m

Length of response zone, Z : 0.00 m

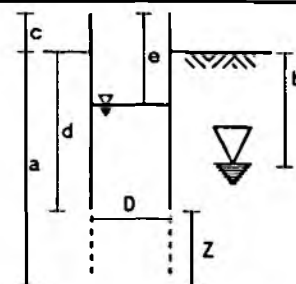
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense orange sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

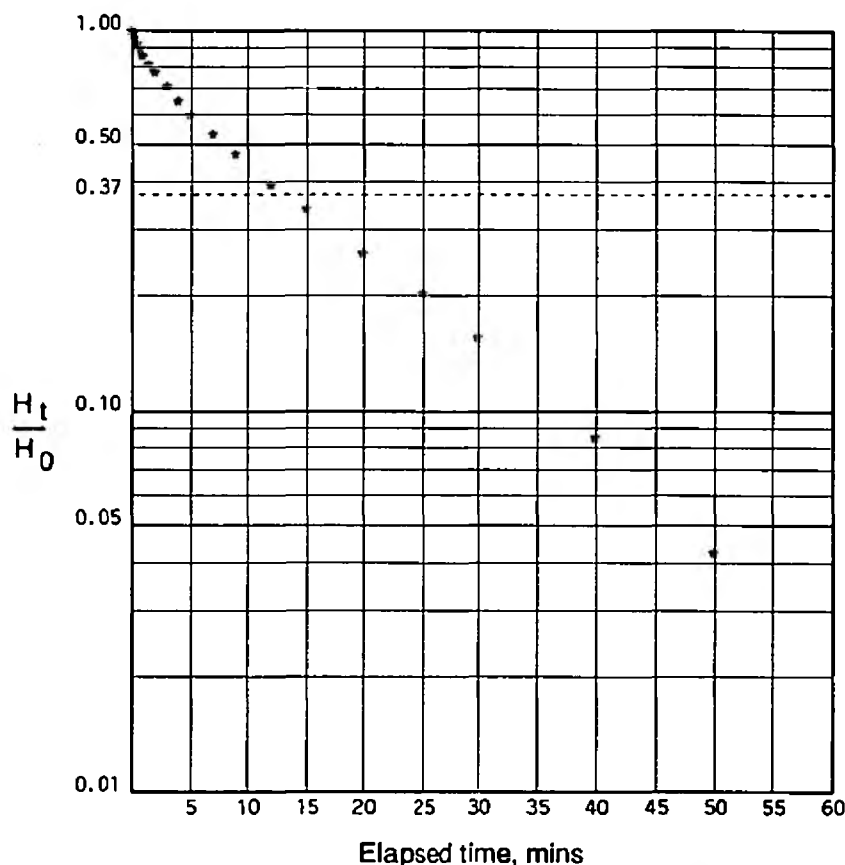
Plot $\log \frac{H_t}{H_0}$ v t

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 7.32E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	8.57	-2.12	1.000
0.16	8.52	-2.07	0.976
0.33	8.47	-2.02	0.953
0.50	8.41	-1.96	0.925
0.75	8.35	-1.90	0.896
1.00	8.26	-1.81	0.854
1.50	8.17	-1.72	0.811
2.00	8.09	-1.64	0.774
3.00	7.96	-1.51	0.712
4.00	7.83	-1.38	0.651
5.00	7.72	-1.27	0.599
7.00	7.58	-1.13	0.533
9.00	7.45	-1.00	0.472
12.00	7.28	-0.83	0.392
15.00	7.17	-0.72	0.340
20.00	7.00	-0.55	0.259
25.00	6.88	-0.43	0.203
30.00	6.78	-0.33	0.156
40.00	6.63	-0.18	0.085
50.00	6.54	-0.09	0.042
60.00	6.45	0.00	0.000



REMARKS:

6023

In-Situ Permeability Test

Bh No

4A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 10/05/94 Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 13.00 m

Depth to equilibrium watertable, b : 6.00 m Assumed

Height of casing above ground level, c : 0.00 m

Depth of casing below ground level, d : 13.00 m

Length of response zone, Z : 0.00 m

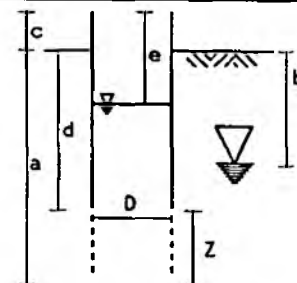
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense grey sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

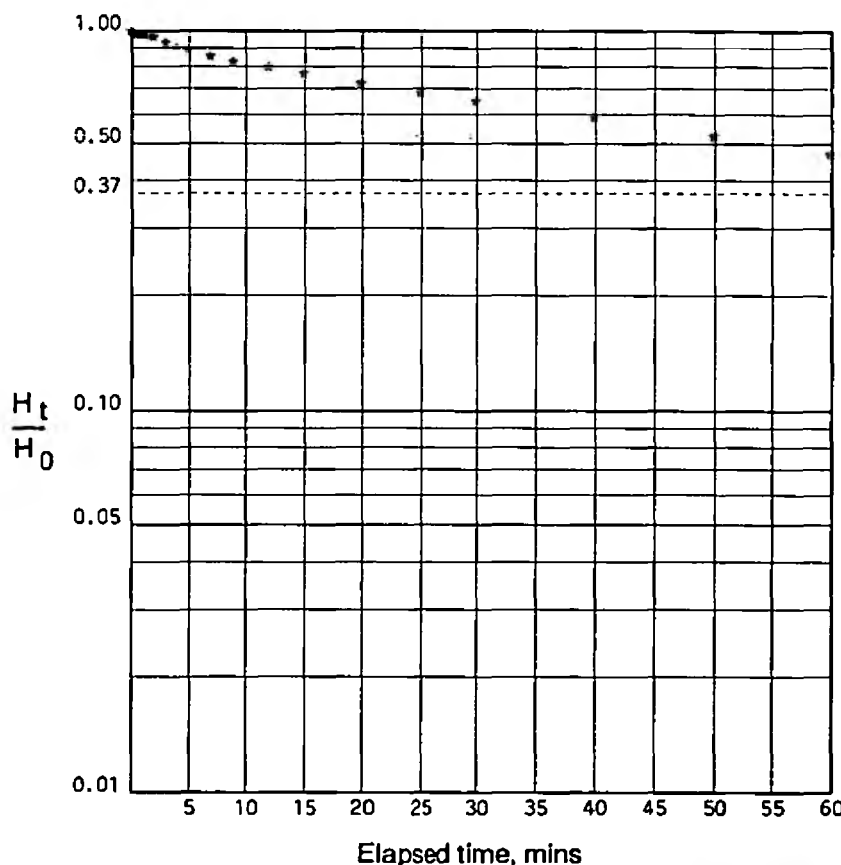
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.26E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	8.00	-2.00	1.000
0.16	7.98	-1.98	0.990
0.33	7.97	-1.97	0.985
0.50	7.96	-1.96	0.980
0.75	7.96	-1.96	0.980
1.00	7.95	-1.95	0.975
1.50	7.94	-1.94	0.970
2.00	7.93	-1.93	0.965
3.00	7.86	-1.86	0.930
4.00	7.81	-1.81	0.905
5.00	7.78	-1.78	0.890
7.00	7.71	-1.71	0.855
9.00	7.65	-1.65	0.825
12.00	7.60	-1.60	0.800
15.00	7.54	-1.54	0.770
20.00	7.45	-1.45	0.725
25.00	7.37	-1.37	0.685
30.00	7.30	-1.30	0.650
40.00	7.18	-1.18	0.590
50.00	7.05	-1.05	0.525
60.00	6.94	-0.94	0.470



REMARKS:

6023

In-Situ Permeability Test

Bh No

4A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 10/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 16.00 m

Depth to equilibrium watertable, b : 6.00 m Assumed

Height of casing above ground level, c : 0.00 m

Depth of casing below ground level, d : 16.00 m

Length of response zone, Z : 0.00 m

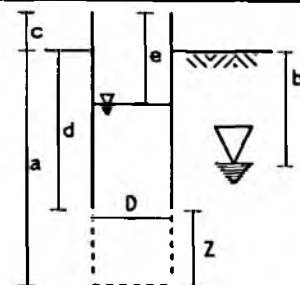
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense grey fine sand with some grey clay layers



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

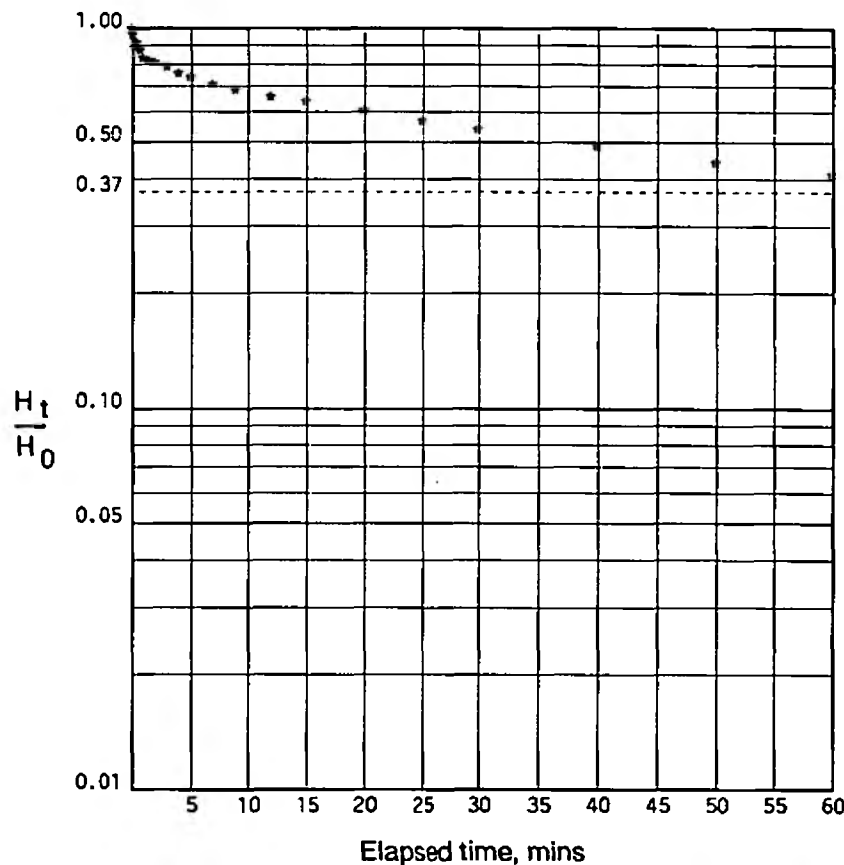
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.34E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	9.60	-3.60	1.000
0.16	9.45	-3.45	0.958
0.33	9.20	-3.20	0.889
0.50	9.30	-3.30	0.917
0.75	9.15	-3.15	0.875
1.00	9.00	-3.00	0.833
1.50	8.96	-2.96	0.822
2.00	8.92	-2.92	0.811
3.00	8.84	-2.84	0.789
4.00	8.74	-2.74	0.761
5.00	8.67	-2.67	0.742
7.00	8.55	-2.55	0.708
9.00	8.47	-2.47	0.686
12.00	8.37	-2.37	0.658
15.00	8.30	-2.30	0.639
20.00	8.18	-2.18	0.606
25.00	8.05	-2.05	0.569
30.00	7.95	-1.95	0.542
40.00	7.76	-1.76	0.489
50.00	7.60	-1.60	0.444
60.00	7.49	-1.49	0.414



REMARKS:

6023

In-Situ Permeability Test

Bh No

4A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 11/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 19.00 m

Depth to equilibrium watertable, b : 6.00 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 19.00 m

Length of response zone, Z : 0.00 m

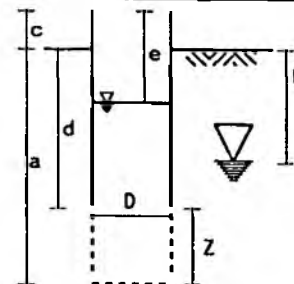
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense grey clayey sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

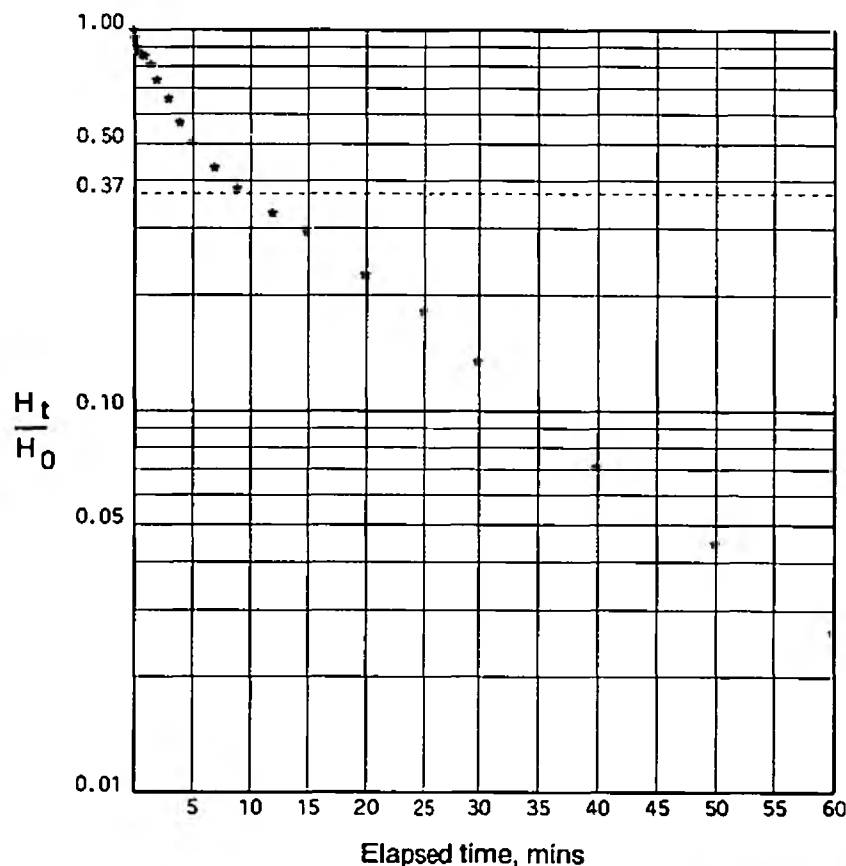
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.06E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	10.00	-3.80	1.000
0.16	9.80	-3.60	0.947
0.33	9.63	-3.43	0.903
0.50	9.52	-3.32	0.874
0.75	9.47	-3.27	0.861
1.00	9.43	-3.23	0.850
1.50	9.27	-3.07	0.808
2.00	9.00	-2.80	0.737
3.00	8.70	-2.50	0.658
4.00	8.36	-2.16	0.568
5.00	8.12	-1.92	0.505
7.00	7.85	-1.65	0.434
9.00	7.65	-1.45	0.382
12.00	7.45	-1.25	0.329
15.00	7.31	-1.11	0.292
20.00	7.06	-0.86	0.226
25.00	6.89	-0.69	0.182
30.00	6.71	-0.51	0.134
40.00	6.47	-0.27	0.071
50.00	6.37	-0.17	0.045
60.00	6.30	-0.10	0.026



REMARKS:

6023

In-Situ Permeability Test

Bh No

4A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 11/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 22.00 m

Depth to equilibrium watertable, b : 6.00 m Assumed

Height of casing above ground level, c : 0.50 m

Depth of casing below ground level, d : 21.50 m

Length of response zone, Z : 0.50 m

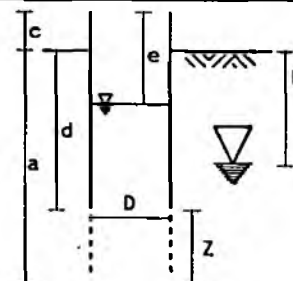
Diameter of response zone, D : 0.20 m

Intake factor, F : 1.9072

(From condition D of fig. 7 BS5930)

Soil Type at test level

Dense grey fine slightly clayey sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

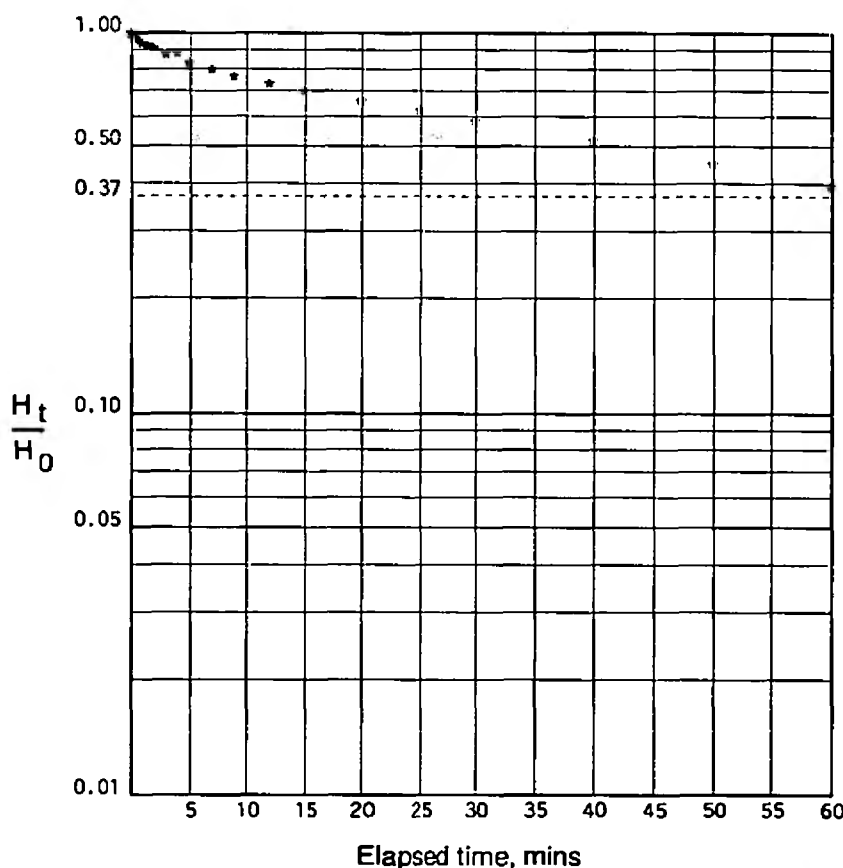
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 4.2E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	9.60	-3.10	1.000
0.16	9.50	-3.00	0.968
0.33	9.50	-3.00	0.968
0.50	9.50	-3.00	0.968
0.75	9.45	-2.95	0.952
1.00	9.40	-2.90	0.935
1.50	9.36	-2.86	0.923
2.00	9.32	-2.82	0.910
3.00	9.22	-2.72	0.877
4.00	9.24	-2.74	0.884
5.00	9.08	-2.58	0.832
7.00	8.98	-2.48	0.800
9.00	8.87	-2.37	0.765
12.00	8.77	-2.27	0.732
15.00	8.68	-2.18	0.703
20.00	8.55	-2.05	0.661
25.00	8.43	-1.93	0.623
30.00	8.31	-1.81	0.584
40.00	8.11	-1.61	0.519
50.00	7.90	-1.40	0.452
60.00	7.72	-1.22	0.394



REMARKS:

6023

In-Situ Permeability Test

Bh No

4A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 11/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 25.00 m

Depth to equilibrium watertable, b : 6.00 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 22.50 m

Length of response zone, Z : 2.50 m

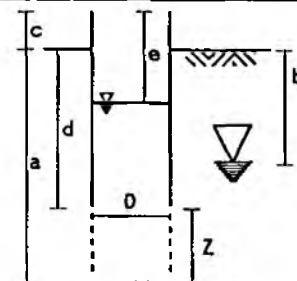
Diameter of response zone, D : 0.20 m

Intake factor, F : 4.8775

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flints



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

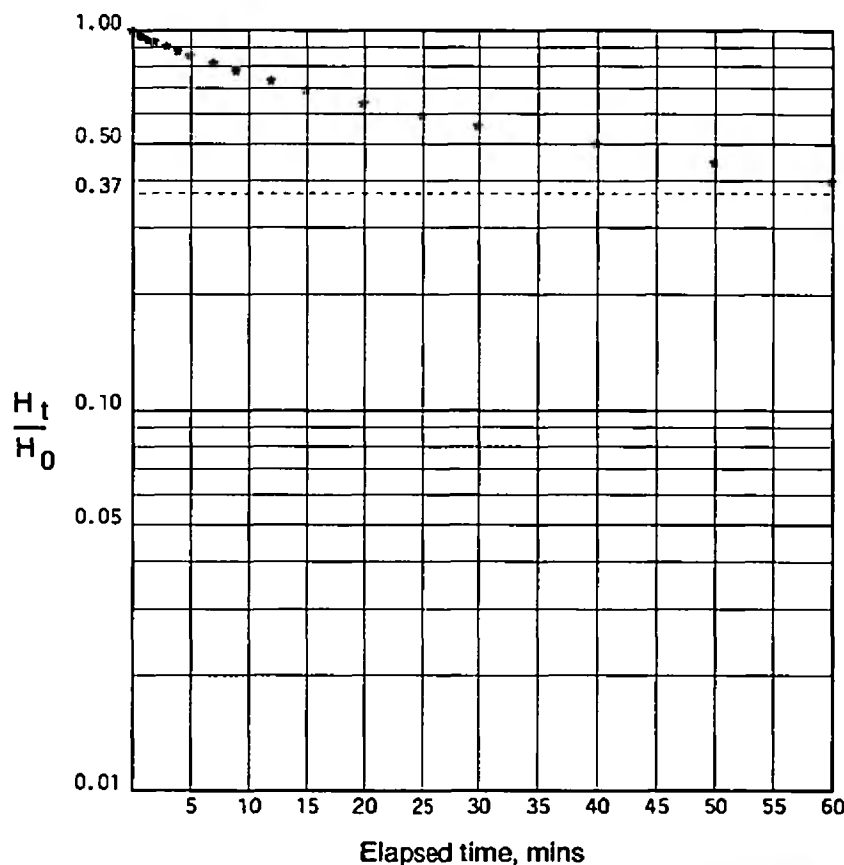
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.6E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	9.80	-3.60	1.000
0.16	9.78	-3.58	0.994
0.33	9.75	-3.55	0.986
0.50	9.72	-3.52	0.978
0.75	9.68	-3.48	0.967
1.00	9.64	-3.44	0.956
1.50	9.59	-3.39	0.942
2.00	9.55	-3.35	0.931
3.00	9.46	-3.26	0.906
4.00	9.36	-3.16	0.878
5.00	9.27	-3.07	0.853
7.00	9.15	-2.95	0.819
9.00	9.00	-2.80	0.778
12.00	8.84	-2.64	0.733
15.00	8.69	-2.49	0.692
20.00	8.50	-2.30	0.639
25.00	8.34	-2.14	0.594
30.00	8.21	-2.01	0.558
40.00	8.01	-1.81	0.503
50.00	7.81	-1.61	0.447
60.00	7.64	-1.44	0.400



REMARKS:

6023

In-Situ Permeability Test

Bh No

4A

F1g No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 12/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 10.00 m

Depth to equilibrium watertable, b : 6.00 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 10.00 m

Length of response zone, Z : 0.00 m

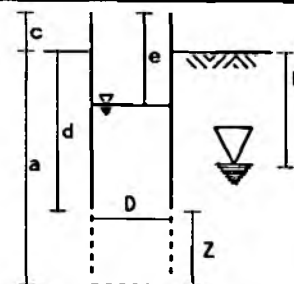
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense orange sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

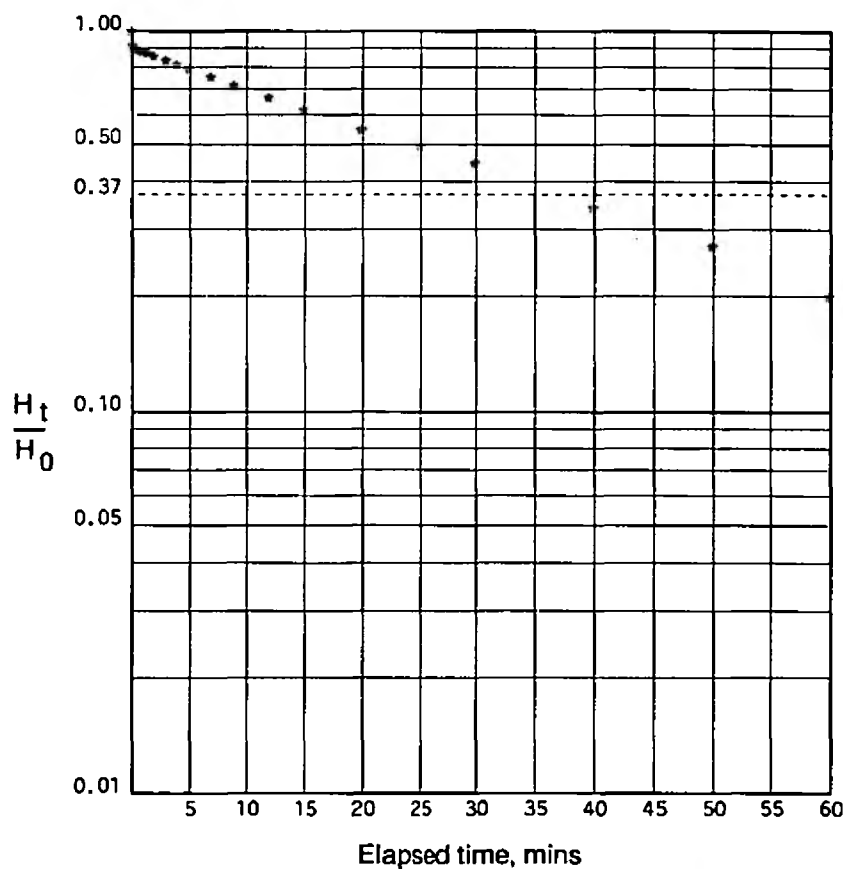
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 2.57E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	7.90	-1.70	1.000
0.16	7.75	-1.55	0.912
0.33	7.72	-1.52	0.894
0.75	7.71	-1.51	0.888
1.00	7.69	-1.49	0.876
1.50	7.68	-1.48	0.871
2.00	7.65	-1.45	0.853
3.00	7.62	-1.42	0.835
4.00	7.58	-1.38	0.812
5.00	7.55	-1.35	0.794
7.00	7.48	-1.28	0.753
9.00	7.42	-1.22	0.718
12.00	7.33	-1.13	0.665
15.00	7.25	-1.05	0.618
20.00	7.13	-0.93	0.547
25.00	7.04	-0.84	0.494
30.00	6.96	-0.76	0.447
40.00	6.78	-0.58	0.341
50.00	6.66	-0.46	0.271
60.00	6.54	-0.34	0.200



REMARKS:

6023

In-Situ Permeability Test

Bh No

48

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 05/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 4.00 m

Depth to equilibrium watertable, b : 1.00 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 4.00 m

Length of response zone, Z : 0.00 m

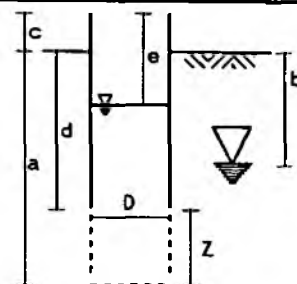
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Firm grey slightly clayey fine sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

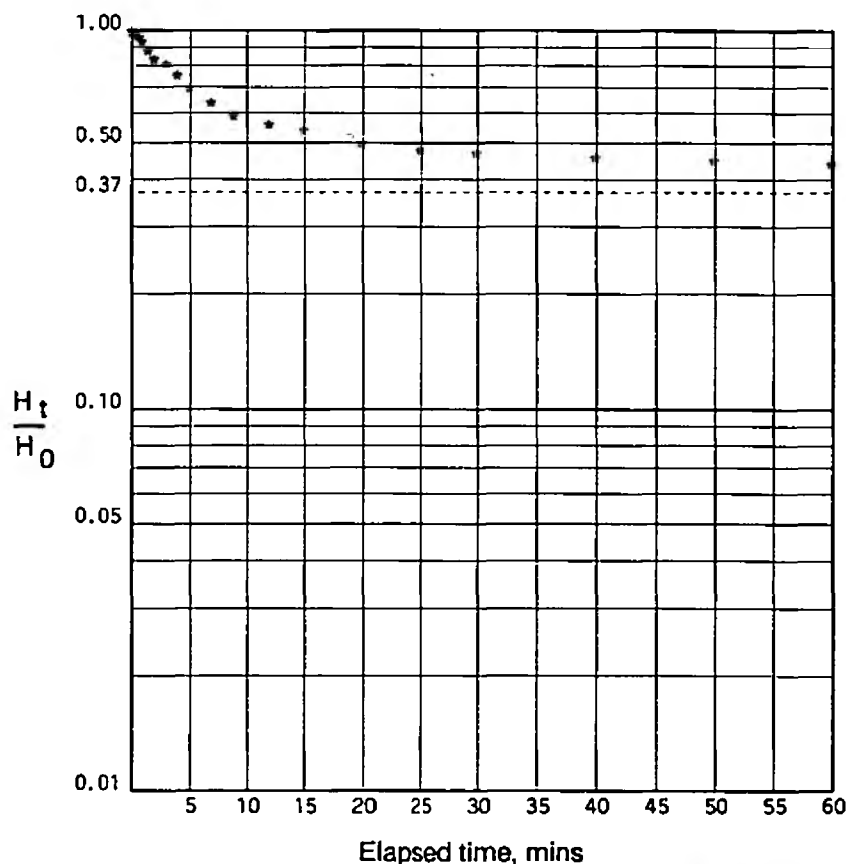
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 8.2E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.65	-2.45	1.000
0.16	3.60	-2.40	0.980
0.33	3.58	-2.38	0.971
0.50	3.57	-2.37	0.967
0.75	3.54	-2.34	0.955
1.00	3.48	-2.28	0.931
1.50	3.34	-2.14	0.873
2.00	3.24	-2.04	0.833
3.00	3.17	-1.97	0.804
4.00	3.05	-1.85	0.755
5.00	2.91	-1.71	0.698
7.00	2.76	-1.56	0.637
9.00	2.64	-1.44	0.588
12.00	2.57	-1.37	0.559
15.00	2.52	-1.32	0.539
20.00	2.42	-1.22	0.498
25.00	2.37	-1.17	0.478
30.00	2.35	-1.15	0.469
40.00	2.32	-1.12	0.457
50.00	2.30	-1.10	0.449
60.00	2.28	-1.08	0.441



REMARKS:

6023

In-Situ Permeability Test

Bh No

Fig No

5A

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 05/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 7.00 m

Depth to equilibrium watertable, b : 2.50 m Assumed

Height of casing above ground level, c : 0.15 m

Depth of casing below ground level, d : 7.00 m

Length of response zone, Z : 0.00 m

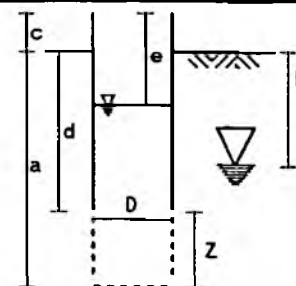
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Soft grey slightly clayey sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

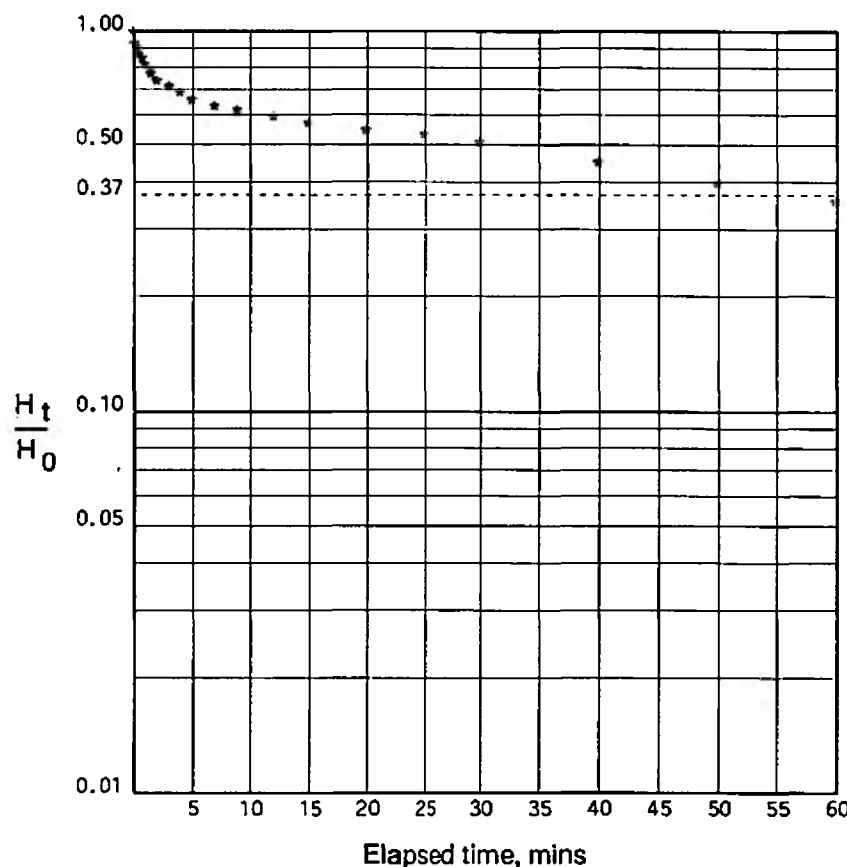
Plot $\log \frac{H_t}{H_0}$ v t

then $\frac{H_t}{H_0}$

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.73E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	4.75	-2.10	1.000
0.16	4.60	-1.95	0.929
0.33	4.55	-1.90	0.905
0.50	4.48	-1.83	0.871
0.75	4.43	-1.78	0.848
1.00	4.37	-1.72	0.819
1.50	4.27	-1.62	0.771
2.00	4.20	-1.55	0.738
3.00	4.15	-1.50	0.714
4.00	4.10	-1.45	0.690
5.00	4.03	-1.38	0.657
7.00	3.98	-1.33	0.633
9.00	3.95	-1.30	0.619
12.00	3.90	-1.25	0.595
15.00	3.85	-1.20	0.571
20.00	3.80	-1.15	0.548
25.00	3.77	-1.12	0.533
30.00	3.72	-1.07	0.510
40.00	3.60	-0.95	0.452
50.00	3.49	-0.84	0.400
60.00	3.40	-0.75	0.357



REMARKS:

6023

In-Situ Permeability Test

Bh No

5A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 05/05/94 Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 10.00 m

Depth to equilibrium watertable, b : 1.00 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 10.00 m

Length of response zone, Z : 0.00 m

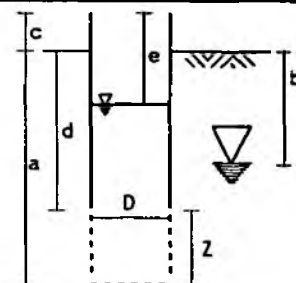
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flint



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

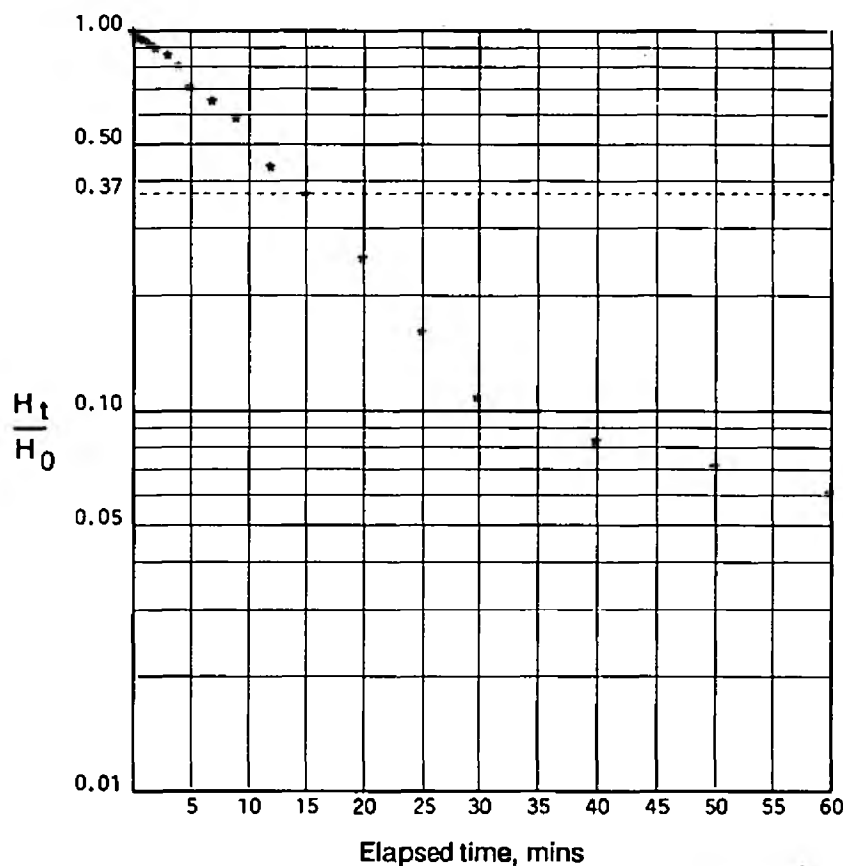
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 6.34E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	8.90	-7.70	1.000
0.16	8.80	-7.60	0.987
0.33	8.65	-7.45	0.968
0.50	8.55	-7.35	0.955
0.50	8.52	-7.32	0.951
1.00	8.48	-7.28	0.945
1.50	8.28	-7.08	0.919
2.00	8.12	-6.92	0.899
3.00	7.82	-6.62	0.860
4.00	7.41	-6.21	0.806
5.00	6.65	-5.45	0.708
7.00	6.23	-5.03	0.653
9.00	5.72	-4.52	0.587
12.00	4.56	-3.36	0.436
15.00	4.06	-2.86	0.371
20.00	3.13	-1.93	0.251
25.00	2.44	-1.24	0.161
30.00	2.03	-0.83	0.108
40.00	1.84	-0.64	0.083
50.00	1.75	-0.55	0.071
60.00	1.67	-0.47	0.061



REMARKS:

6023

In-Situ Permeability Test

Bh No

5A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 06/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 13.00 m

Depth to equilibrium watertable, b : 1.00 m Assumed

Height of casing above ground level, c : 0.40 m

Depth of casing below ground level, d : 10.00 m

Length of response zone, Z : 3.00 m

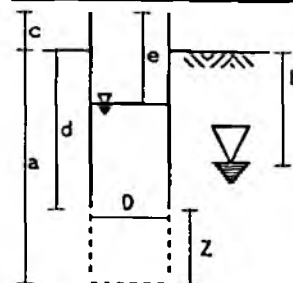
Diameter of response zone, D : 0.20 m

Intake factor, F : 5.5402

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

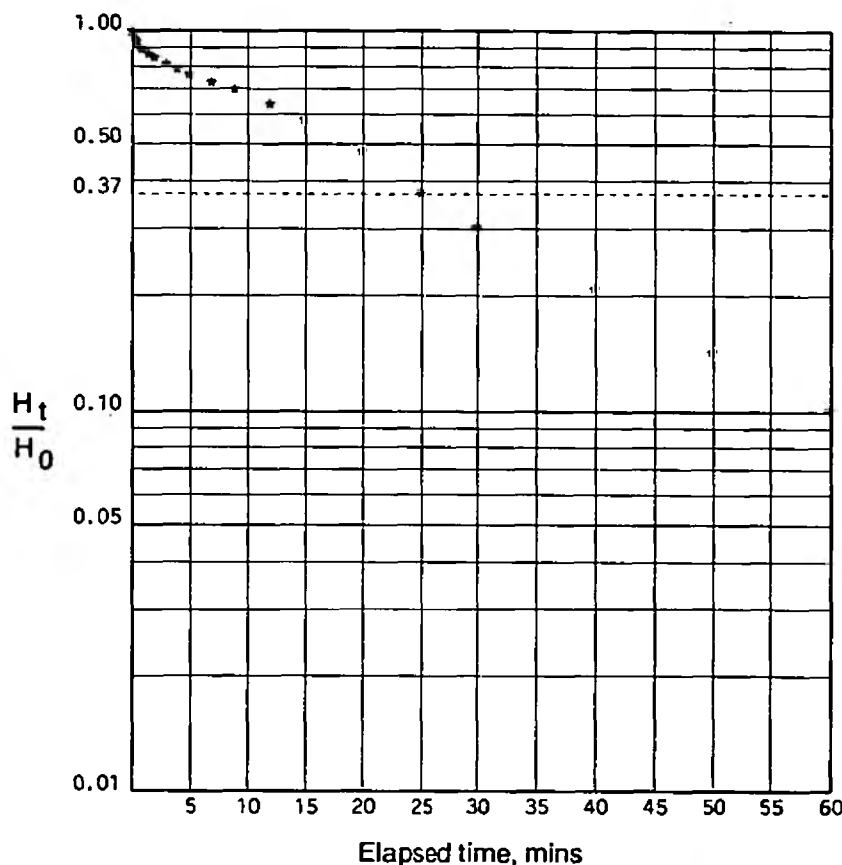
Plot $\log \frac{H_t}{H_0}$ v t

then $\frac{H_t}{H_0}$

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 3.7E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	5.95	-4.55	1.000
0.16	5.80	-4.40	0.967
0.33	5.72	-4.32	0.949
0.50	5.65	-4.25	0.934
0.75	5.51	-4.11	0.903
1.00	5.46	-4.06	0.892
1.50	5.35	-3.95	0.868
2.00	5.25	-3.85	0.846
3.00	5.11	-3.71	0.815
4.00	5.00	-3.60	0.791
5.00	4.89	-3.49	0.767
7.00	4.72	-3.32	0.730
9.00	4.58	-3.18	0.699
12.00	4.31	-2.91	0.640
15.00	4.04	-2.64	0.580
20.00	3.58	-2.18	0.479
25.00	3.10	-1.70	0.374
30.00	2.78	-1.38	0.303
40.00	2.35	-0.95	0.209
50.00	2.05	-0.65	0.143
60.00	1.86	-0.46	0.101



REMARKS:

6023

In-Situ Permeability Test

Bh No

5A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 06/05/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 6.00 m

Depth to equilibrium watertable, b : 1.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 6.00 m

Length of response zone, Z : 0.00 m

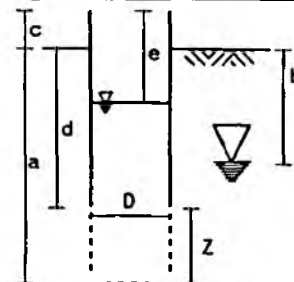
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Soft grey slightly clayey sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

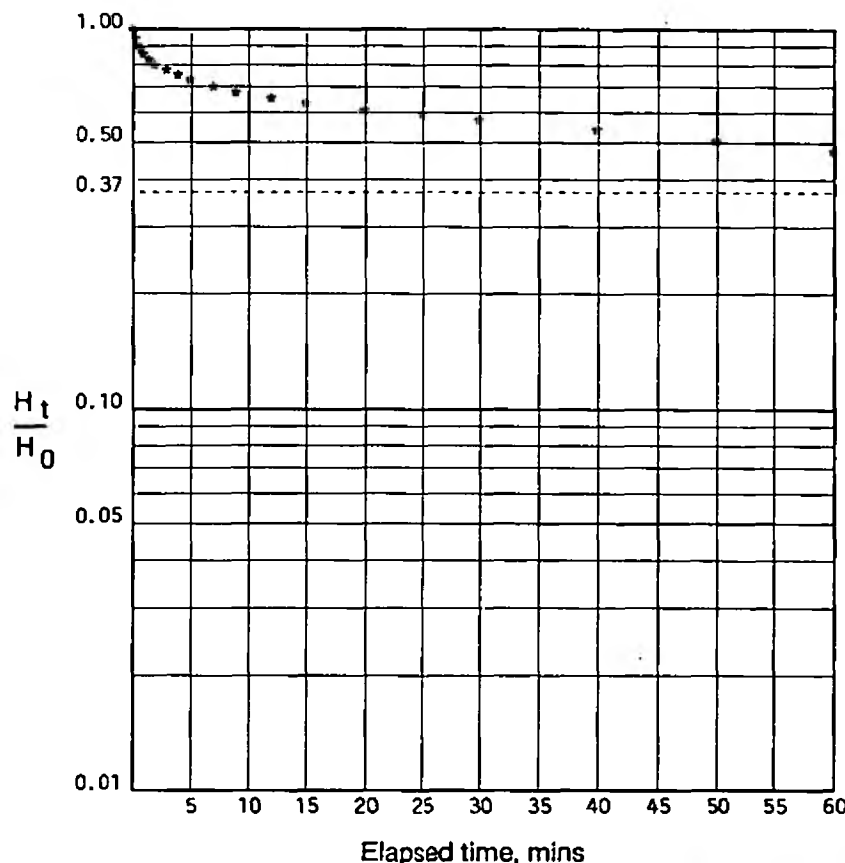
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.0E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	4.90	-3.20	1.000
0.16	4.84	-3.14	0.981
0.33	4.71	-3.01	0.941
0.50	4.60	-2.90	0.906
0.75	4.52	-2.82	0.881
1.00	4.44	-2.74	0.856
1.50	4.35	-2.65	0.828
2.00	4.27	-2.57	0.803
3.00	4.19	-2.49	0.778
4.00	4.11	-2.41	0.753
5.00	4.04	-2.34	0.731
7.00	3.95	-2.25	0.703
9.00	3.86	-2.16	0.675
12.00	3.80	-2.10	0.656
15.00	3.73	-2.03	0.634
20.00	3.65	-1.95	0.609
25.00	3.60	-1.90	0.594
30.00	3.54	-1.84	0.575
40.00	3.43	-1.73	0.541
50.00	3.32	-1.62	0.506
60.00	3.23	-1.53	0.478



REMARKS:

6023

In-Situ Permeability Test

Bh No

58

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 13/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 6.00 m

Depth to equilibrium watertable, b : 1.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 6.00 m

Length of response zone, Z : 0.00 m

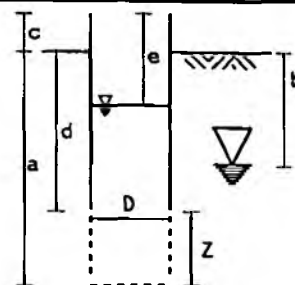
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense orange brown sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

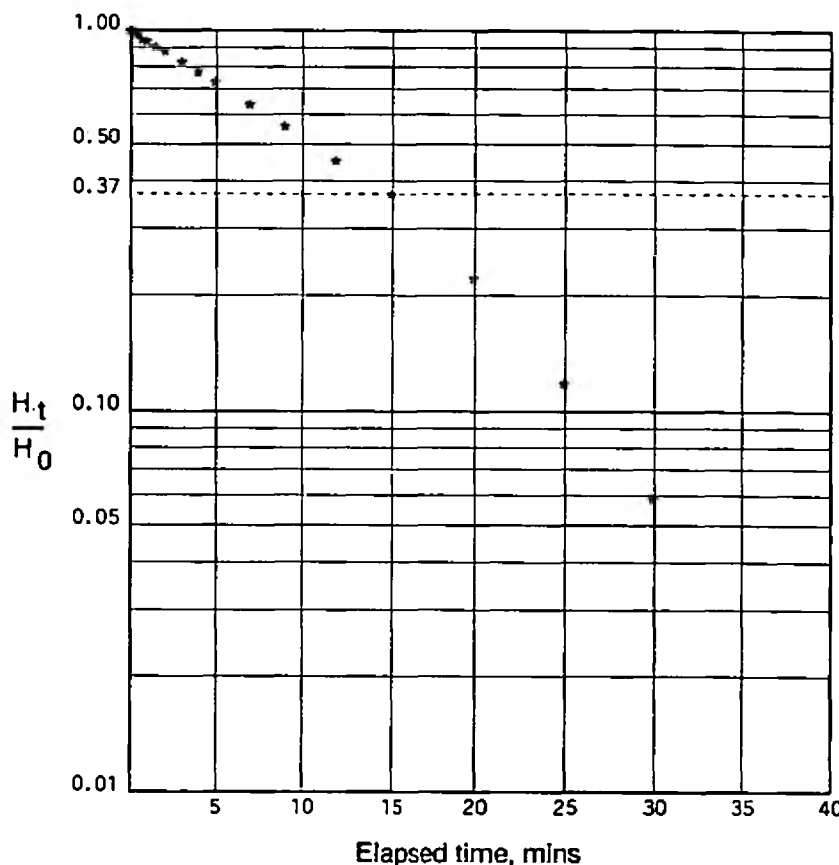
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 6.34E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	5.10	-3.40	1.000
0.16	5.10	-3.40	1.000
0.33	5.05	-3.35	0.985
0.50	5.02	-3.32	0.976
0.75	4.90	-3.20	0.941
1.00	4.87	-3.17	0.932
1.50	4.77	-3.07	0.903
2.00	4.69	-2.99	0.879
3.00	4.50	-2.80	0.824
4.00	4.33	-2.63	0.774
5.00	4.18	-2.48	0.729
7.00	3.87	-2.17	0.638
9.00	3.60	-1.90	0.559
12.00	3.24	-1.54	0.453
15.00	2.95	-1.25	0.368
20.00	2.45	-0.75	0.221
25.00	2.10	-0.40	0.118
30.00	1.90	-0.20	0.059
40.00	1.70	0.00	0.000



