ASHDOWN SITE INVESTIGATION
L•I•M•I•T•E•D
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS1

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 10/07/2012 | End Date: 10/07/2012

Standpipe Installation	Samples and Testing: Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	DPSH Profile Blows/100mm (5, 15, 25)	Strata: Legend	Depth / Reduced Level	Strata Descriptions
							0.00	Ground Level
	J T	0.10					0.35	Topsoil.
	D	0.50					0.90	Dense brown slightly clayey very gravelly medium to coarse SAND. Gravel is angular fine to coarse flint. (River Terrace Deposits)
	D	1.00						Dense orange brown very gravelly medium to coarse SAND. Gravel is angular fine to coarse flint. (River Terrace Deposits)
	D	1.10	2.00				2.70	
	D H	3.00		90			4.00	Stiff orange brown and grey brown very sandy CLAY. (Earnley Sand Formation and Marsh Farm Formation)
								End of Borehole

Remarks:

No further progress below 4.0m depth - borehole collapsing within sand.

Groundwater at 1.0m depth 10 minutes after completion of borehole.

Borehole collapsed to 1.5m depth on completion.

Standpipe installed to 3.0m depth; 3.0m to 1.0m slotted pipe with gravel surround; 1.0m to ground level plain pipe with bentonite seal; completed with gas tap and security cover concreted flush with ground surface.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS2

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 10/07/2012 | End Date: 10/07/2012

Standpipe Installation	Samples and Testing: Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	DPSH Profile Blows/100mm (5 15 25)	Legend	Strata: Depth / Reduced Level	Strata Descriptions
							0.00	Ground Level
	J	0.10					0.30	Topsoil with occasional medium gravel of flint.
	J D	0.40 0.50					0.70	Firm orange brown and grey mottled slightly sandy gravelly CLAY. Gravel is angular medium flint and ironstone. (River Terrace Deposits)
	D	1.00	2.00				2.70	Dense orange brown very gravelly medium to coarse SAND. Gravel is angular fine to coarse flint. (River Terrace Deposits)
	D	3.00					3.00	Firm orange brown thinly laminated sandy CLAY. (Earnley Sand Formation and Marsh Farm Formation)
	D	4.00					4.00	Firm to stiff dark grey thinly interlaminated CLAY and light grey SILT. (Earnley Sand Formation and Marsh Farm Formation)
								End of Borehole

Remarks:

No further progress below 4.0m depth - borehole collapsing within sand.

Groundwater at 1.1m depth on completion of borehole.

Running sand noted below 1.7m depth. Borehole collapsed to 1.5m depth on completion.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

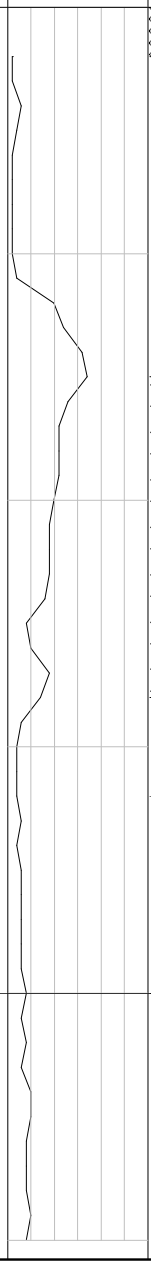
Borehole No.: WS3

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 10