REMARKS:

6023

In-Situ Permeability Test

Bh No

Fig No

6A

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 13/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 9.00 m

Depth to equilibrium watertable, b : 2.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 9.00 m

Length of response zone, Z : 0.00 m

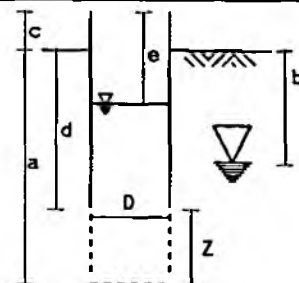
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Loose grey slightly clayey sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

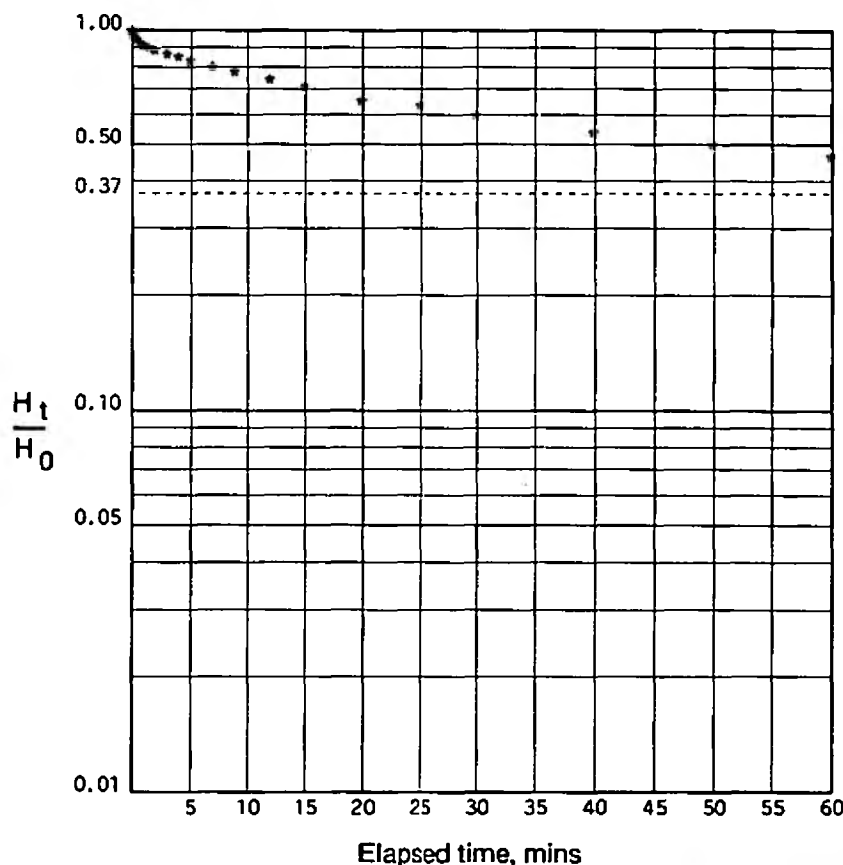
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.12E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, a m	Head of water, H m	Ht/Ho
0.00	5.30	-2.60	1.000
0.15	5.22	-2.52	0.969
0.33	5.19	-2.49	0.958
0.50	5.15	-2.45	0.942
0.75	5.10	-2.40	0.923
1.00	5.07	-2.37	0.912
1.50	5.04	-2.34	0.900
2.00	5.00	-2.30	0.885
3.00	4.95	-2.25	0.865
4.00	4.91	-2.21	0.850
5.00	4.86	-2.16	0.831
7.00	4.79	-2.09	0.804
9.00	4.72	-2.02	0.777
12.00	4.63	-1.93	0.742
15.00	4.55	-1.85	0.712
20.00	4.40	-1.70	0.654
25.00	4.35	-1.65	0.635
30.00	4.26	-1.56	0.600
40.00	4.10	-1.40	0.538
50.00	4.00	-1.30	0.500
60.00	3.91	-1.21	0.465



REMARKS:

6023

In-Situ Permeability Test

Bh No

5A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 14/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 12.00 m

Depth to equilibrium watertable, b : 1.90 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 12.00 m

Length of response zone, Z : 0.00 m

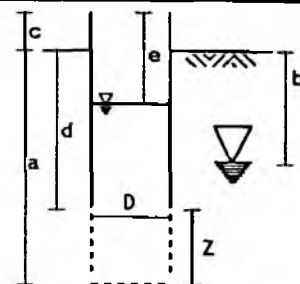
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense grey fine sand with flint



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

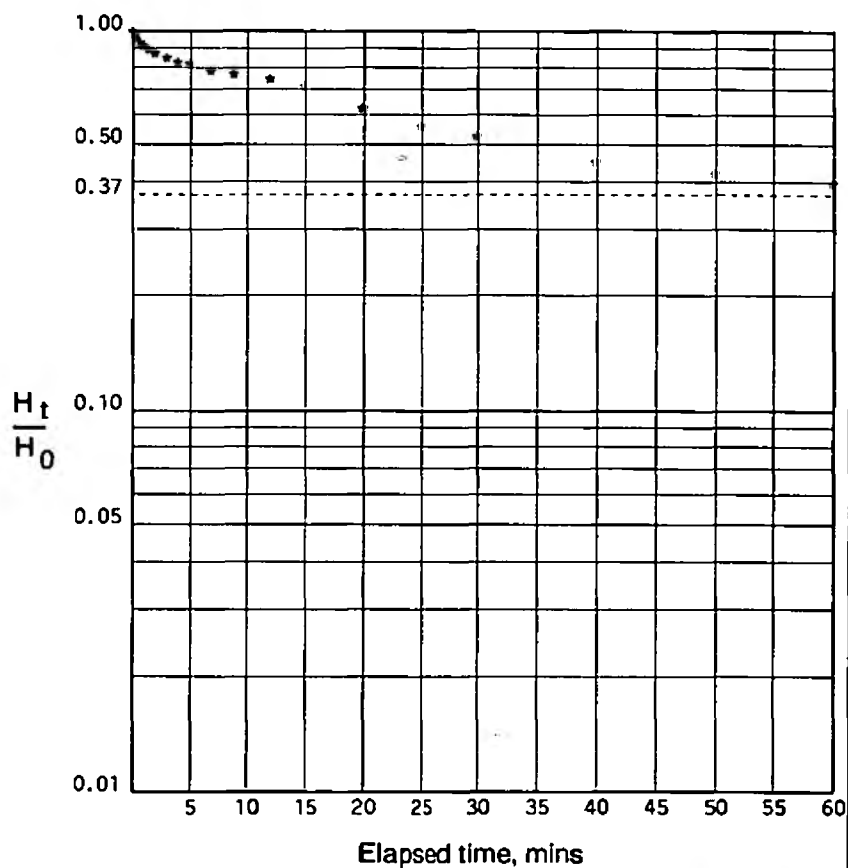
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then $\frac{H_t}{H_0}$

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.9E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	9.00	-6.90	1.000
0.16	8.91	-6.81	0.987
0.33	8.80	-6.70	0.971
0.30	8.69	-6.59	0.955
0.75	8.51	-6.41	0.929
1.00	8.39	-6.29	0.912
1.50	8.25	-6.15	0.891
2.00	8.10	-6.00	0.870
3.00	7.95	-5.85	0.848
4.00	7.80	-5.70	0.826
5.00	7.74	-5.64	0.817
7.00	7.51	-5.41	0.784
9.00	7.40	-5.30	0.768
12.00	7.25	-5.15	0.746
15.00	7.02	-4.92	0.713
20.00	6.40	-4.30	0.623
25.00	5.95	-3.85	0.558
30.00	5.74	-3.64	0.528
40.00	5.21	-3.11	0.451
50.00	5.00	-2.90	0.420
60.00	4.85	-2.75	0.399



REMARKS:

6023

In-Situ Permeability Test

Bh No

6A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 14/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 15.50 m

Depth to equilibrium watertable, b : 1.90 m Assumed

Height of casing above ground level, c : 0.40 m

Depth of casing below ground level, d : 13.80 m

Length of response zone, Z : 1.70 m

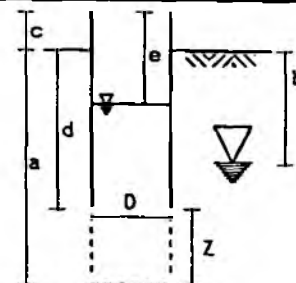
Diameter of response zone, D : 0.20 m

Intake factor, F : 3.7655

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flints



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

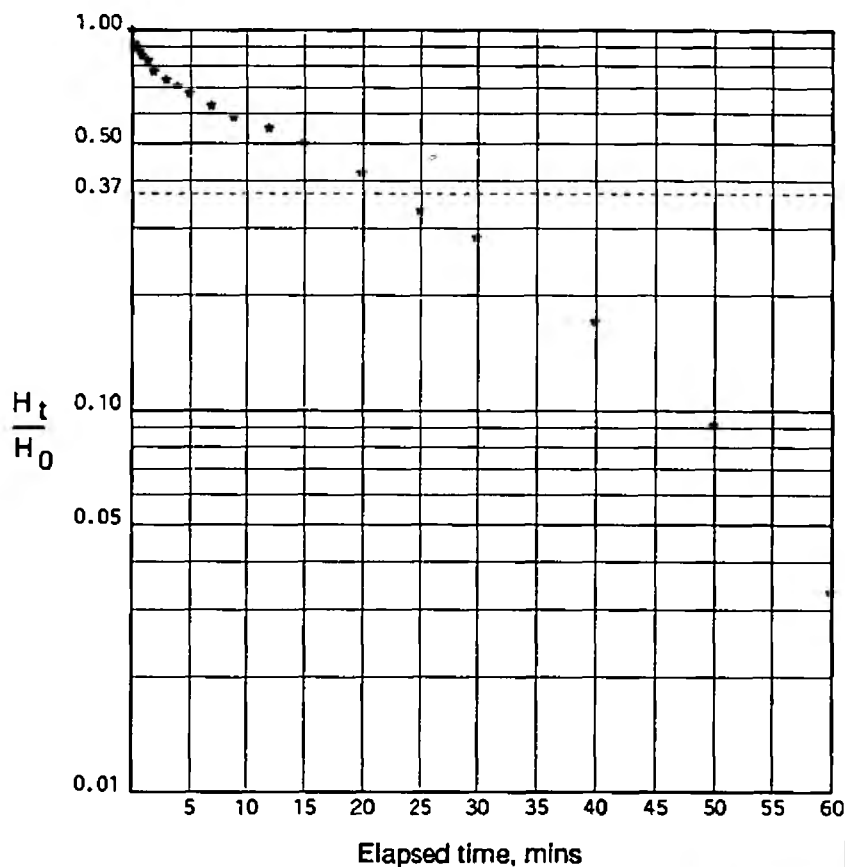
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then H_0

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 6.0E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	4.70	-2.40	1.000
0.16	4.69	-2.39	0.996
0.33	4.51	-2.21	0.921
0.50	4.46	-2.16	0.900
0.75	4.40	-2.10	0.875
1.00	4.35	-2.05	0.854
1.50	4.29	-1.99	0.829
2.00	4.16	-1.86	0.775
3.00	4.07	-1.77	0.738
4.00	4.00	-1.70	0.708
5.00	3.93	-1.63	0.679
7.00	3.81	-1.51	0.629
9.00	3.71	-1.41	0.588
12.00	3.62	-1.32	0.550
15.00	3.51	-1.21	0.504
20.00	3.31	-1.01	0.421
25.00	3.10	-0.80	0.333
30.00	2.98	-0.68	0.283
40.00	2.71	-0.41	0.171
50.00	2.52	-0.22	0.092
60.00	2.38	-0.08	0.033



REMARKS:

6023

In-Situ Permeability Test

Bh No

6A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 15/04/94 Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 6.00 m

Depth to equilibrium watertable, b : 1.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 6.00 m

Length of response zone, Z : 0.00 m

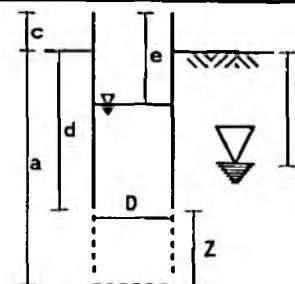
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense orange brown sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

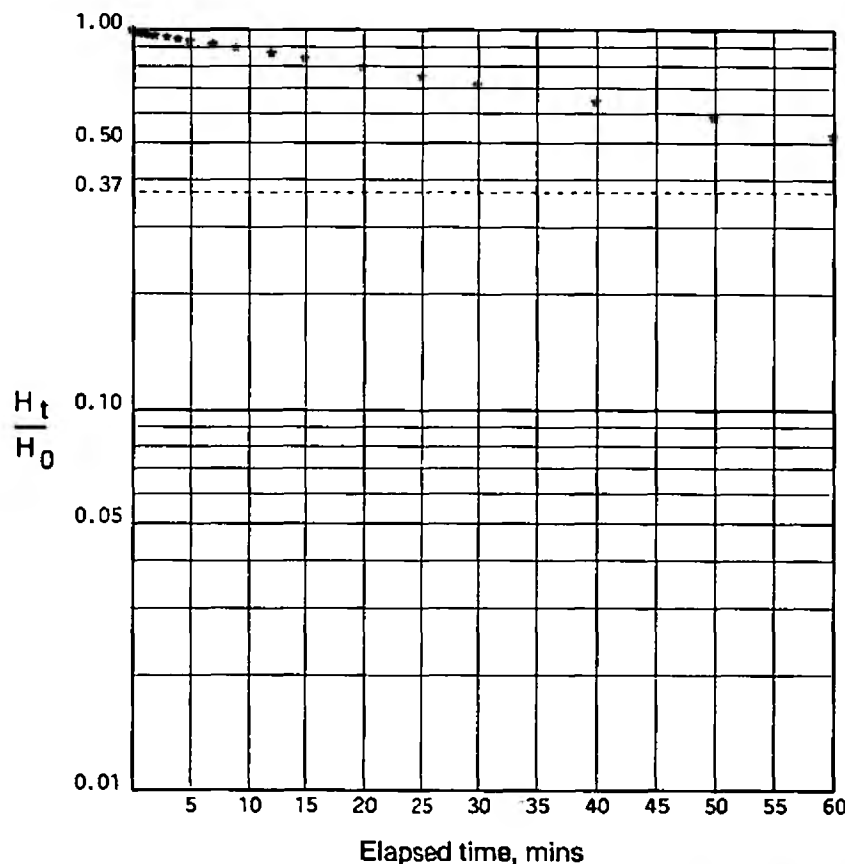
Plot $\log \frac{H_t}{H_0}$ v t *.....*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.13E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	5.25	-3.55	1.000
0.16	5.23	-3.53	0.994
0.33	5.21	-3.51	0.989
0.50	5.19	-3.49	0.983
0.75	5.17	-3.47	0.977
1.00	5.16	-3.46	0.975
1.50	5.14	-3.44	0.969
2.00	5.12	-3.42	0.963
3.00	5.09	-3.39	0.955
4.00	5.05	-3.35	0.944
5.00	5.02	-3.32	0.935
7.00	4.95	-3.25	0.915
9.00	4.89	-3.19	0.899
12.00	4.78	-3.08	0.868
15.00	4.69	-2.99	0.842
20.00	4.53	-2.83	0.797
25.00	4.38	-2.68	0.755
30.00	4.24	-2.54	0.715
40.00	3.99	-2.29	0.645
50.00	3.78	-2.08	0.586
60.00	3.56	-1.86	0.524



REMARKS:

6023

In-Situ Permeability Test

Bh No

6B

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 18/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 5.00 m

Depth to equilibrium watertable, b : 1.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 5.00 m

Length of response zone, Z : 0.00 m

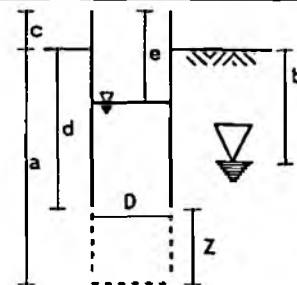
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense orange brown fine sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

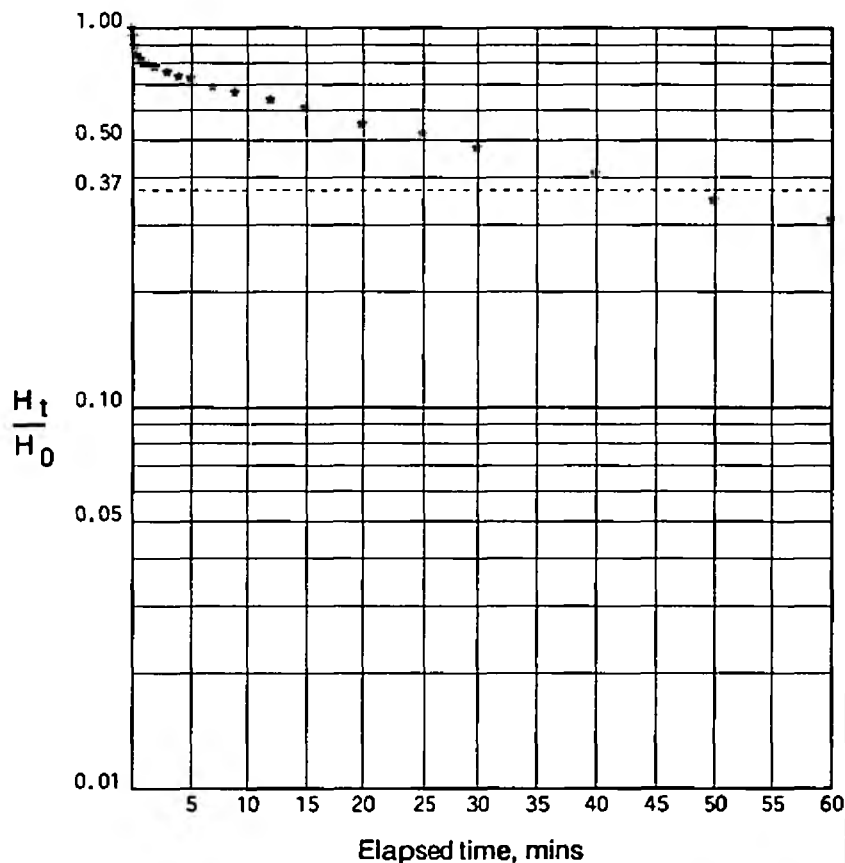
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 2.06E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.70	-2.00	1.000
0.16	3.60	-1.90	0.950
0.33	3.50	-1.80	0.900
0.50	3.39	-1.69	0.845
0.75	3.34	-1.64	0.820
1.00	3.30	-1.60	0.800
1.50	3.29	-1.59	0.795
2.00	3.27	-1.57	0.785
3.00	3.22	-1.52	0.760
4.00	3.18	-1.48	0.740
5.00	3.16	-1.46	0.730
7.00	3.09	-1.39	0.695
9.00	3.04	-1.34	0.670
12.00	2.98	-1.28	0.640
15.00	2.92	-1.22	0.610
20.00	2.81	-1.11	0.555
25.00	2.74	-1.04	0.520
30.00	2.66	-0.96	0.480
40.00	2.52	-0.82	0.410
50.00	2.40	-0.70	0.350
60.00	2.32	-0.62	0.310



REMARKS:

6023

In-Situ Permeability Test

Bh No

7A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 18/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 8.00 m

Depth to equilibrium watertable, b : 2.00 m Assumed

Height of casing above ground level, c : 0.15 m

Depth of casing below ground level, d : 8.00 m

Length of response zone, Z : 0.00 m

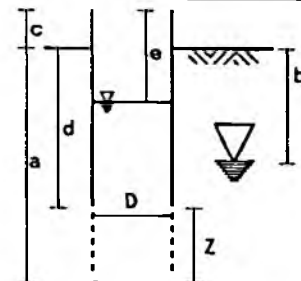
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition 8 of fig. 7 BS5930)

Soil Type at test level

Loose grey fine sand with thin layers of soft grey clay



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

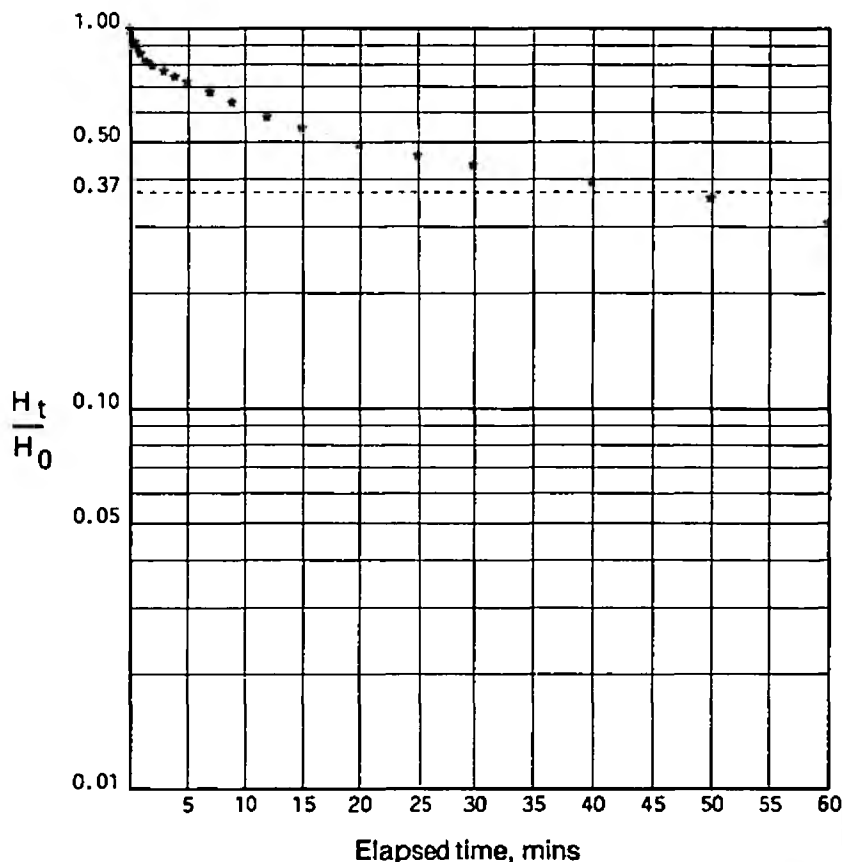
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 2.11E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	5.60	-3.45	1.000
0.16	5.48	-3.33	0.965
0.33	5.32	-3.17	0.919
0.50	5.32	-3.17	0.919
0.75	5.21	-3.06	0.887
1.00	5.11	-2.96	0.858
1.50	4.97	-2.82	0.817
2.00	4.90	-2.75	0.797
3.00	4.81	-2.66	0.771
4.00	4.72	-2.57	0.745
5.00	4.64	-2.49	0.722
7.00	4.49	-2.34	0.678
9.00	4.35	-2.20	0.638
12.00	4.16	-2.01	0.583
15.00	4.03	-1.88	0.545
20.00	3.86	-1.71	0.496
25.00	3.75	-1.60	0.464
30.00	3.66	-1.51	0.438
40.00	3.51	-1.36	0.394
50.00	3.38	-1.23	0.357
60.00	3.21	-1.06	0.307



REMARKS:

6023

In-Situ Permeability Test

Bh No

Fig No

7A:

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 18/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 11.00 m

Depth to equilibrium watertable, b : 2.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 11.00 m

Length of response zone, Z : 0.00 m

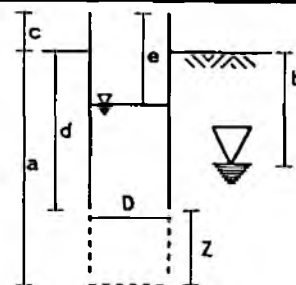
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense grey sand and large flint gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

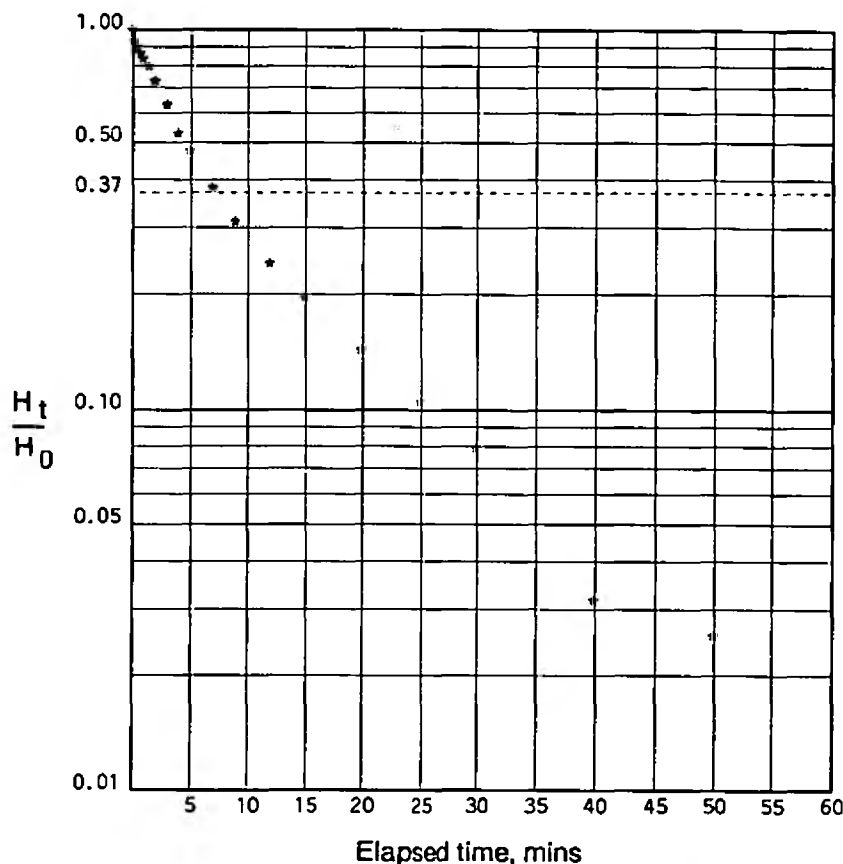
Plot $\log \frac{H_t}{H_0}$ v t *.....*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.36E-4 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	5.85	-3.15	1.000
0.16	5.78	-3.08	0.978
0.20	5.63	-2.93	0.930
0.50	5.54	-2.64	0.902
0.75	5.42	-2.72	0.863
1.00	5.34	-2.64	0.838
1.50	5.22	-2.52	0.800
2.00	5.00	-2.30	0.730
3.00	4.69	-1.99	0.632
4.00	4.37	-1.67	0.530
5.00	4.20	-1.50	0.476
7.00	3.90	-1.20	0.381
9.00	3.68	-0.98	0.311
12.00	3.46	-0.76	0.241
15.00	3.32	-0.62	0.197
20.00	3.15	-0.45	0.143
25.00	3.03	-0.33	0.105
30.00	2.95	-0.25	0.079
40.00	2.80	-0.10	0.032
50.00	2.78	-0.08	0.025
60.00	2.60	0.10	-0.032



REMARKS:

6023

In-Situ Permeability Test

Bh No

7A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 19/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 14.00 m

Depth to equilibrium watertable, b : 2.50 m Assumed

Height of casing above ground level, c : 0.85 m

Depth of casing below ground level, d : 12.40 m

Length of response zone, Z : 1.60 m

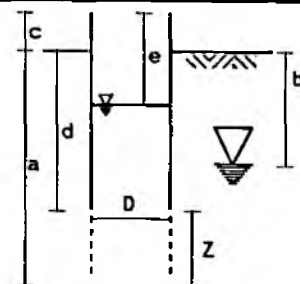
Diameter of response zone, D : 0.20 m

Intake factor, F : 3.6208

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flints



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

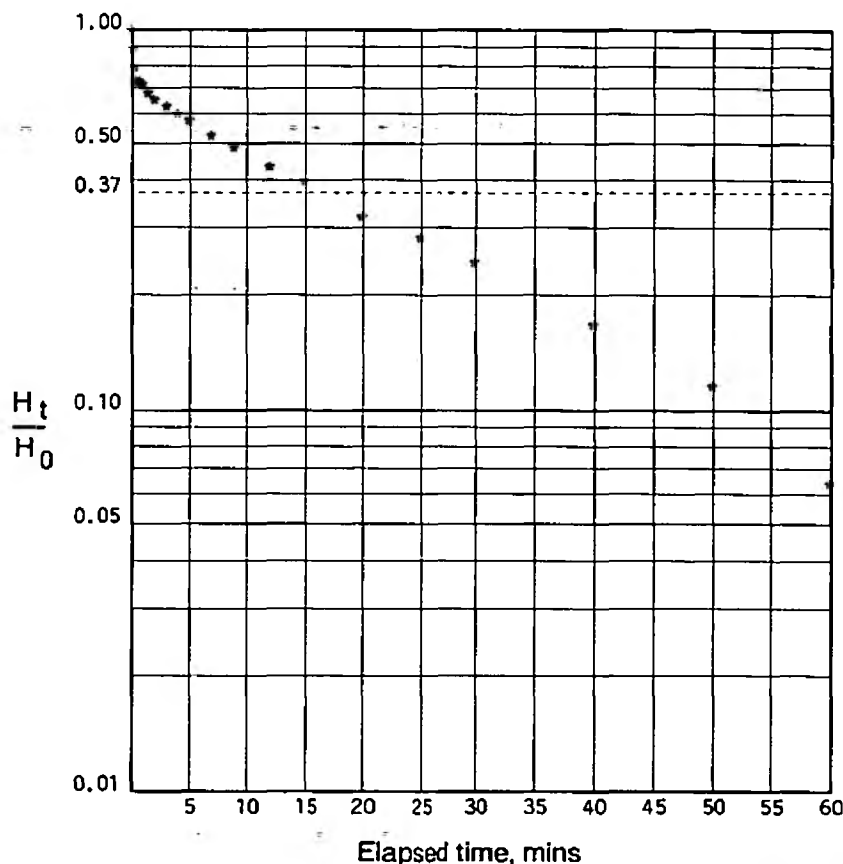
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 9.0E-6 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	4.13	-0.78	1.000
0.16	4.04	-0.69	0.885
0.33	3.97	-0.62	0.795
0.50	3.92	-0.57	0.731
0.75	3.92	-0.57	0.731
1.00	3.91	-0.56	0.718
1.50	3.88	-0.53	0.679
2.00	3.86	-0.51	0.654
3.00	3.84	-0.49	0.628
4.00	3.82	-0.47	0.603
5.00	3.80	-0.45	0.577
7.00	3.76	-0.41	0.526
9.00	3.73	-0.38	0.487
12.00	3.69	-0.34	0.436
15.00	3.66	-0.31	0.397
20.00	3.60	-0.25	0.321
25.00	3.57	-0.22	0.282
30.00	3.54	-0.19	0.244
40.00	3.48	-0.13	0.167
50.00	3.44	-0.09	0.115
60.00	3.40	-0.05	0.064



REMARKS: Water level could not be lowered below 4.5m depth

6023

In-Situ Permeability Test

Bh No

7A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 19/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 6.00 m

Depth to equilibrium watertable, b : 1.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 6.00 m

Length of response zone, Z : 0.00 m

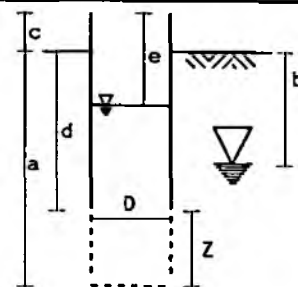
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Loose grey brown medium fine sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

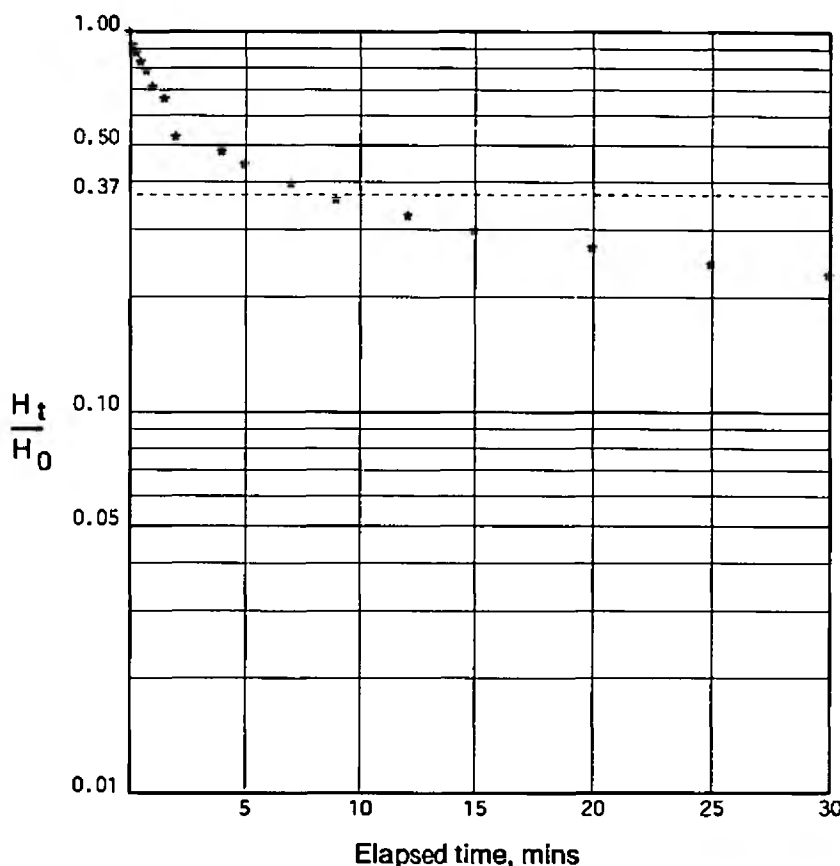
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.06E-4 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	4.15	-2.45	1.000
0.16	3.95	-2.25	0.918
0.33	3.85	-2.15	0.878
0.50	3.74	-2.04	0.833
0.75	3.63	-1.93	0.788
1.00	3.45	-1.75	0.714
1.50	3.33	-1.63	0.665
2.00	2.99	-1.29	0.527
4.00	2.88	-1.18	0.482
5.00	2.79	-1.09	0.445
7.00	2.67	-0.97	0.396
9.00	2.58	-0.88	0.359
12.00	2.50	-0.80	0.327
15.00	2.43	-0.73	0.298
20.00	2.36	-0.66	0.269
25.00	2.30	-0.60	0.245
30.00	2.26	-0.56	0.229



REMARKS:

6023

In-Situ Permeability Test

Bh No

78

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 20/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 4.00 m

Depth to equilibrium watertable, b : 0.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 4.00 m

Length of response zone, Z : 0.00 m

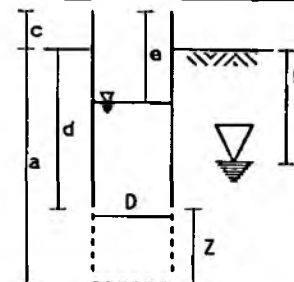
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense grey gravel and sand



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

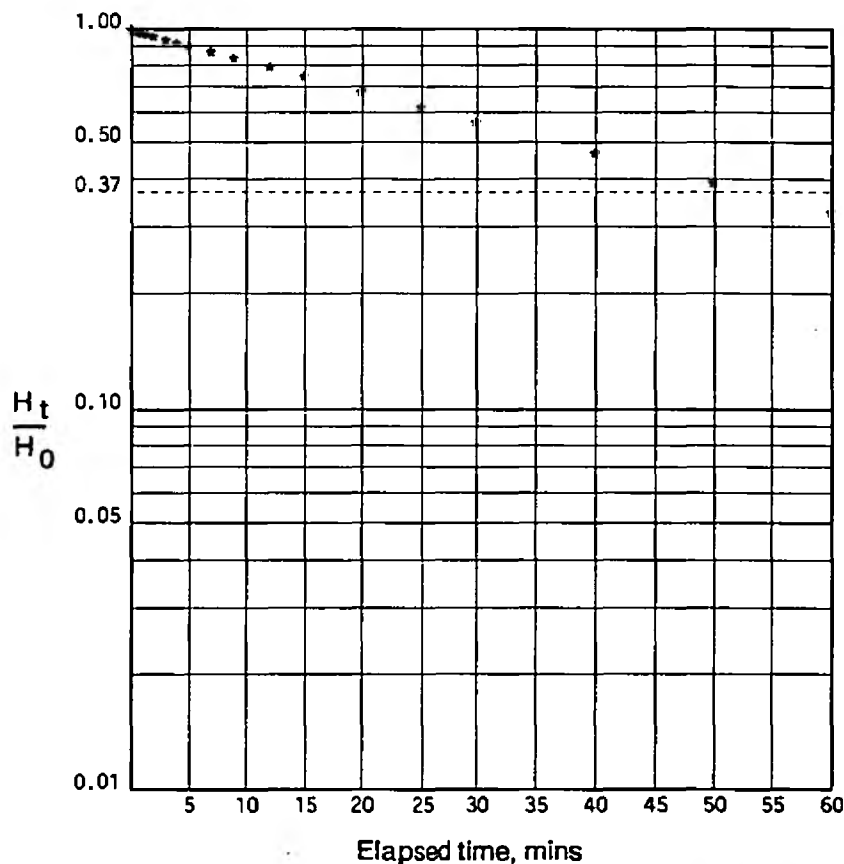
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 1.83E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.60	-2.90	1.000
0.16	3.58	-2.88	0.993
0.33	3.56	-2.86	0.986
0.50	3.55	-2.85	0.983
0.75	3.54	-2.84	0.979
1.00	3.51	-2.81	0.969
1.50	3.49	-2.79	0.962
2.00	3.46	-2.76	0.952
3.00	3.41	-2.71	0.934
4.00	3.36	-2.66	0.917
5.00	3.32	-2.62	0.903
7.00	3.22	-2.52	0.869
9.00	3.12	-2.42	0.834
12.00	3.00	-2.30	0.793
15.00	2.87	-2.17	0.748
20.00	2.67	-1.97	0.679
25.00	2.49	-1.79	0.617
30.00	2.34	-1.64	0.566
40.00	2.06	-1.36	0.469
50.00	1.83	-1.13	0.390
60.00	1.65	-0.95	0.328



REMARKS:

6023

In-Situ Permeability Test

Bh No

8A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 20/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 7.00 m

Depth to equilibrium watertable, b : 0.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 7.00 m

Length of response zone, Z : 0.00 m

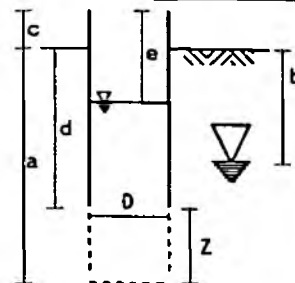
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense grey sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

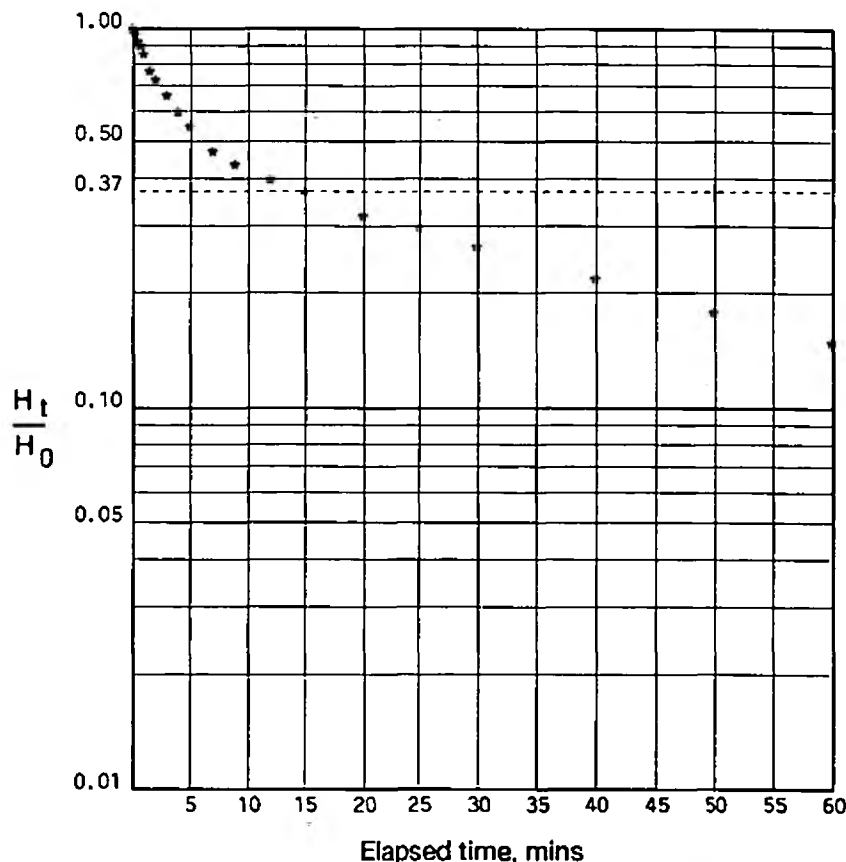
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 6.34E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	3.46	-2.76	1.000
0.16	3.40	-2.70	0.978
0.33	3.35	-2.65	0.960
0.50	3.25	-2.55	0.924
0.75	3.18	-2.48	0.899
1.00	3.05	-2.35	0.851
1.50	2.81	-2.11	0.764
2.00	2.70	-2.00	0.725
3.00	2.52	-1.82	0.659
4.00	2.35	-1.65	0.598
5.00	2.21	-1.51	0.547
7.00	2.00	-1.30	0.471
9.00	1.90	-1.20	0.435
12.00	1.80	-1.10	0.399
15.00	1.72	-1.02	0.370
20.00	1.58	-0.88	0.319
25.00	1.52	-0.82	0.297
30.00	1.43	-0.73	0.264
40.00	1.30	-0.60	0.217
50.00	1.19	-0.49	0.178
60.00	1.11	-0.41	0.149



REMARKS:

6023

In-Situ Permeability Test

Bh No

Fig No

8A

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 21/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 10.00 m

Depth to equilibrium watertable, b : 0.50 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 10.00 m

Length of response zone, Z : 0.00 m

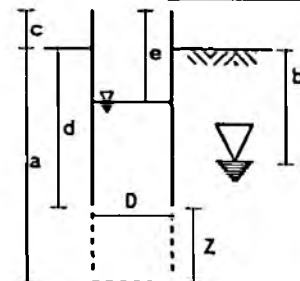
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Dense grey sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

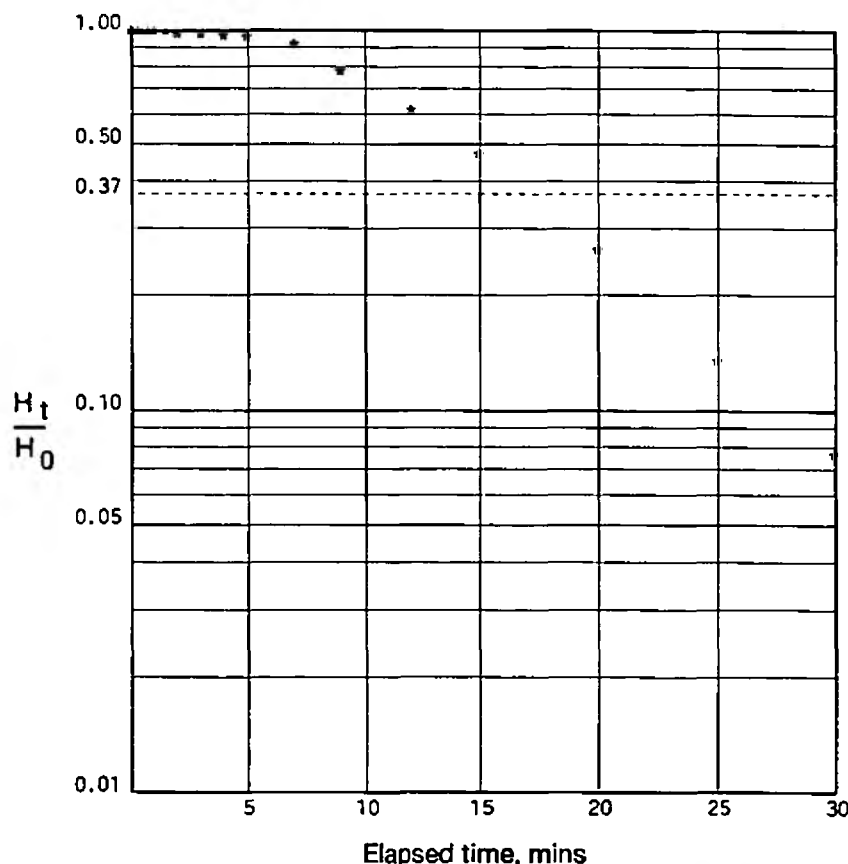
Plot $\log \frac{H_t}{H_0}$ v t *.....*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 5.6E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	7.89	-7.19	1.000
0.16	7.86	-7.16	0.996
0.33	7.84	-7.14	0.993
0.50	7.83	-7.13	0.992
0.75	7.83	-7.13	0.992
1.00	7.81	-7.11	0.989
1.50	7.79	-7.09	0.986
2.00	7.75	-7.05	0.981
3.00	7.70	-7.00	0.974
4.00	7.66	-6.96	0.968
5.00	7.61	-6.91	0.961
7.00	7.31	-6.61	0.919
9.00	6.31	-5.61	0.780
12.00	5.15	-4.45	0.619
15.00	4.10	-3.40	0.473
20.00	2.59	-1.89	0.263
25.00	1.67	-0.97	0.135
30.00	1.25	-0.55	0.076



REMARKS:

6023

In-Situ Permeability Test

Bh No

8A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 21/04/94

Type of Test Rising Head

Level
m00

Depth of borehole during test, a : 13.00 m

Depth to equilibrium watertable, b : 0.50 m Assumed

Height of casing above ground level, c : 1.00 m

Depth of casing below ground level, d : 10.50 m

Length of response zone, Z : 2.50 m

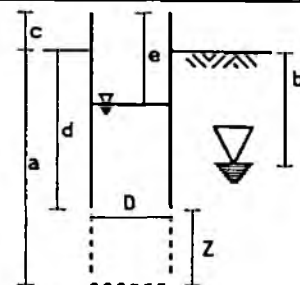
Diameter of response zone, D : 0.20 m

Intake factor, F : 4.8775

(From condition D of fig. 7 BS5930)

Soil Type at test level

Firm white chalk with flints



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

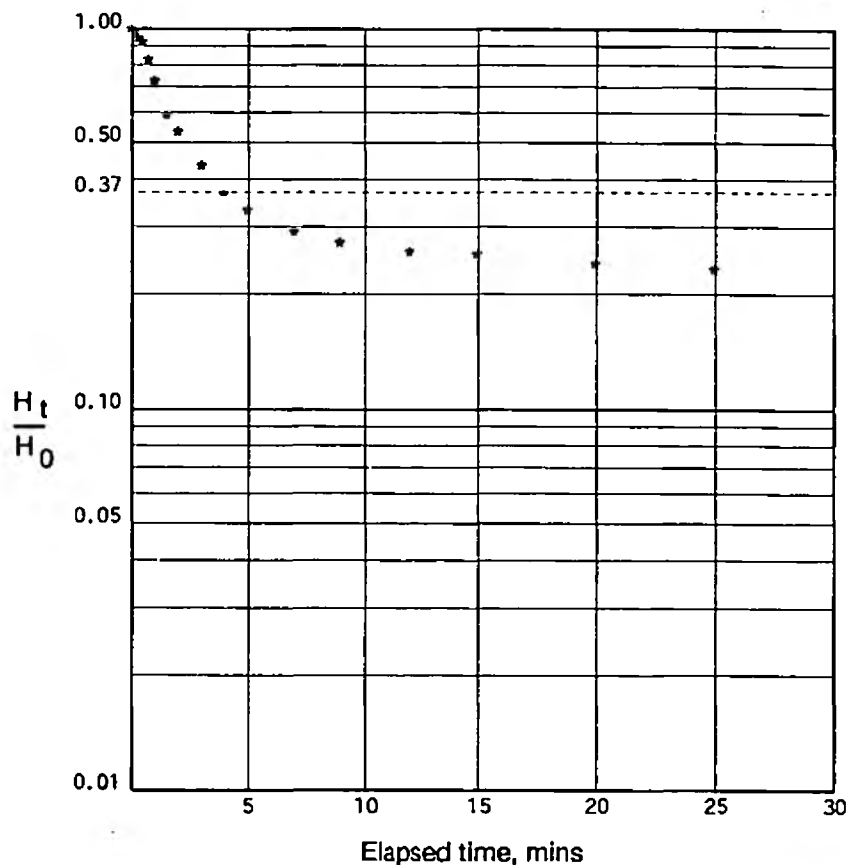
Plot $\log \frac{H_t}{H_0}$ v t *-----*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 2.68E-5 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	4.25	-2.75	1.000
0.16	4.20	-2.70	0.982
0.33	4.10	-2.60	0.945
0.50	4.04	-2.54	0.924
0.75	3.78	-2.28	0.829
1.00	3.50	-2.00	0.727
1.50	3.12	-1.62	0.589
2.00	2.97	-1.47	0.535
3.00	2.70	-1.20	0.436
4.00	2.51	-1.01	0.367
5.00	2.41	-0.91	0.331
7.00	2.30	-0.80	0.291
9.00	2.25	-0.75	0.273
12.00	2.21	-0.71	0.258
15.00	2.20	-0.70	0.255
20.00	2.16	-0.66	0.240
25.00	2.14	-0.64	0.233



REMARKS:

6023

In-Situ Permeability Test

Bh No

8A

Fig No

Site EAST RUSTON

Client NATIONAL RIVERS AUTHORITY

Date 21/04/94

Type of Test Rising Head

Level
mOD

Depth of borehole during test, a : 5.00 m

Depth to equilibrium watertable, b : 0.25 m Assumed

Height of casing above ground level, c : 0.20 m

Depth of casing below ground level, d : 5.00 m

Length of response zone, Z : 0.00 m

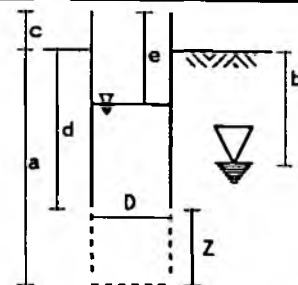
Diameter of response zone, D : 0.20 m

Intake factor, F : 0.55

(From condition B of fig. 7 BS5930)

Soil Type at test level

Medium dense grey brown sand and gravel



PERMEABILITY (after Hvorslev 1951)

Basic Time Lag Approach

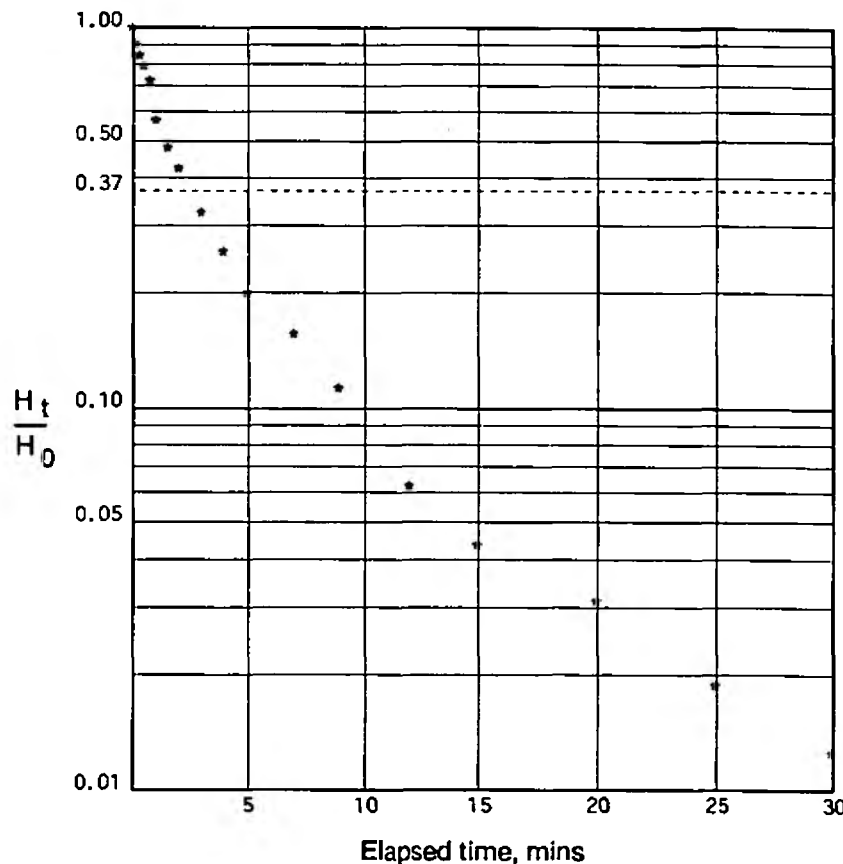
Plot $\log \frac{H_t}{H_0}$ v t *.....*

then

$$k = \frac{A}{60FT} \text{ m/sec}$$

$$k = 3.8E-4 \text{ m/sec}$$

Elapsed time, t mins	Depth to water, e m	Head of water, H m	Ht/Ho
0.00	2.05	-1.60	1.000
0.16	1.90	-1.45	0.906
0.33	1.80	-1.35	0.844
0.50	1.72	-1.27	0.794
0.75	1.61	-1.16	0.725
1.00	1.36	-0.91	0.569
1.50	1.22	-0.77	0.481
2.00	1.13	-0.68	0.425
3.00	0.97	-0.52	0.325
4.00	0.86	-0.41	0.256
5.00	0.77	-0.32	0.200
7.00	0.70	-0.25	0.156
9.00	0.63	-0.18	0.113
12.00	0.55	-0.10	0.063
15.00	0.52	-0.07	0.044
20.00	0.50	-0.05	0.031
25.00	0.48	-0.03	0.019
30.00	0.47	-0.02	0.013



REMARKS:

6023

In-Situ Permeability Test

Bh No

88

Fig No

LABORATORY TEST RESULTS

CONTRACT EAST RUSTON

Bore-hole	Sample	Depth m	Classification				Density		Triaxial Compression					Sulphates (SO ₄)				Remarks
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m ³	Dry Mg/m ³	Type	Deviator Stress kN/m ²	Cell Pressure kN/m ²	Cohesion kN/m ²	Angle of Shear Resistance degrees	Soil		Water	pH	
														Total % Dry Wt.	Aqueous Extract g/l	g/l		
1A	B2	2.50 - 3.00	28	22	6	25												
	B3	5.00 - 5.50				12												
	B4	6.00 - 6.50				13												
	B5	7.00 - 7.50	20	-	Non-Plas	15												
	B6	8.00 - 8.50				19												
	B7	9.50 - 10.00	22	-	Non-Plas	11												
	2A	U1	1.00				59											
U2		3.00				472												
B1		4.00 - 4.50	24	-	Non-Plas	18												
B4		7.00 - 7.50				7												
B6		9.00 - 9.50	29	23	6	30												

U - UNDISTURBED SAMPLE
D - DISTURBED SAMPLE
B - BULK SAMPLE
W - WATER SAMPLE
C.U. - CONSOLIDATED UNDRAINED
C.D. - CONSOLIDATED DRAINED
Q. - IMMEDIATE UNDRAINED
Q.M. - IMMEDIATE UNDRAINED MULTISTAGE

Aqueous Extract 2:1 Water:Soil

SOILS ENGINEERING LIMITED, PETERBOROUGH

LABORATORY TEST RESULTS

CONTRACT EAST RUSTON

Bore-hole	Sample	Depth m	Classification				Density		Triaxial Compression					Sulphates (SO ₄)				Remarks	
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m ³	Dry Mg/m ³	Type	Deviator Stress kN/m ²	Cell Pressure kN/m ²	Cohesion kN/m ²	Angle of Shear Resistance degrees	Soil		Water	pH		
														Total % Dry Wt.	Aqueous Extract g/l	g/l			
3A	B3	3.00 - 3.50				39													
	B4	4.00 - 4.50				5													
	B5	5.50 - 6.00				18													
	B7	8.00 - 8.50				12													
4A	B3	5.50 - 6.00	23	13	10														
	B4	6.50 - 7.00				8													
	B5	7.50 - 8.00				9													
	B6	8.50 - 9.00				12													
	B7	9.50 - 10.00				9													
	B8	10.50 - 11.00				7													

U - UNDISTURBED SAMPLE

D - DISTURBED SAMPLE

B - BULK SAMPLE

W - WATER SAMPLE

C.U. - CONSOLIDATED UNDRAINED

C.D. - CONSOLIDATED DRAINED

Q. - IMMEDIATE UNDRAINED

Q.M. - IMMEDIATE UNDRAINED MULTISTAGE

Aqueous Extract 2:1 Water:Soil

SOILS ENGINEERING LIMITED, PETERBOROUGH

LABORATORY TEST RESULTS

CONTRACT EAST RUSTON

Bore-hole	Sample	Depth m	Classification				Density		Triaxial Compression					Sulphates (SO ₄)				Remarks	
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m ³	Dry Mg/m ³	Type	Deviator Stress kN/m ²	Cell Pressure kN/m ²	Cohesion kN/m ²	Angle of Shear Resistance degrees	Soil		Water	pH		
														Total % Dry Mt.	Aqueous Extract g/l	g/l			
4A	B9	11.50 - 12.00				21													
	B10	12.50 - 13.00				12													
	B11	13.50 - 14.00	22	-	Non-Plas	20													
	B12	15.50 - 16.00	22	-	Non-Plas	18													
	B13	17.00 - 17.50	23	-	Non-Plas	13													
	B14	18.00 - 18.50	25	12	13	26													
	B15	19.50 - 20.00				9													
	B16	20.50 - 21.00	22	-	Non-Plas	26													
B17	22.10 - 22.50				0.9														
5A	B1	1.00 - 1.50				41													

U - UNDISTURBED SAMPLE
 D - DISTURBED SAMPLE
 B - BULK SAMPLE
 W - WATER SAMPLE
 C.U. - CONSOLIDATED UNDRAINED
 C.D. - CONSOLIDATED DRAINED
 Q. - IMMEDIATE UNDRAINED
 Q.M. - IMMEDIATE UNDRAINED MULTISTAGE

Aqueous Extract 2:1 Water:Soil

SOILS ENGINEERING LIMITED, PETERBOROUGH

LABORATORY TEST RESULTS

CONTRACT EAST RUSTON

Bore-hole	Sample	Depth m	Classification				Density		Triaxial Compression					Sulphates (SO ₄)				Remarks	
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m ³	Dry Mg/m ³	Type	Deviator Stress kN/m ²	Cell Pressure kN/m ²	Cohesion kN/m ²	Angle of Shear Resistance degrees	Soil		Water	pH		
														Total % Dry Wt.	Aqueous Extract g/l	g/l			
5A	B2	2.10 - 2.50	22	-	Non-Plas	23													
	B3	3.50 - 4.00				35													
6A	B4	5.00 - 5.50	19	-	Non-Plas	19													
	B5	7.50 - 8.00				20													
	B1	2.00 - 2.50				10													
	B3	4.00 - 4.50				6													
	B5	6.00 - 6.50				4													
	B7	8.00 - 8.50	22	-	Non-Plas	17													
	B9	10.00 - 10.50	21	-	Non-Plas	19													
	B11	12.00 - 12.50				13													

U - UNDISTURBED SAMPLE

D - DISTURBED SAMPLE

B - BULK SAMPLE

W - WATER SAMPLE

C.U. - CONSOLIDATED UNDRAINED

C.D. - CONSOLIDATED DRAINED

Q. - IMMEDIATE UNDRAINED

Q.M. - IMMEDIATE UNDRAINED MULTISTAGE

Aqueous Extract 2:1 Water:Soil

SOILS ENGINEERING LIMITED, PETERBOROUGH

LABORATORY TEST RESULTS

CONTRACT EAST RUSTON

Bore-hole	Sample	Depth m	Classification				Density		Triaxial Compression					Sulphates (SO ₄)				Remarks																	
			Liquid Limit %	Plastic Limit %	Plasticity Index %	Moisture Content %	Bulk Mg/m ³	Dry Mg/m ³	Type	Deviator Stress kN/m ²	Cell Pressure kN/m ²	Cohesion kN/m ²	Angle of Shear Resistance degrees	Soil		Water	pH																		
														Total % Dry Wt.	Aqueous Extract g/l	g/l																			
7A	B4	3.50 - 4.00	20	-	Non-Plas	16																													
8A	B6	6.00 - 6.50																					27												
	B8	8.00 - 8.50	16																																
	B10	11.00 - 11.50															11																		
	U1	1.00	102																																
B1	2.50 - 3.00	4																																	
B3	4.50 - 5.00		5																																
B5	6.50 - 7.00	4																																	
B7	8.50 - 9.00		8																																
	B8	9.50 - 10.00	3																																

U - UNDISTURBED SAMPLE
D - DISTURBED SAMPLE
B - BULK SAMPLE
W - WATER SAMPLE

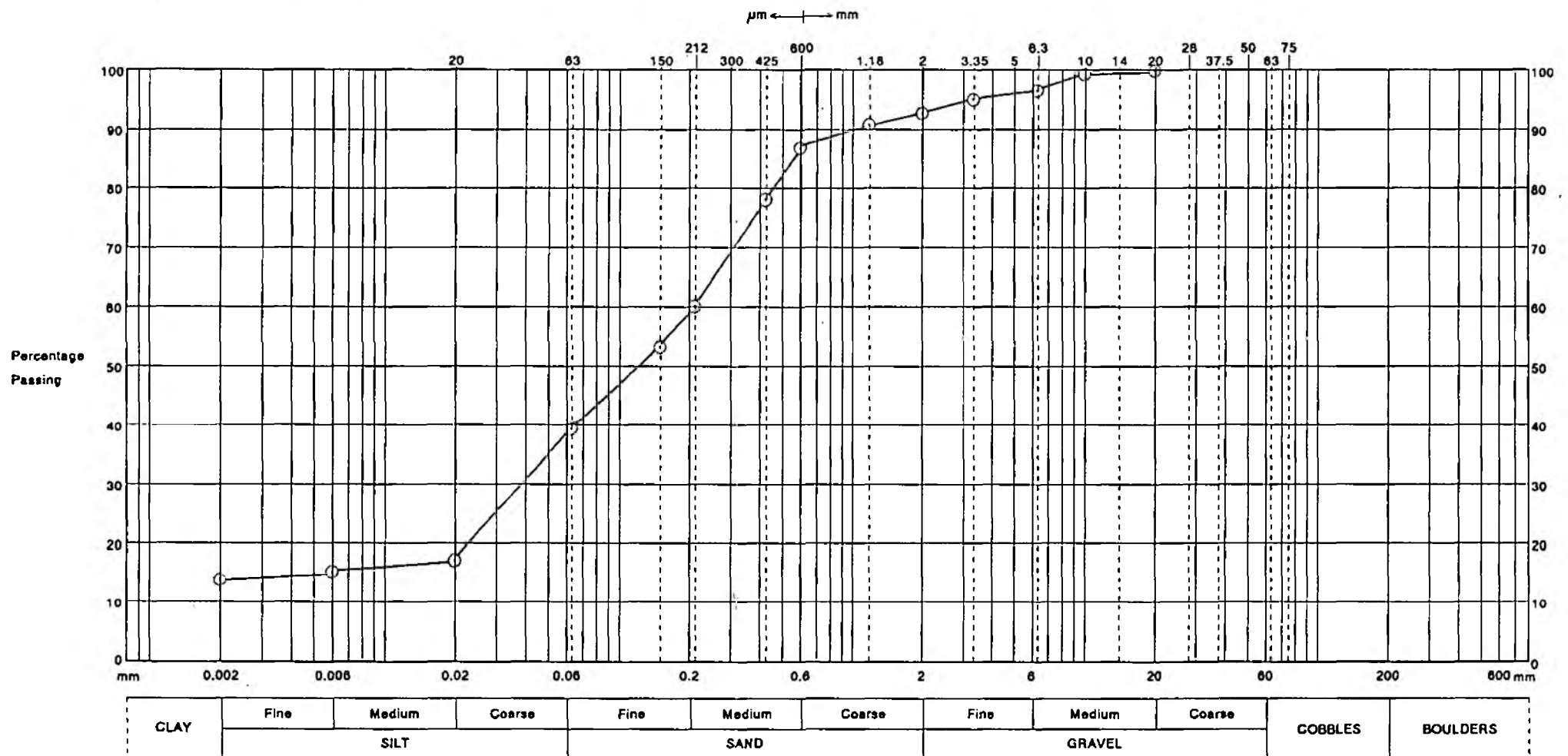
C.U. - CONSOLIDATED UNDRAINED
C.D. - CONSOLIDATED DRAINED
Q. - IMMEDIATE UNDRAINED
Q.M. - IMMEDIATE UNDRAINED MULTISTAGE

Aqueous Extract 2:1 Water:Soil

SOILS ENGINEERING LIMITED, PETERBOROUGH

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	14	16	17	39	53	60	-	78	87	91	93	95	-	97	99	-	100	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
81

Depth
1.00 - 1.50

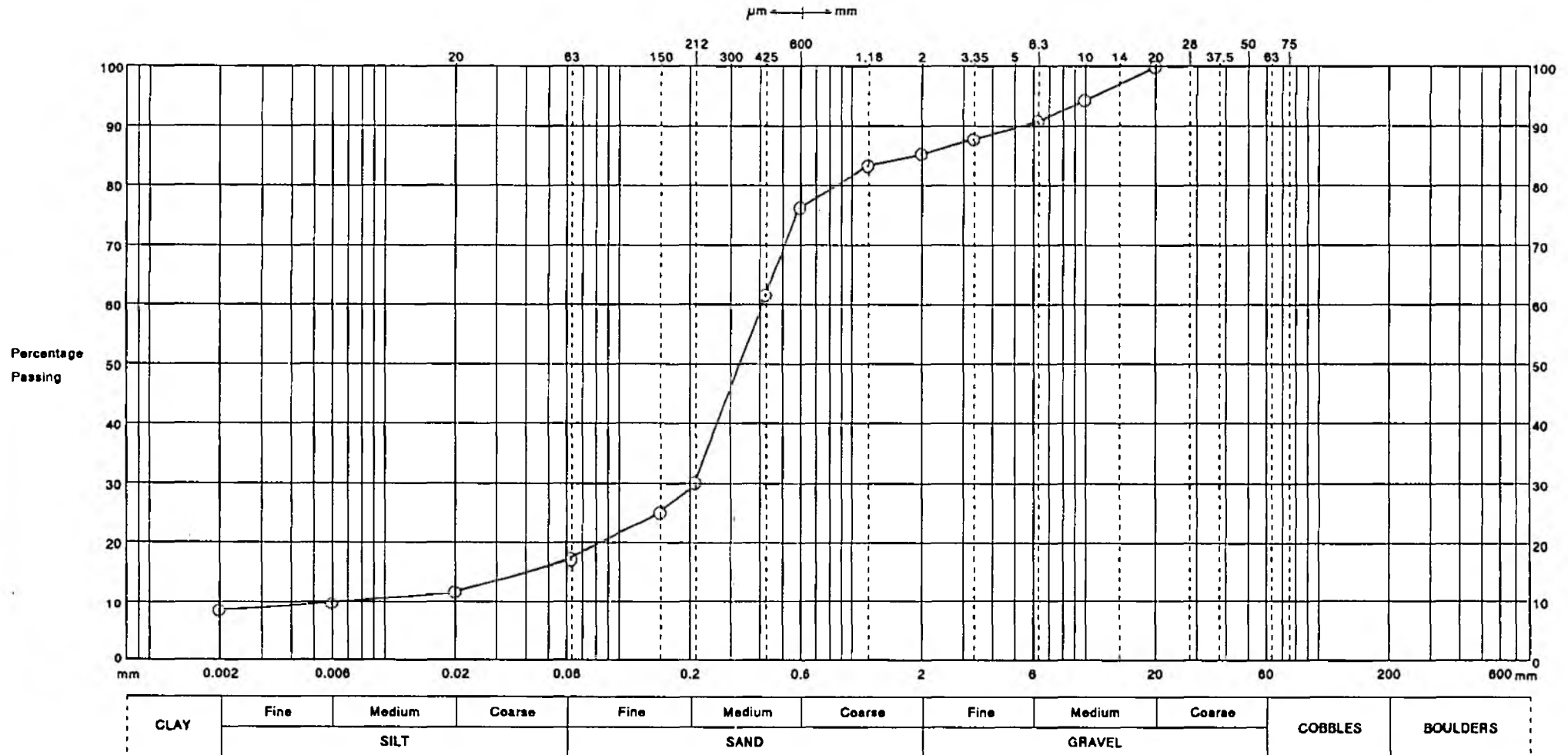
BH/TP Number
1A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	8	10	12	17	25	30	-	62	76	83	85	88	-	91	94	-	100	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B2

Depth
2.50 - 3.00

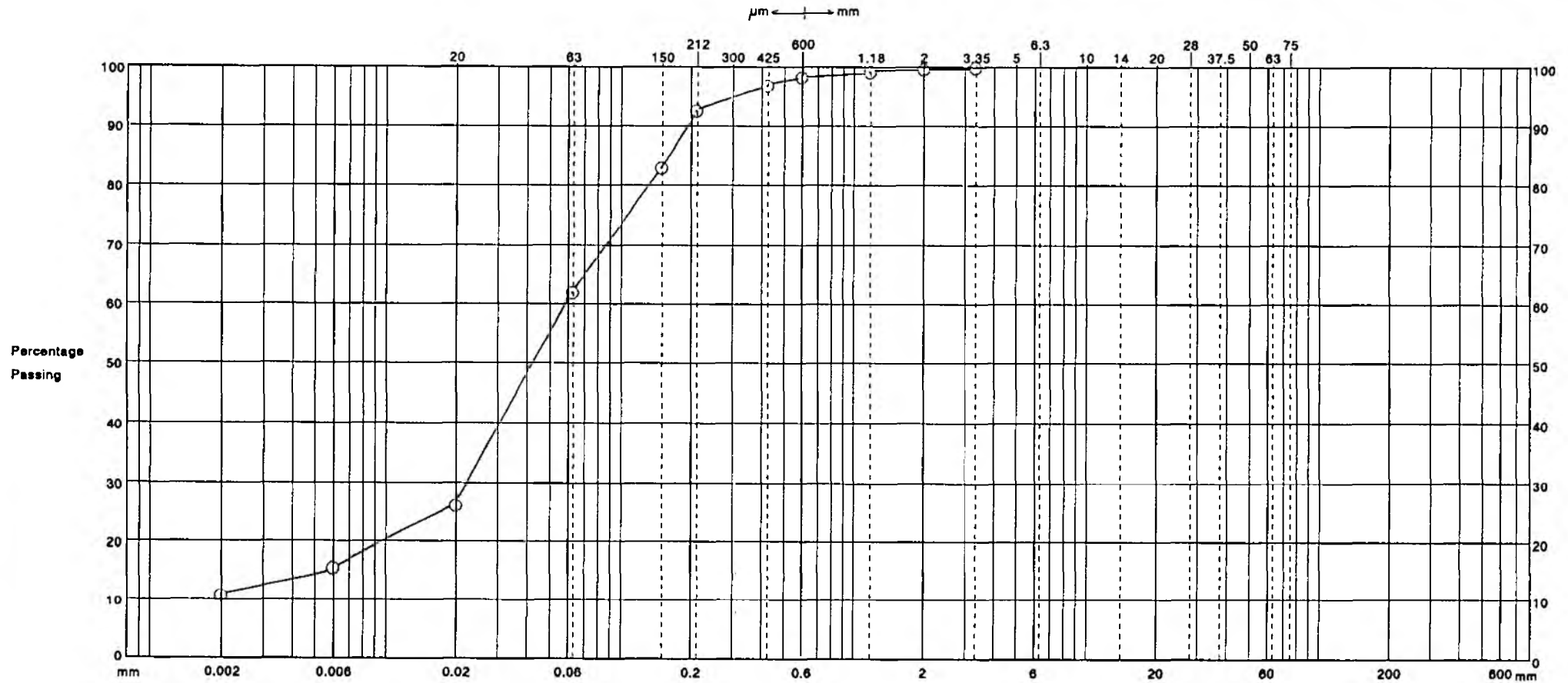
BH/TP Number
1A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	11	16	26	62	83	92	-	97	98	99	100	100	-	-	-	-	-	-	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Pipette Sedimentation

Sample Number
83

Depth
5.00 - 5.50

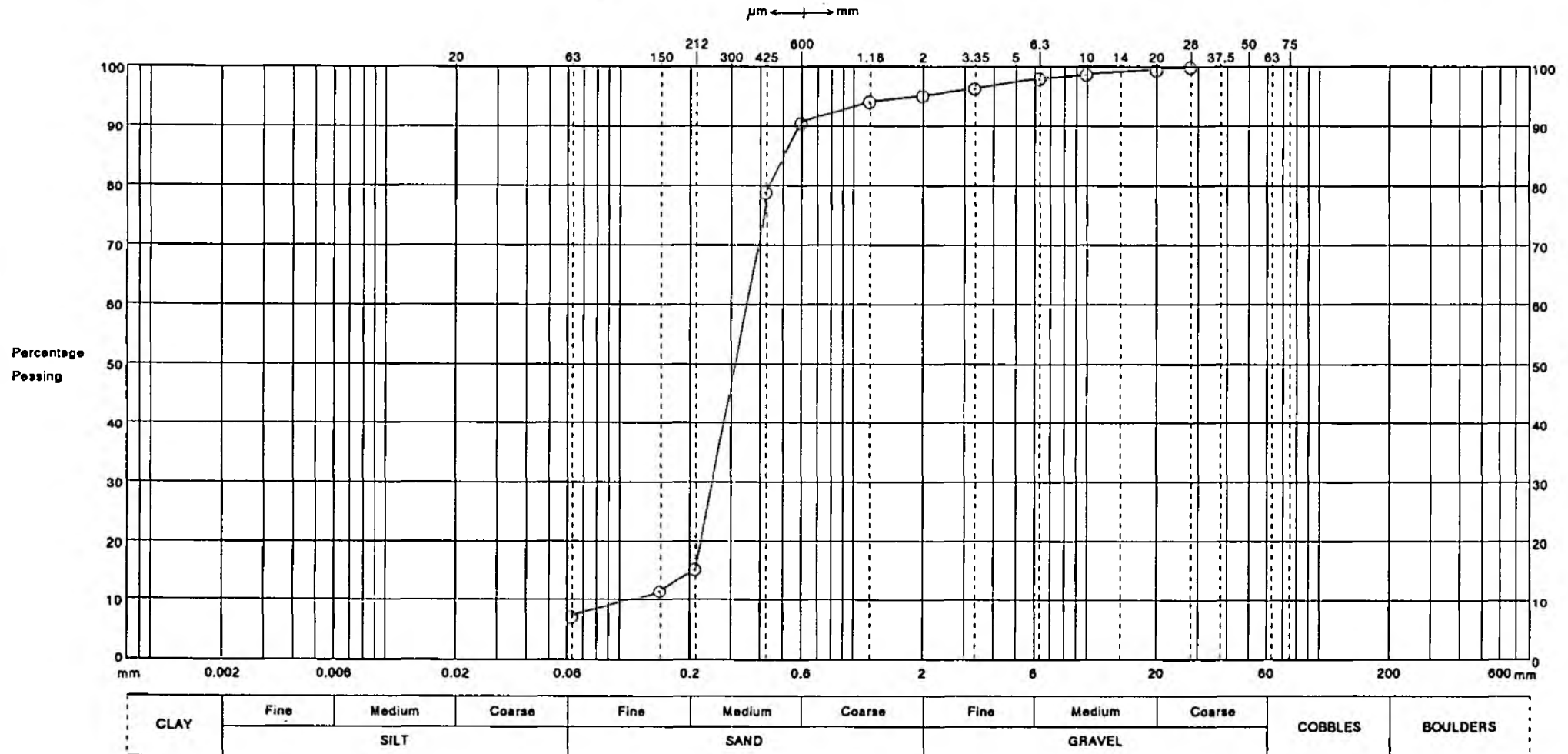
BH/TP Number
1A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

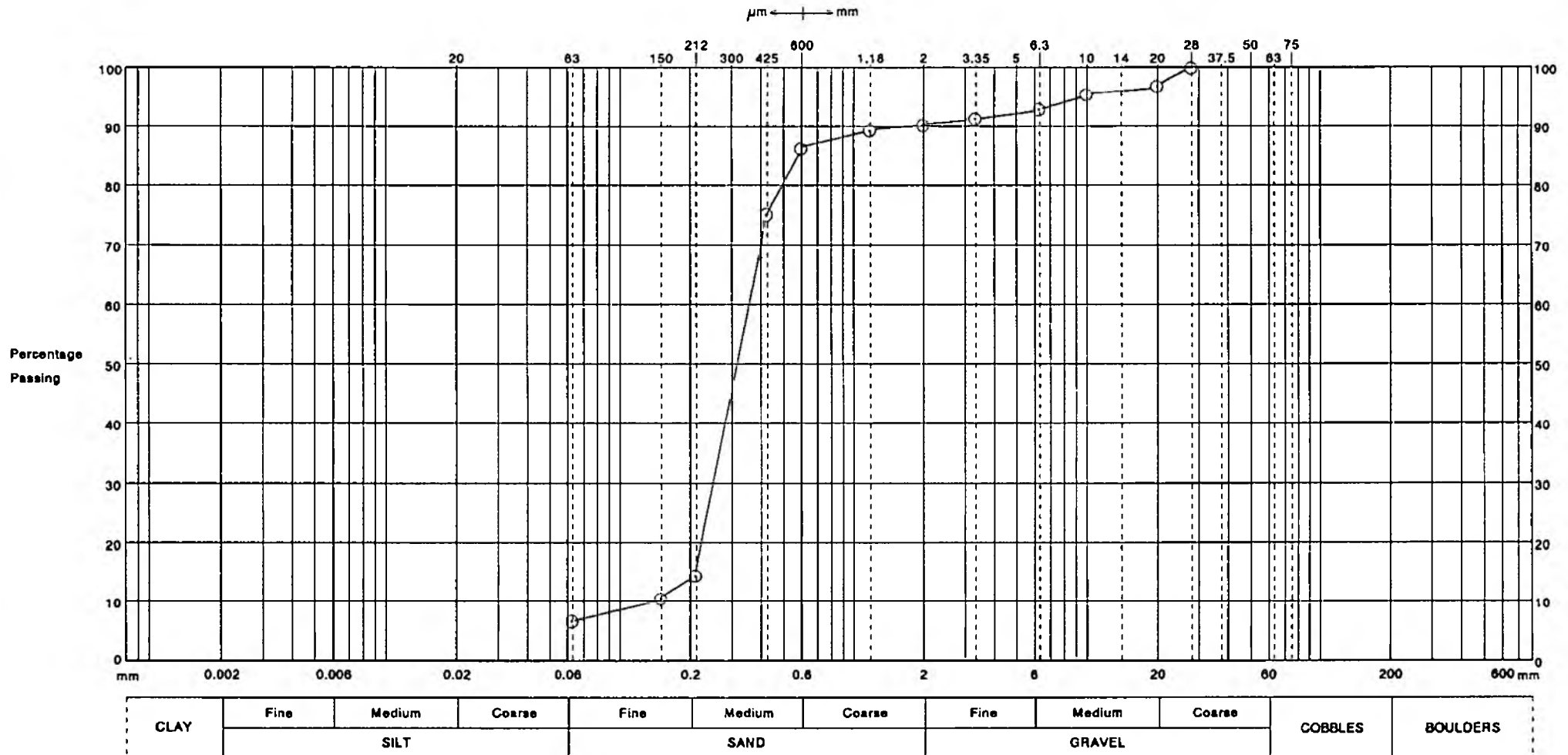
	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	7	12	16	-	79	90	94	95	96	-	98	99	-	99	100	-	-	-	-



	Remarks	Method Wet Sieve	Sample Number B4	Depth 6.00 - 6.50	BH/TP Number 1A	6023
		Site EAST RUSTON				

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	7	10	15	-	75	86	89	90	91	-	93	95	-	97	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
85

Depth
7.00 - 7.50

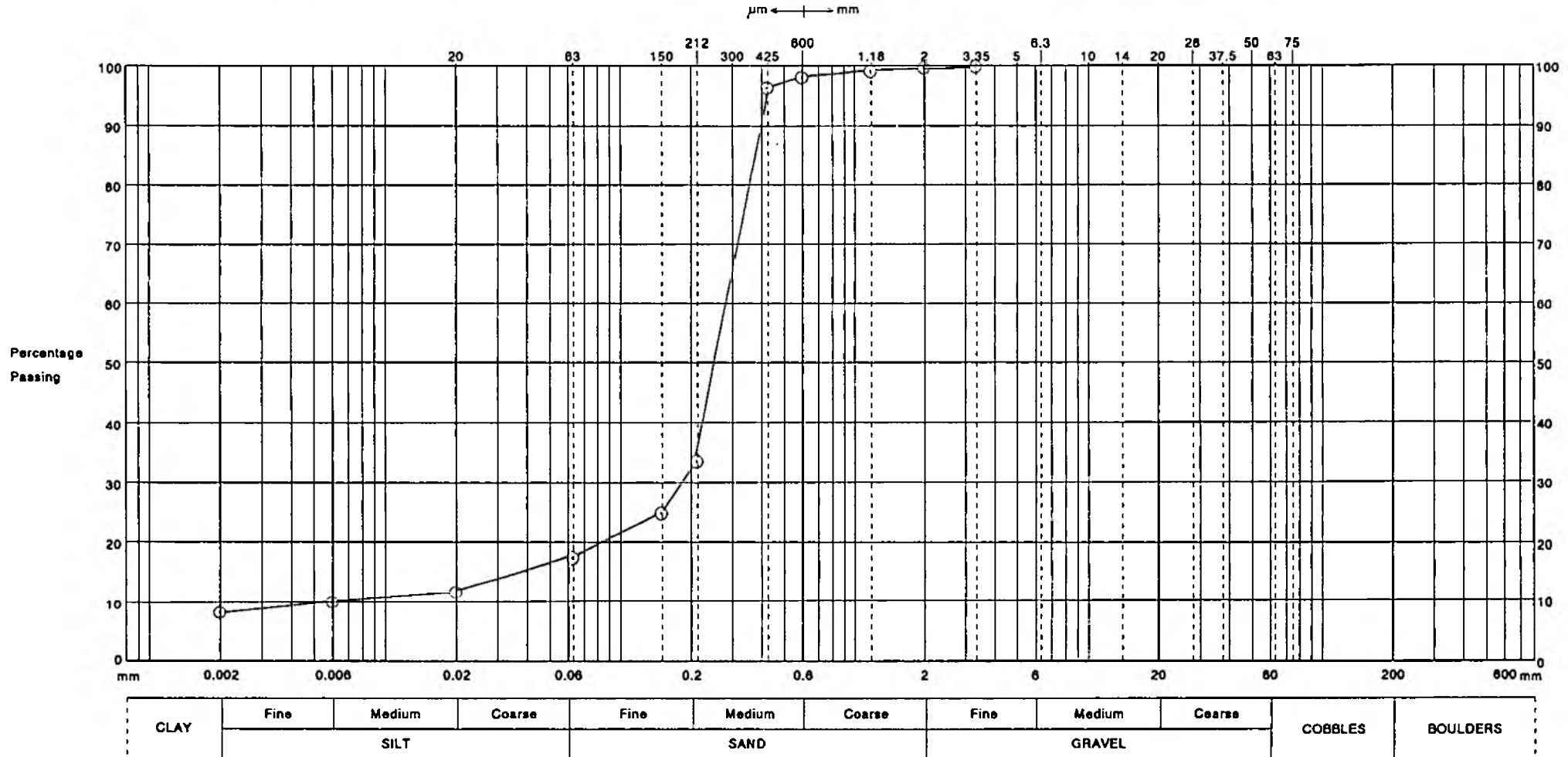
BH/TP Number
1A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	8	10	12	18	25	34	-	96	98	99	100	100	-	-	-	-	-	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B6

Depth
8.00 - 8.50

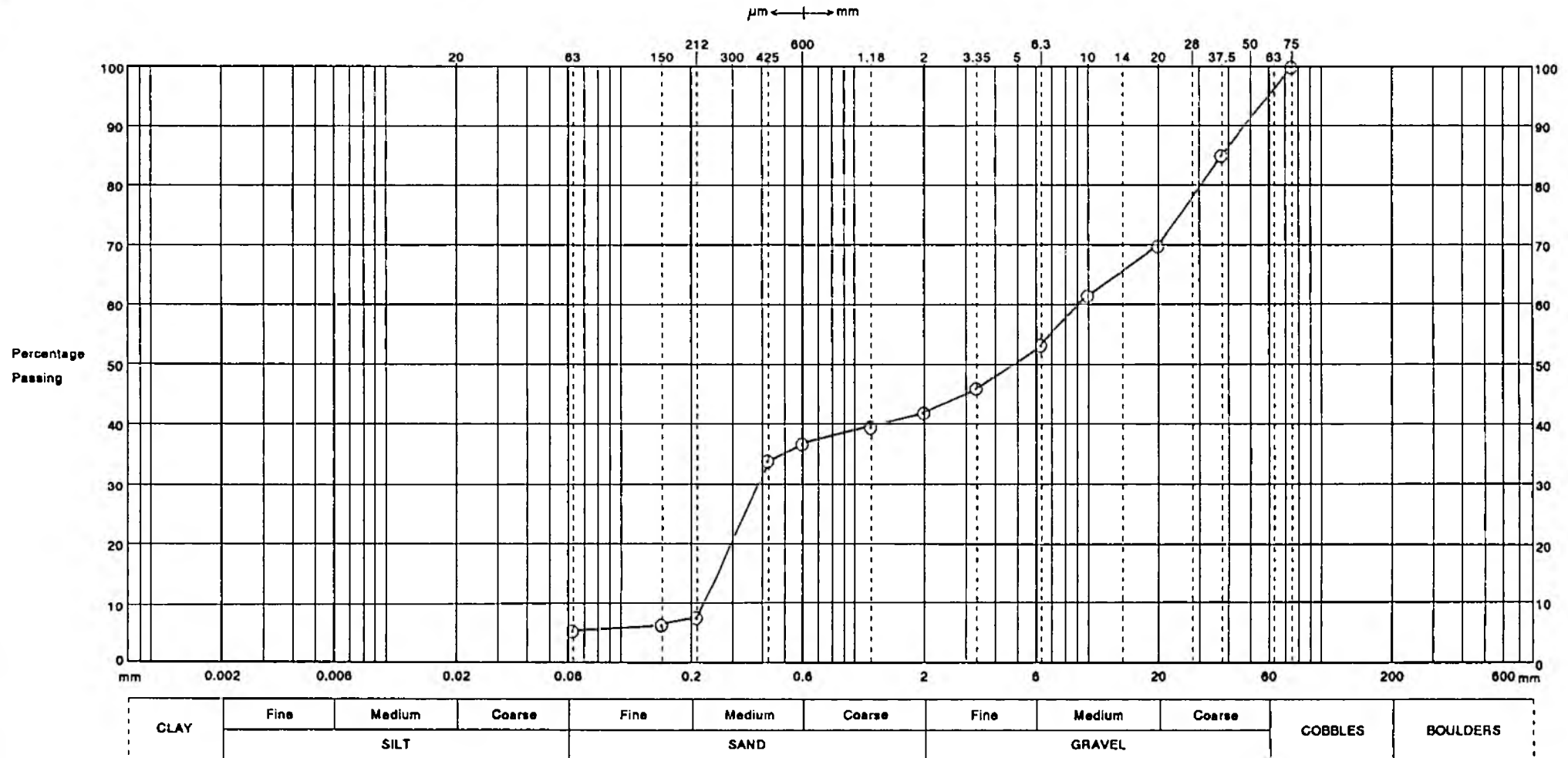
BH/TP Number
1A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	5	6	7	-	34	37	39	42	46	-	53	61	-	70	-	85	100	-	-



Remarks

Method
Wet Sieve

Sample Number
87

Depth
9.50 - 10.00

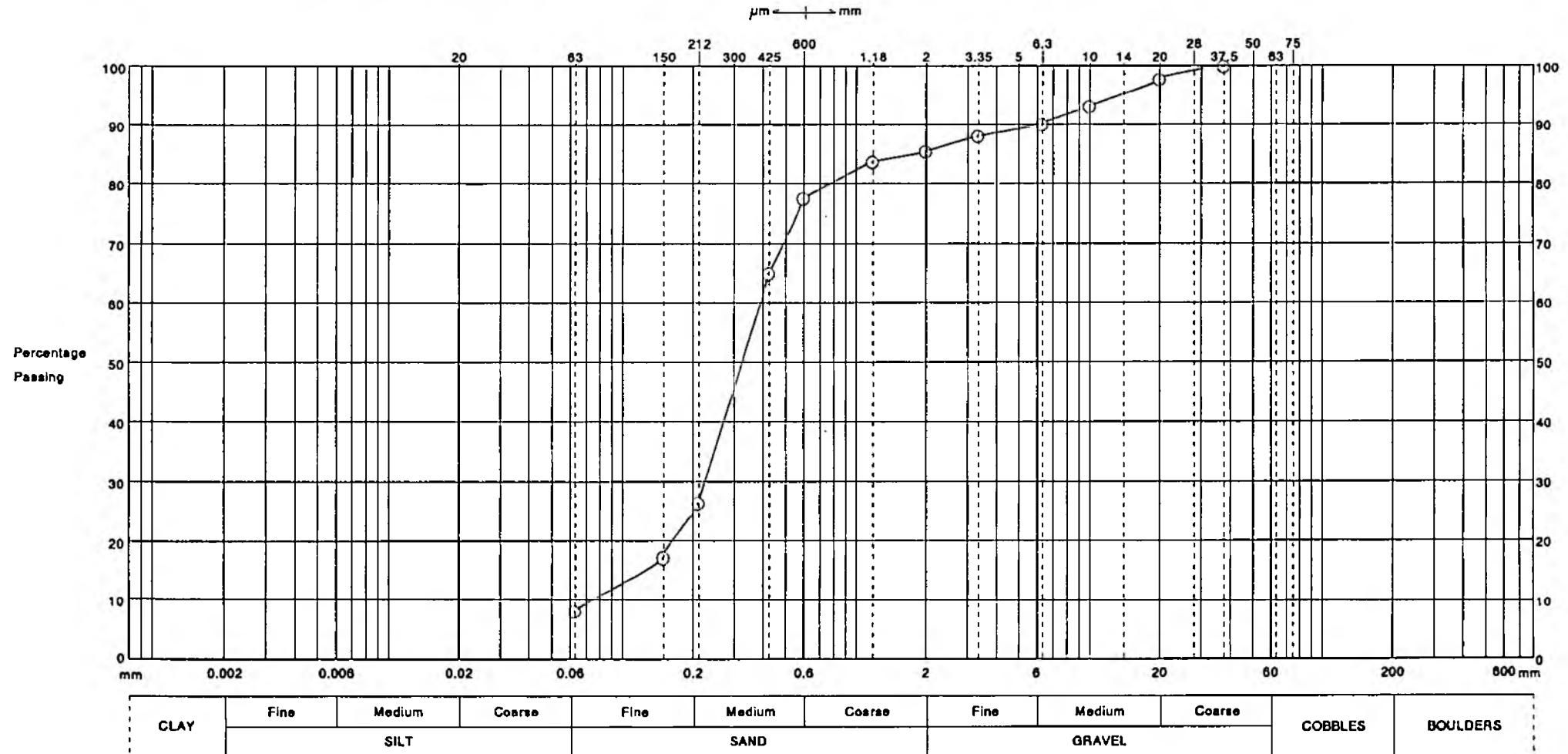
BH/TP Number
1A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	8	17	26	-	65	77	84	85	88	-	90	93	-	98	-	100	-	-	-



Remarks

Method
Wet Sieve

Sample Number
81

Depth
4.00 - 4.50

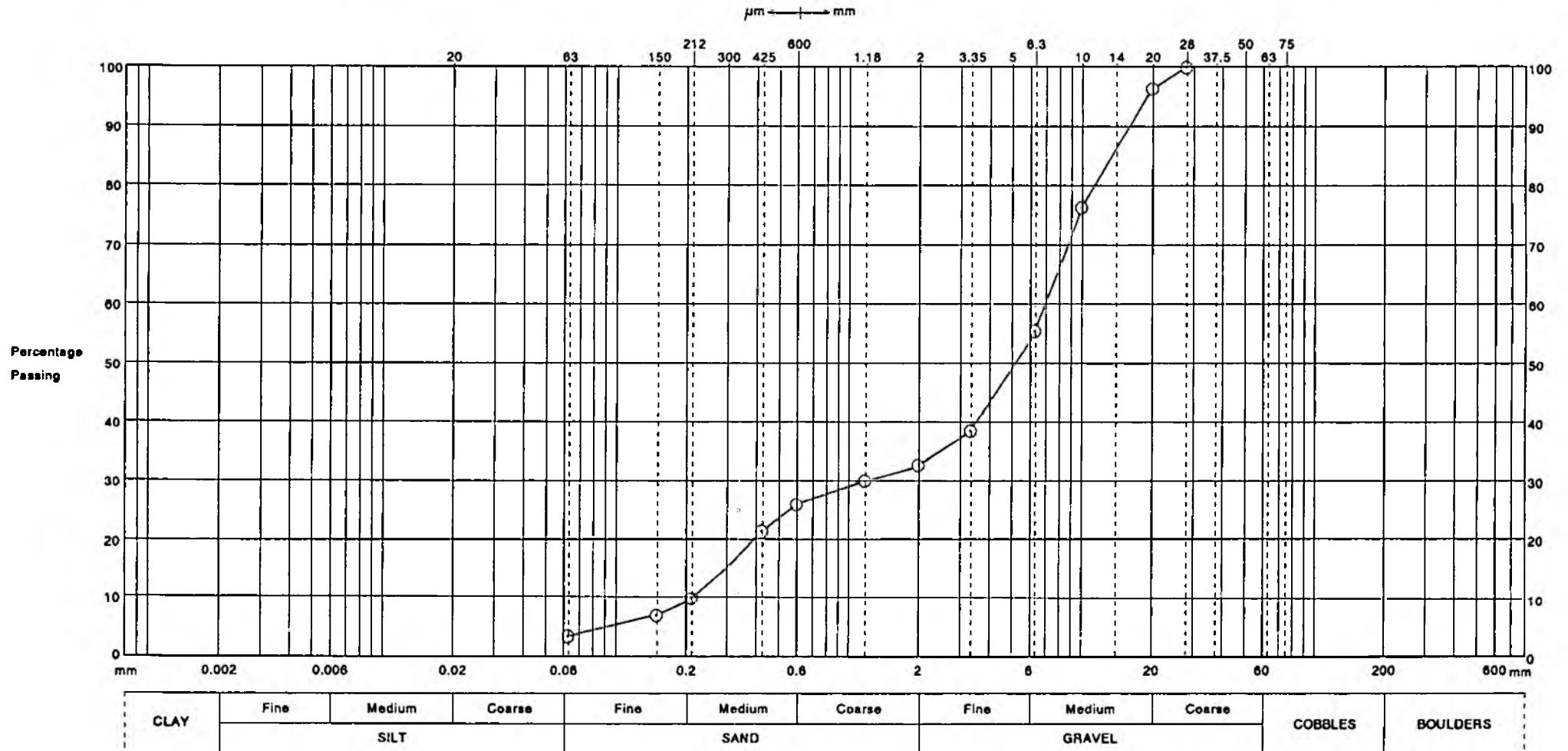
BH/TP Number
2A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	7	10	-	21	26	30	33	38	-	55	76	-	96	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B2

Depth
5.00 - 5.50

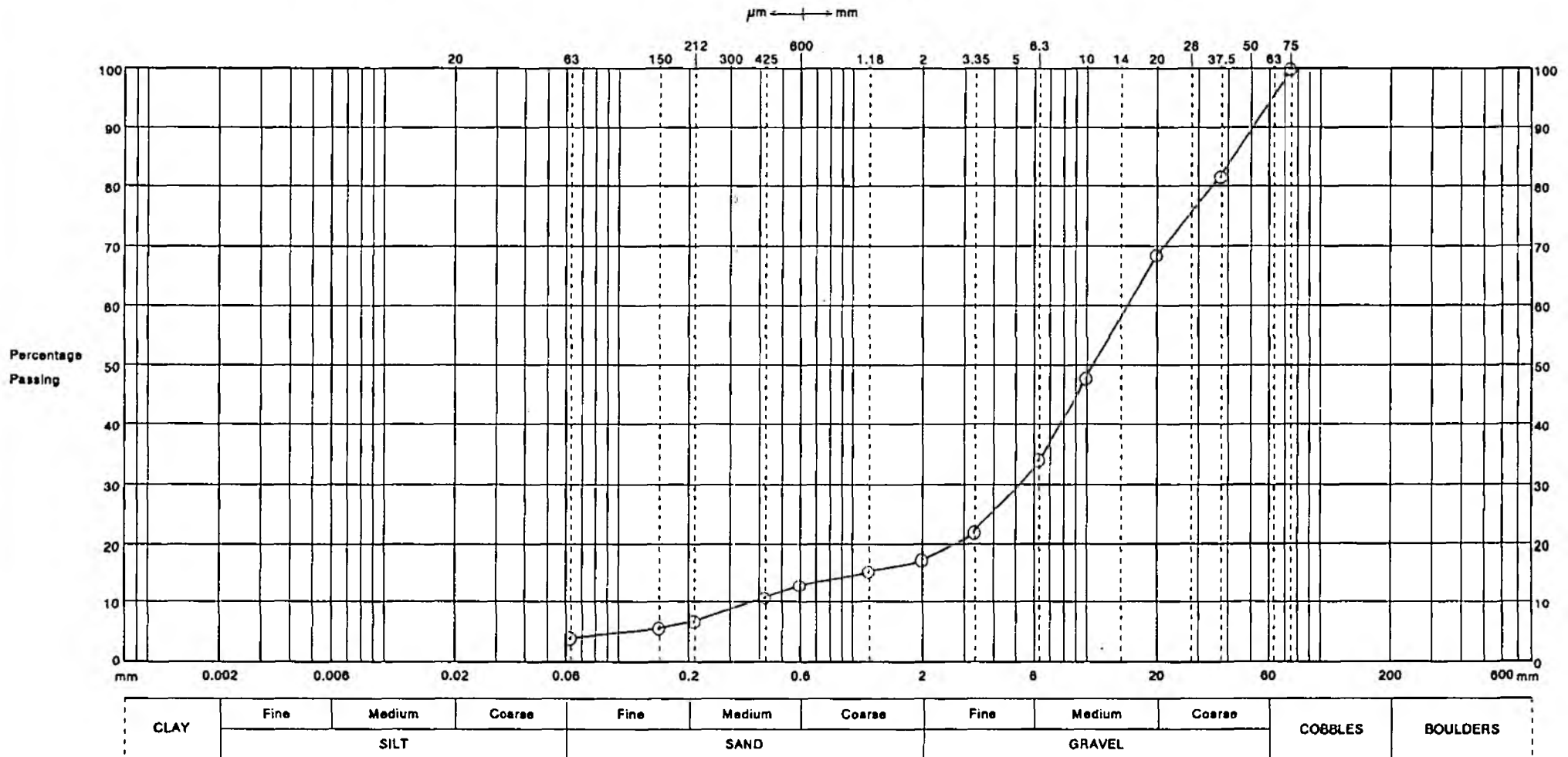
BH/TP Number
2A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	4	6	7	-	11	13	16	18	22	-	34	48	-	68	-	82	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B3

Depth
6.00 - 6.50

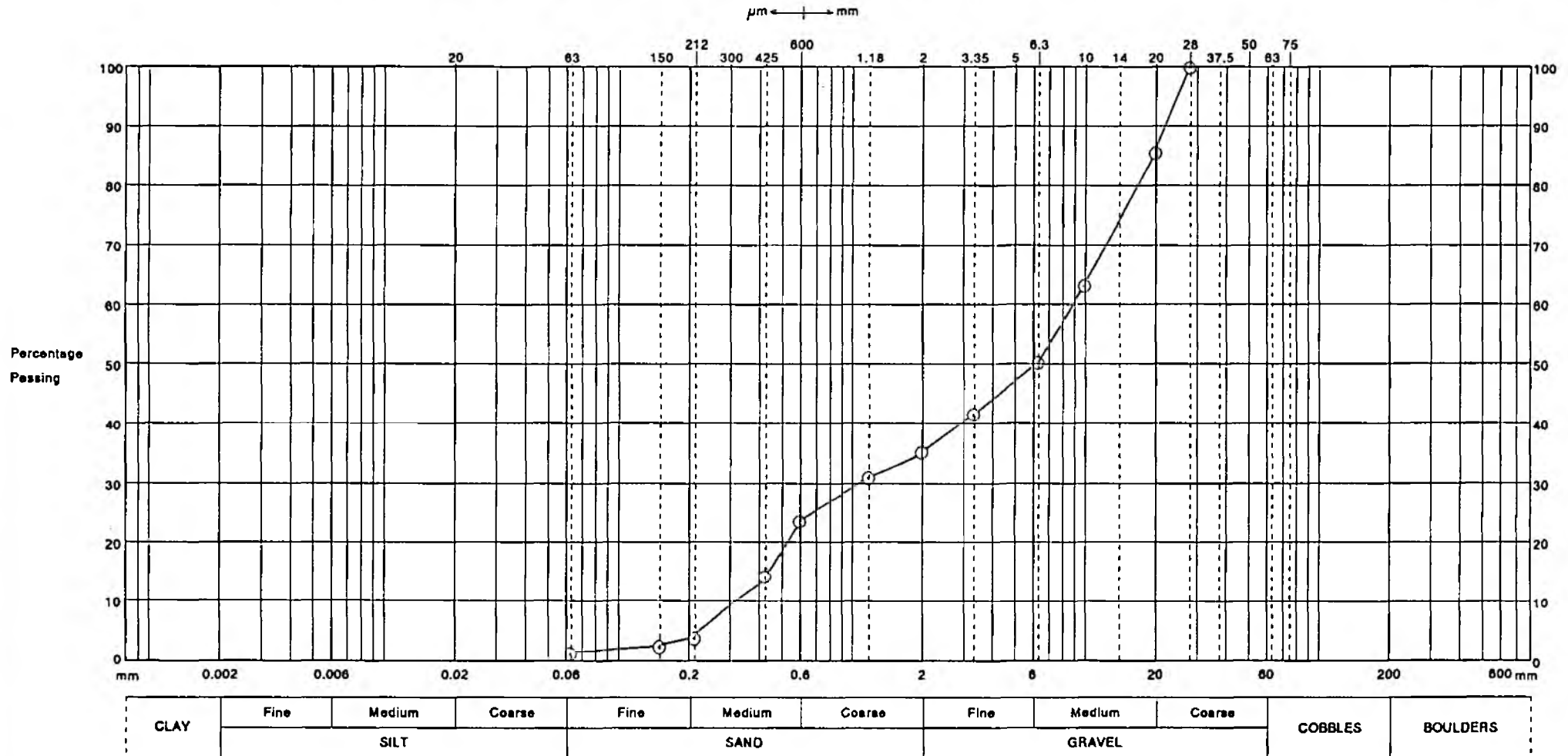
BH/TP Number
2A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	2	4	-	15	23	31	35	42	-	50	63	-	85	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B4

Depth
7.00 - 7.50

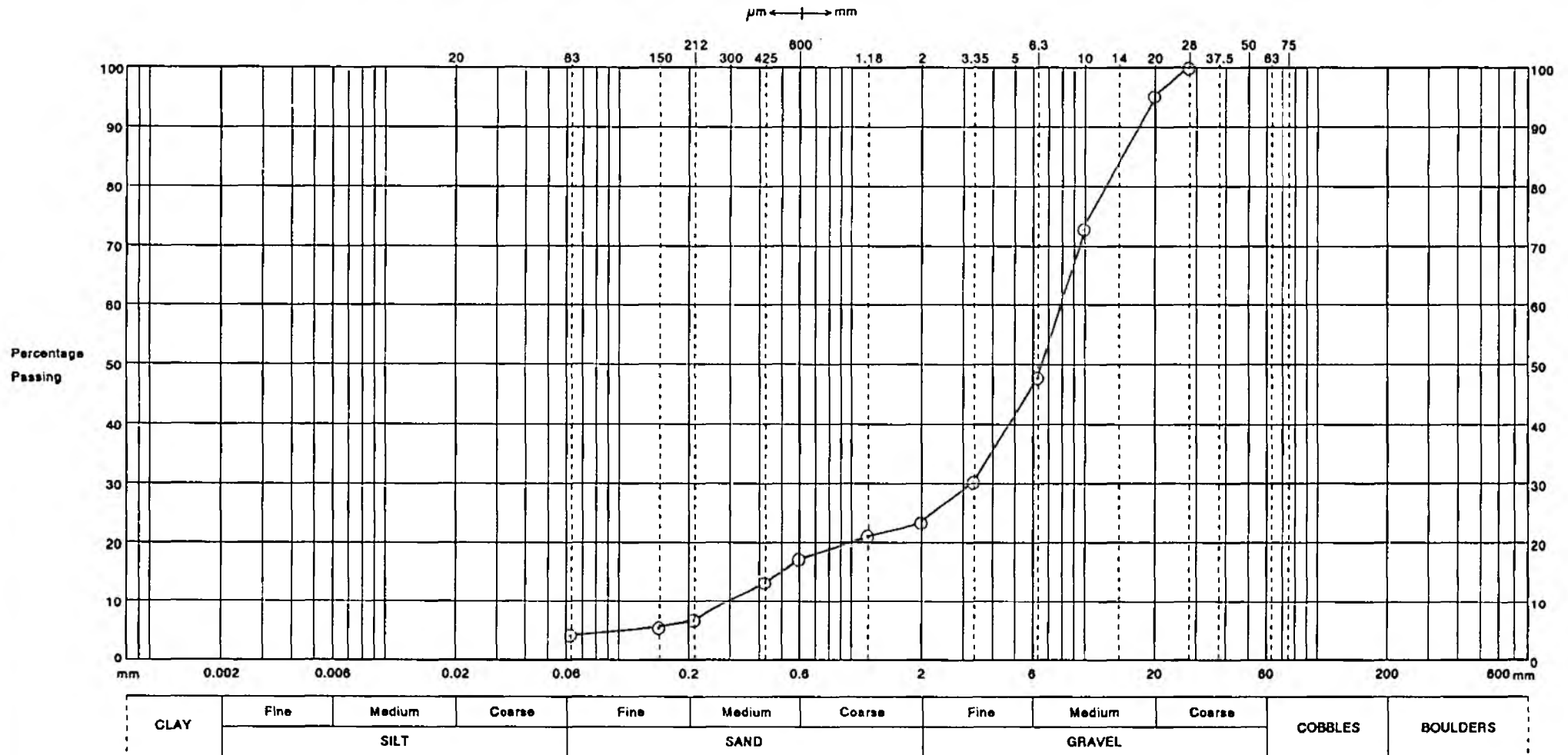
BH/TP Number
2A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm										Size mm													
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300		
Percentage by Mass Passing Sieve	-	-	-	4	5	7	-	14	17	21	23	30	-	48	73	-	95	100	-	-	-	-		



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B5

Depth
8.00 - 8.50

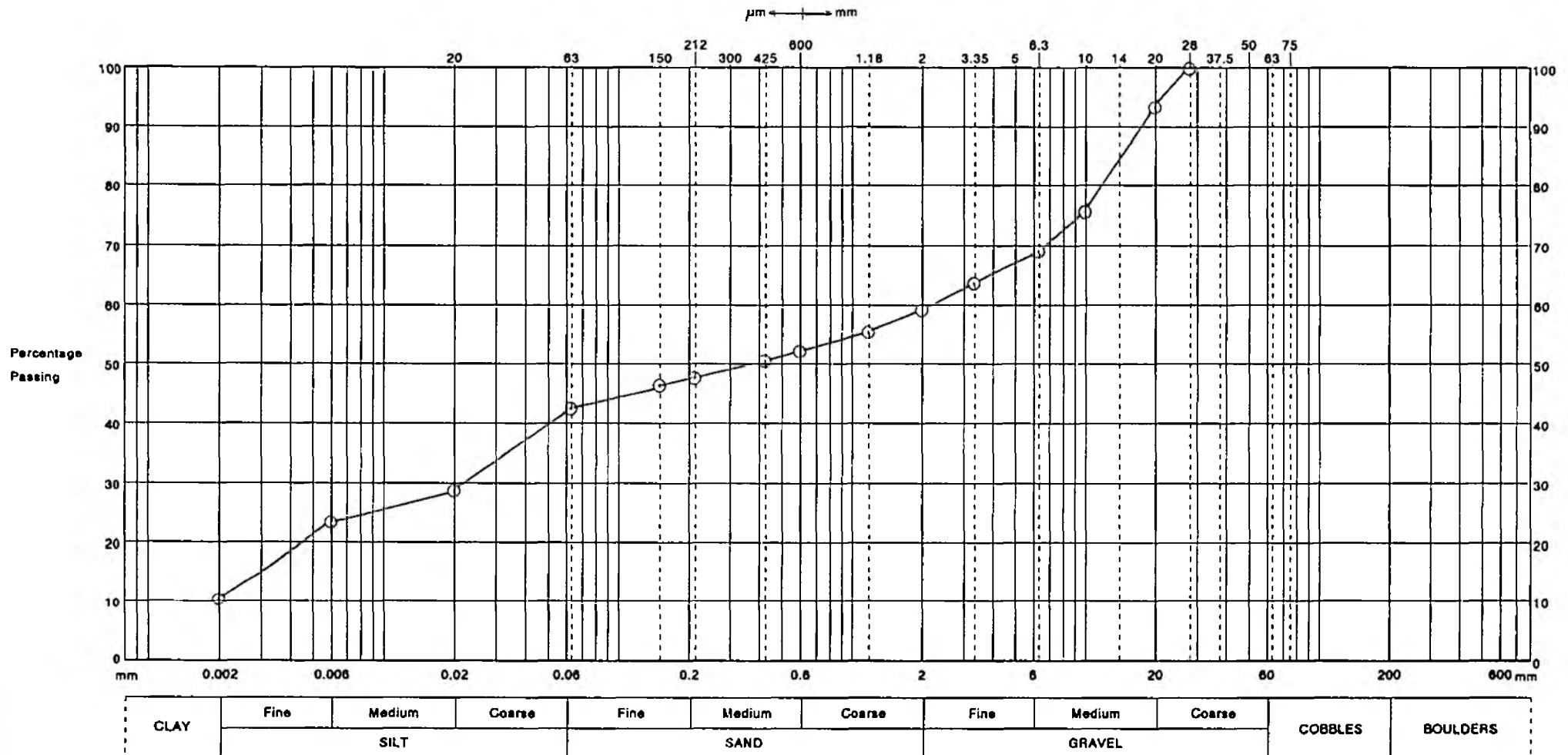
BH/TP Number
2A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

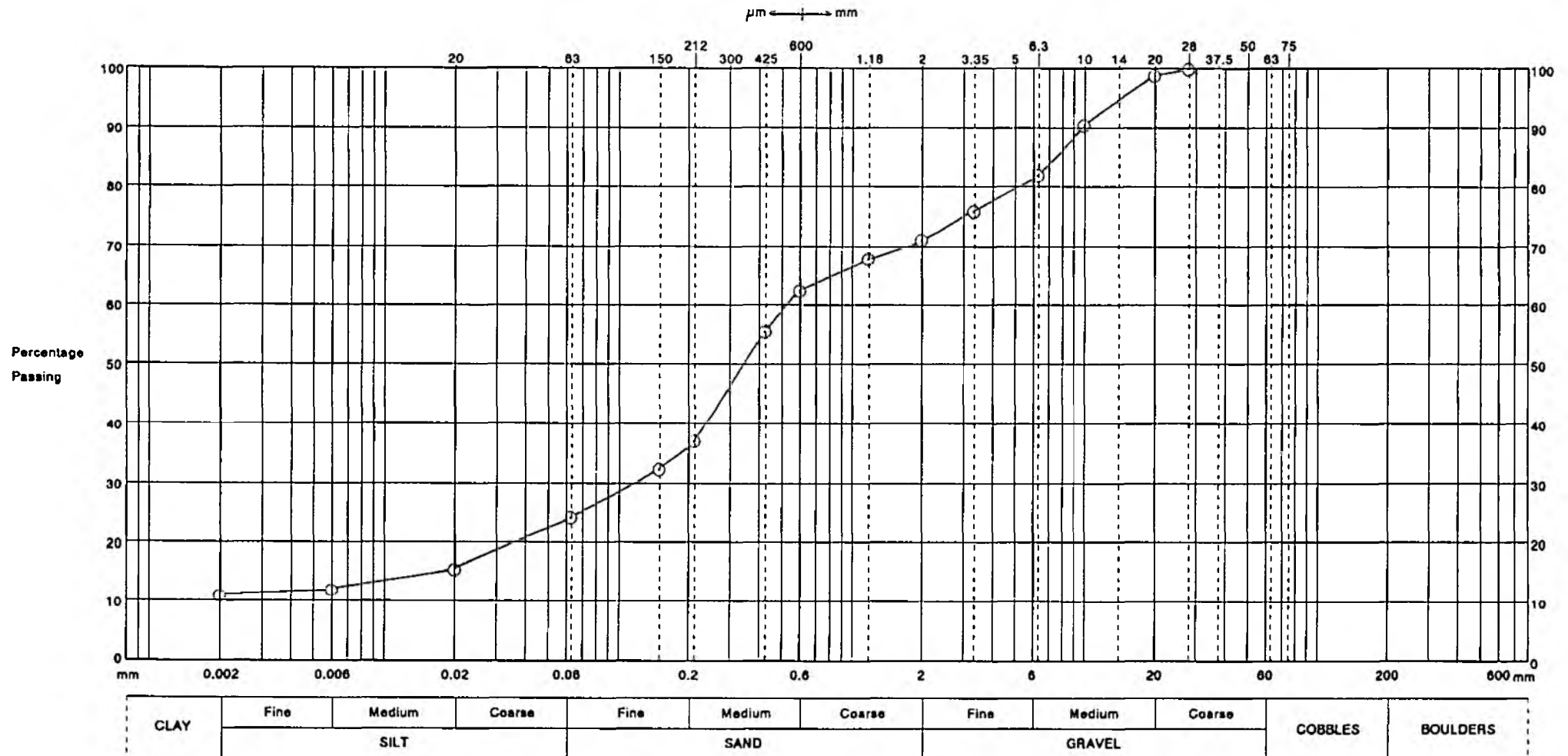
	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	10	23	29	43	46	48	-	51	52	55	59	64	-	69	76	-	93	100	-	-	-	-



	Remarks	Method Pipette Sedimentation	Sample Number 86	Depth 9.00 - 9.50	BK/TP Number 2A	6023
		Site EAST RUSTON				

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	11	12	16	24	32	37	-	55	62	68	71	76	-	82	90	-	99	100	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B1

Depth
1.00 - 1.50

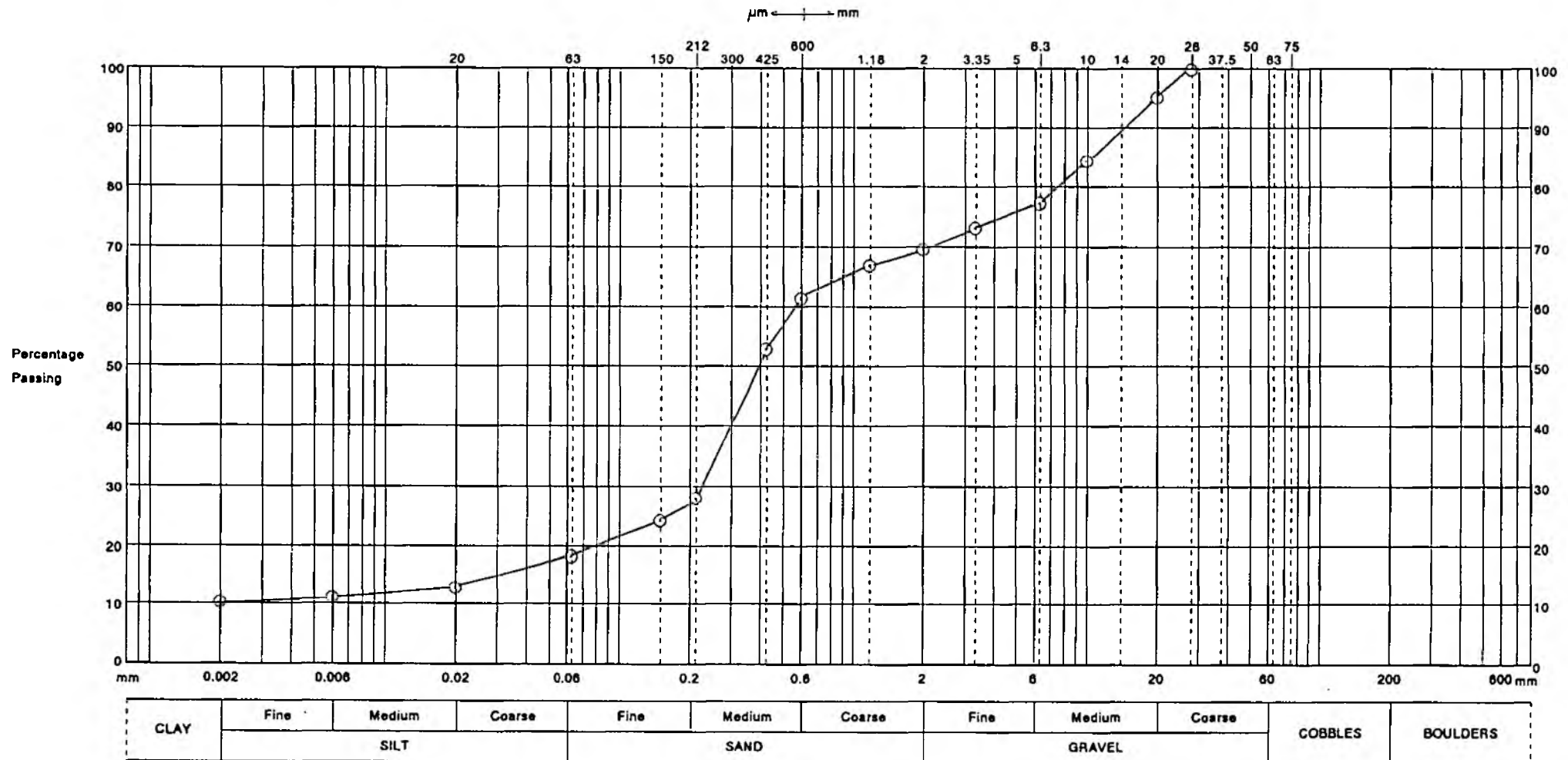
BH/TP Number
3A

5023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm									Size mm												
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	10	11	13	18	24	28	-	53	61	67	70	73	-	77	84	-	95	100	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B2

Depth
2.00 - 2.50

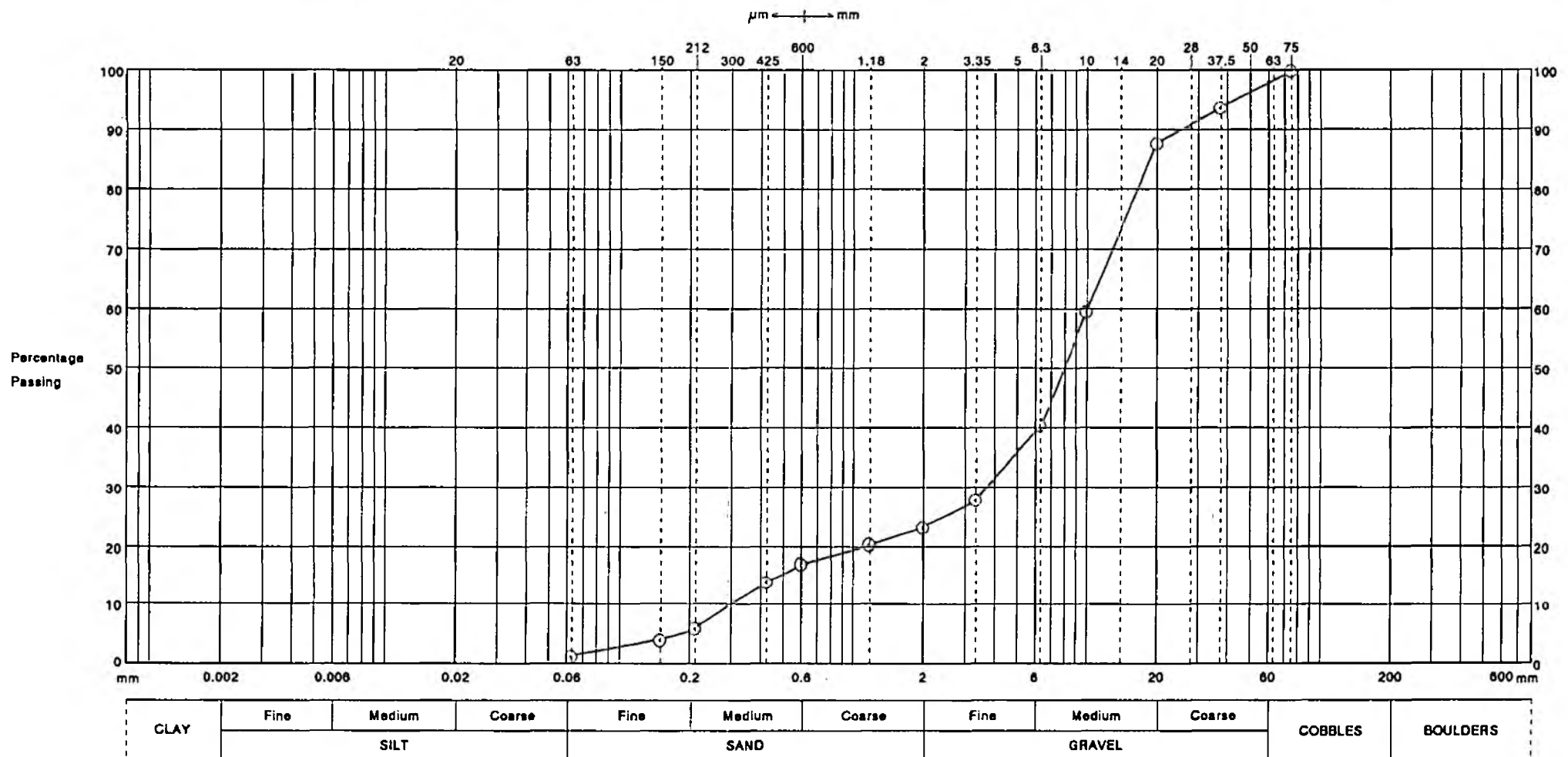
BH/TP Number
3A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	4	6	-	14	17	20	23	28	-	40	59	-	88	-	94	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B3

Depth
3.00 - 3.50

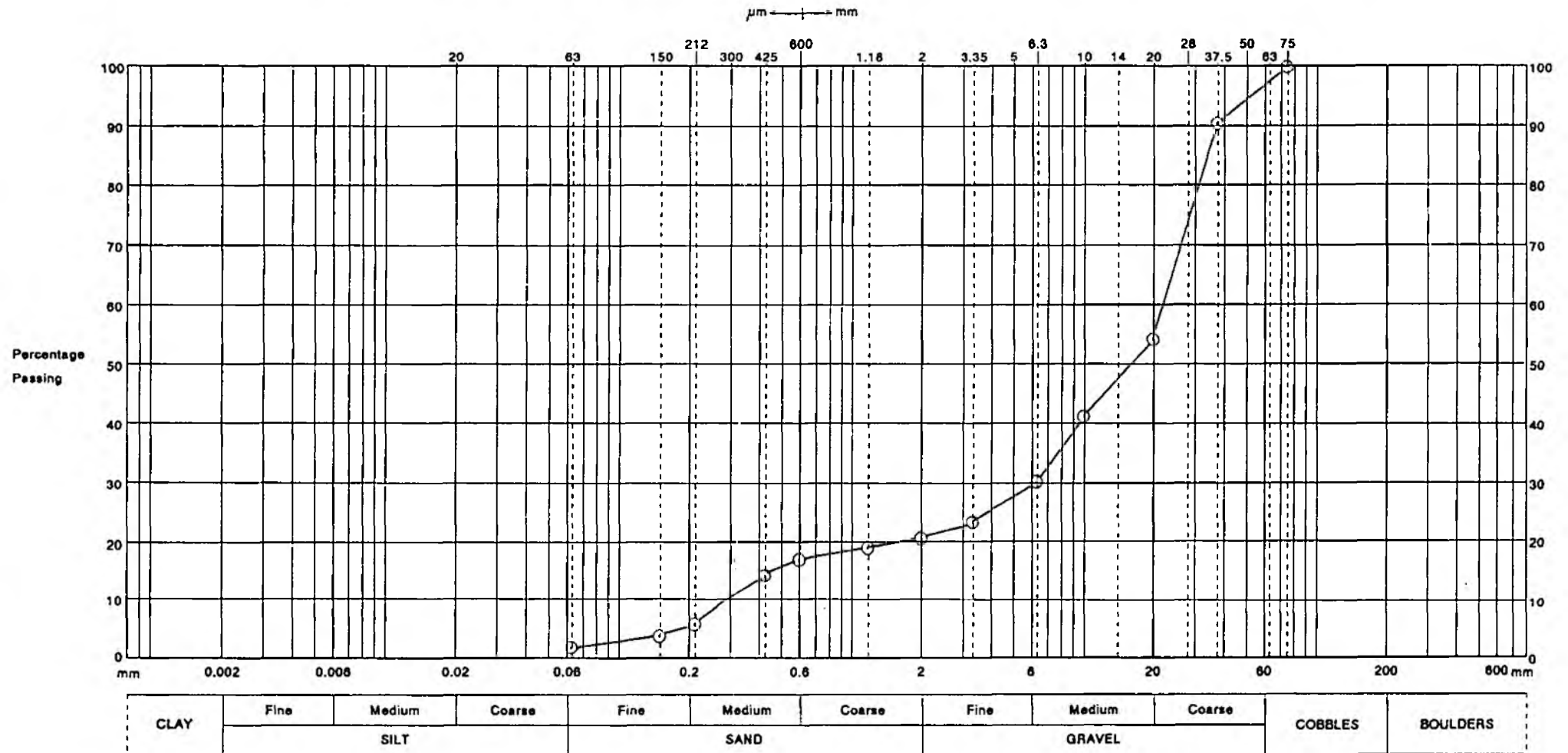
BH/TP Number
3A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	2	4	6	-	15	17	19	21	23	-	30	41	-	54	-	90	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B4

Depth
4.00 - 4.50

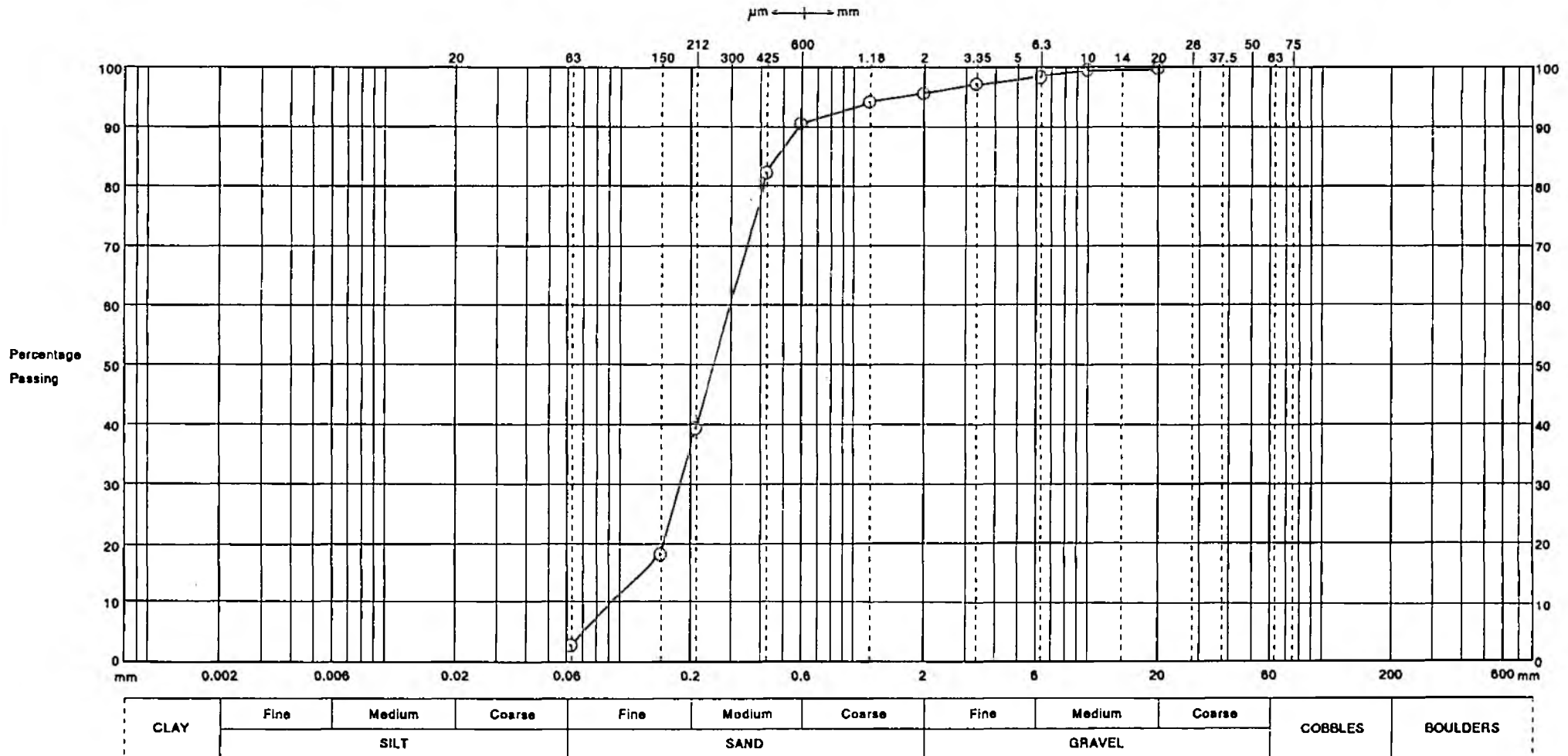
BH/TP Number
3A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

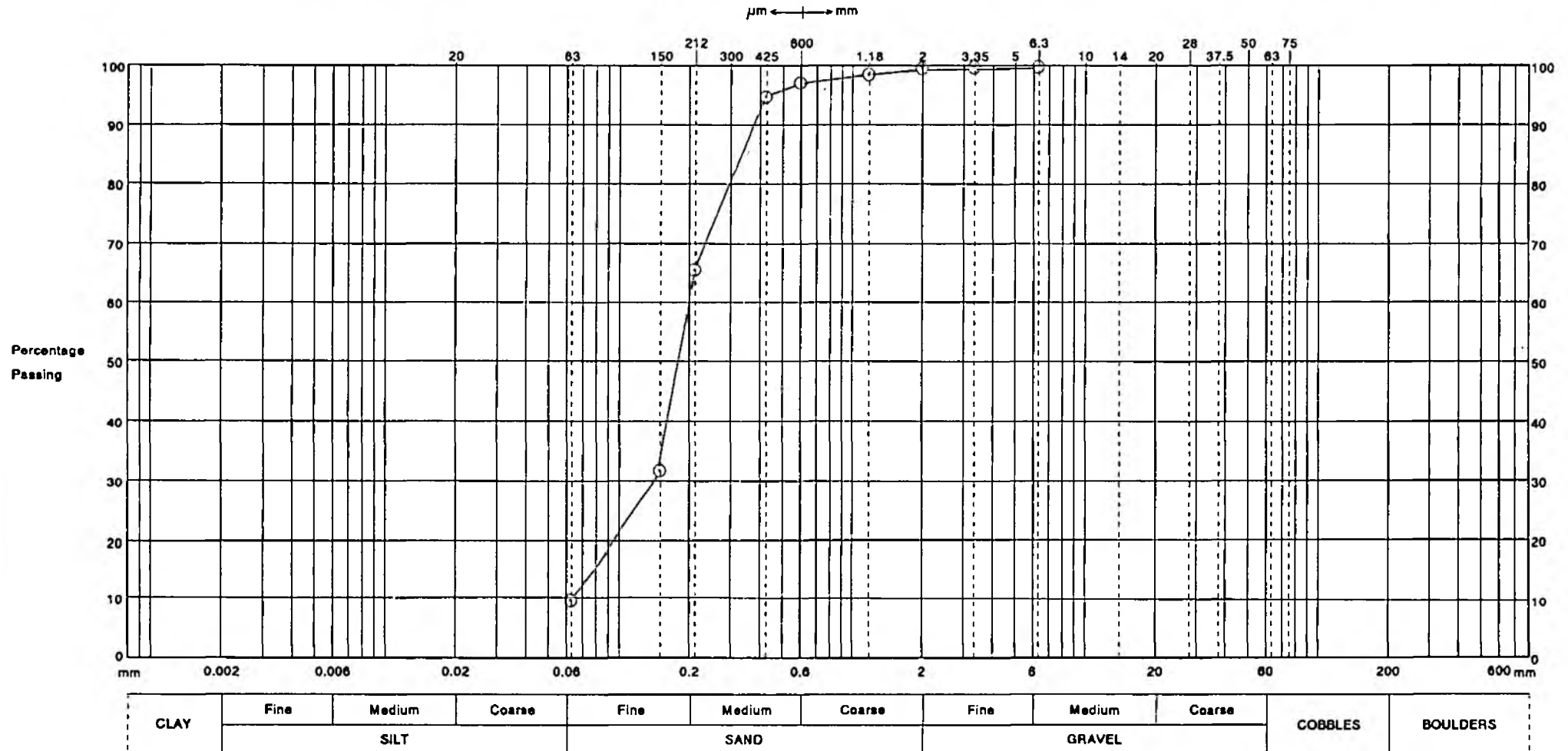
	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	18	39	-	82	91	94	96	97	-	98	100	-	100	-	-	-	-	-



	Remarks	Method	Sample Number	Depth	BH/TP Number	6023
		Wet Sieve	85	5.50 - 6.00	3A	
		Site EAST RUSTON				

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	10	32	66	-	95	97	99	100	100	-	100	-	-	-	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
87

Depth
8.00 - 8.50

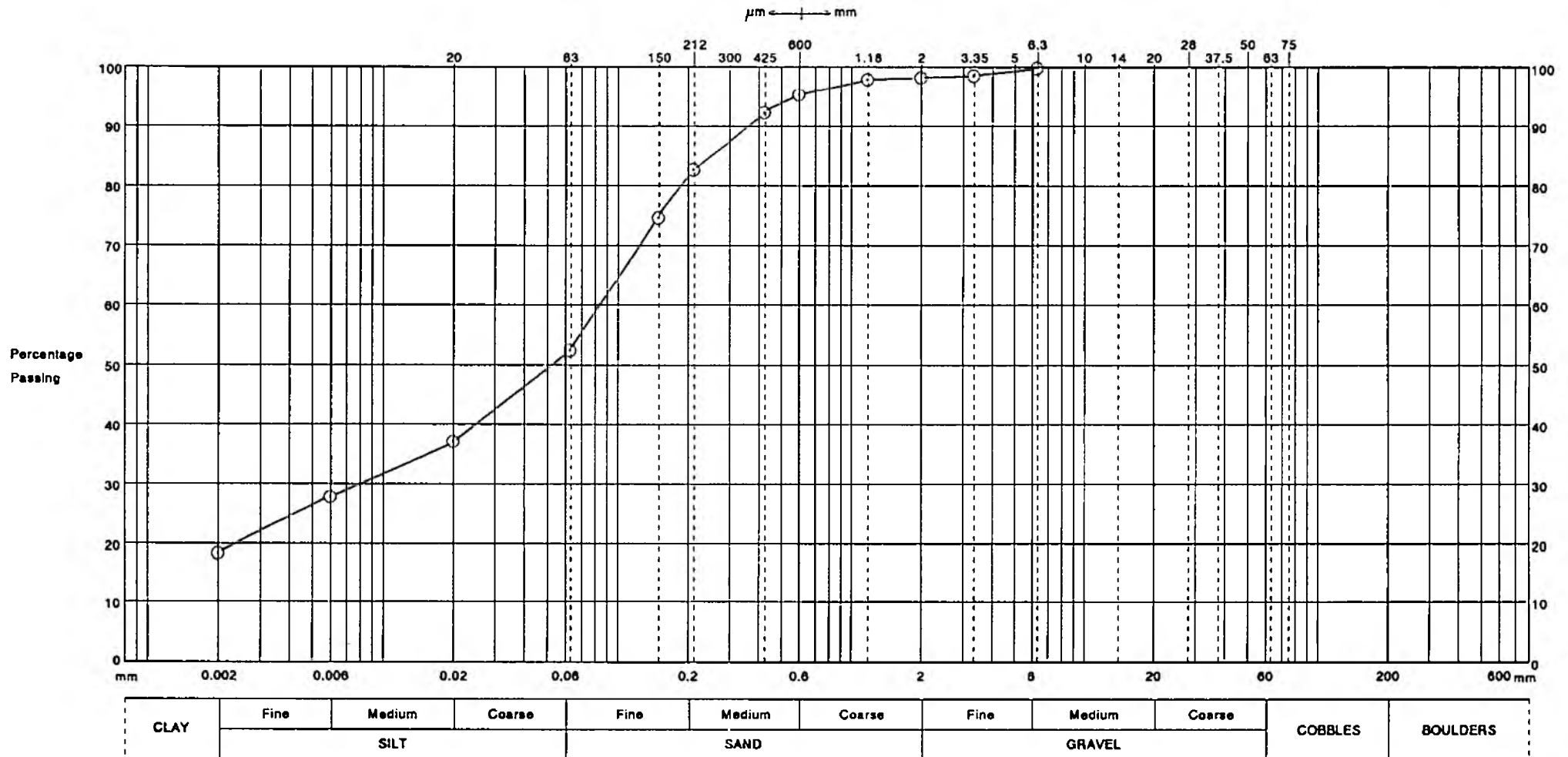
BH/TP Number
3A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	19	28	37	52	75	83	-	92	95	98	98	99	-	100	-	-	-	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
U2

Depth
3.50 - 3.75

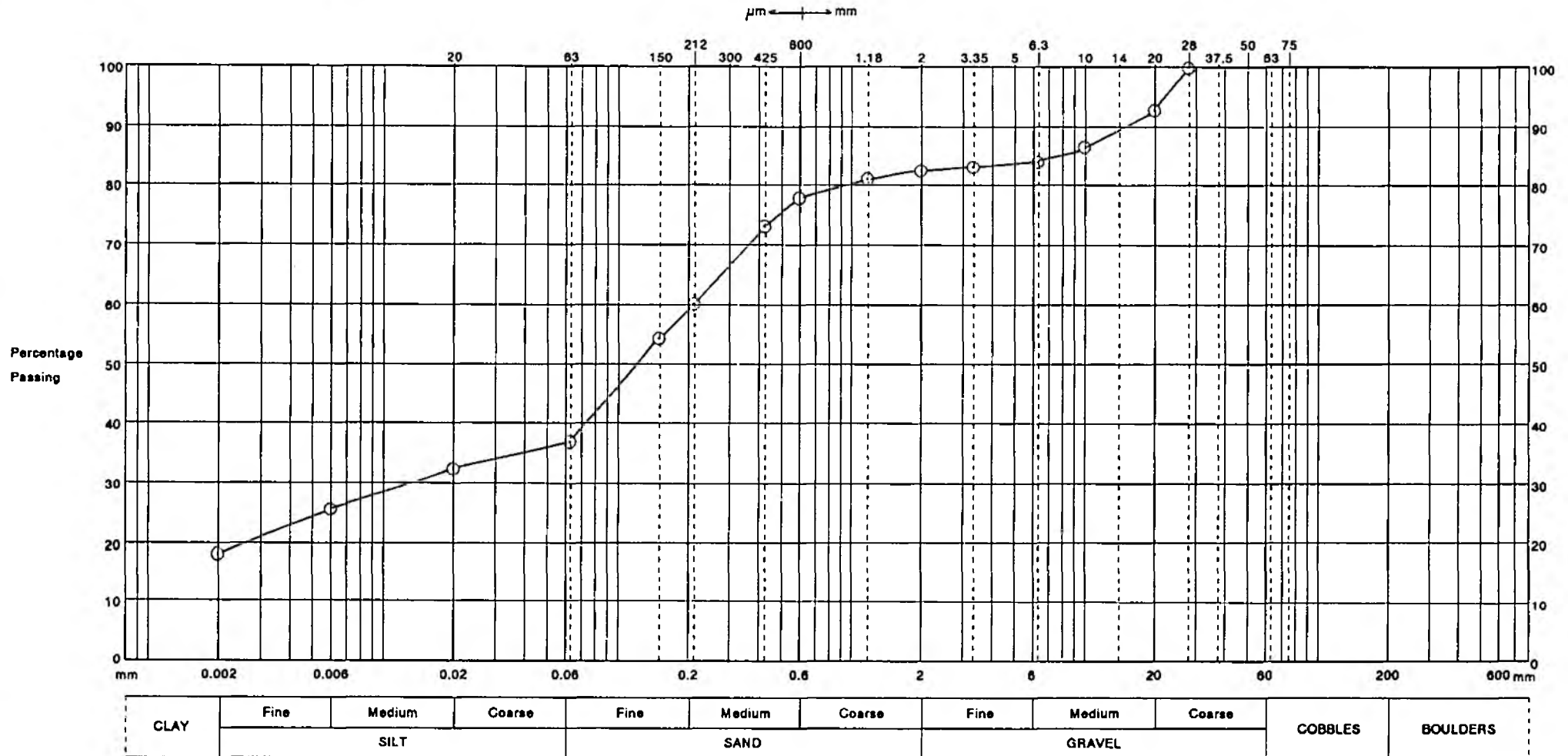
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	18	25	32	37	54	60	-	73	78	81	82	83	-	84	87	-	93	100	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B2

Depth
4.50 - 5.00

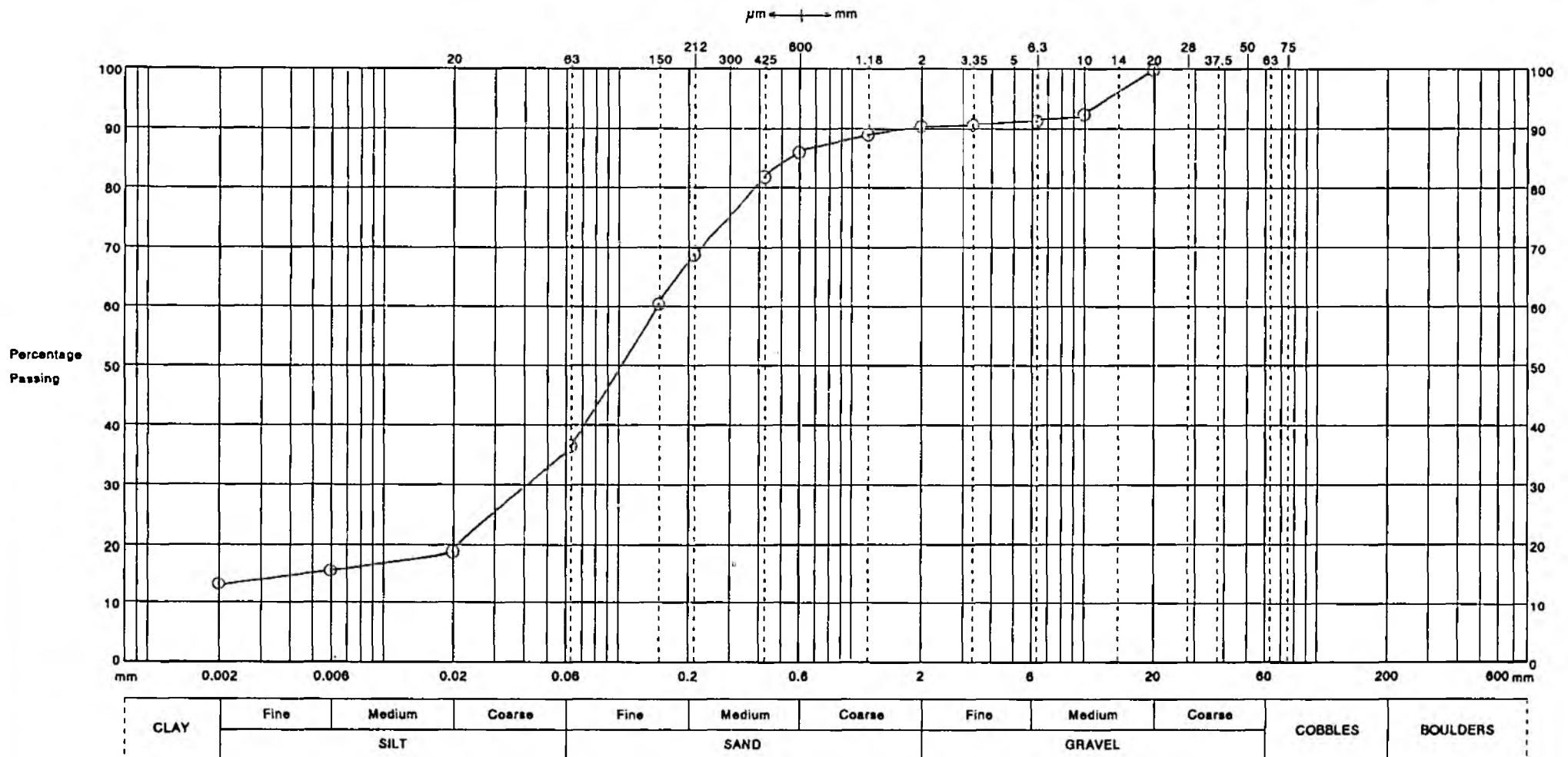
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	13	16	19	37	60	69	-	82	85	89	90	91	-	91	92	-	100	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
83

Depth
5.50 - 6.00

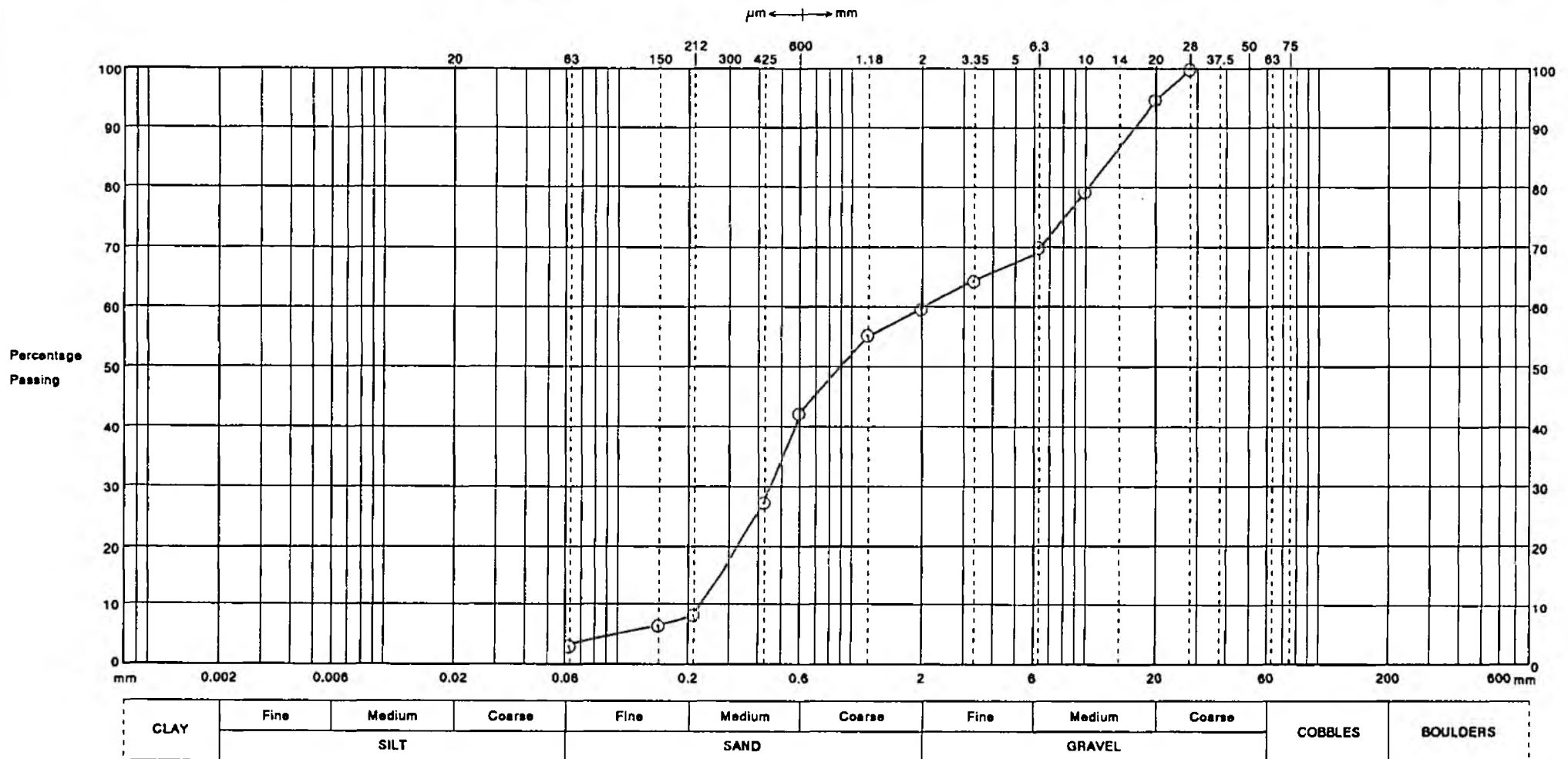
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	6	8	-	27	42	55	60	64	-	70	79	-	95	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B4

Depth
6.50 - 7.00

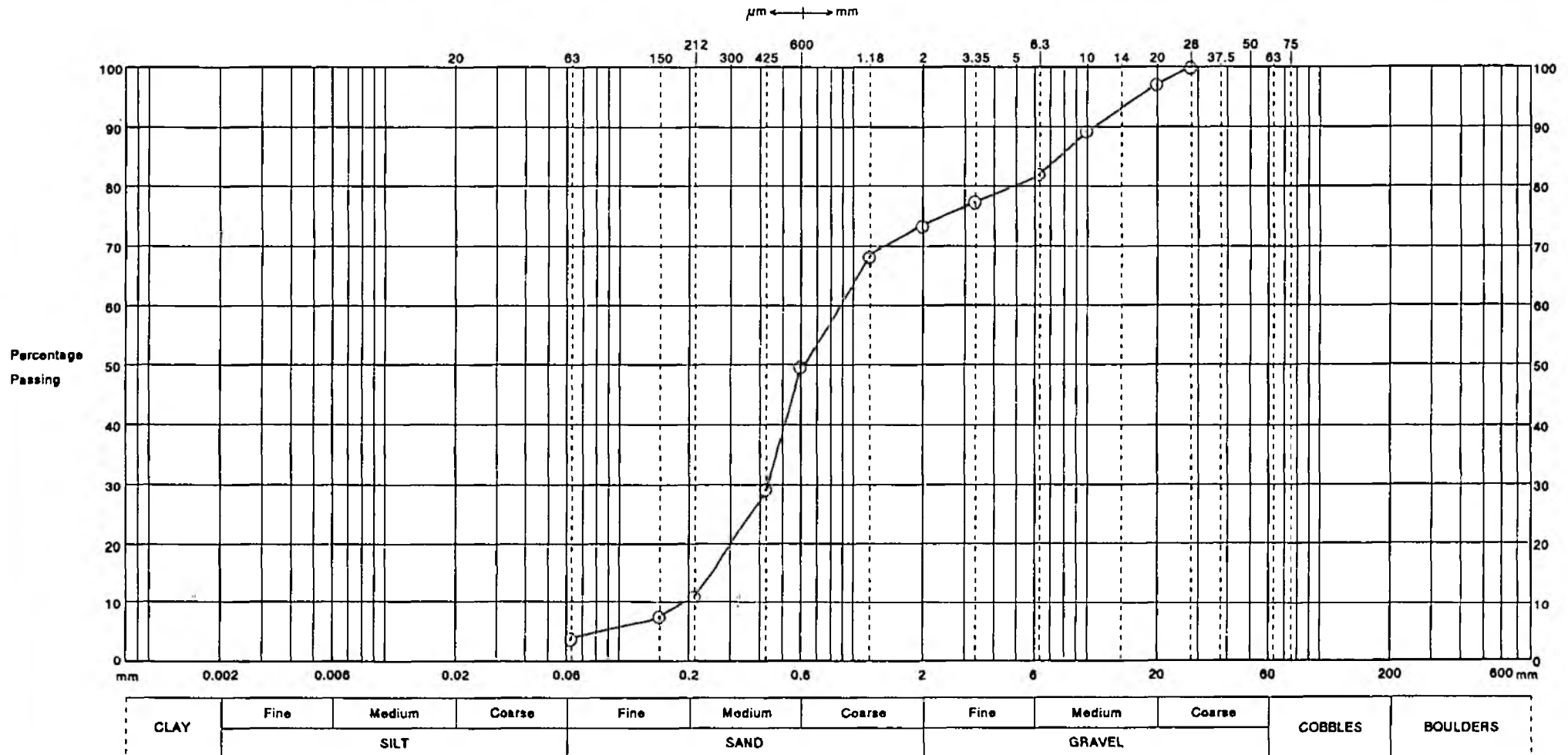
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

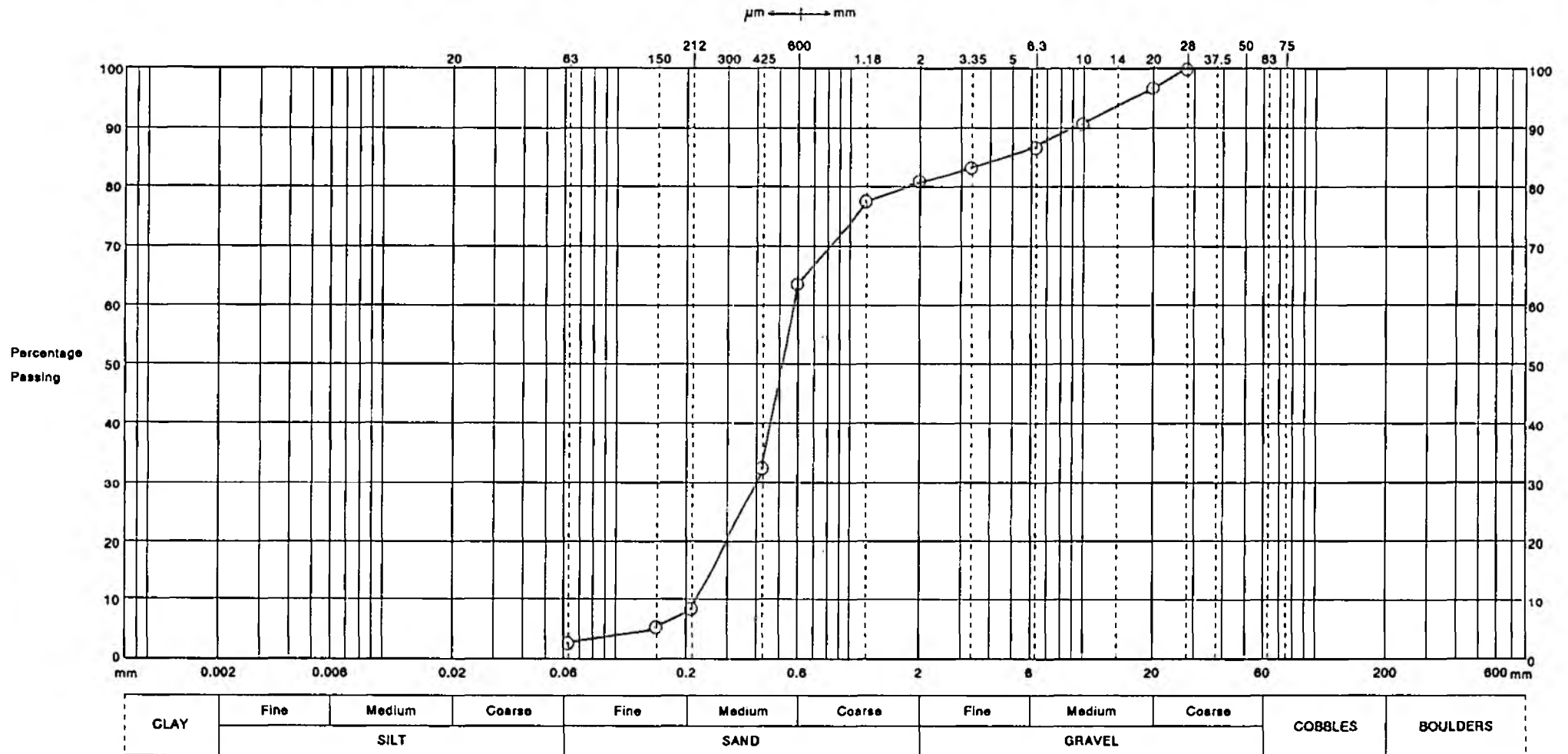
	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	4	7	11	-	29	50	68	73	77	-	82	89	-	97	100	-	-	-	-



		Remarks	Method Wet Sieve	Sample Number B5	Depth 7.50 - 8.00	BH/TP Number 4A	6023
			Site EAST RUSTON				

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	5	8	-	32	64	78	81	83	-	87	91	-	97	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B6

Depth
8.50 - 9.00

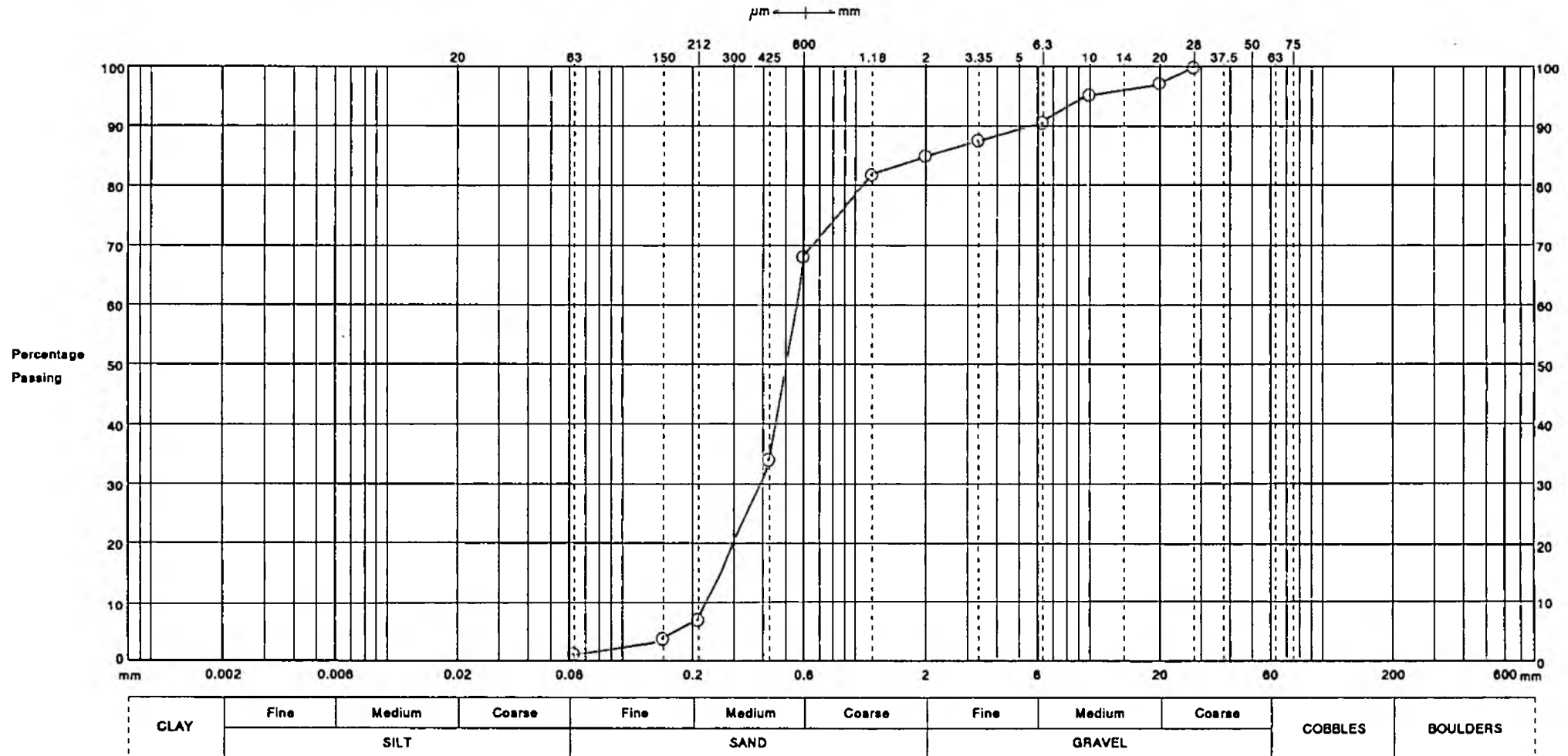
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	4	7	-	34	68	82	85	88	-	91	95	-	97	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B7

Depth
9.50 - 10.00

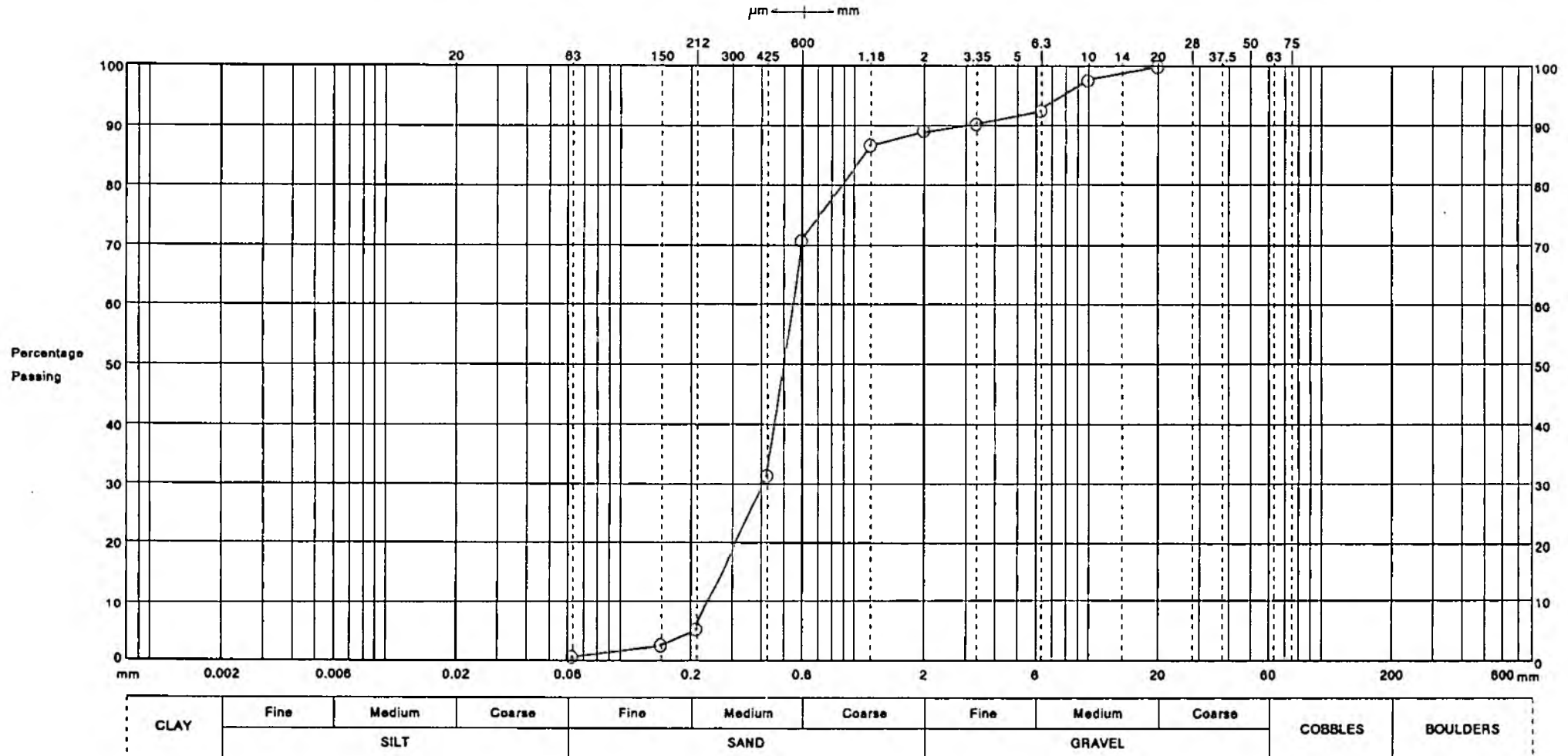
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	3	5	-	31	71	87	89	90	-	93	98	-	100	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
BB

Depth
10.50 - 11.00

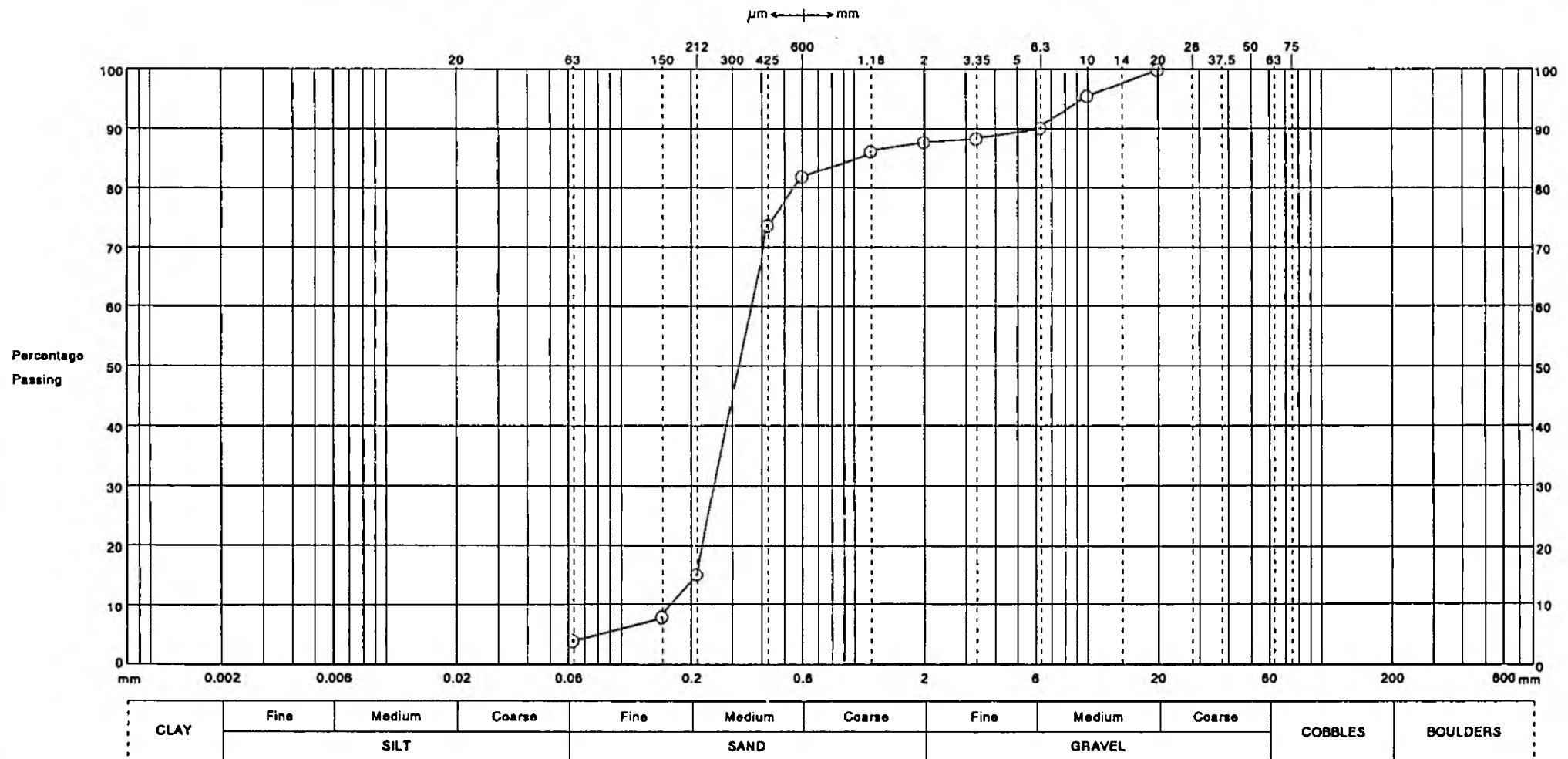
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	4	8	15	-	74	82	86	88	88	-	90	95	-	100	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B9

Depth
11.50 - 12.00

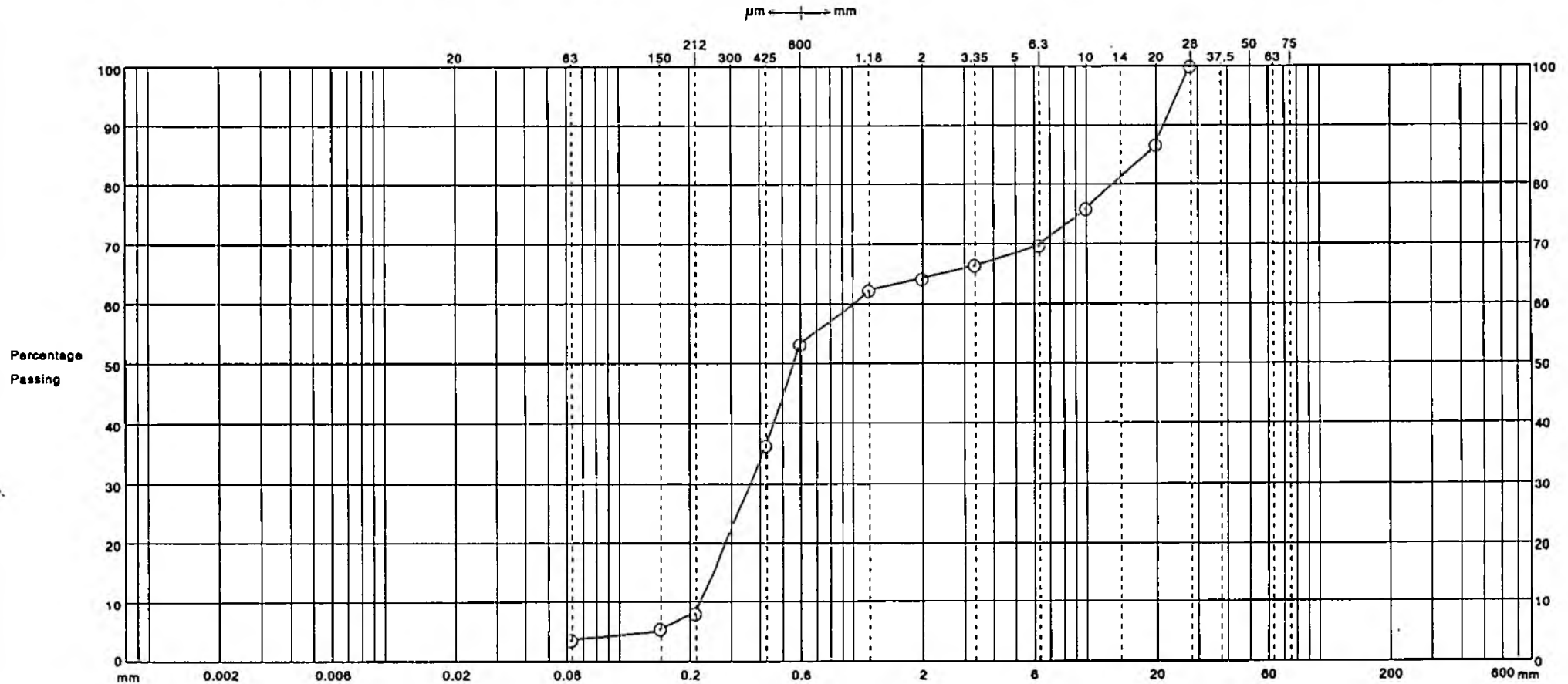
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	5	8	-	36	53	62	64	66	-	70	76	-	87	100	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B10

Depth
12.50 - 13.00

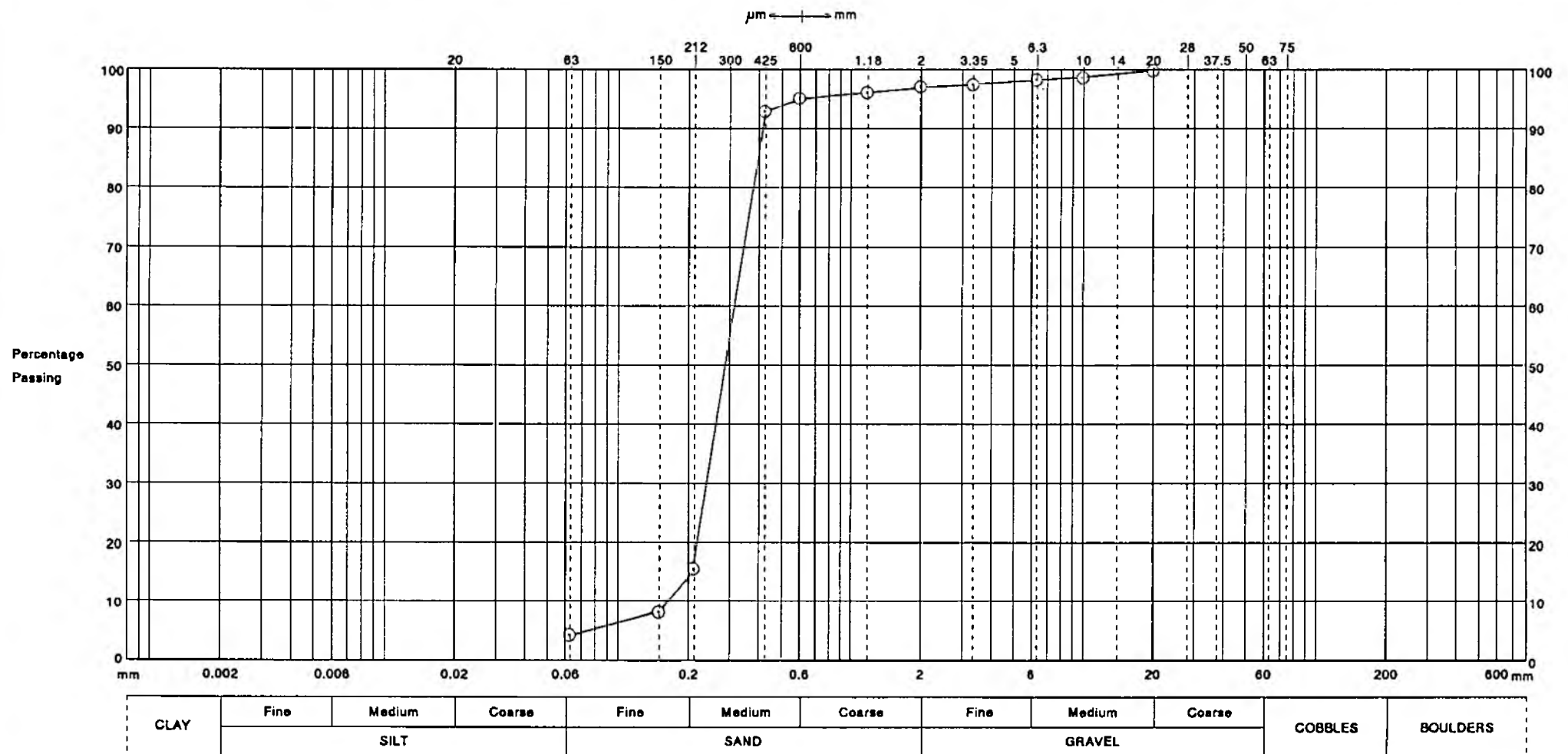
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	4	8	16	-	93	95	96	97	98	-	98	99	-	100	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B11

Depth
13.50 - 14.00

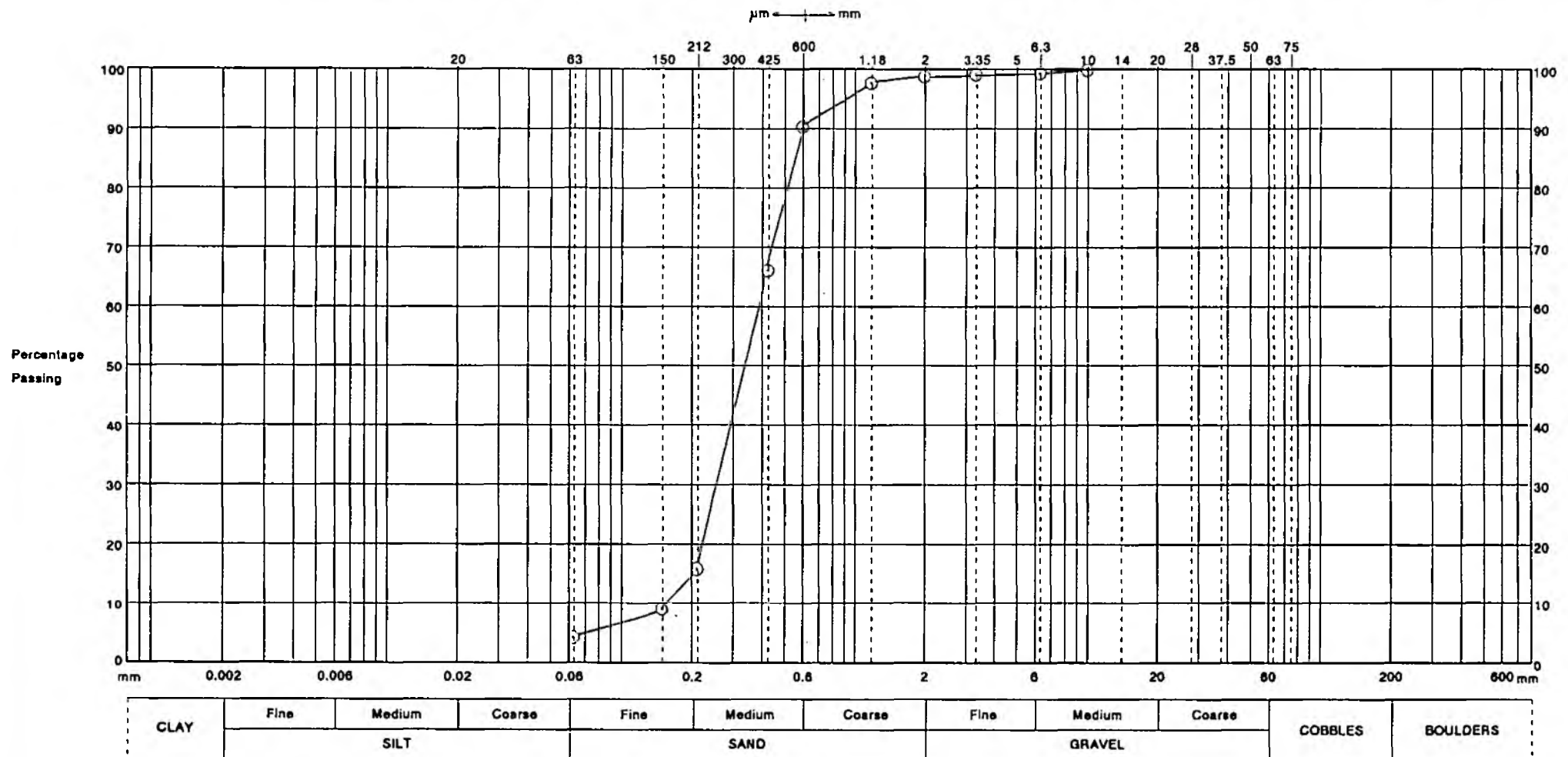
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	4	9	16	-	66	90	98	99	99	-	99	100	-	-	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B12

Depth
15.50 - 16.00

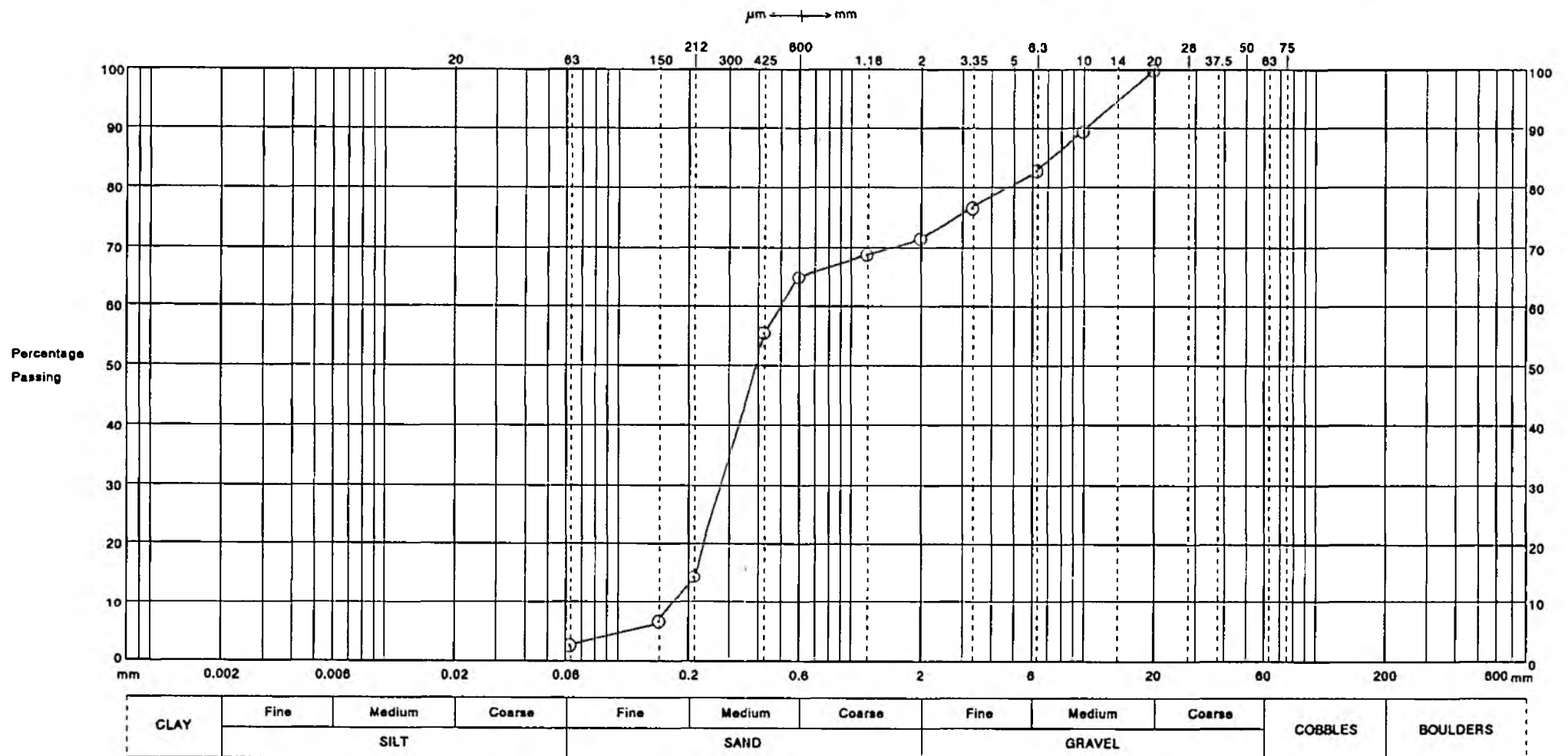
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

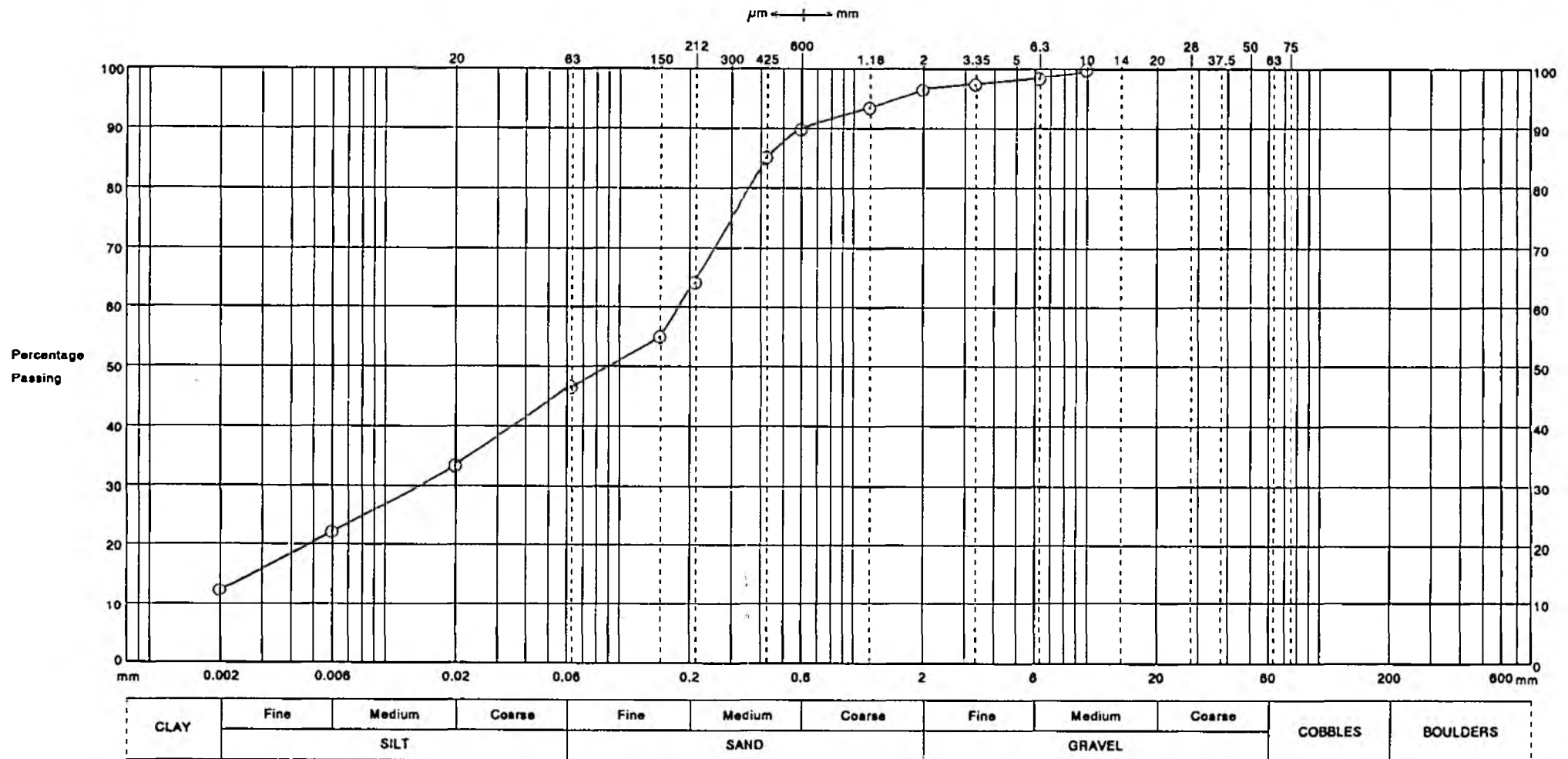
	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	7	15	-	55	65	69	71	76	-	83	89	-	100	-	-	-	-	-



	Remarks	Method Wet Sieve	Sample Number B13	Depth 17.00 - 17.50	BH/TP Number 4A	6023
		Site EAST RUSTON				

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	13	22	33	47	55	64	-	85	90	93	97	97	-	99	100	-	-	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
814

Depth
18.00 - 18.50

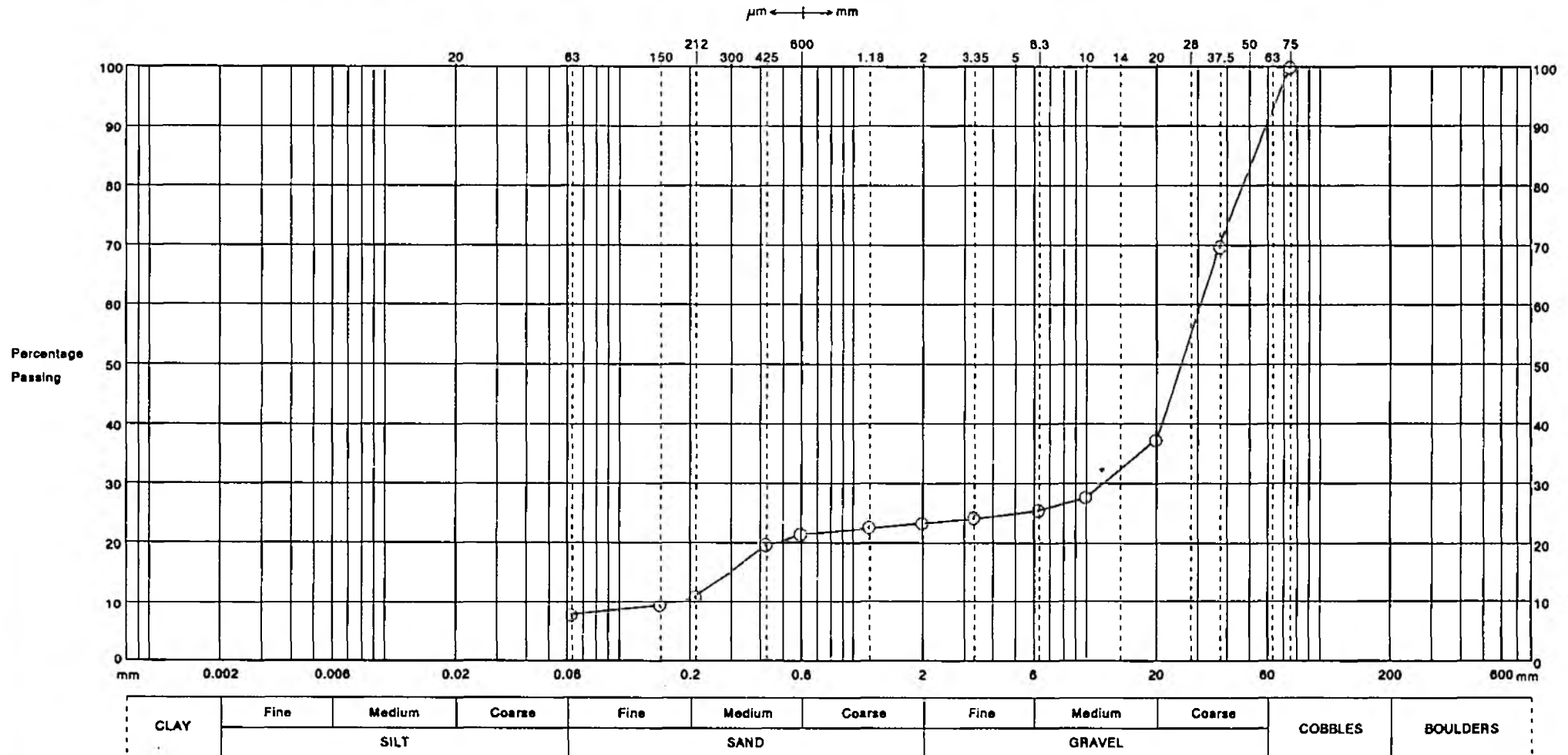
BR/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

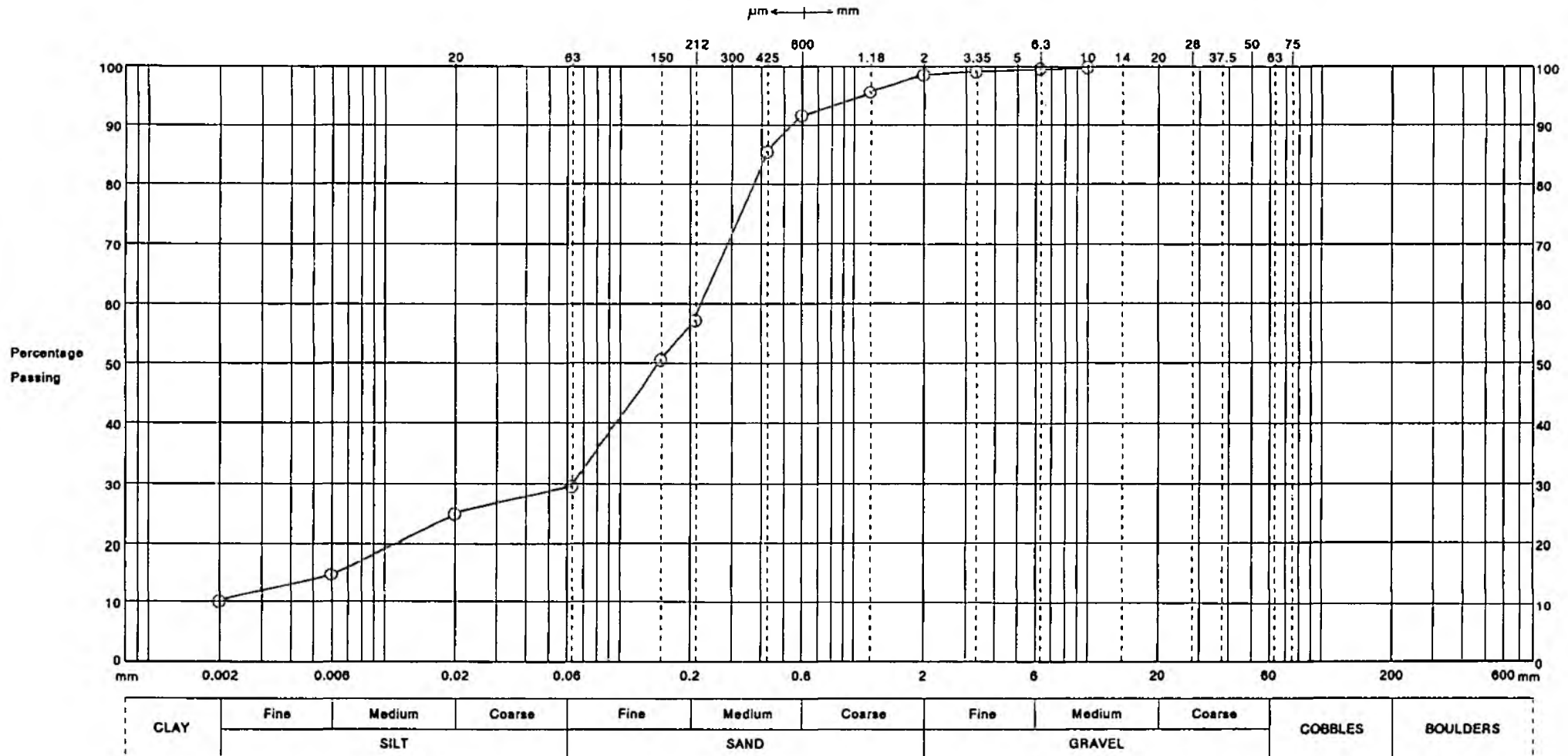
	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	8	9	11	-	20	21	23	23	24	-	25	28	-	37	-	70	100	-	-



	Remarks	Method Wet Sieve	Sample Number B15	Depth 19.50 - 20.00	BH/TP Number 4A	6023
		Site EAST RUSTON				

PARTICLE SIZE DISTRIBUTION

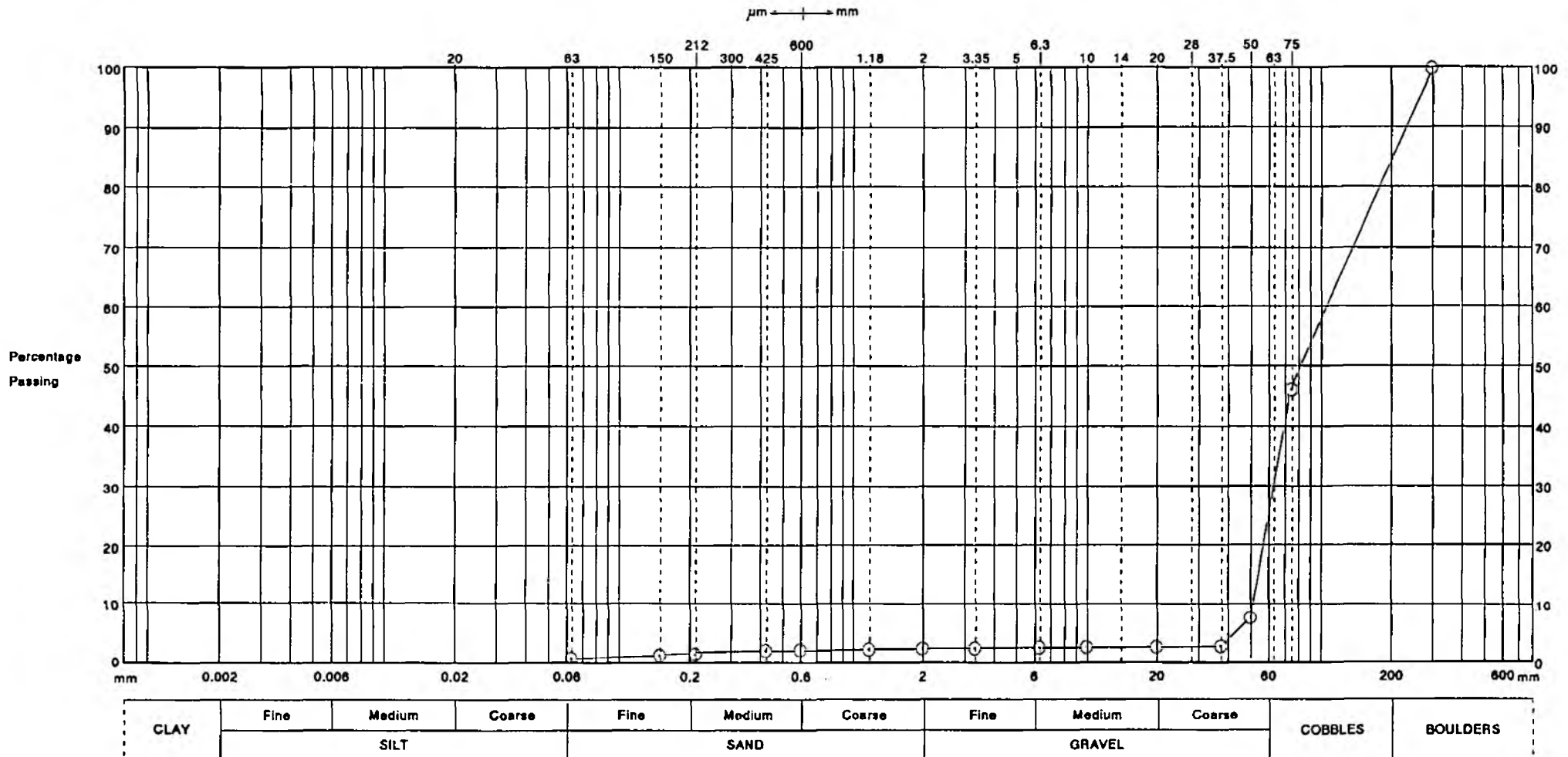
	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	10	15	25	30	51	57	-	85	92	96	99	99	-	100	100	-	-	-	-	-	-	-



	Remarks	Method Pipette Sedimentation	Sample Number B16	Depth 20.50 - 21.00	BH/TP Number 4A	6023
		Site EAST RUSTON				

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	1	2	-	2	2	2	2	2	-	3	3	-	3	-	3	8	46	100



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B17

Depth
22.10 - 22.50

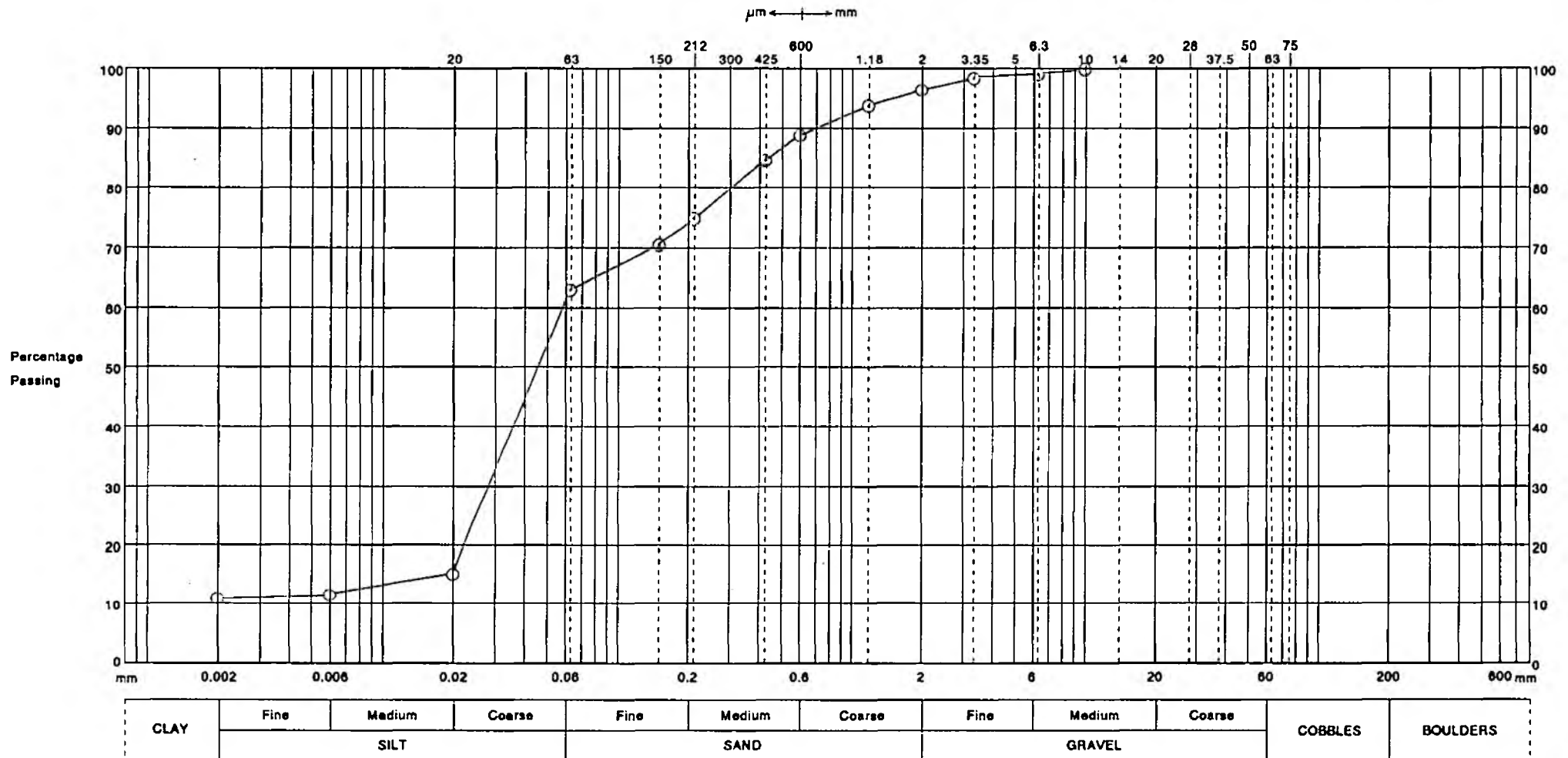
BH/TP Number
4A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	11	12	15	63	70	75	-	85	89	94	96	98	-	99	100	-	-	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B1

Depth
1.00 - 1.50

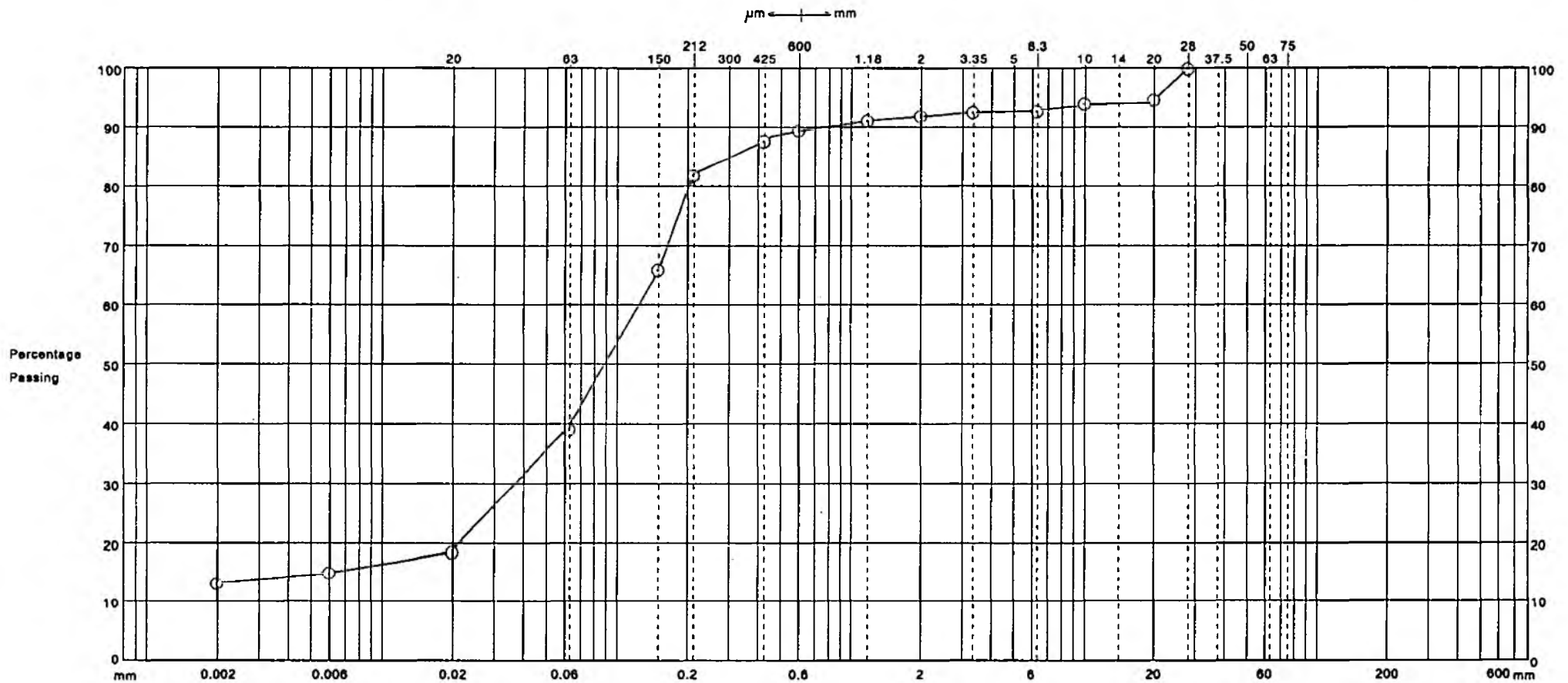
BH/TP Number
5A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	13	15	19	39	66	82	-	87	89	91	92	92	-	93	94	-	95	100	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Pipette Sedimentation

Sample Number
B2

Depth
2.10 - 2.50

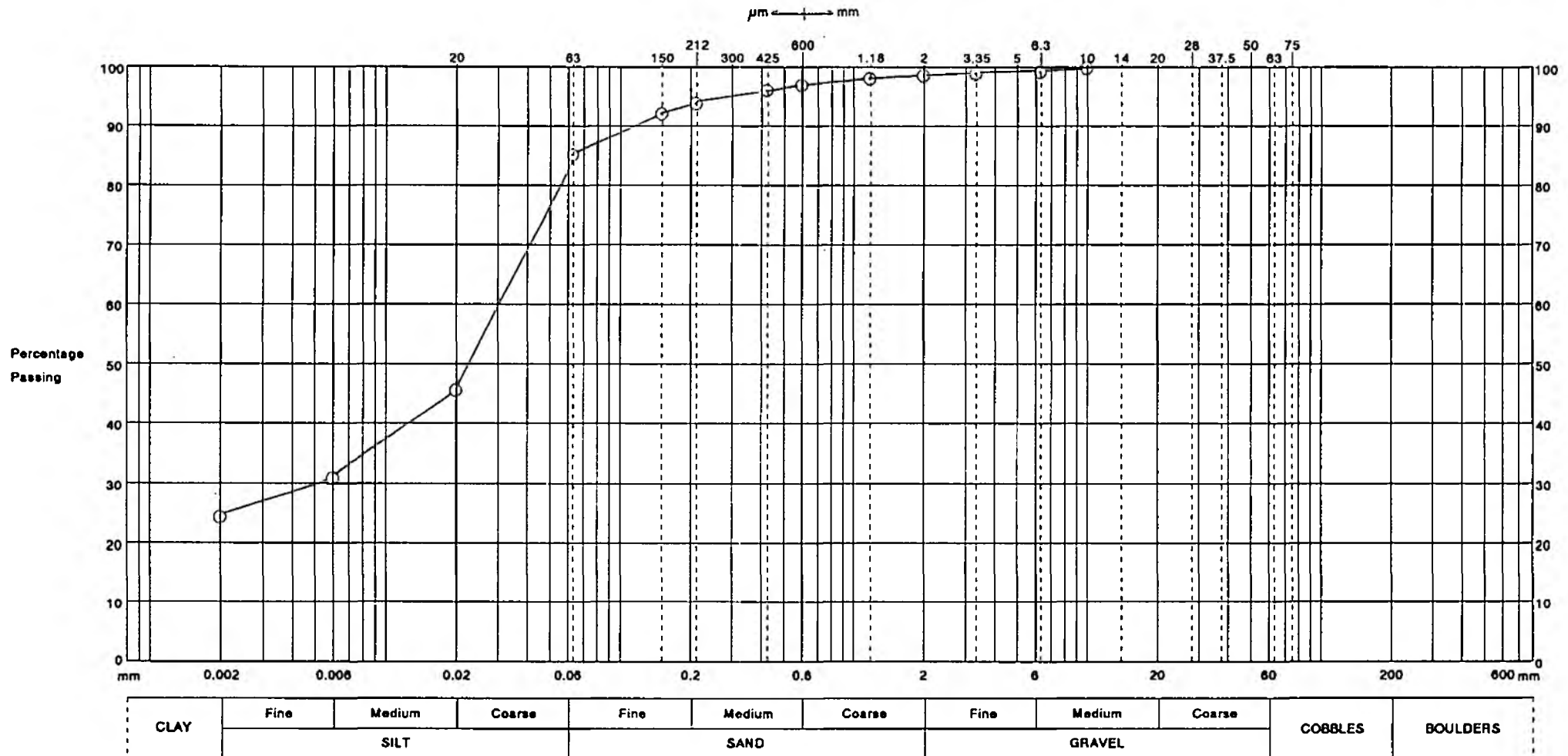
BH/TP Number
5A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	24	31	46	85	92	94	-	96	97	98	99	99	-	99	100	-	-	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
83

Depth
3.50 - 4.00

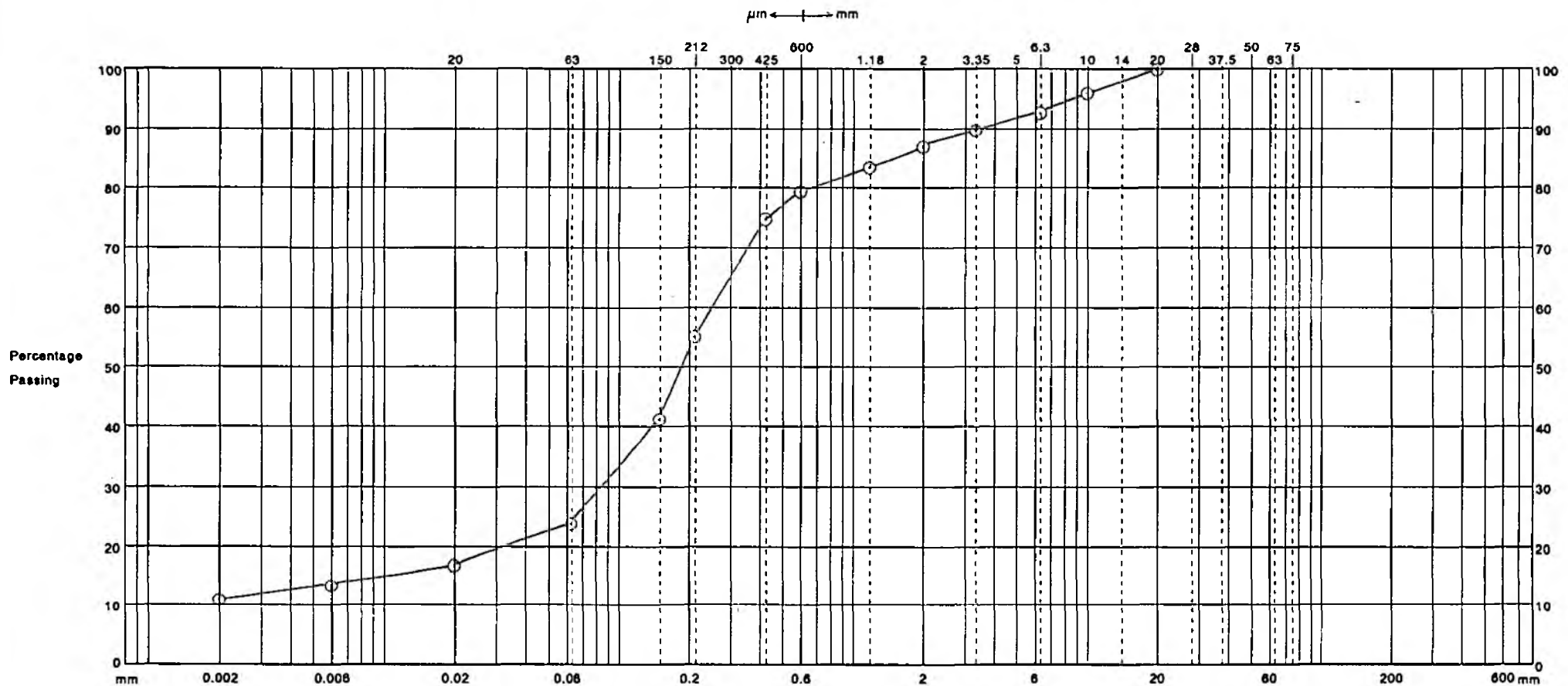
BH/TP Number
5A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	11	14	17	24	41	55	-	75	79	83	87	90	-	93	96	-	100	-	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Pipette Sedimentation

Sample Number
B4

Depth
5.00 - 5.50

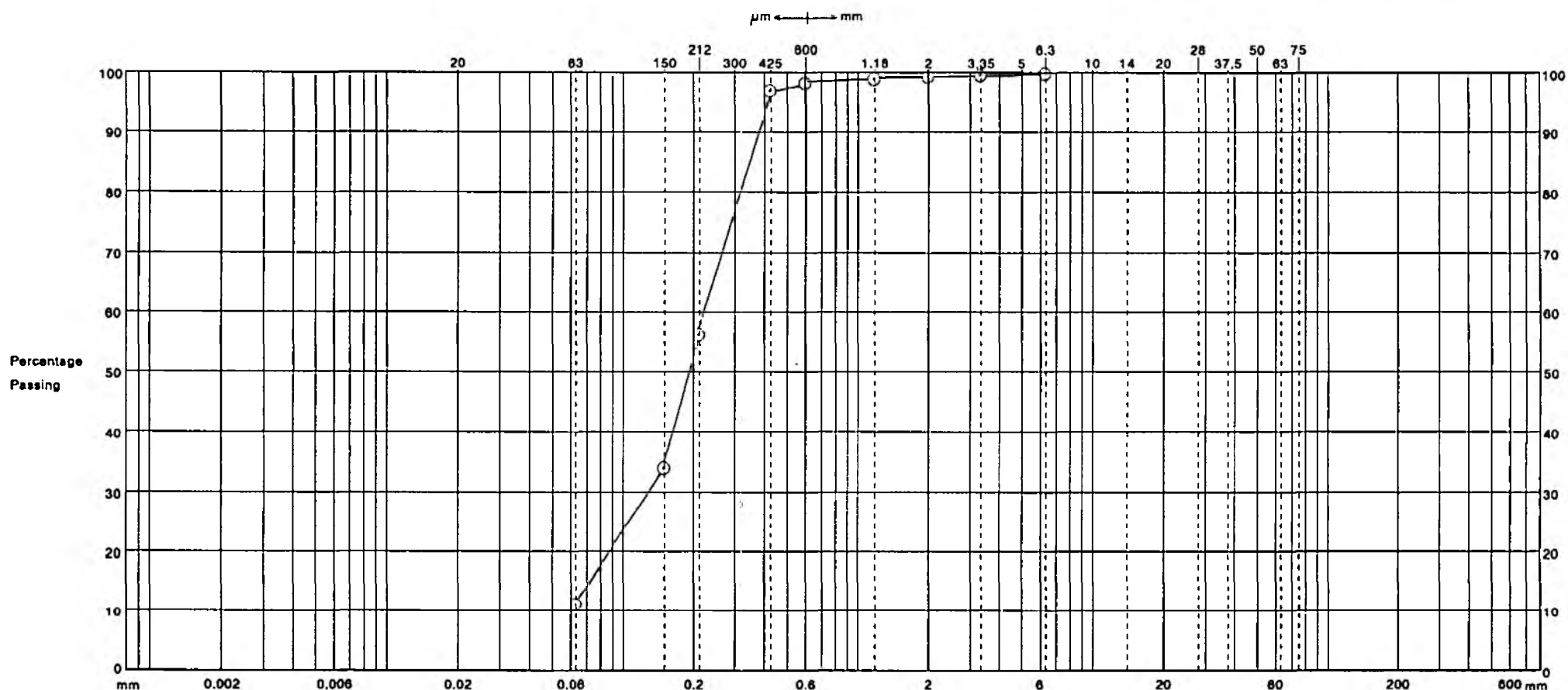
BH/TP Number
5A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	11	34	56	-	97	98	99	99	100	-	100	-	-	-	-	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
85

Depth
7.50 - 8.00

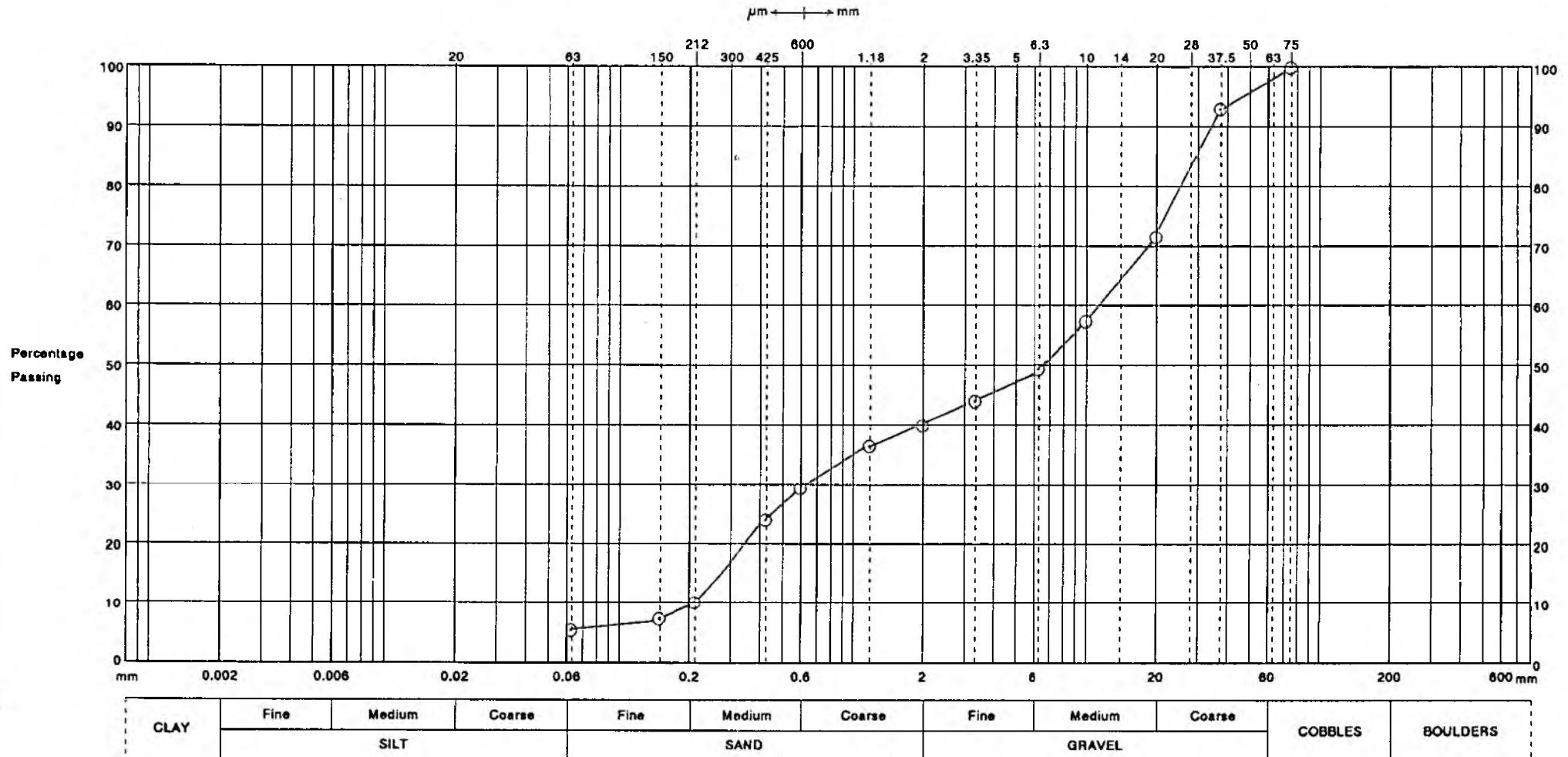
BH/TP Number
5A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm										Size mm											
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	5	7	10	-	24	29	36	40	44	-	49	57	-	71	-	93	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B1

Depth
2.00 - 2.50

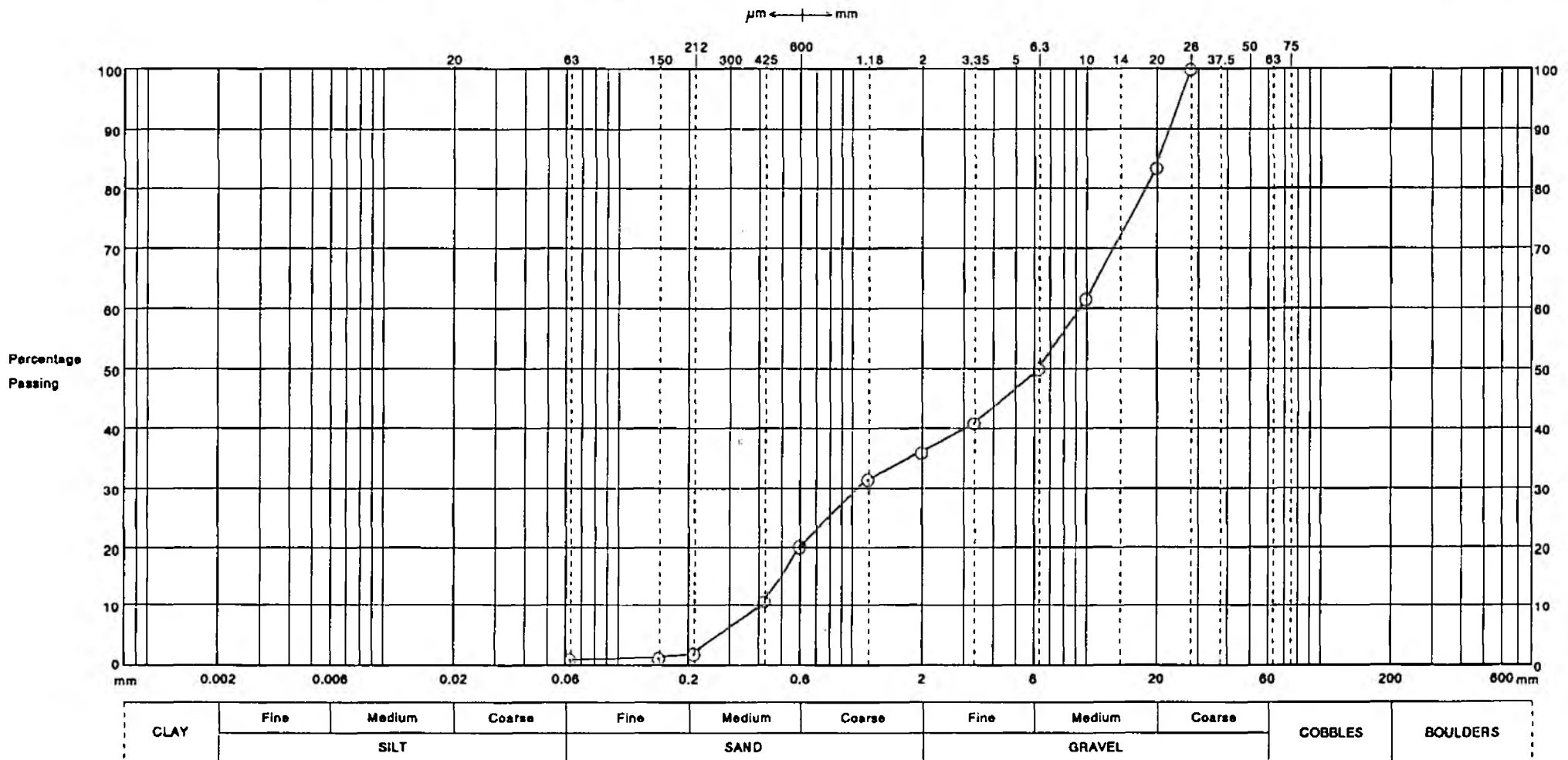
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	1	2	-	11	20	31	36	41	-	50	62	-	83	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
82

Depth
3.00 - 3.50

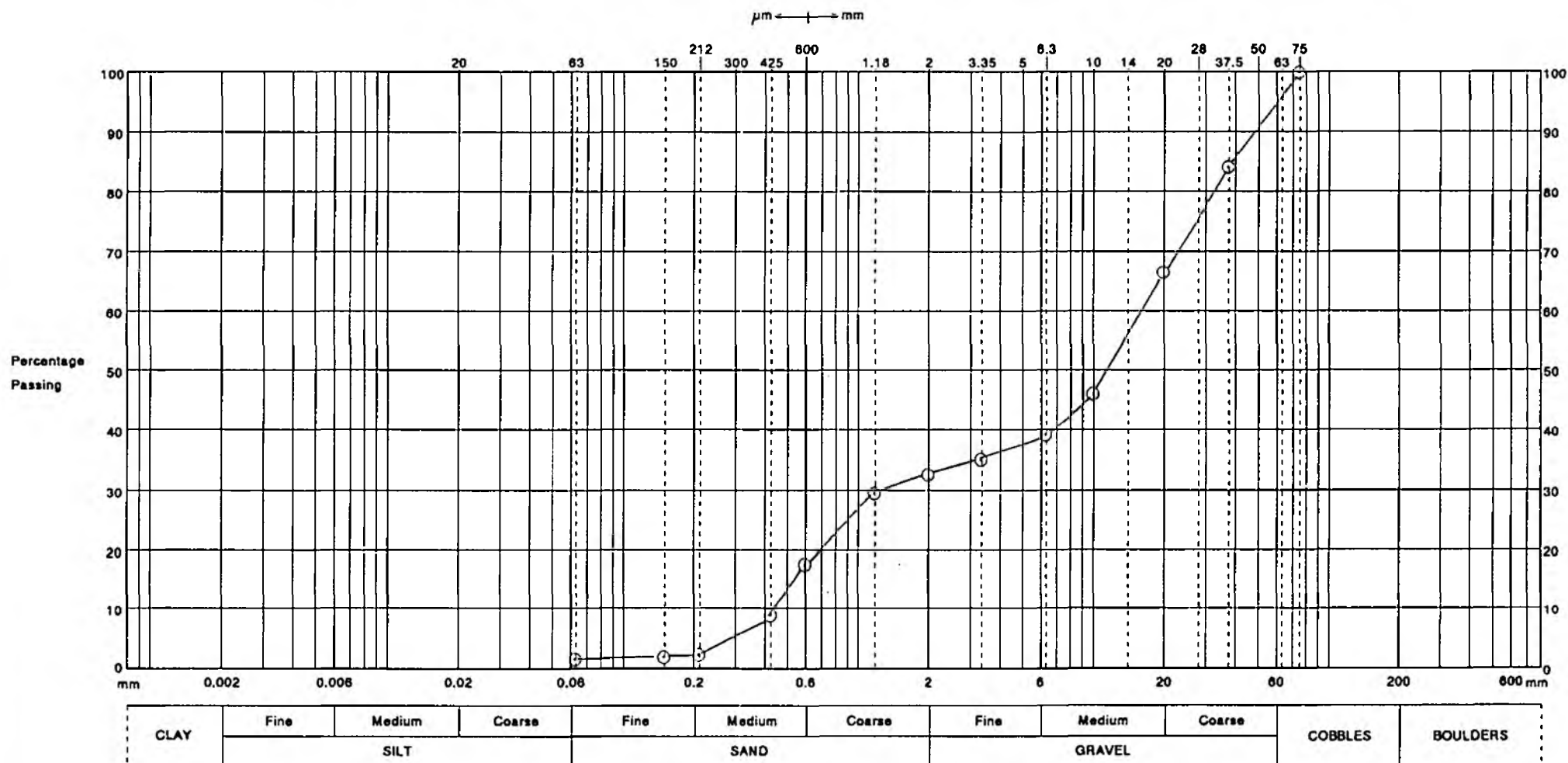
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	2	2	2	-	9	18	29	33	35	-	39	46	-	66	-	84	100	-	-



Remarks

Method
Wet Sieve

Sample Number
83

Depth
4.00 - 4.50

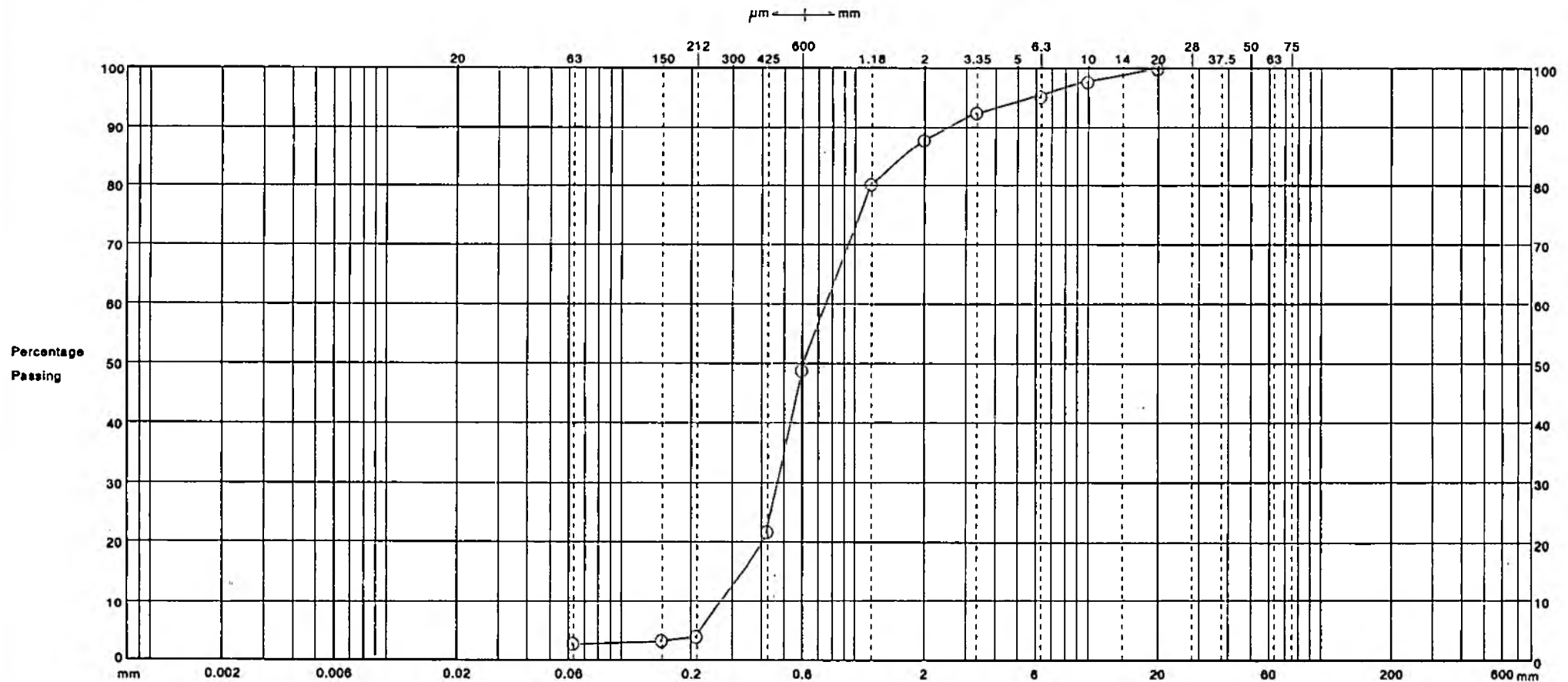
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	3	4	-	22	49	80	88	92	-	95	98	-	100	-	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B4

Depth
5.00 - 5.50

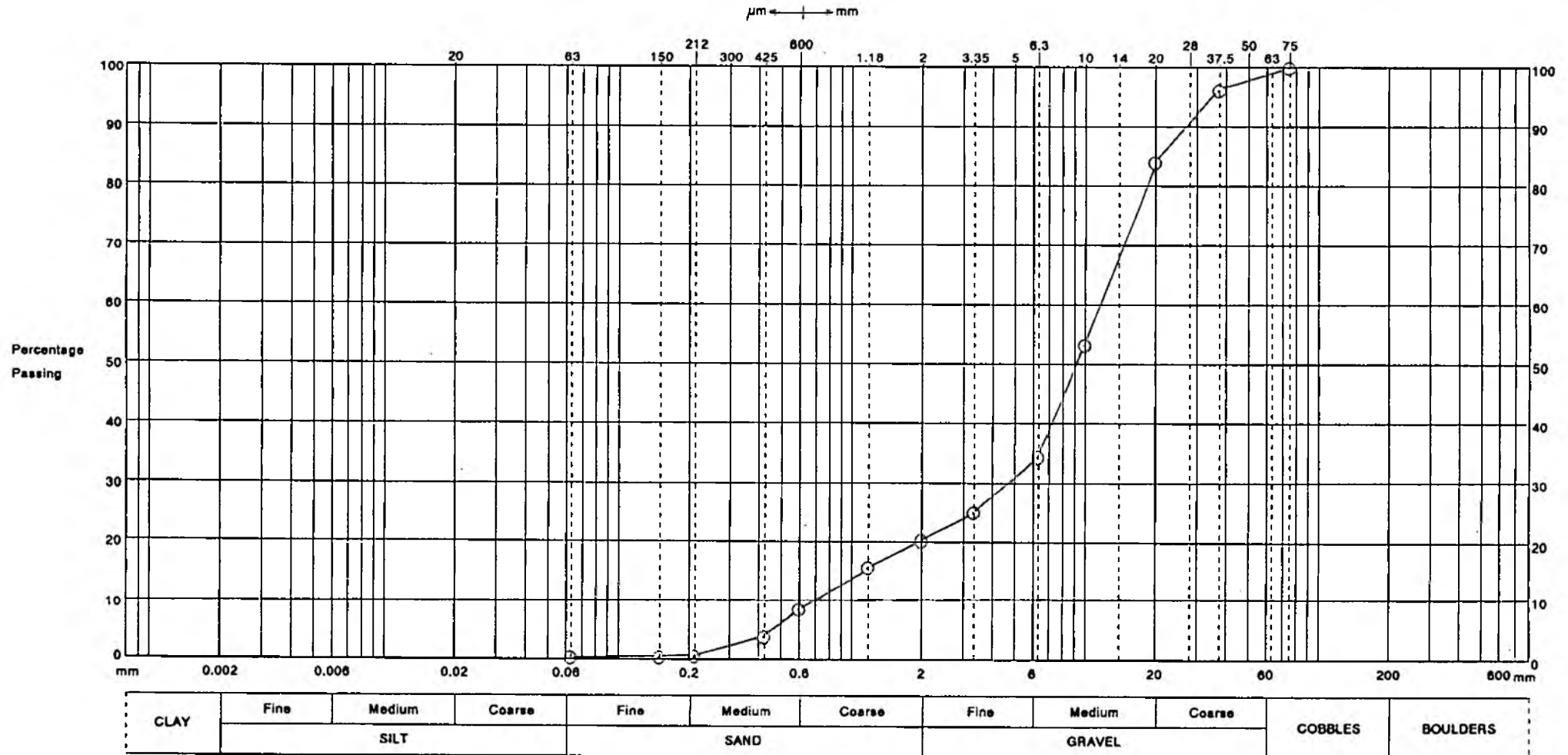
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm									Size mm												
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	0	0	1	-	4	8	16	20	25	-	34	53	-	84	-	96	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B5

Depth
6.00 - 6.50

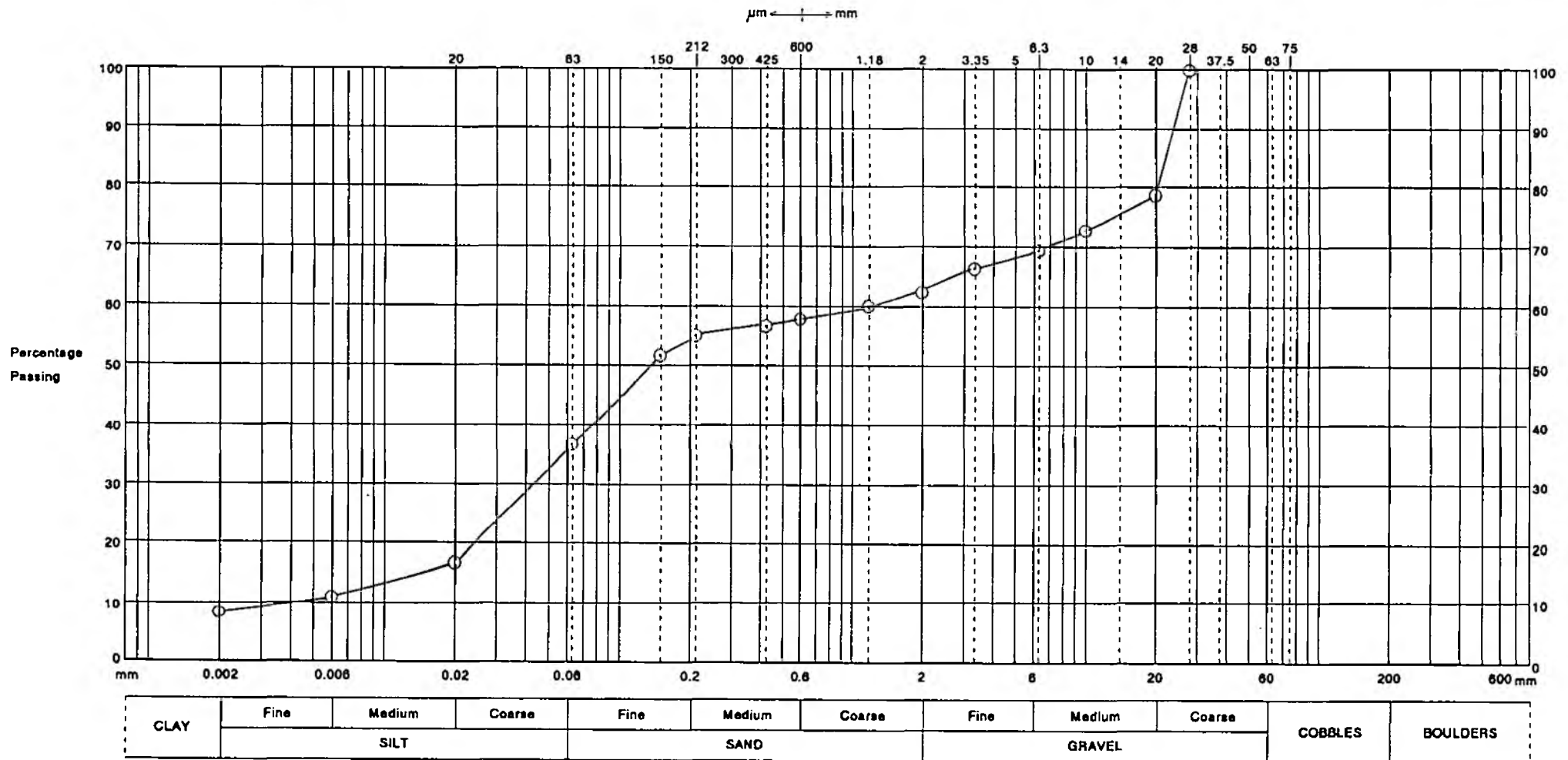
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	8	11	17	37	52	55	-	57	58	60	62	66	-	69	73	-	79	100	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B6

Depth
7.00 - 7.20

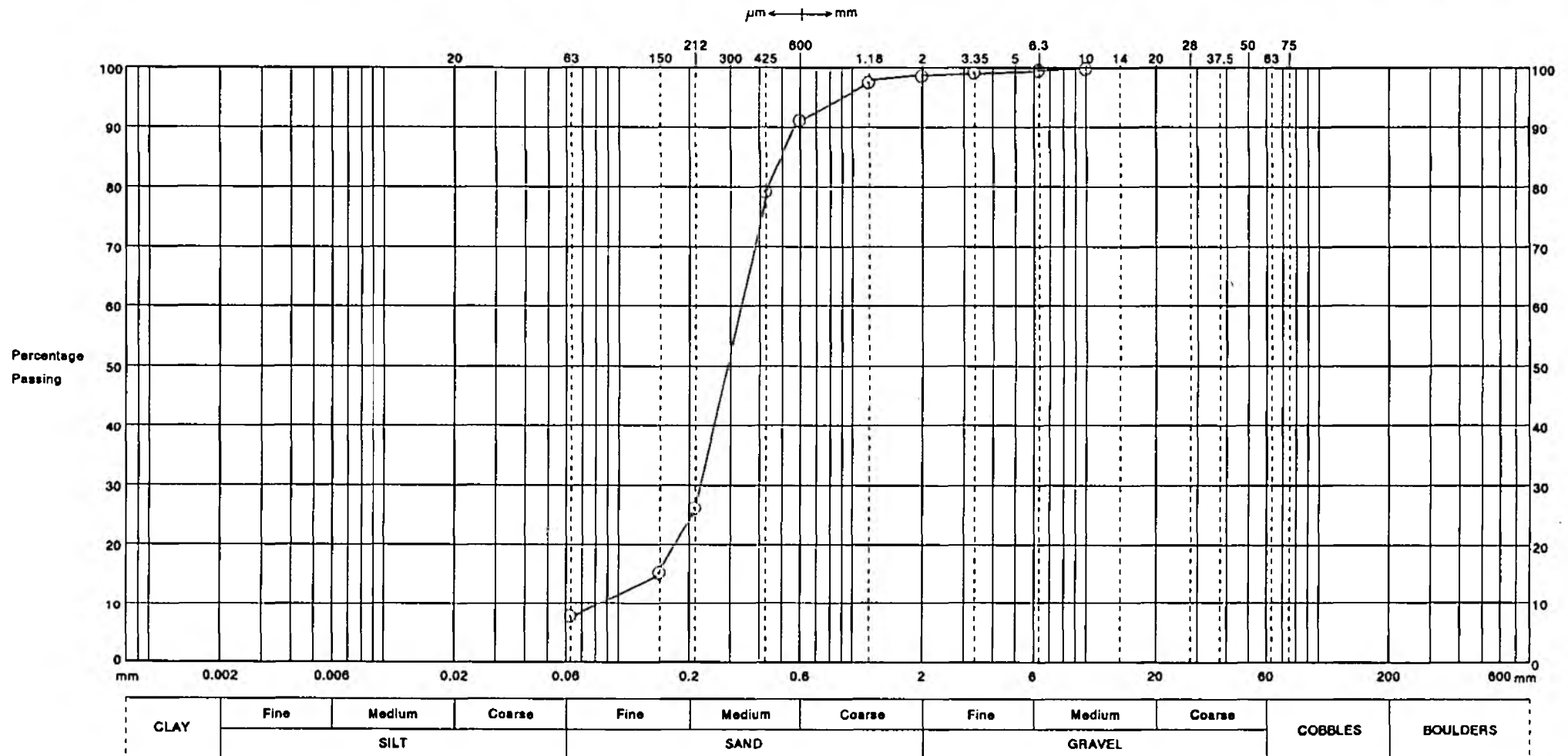
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm									Size mm												
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	8	16	26	-	79	91	98	99	99	-	100	100	-	-	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B7

Depth
8.00 - 8.50

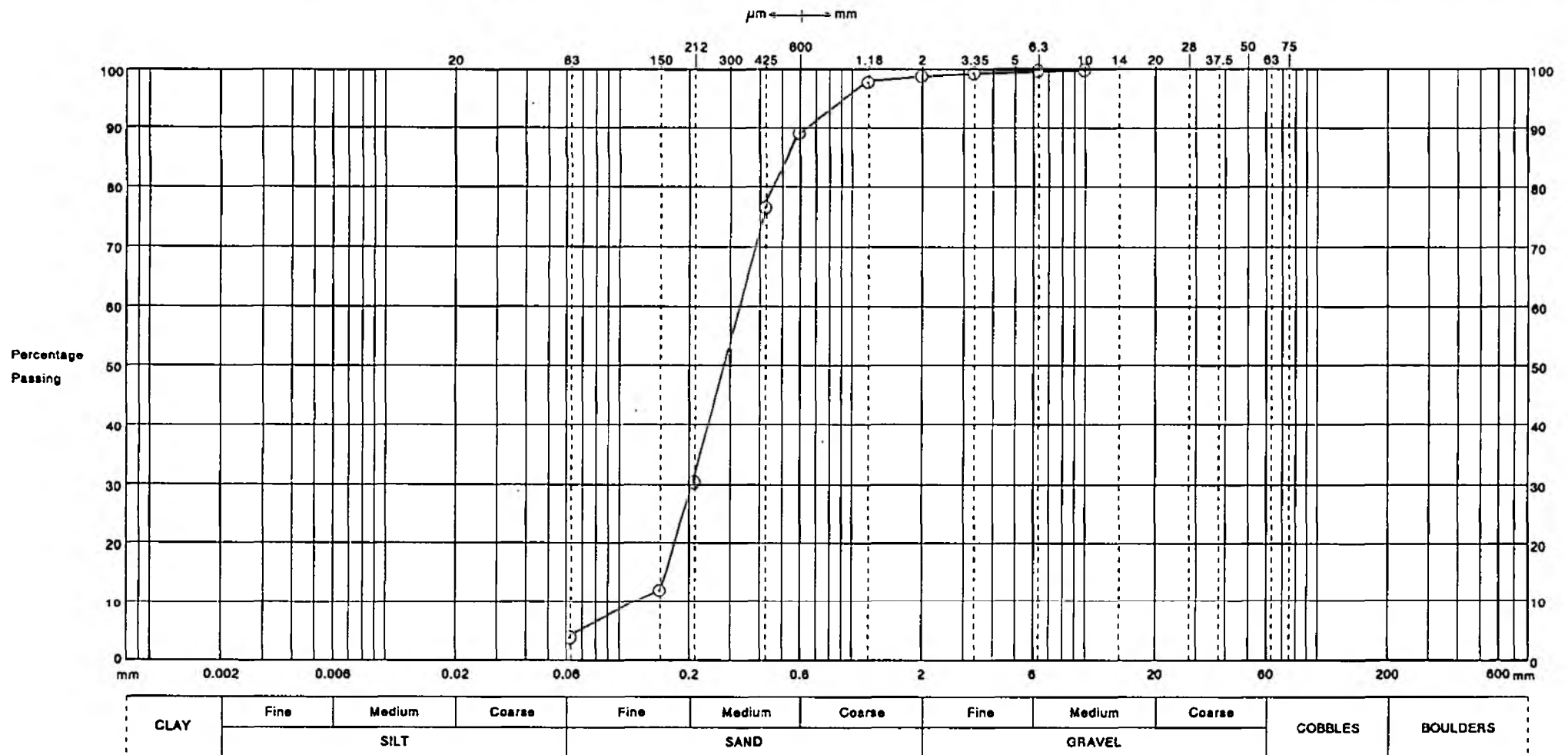
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	4	12	30	-	77	89	98	99	99	-	100	100	-	-	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
88

Depth
9.00 - 9.50

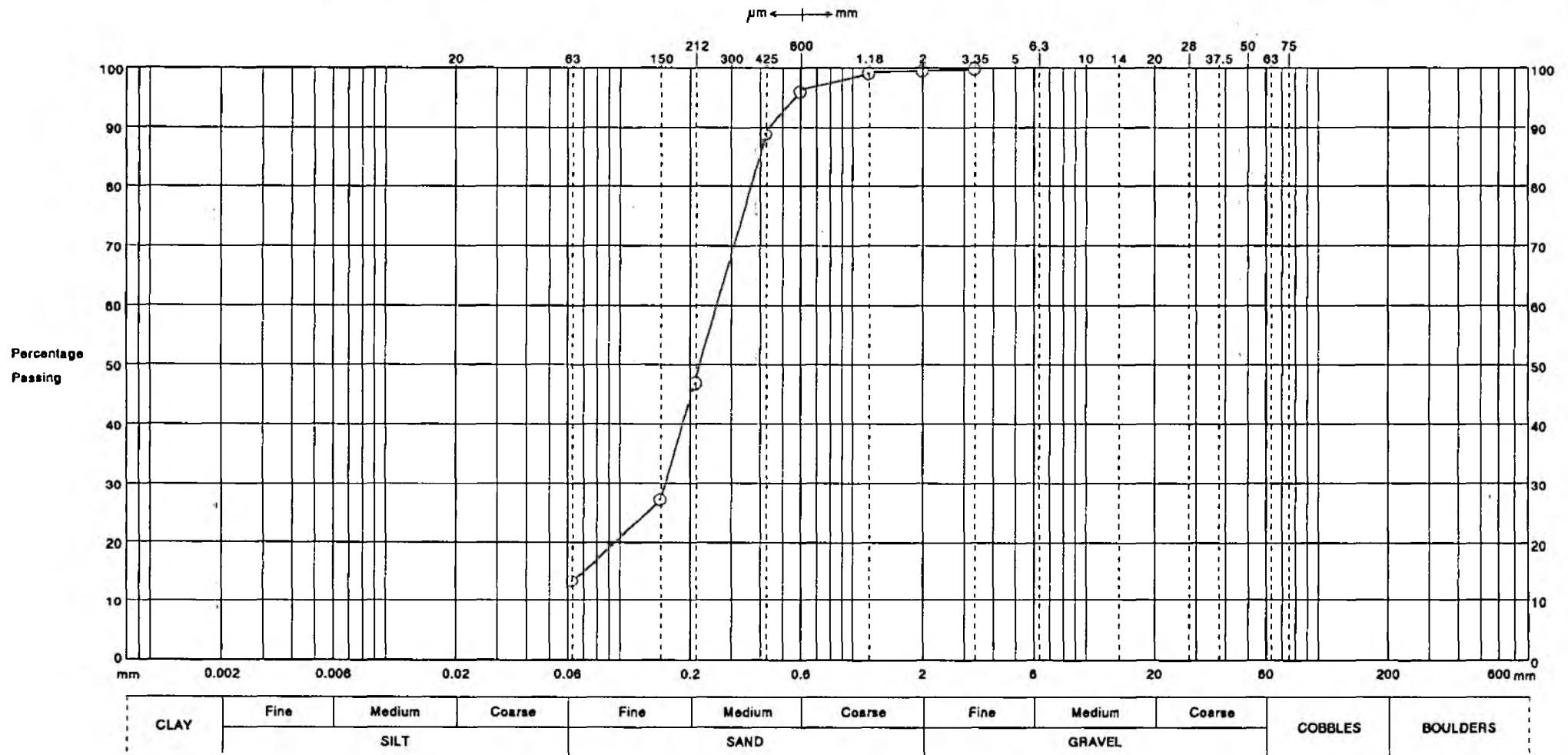
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm									Size mm												
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	14	27	47	-	89	96	99	100	100	-	-	-	-	-	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B9

Depth
10.00 - 10.50

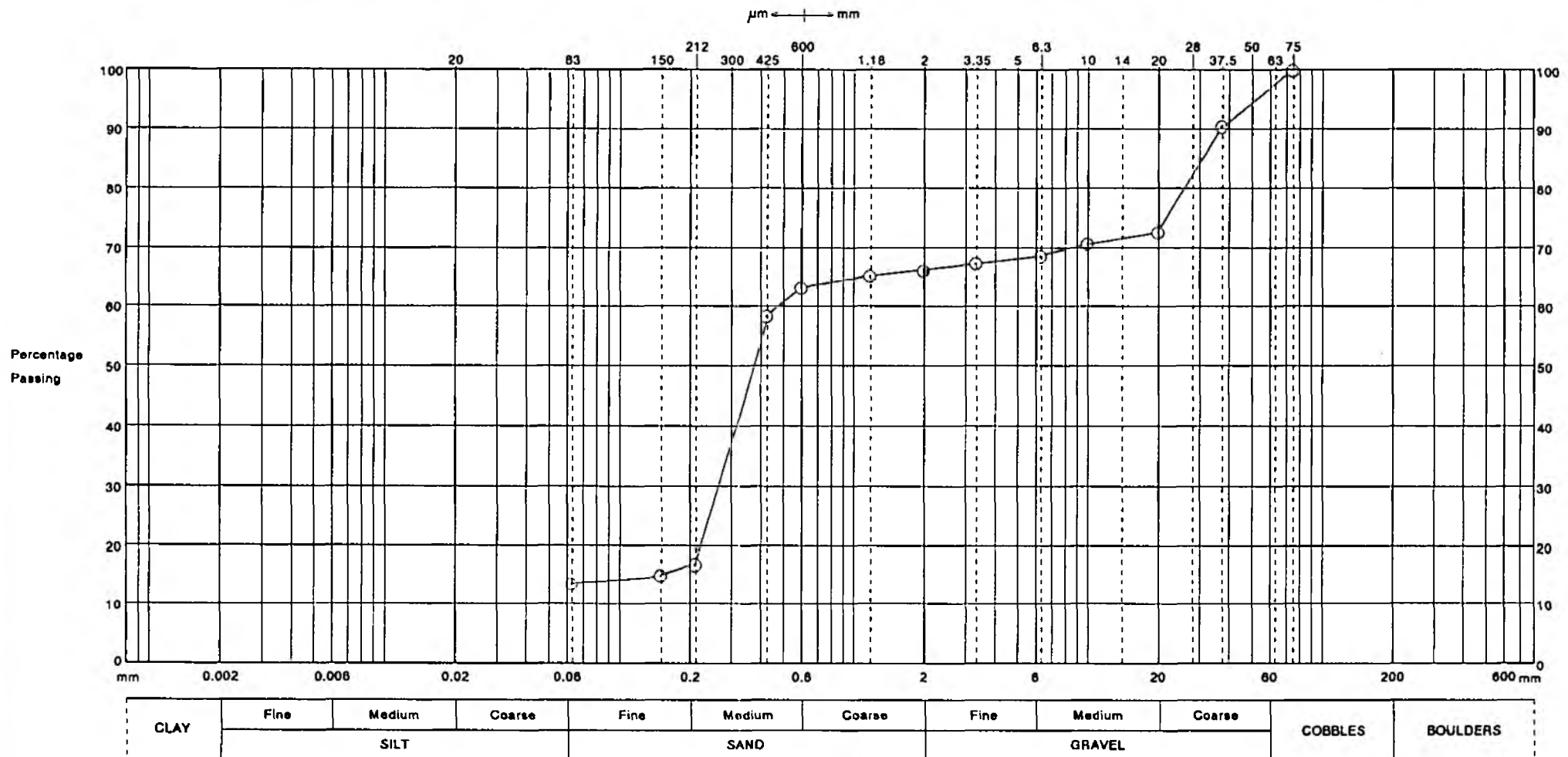
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	14	15	17	-	58	63	65	66	67	-	69	71	-	73	-	90	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B10

Depth
11.10 - 11.50

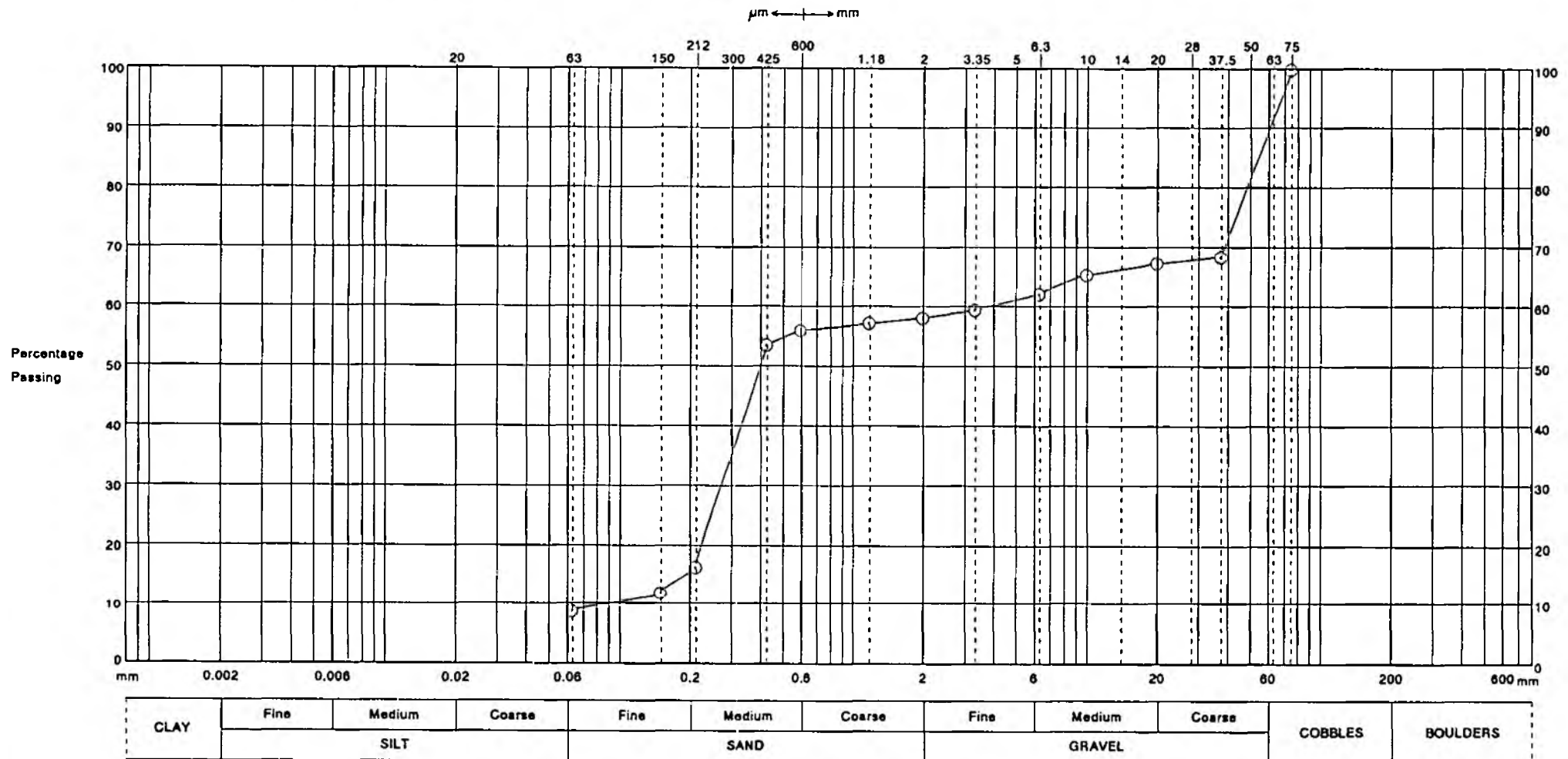
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm									Size mm												
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	9	12	17	-	53	56	57	58	59	-	62	65	-	67	-	68	100	-	-



Remarks

Method
Wet Sieve

Sample Number
811

Depth
12.00 - 12.50

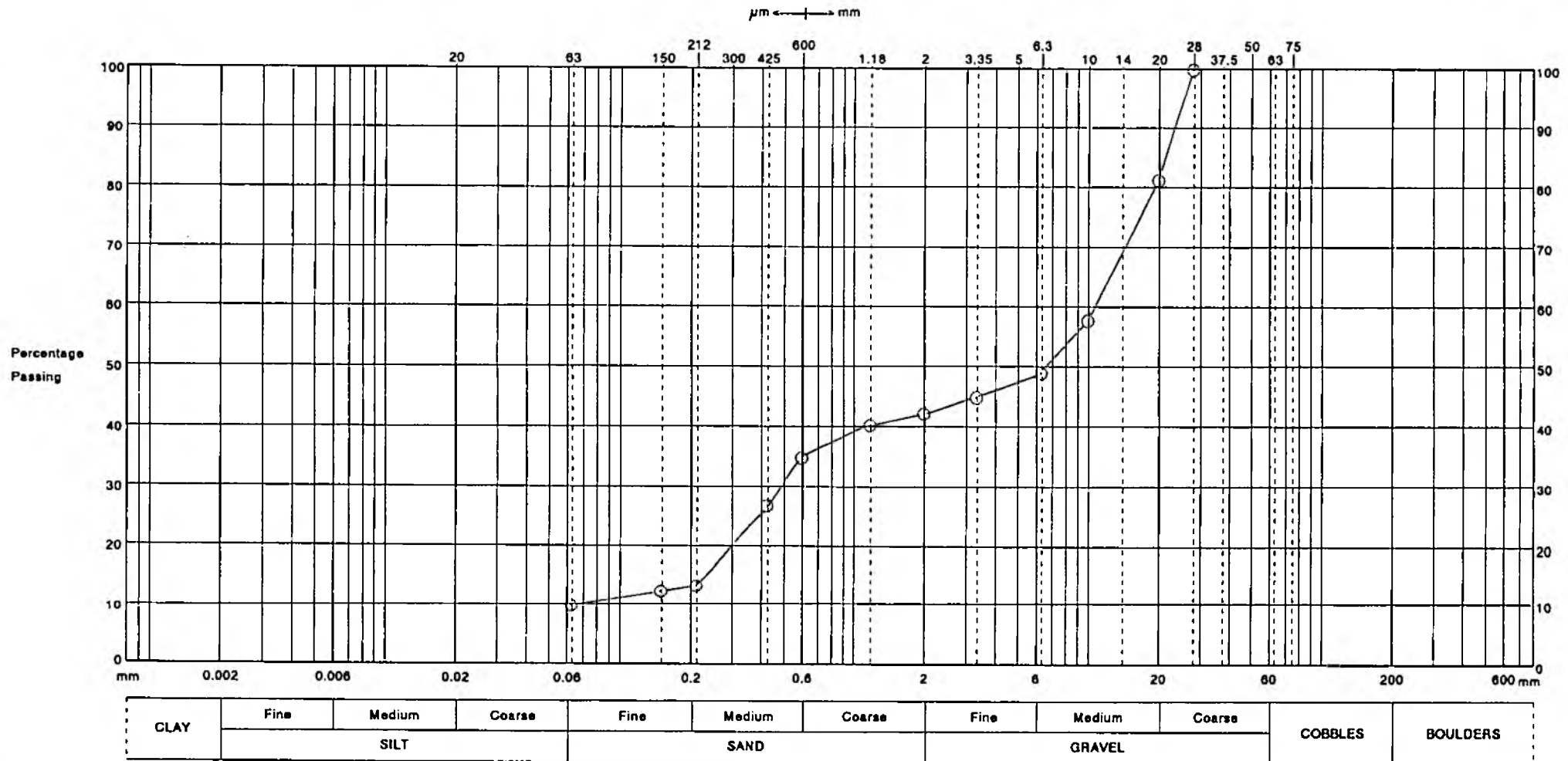
BH/TP Number
6A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	10	12	14	-	27	35	40	42	45	-	49	58	-	81	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
81

Depth
.50 - 1.00

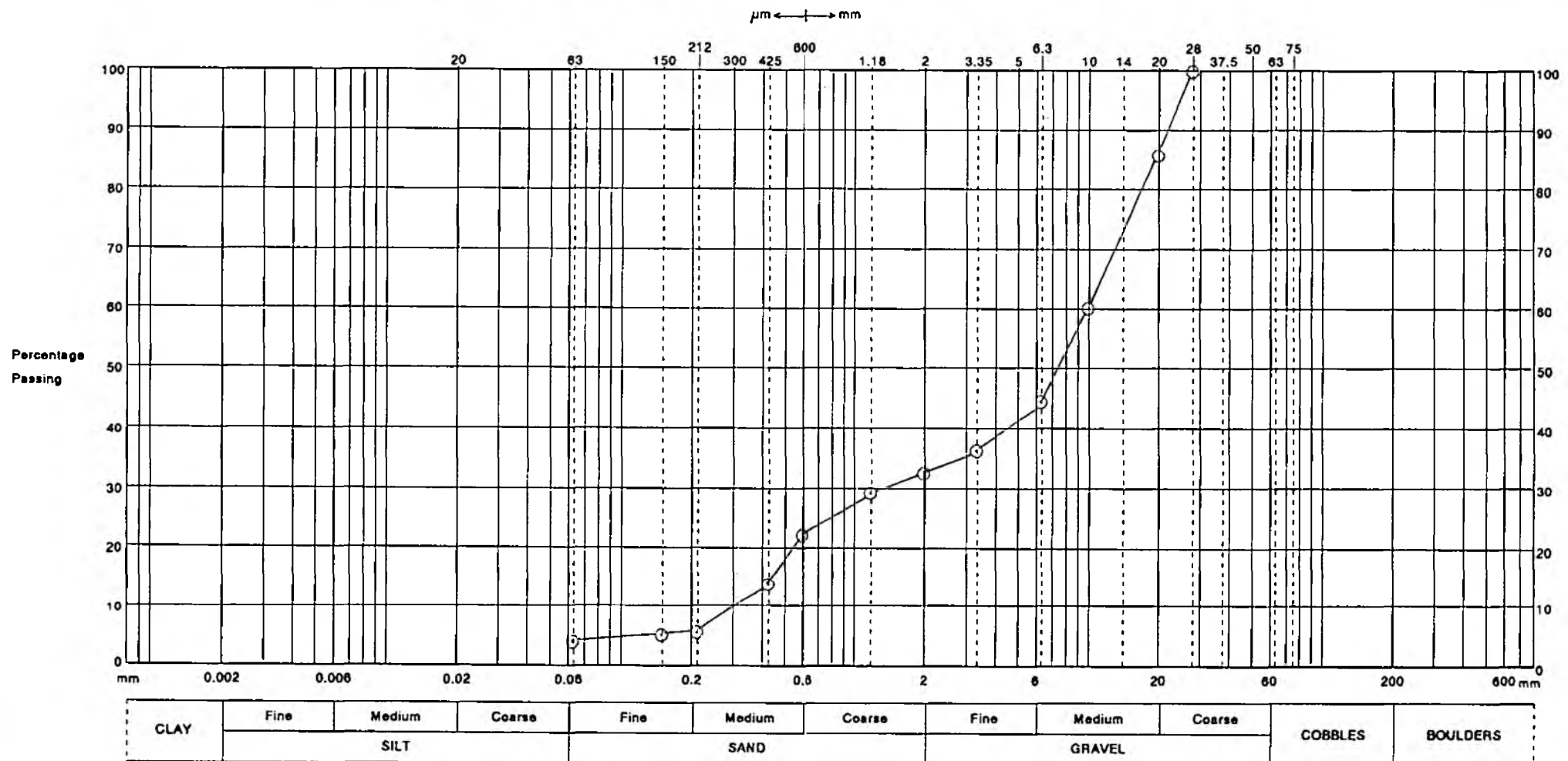
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	4	5	6	-	14	22	29	33	36	-	45	60	-	86	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B2

Depth
1.50 - 2.00

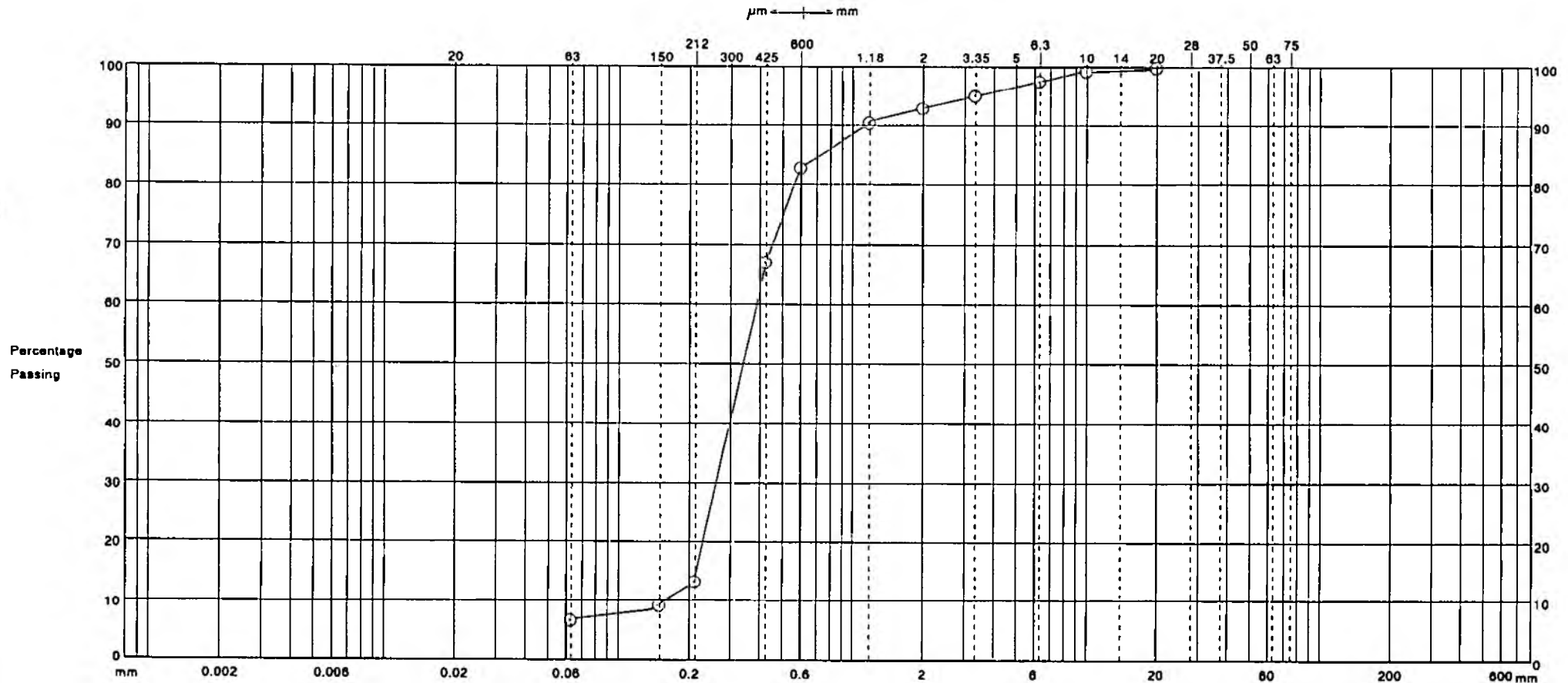
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	7	9	13	-	67	83	90	93	95	-	98	99	-	100	-	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B3

Depth
2.50 - 3.00

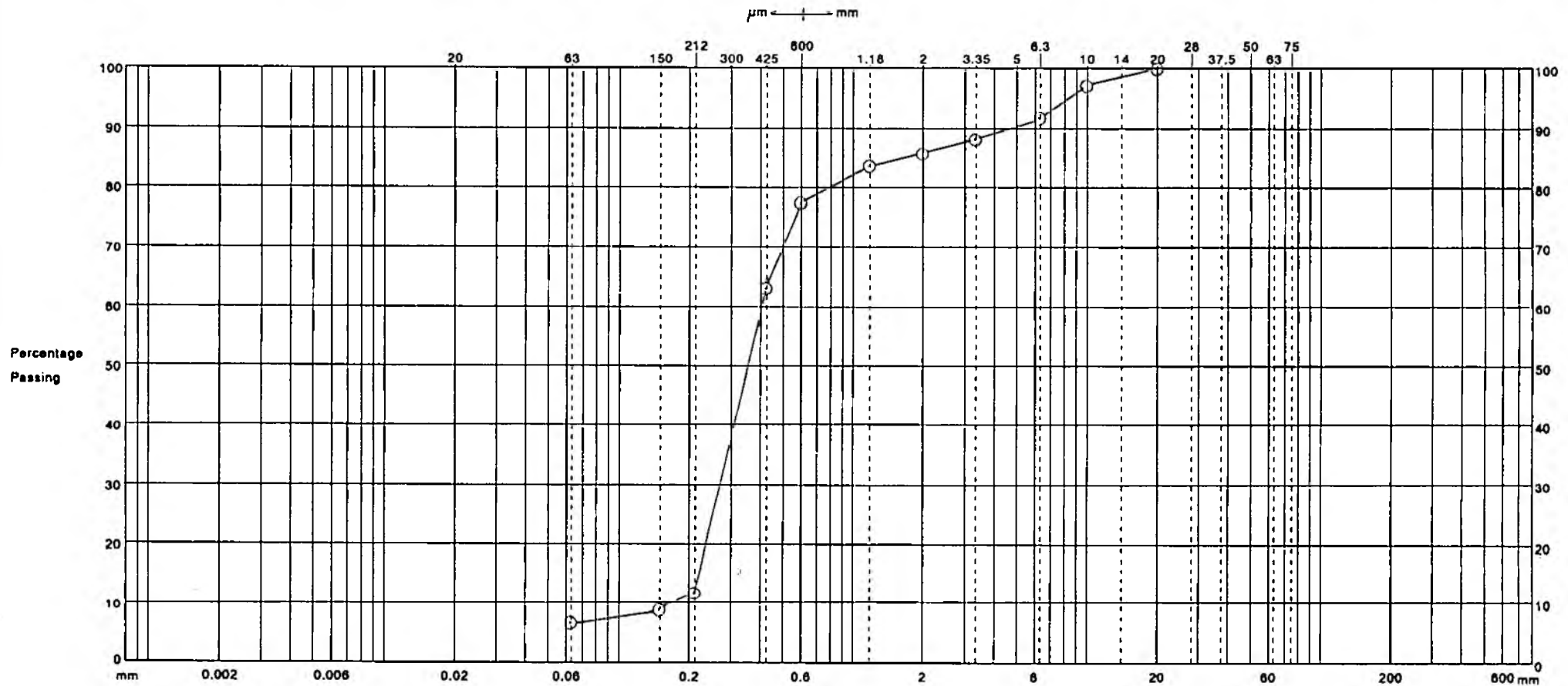
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	7	9	12	-	63	77	83	86	88	-	92	97	-	100	-	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B4

Depth
3.50 - 4.00

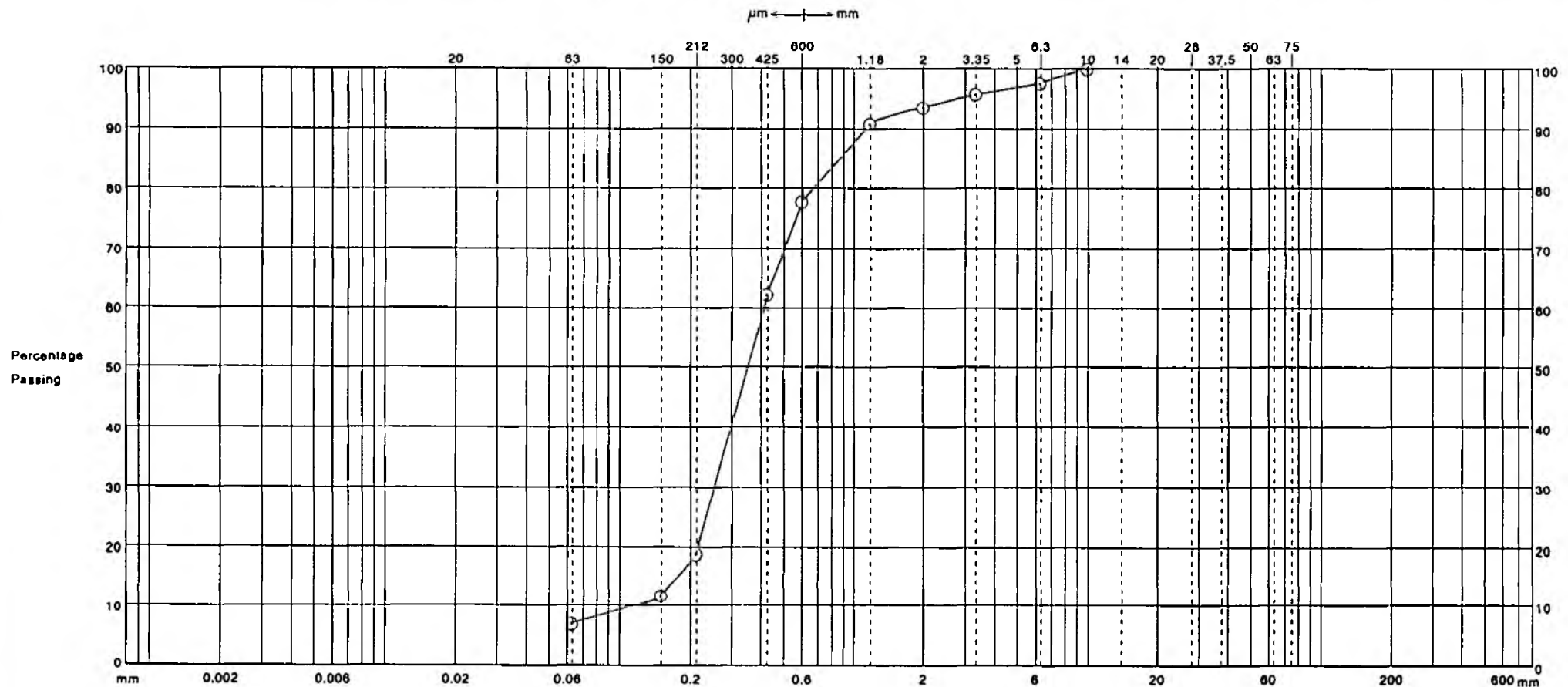
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	7	12	19	-	62	78	91	93	96	-	98	100	-	-	-	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B5

Depth
4.50 - 5.00

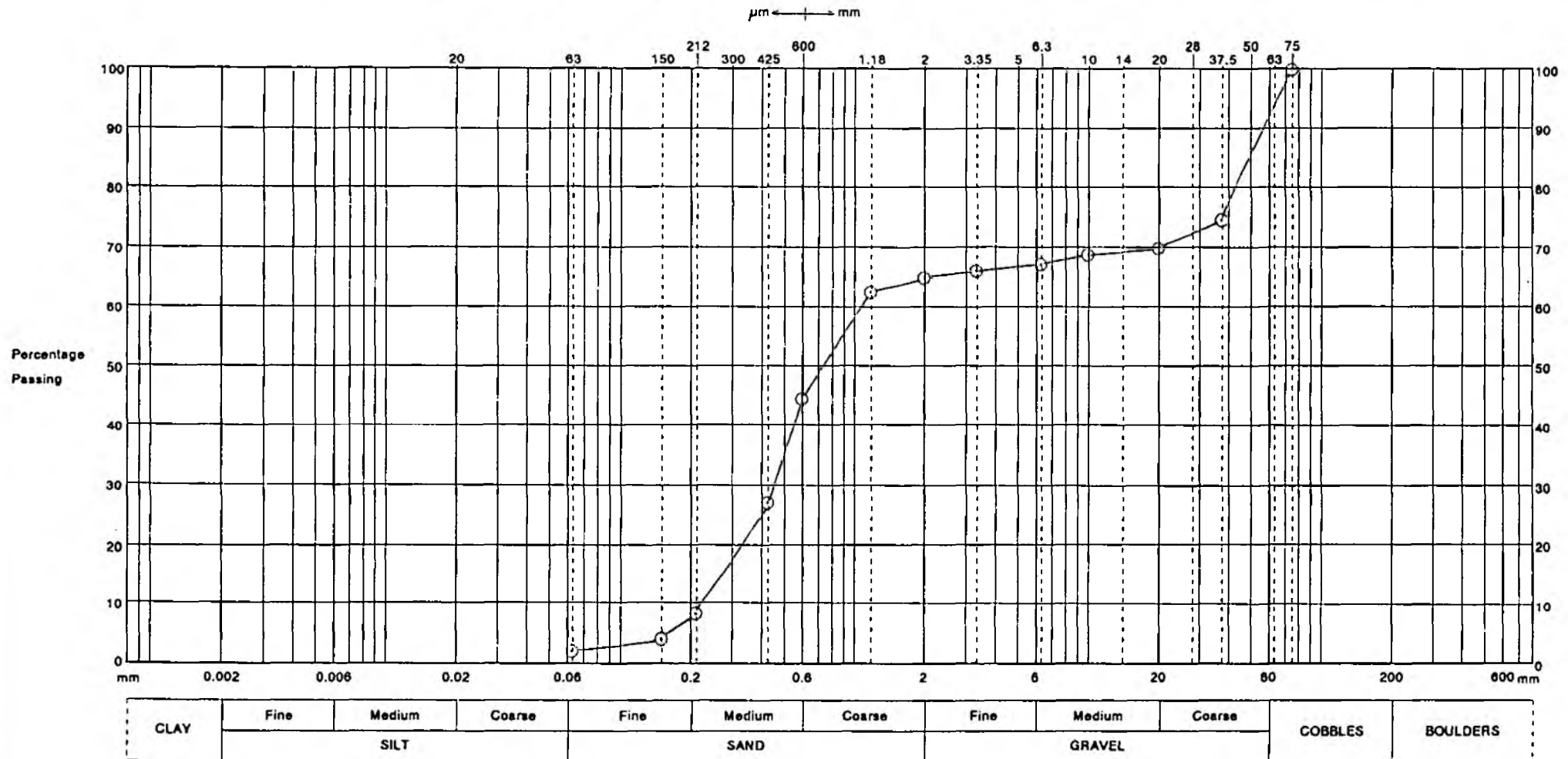
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	2	4	8	-	27	45	62	65	66	-	67	69	-	70	-	75	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B6

Depth
6.00 - 6.50

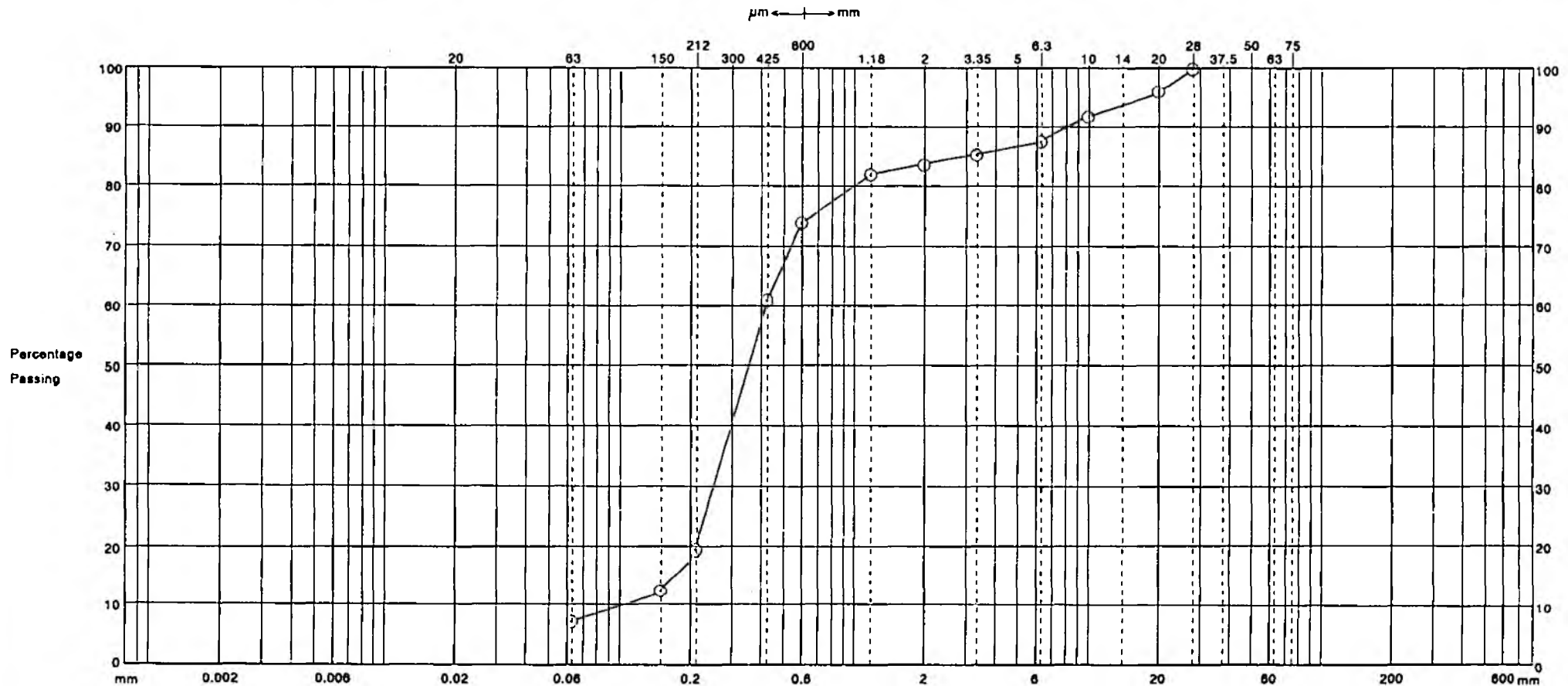
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm									Size mm												
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	7	12	20	-	61	74	82	84	85	-	88	92	-	96	100	-	-	-	-



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Remarks

Method
Wet Sieve

Sample Number
B7

Depth
7.00 - 7.50

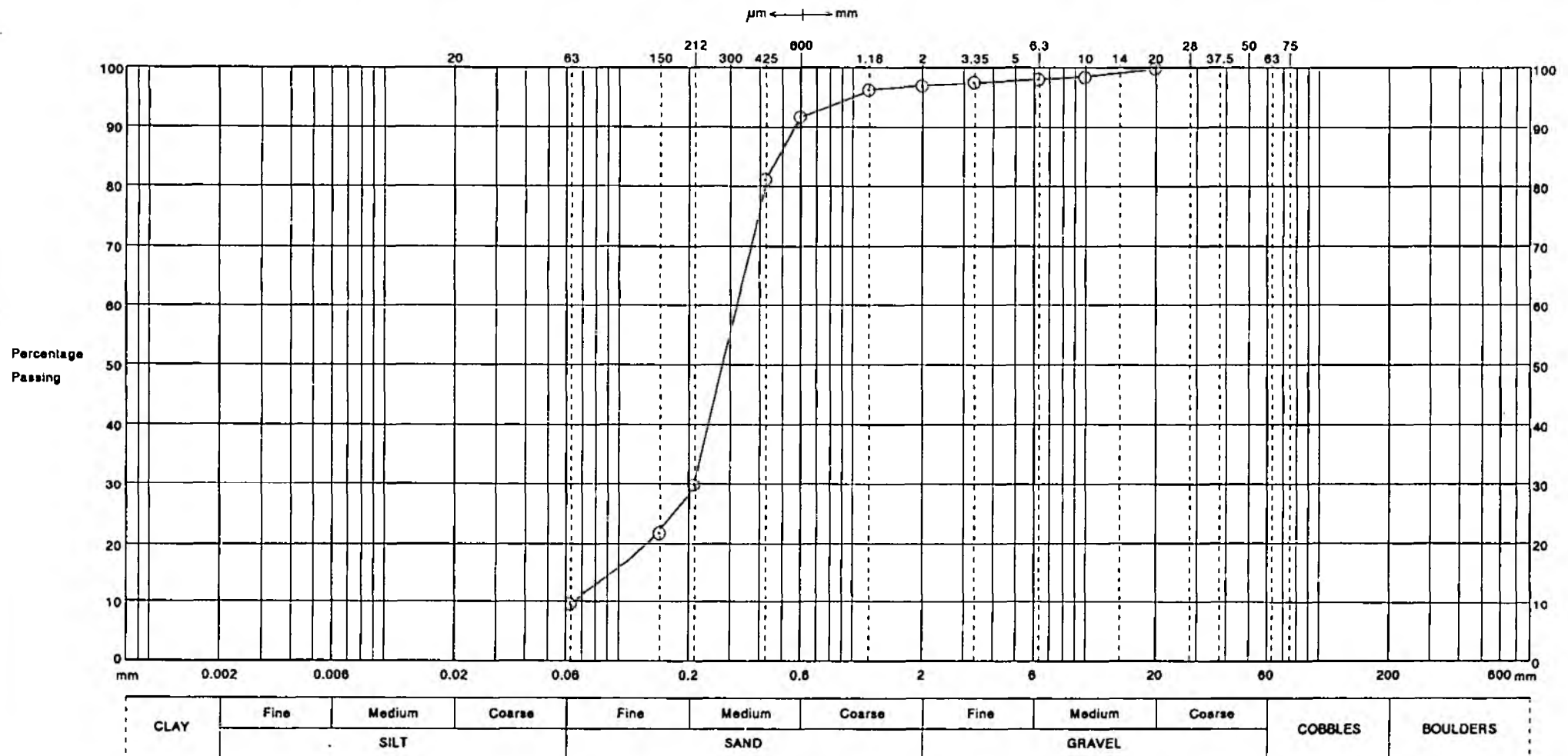
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	10	22	30	-	81	92	96	97	98	-	98	98	-	100	-	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B8

Depth
8.00 - 8.50

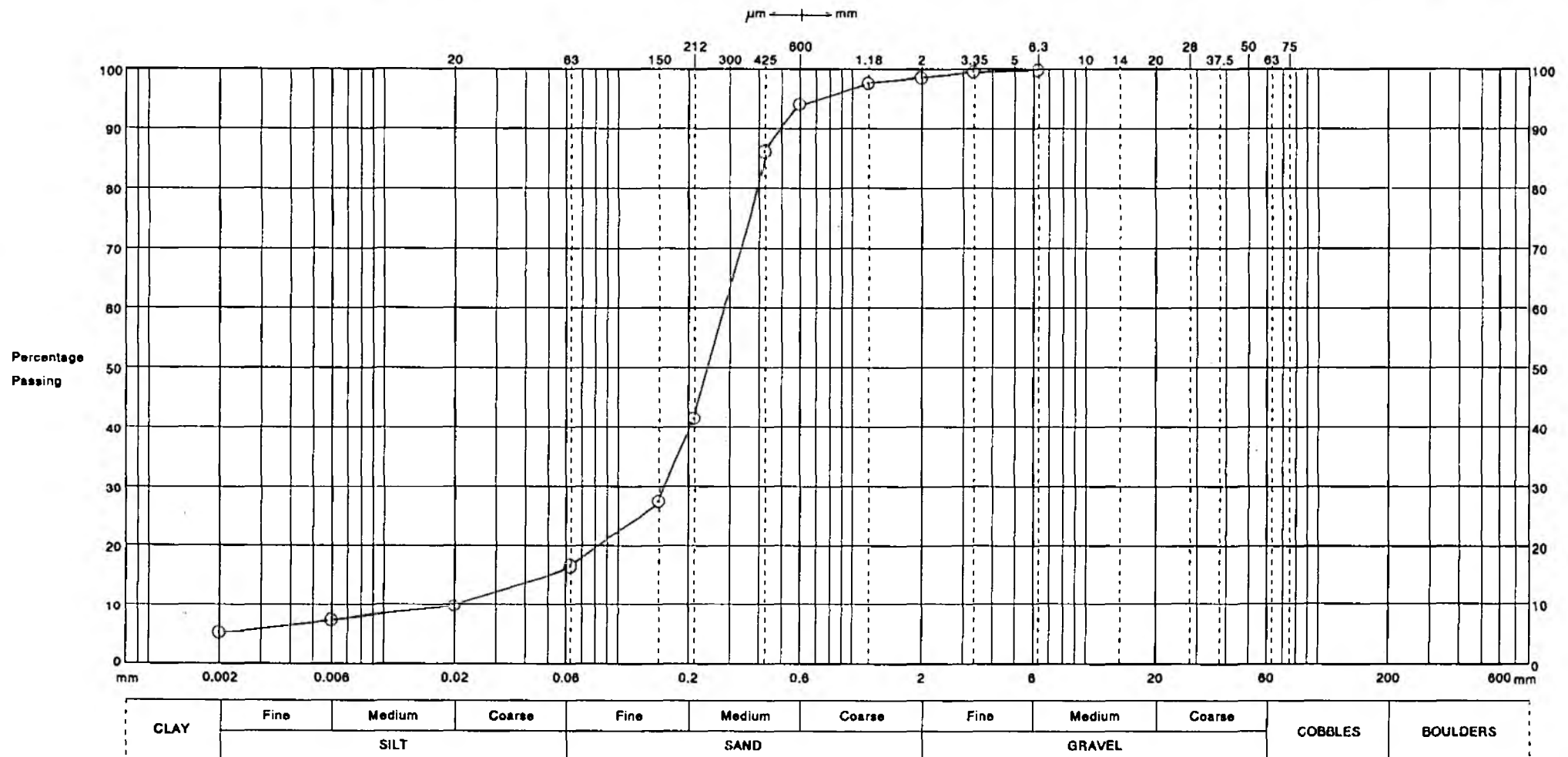
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	5	7	10	17	27	42	-	86	94	98	99	100	-	100	-	-	-	-	-	-	-	-



Remarks

Method
Pipette Sedimentation

Sample Number
B9

Depth
9.00 - 9.50

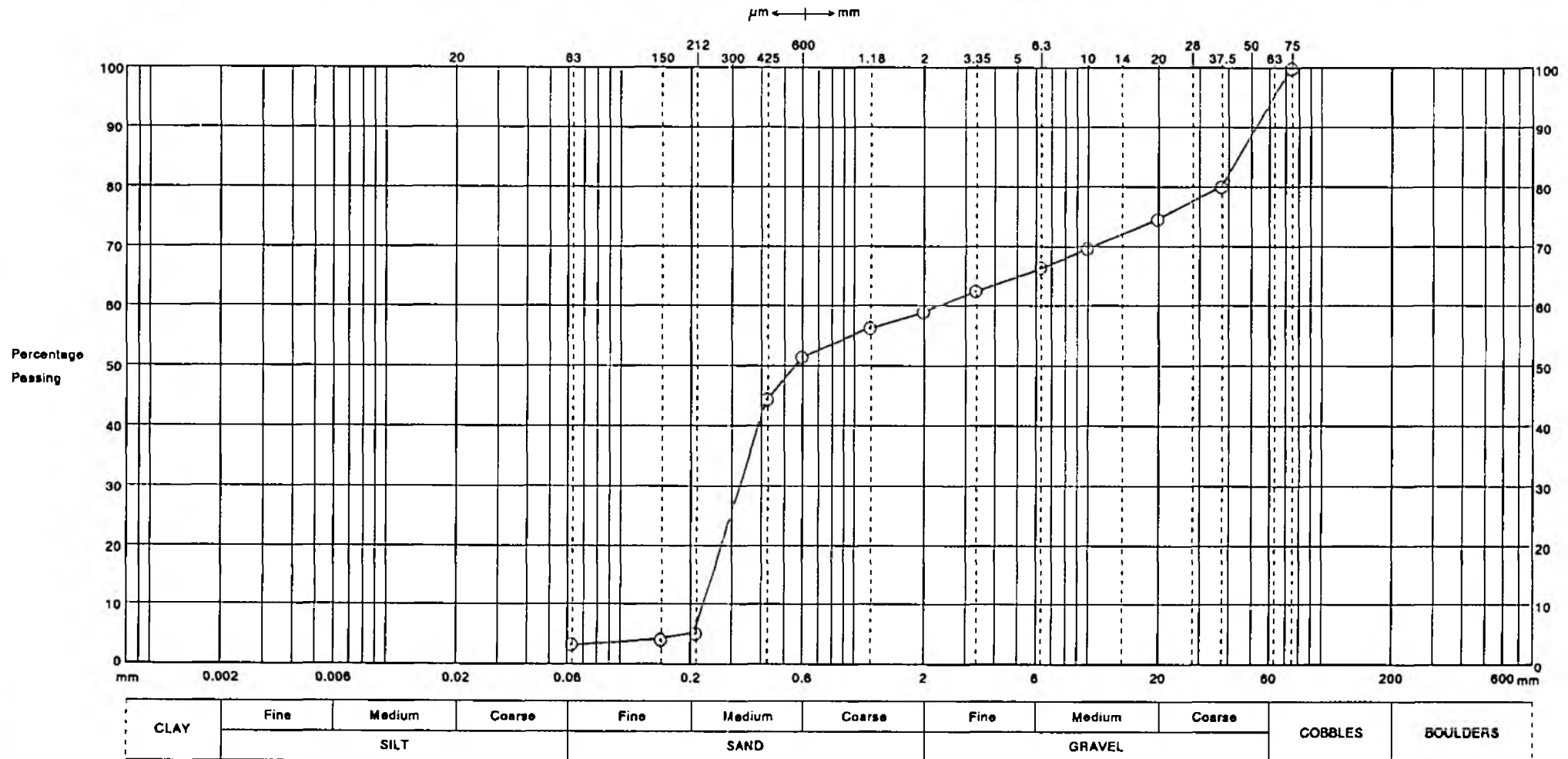
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	4	5	-	44	51	56	59	62	-	67	70	-	75	-	80	100	-	-



Remarks

Method
Wet Sieve

Sample Number
810

Depth
11.00 - 11.50

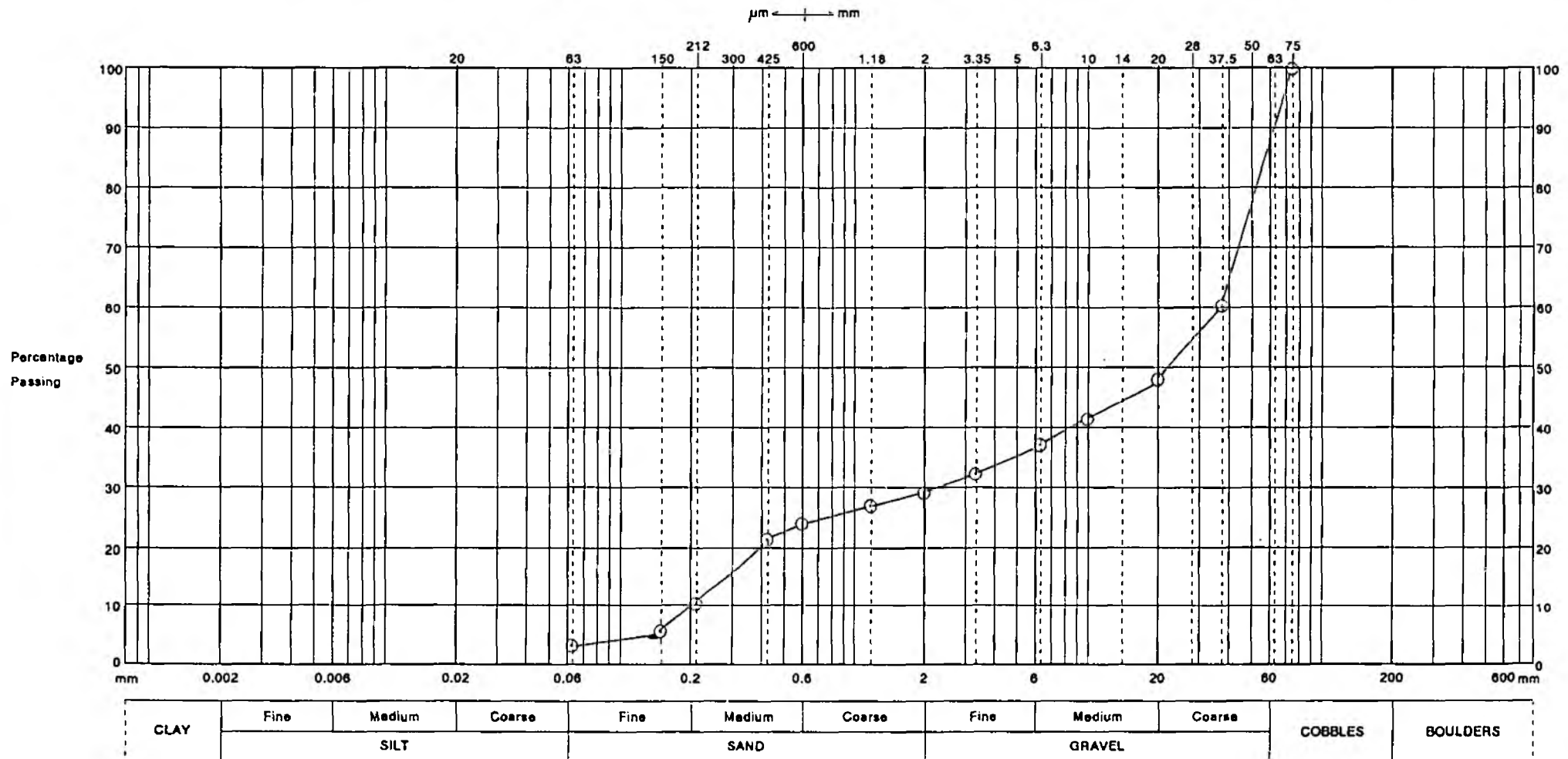
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	6	10	-	21	24	27	29	32	-	37	41	-	48	-	60	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B11

Depth
12.00 - 12.30

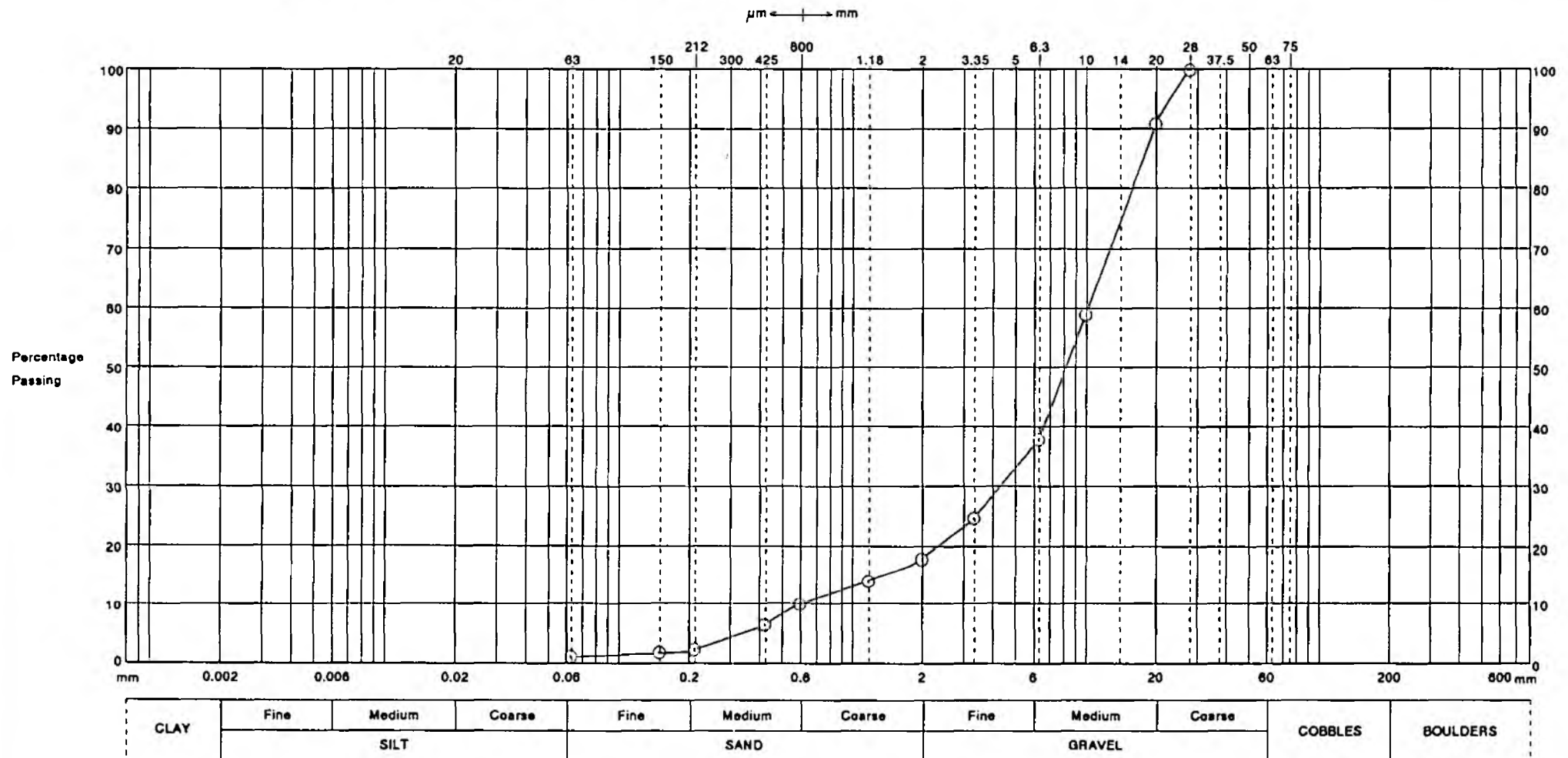
BH/TP Number
7A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	2	2	-	7	10	14	18	25	-	38	59	-	91	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
81

Depth
2.50 - 3.00

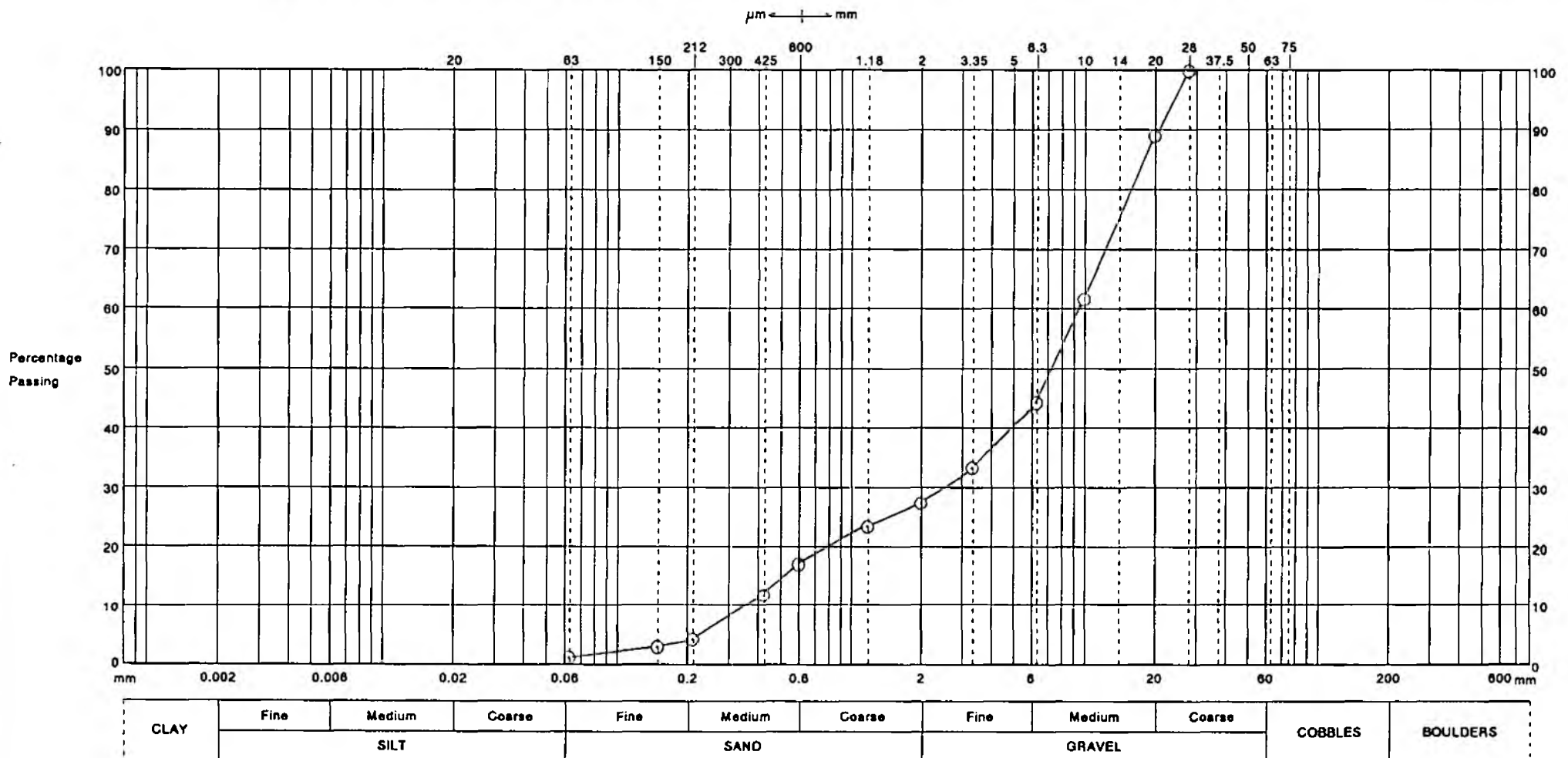
BH/TP Number
8A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	3	4	-	12	17	23	27	33	-	44	61	-	89	100	-	-	-	-



Remarks

Method
Wet Sieve

Sample Number
B2

Depth
3.50 - 4.00

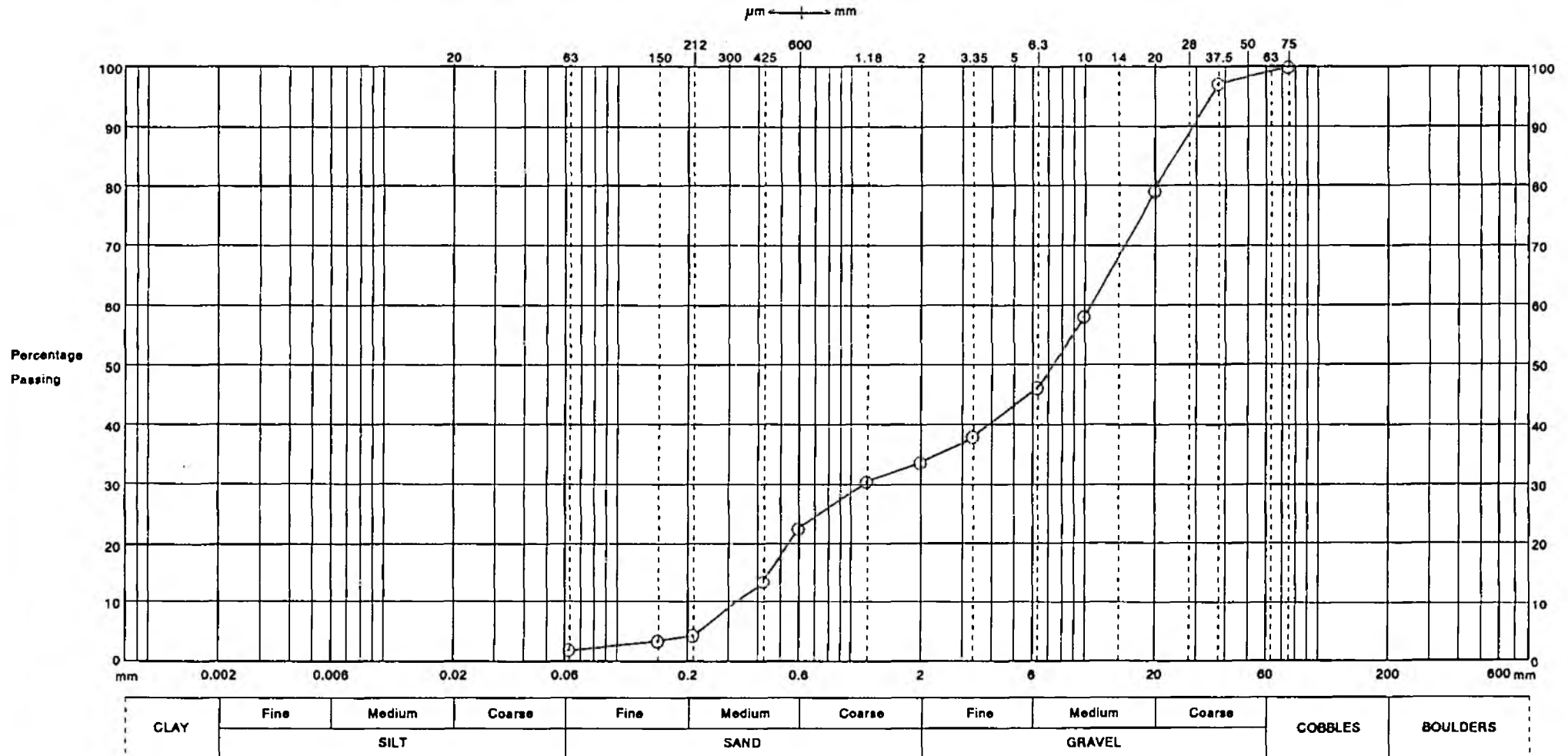
BH/TP Number
8A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	2	3	4	-	14	22	30	34	38	-	46	58	-	79	-	97	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B3

Depth
4.50 - 5.00

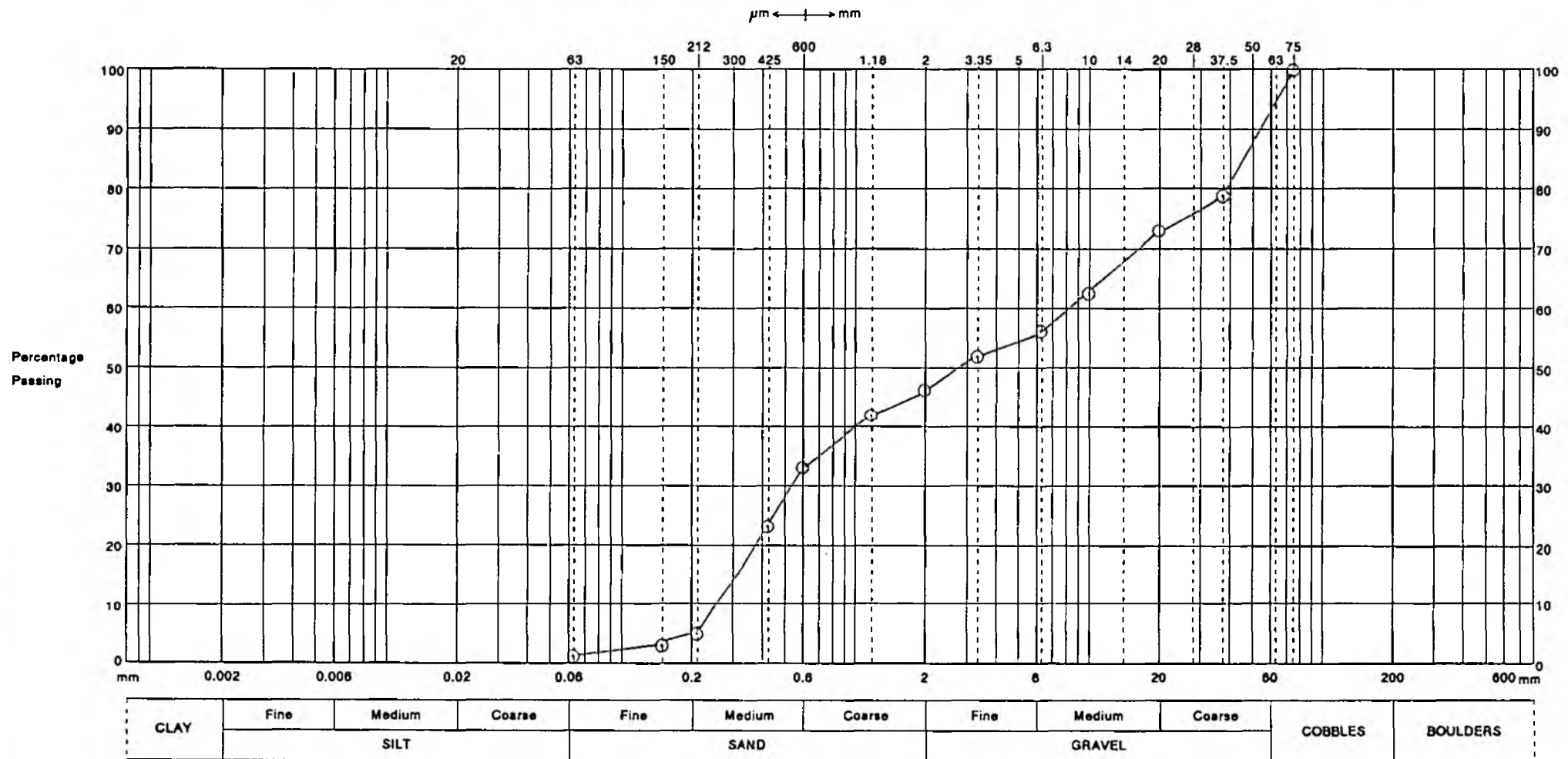
BH/TP Number
8A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	3	5	-	23	33	42	46	52	-	56	62	-	73	-	79	100	-	-



Remarks

Method
Wet Sieve

Sample Number
84

Depth
5.50 - 6.00

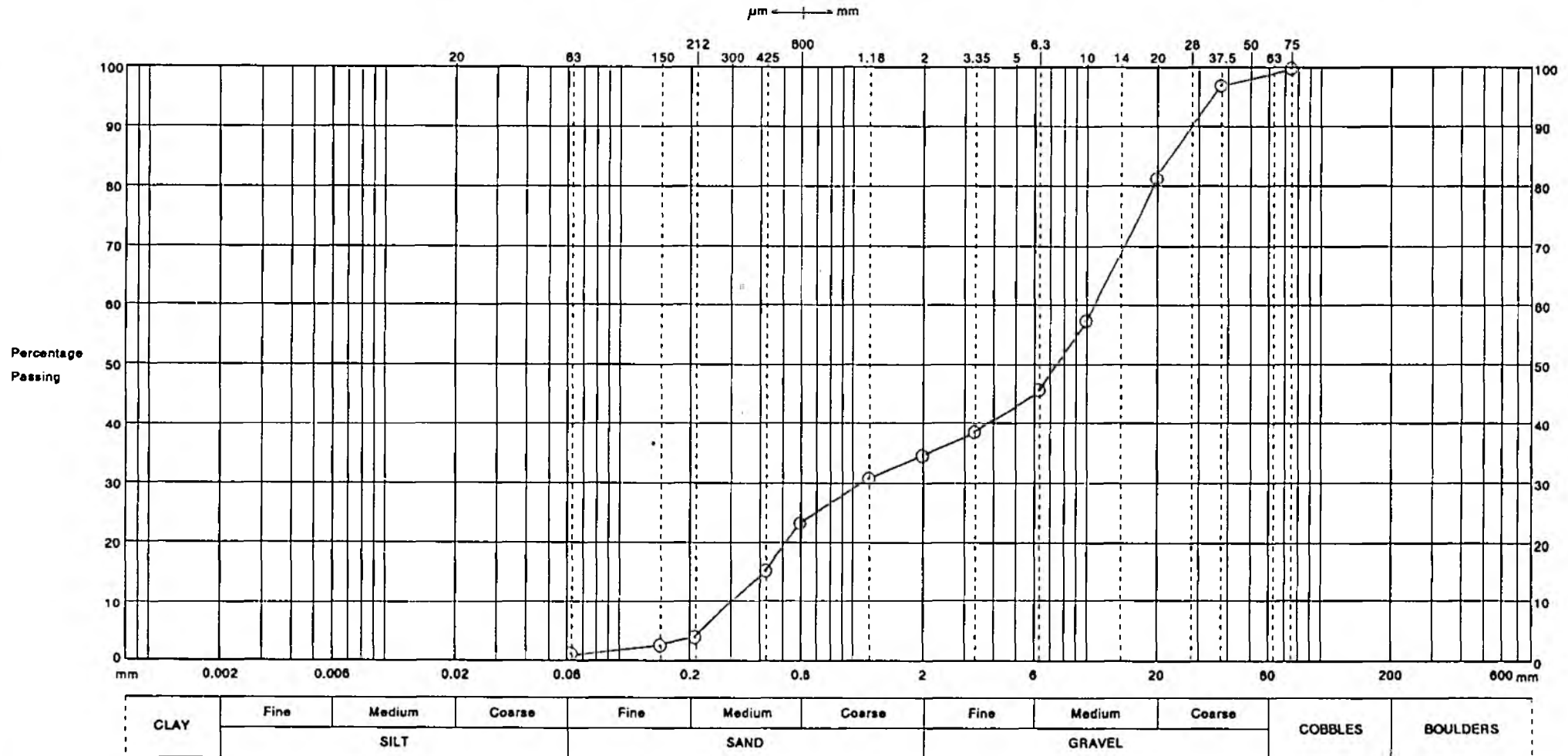
BH/TP Number
8A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

Sieve Size	Size μm									Size mm												
	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	1	3	4	-	16	23	31	35	39	-	46	57	-	81	-	97	100	-	-



Remarks

Method
Wet Sieve

Sample Number
85

Depth
6.50 - 7.00

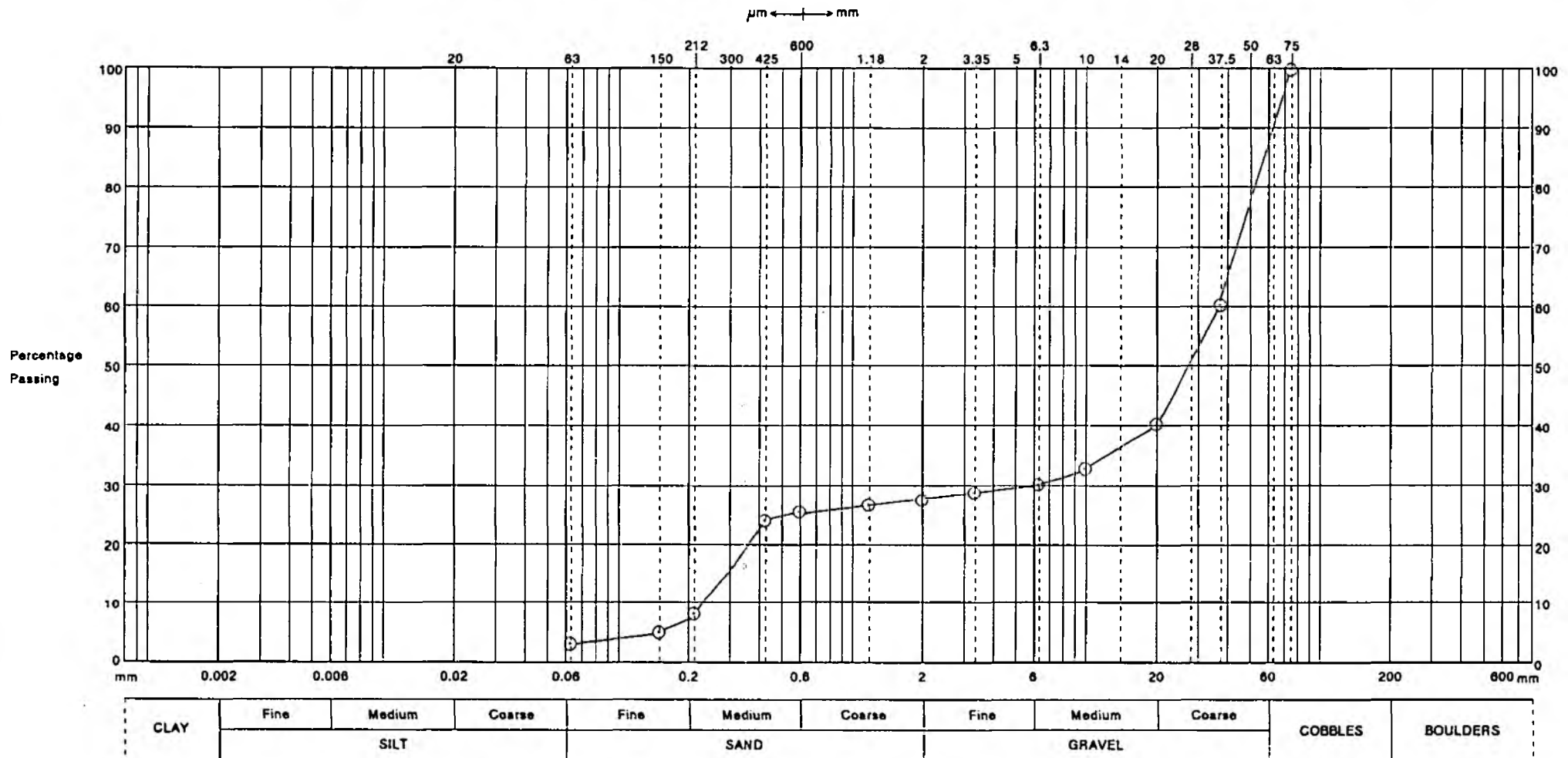
BH/TP Number
8A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	3	5	8	-	24	25	27	27	29	-	30	33	-	40	-	60	100	-	-



Remarks

Method
Wet Sieve

Sample Number
B7

Depth
8.50 - 9.00

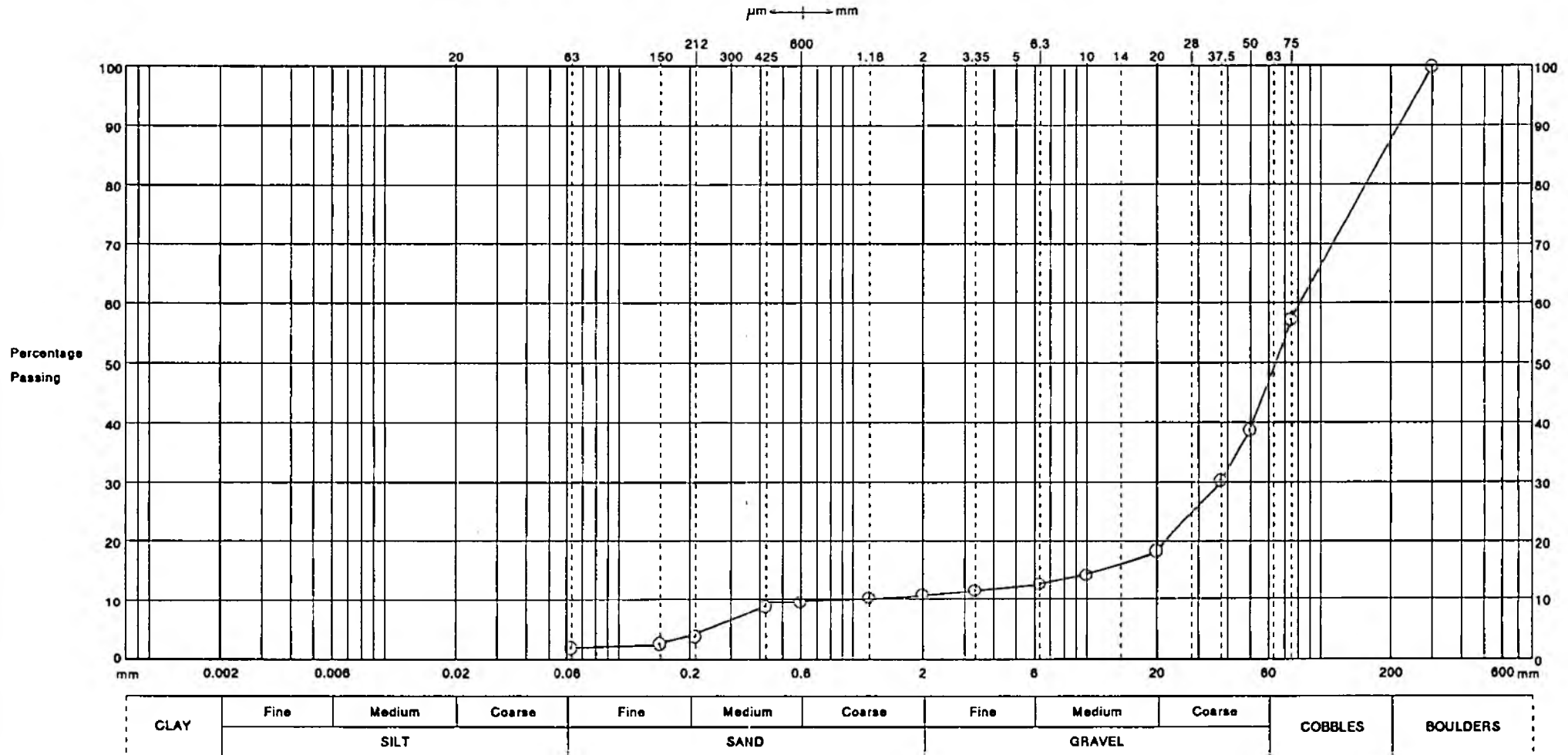
BH/TP Number
8A

6023

Site
EAST RUSTON

PARTICLE SIZE DISTRIBUTION

	Size μm									Size mm												
Sieve Size	2	6	20	63	150	212	300	425	600	1.18	2	3.35	5	6.3	10	14	20	28	37.5	75	125	300
Percentage by Mass Passing Sieve	-	-	-	2	3	4	-	9	10	10	11	12	-	13	15	-	19	-	30	39	57	100



Remarks

Method
Wet Sieve

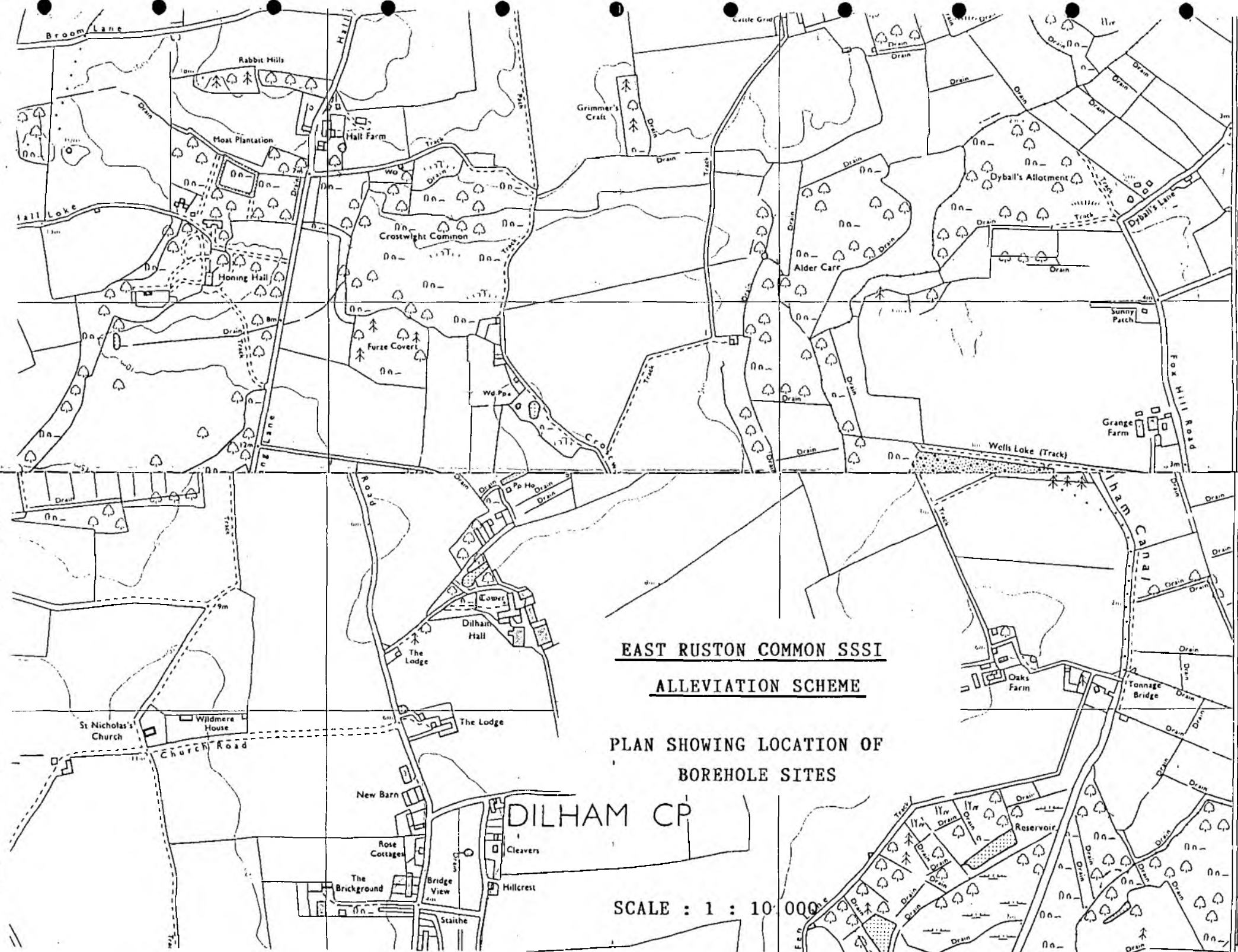
Sample Number
88

Depth
9.50 - 10.00

BH/TP Number
8A

6023

Site
EAST RUSTON

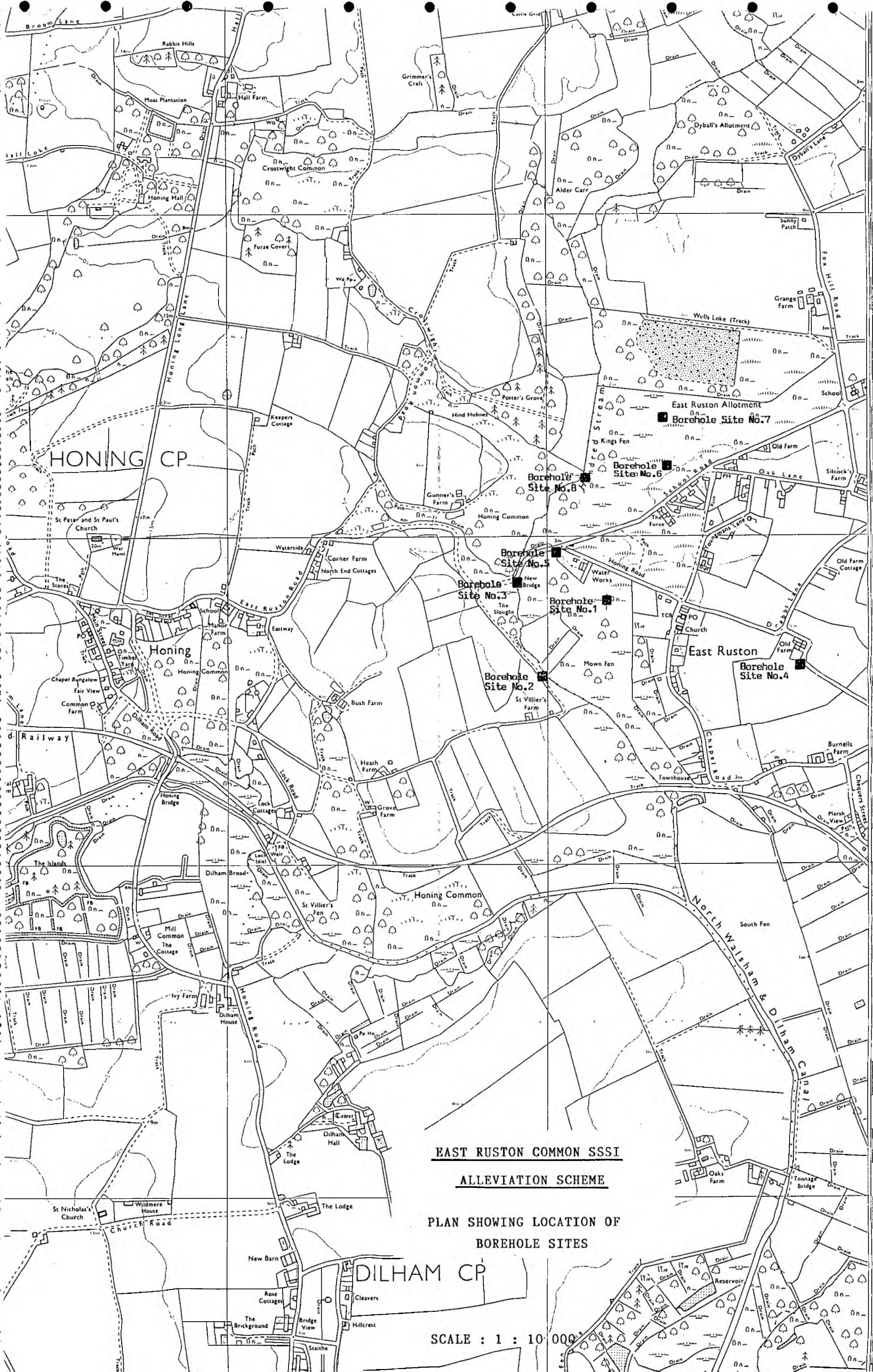


EAST RUSTON COMMON SSSI
ALLEVIATION SCHEME

**PLAN SHOWING LOCATION OF
BOREHOLE SITES**

DILHAM CP

SCALE : 1 : 10 000



EAST RUSTON COMMON SSSI

ALLEVIATION SCHEME

PLAN SHOWING LOCATION OF
BOREHOLE SITES

SCALE : 1 : 10 000

Soils Engineering Limited

Site investigation and soil testing

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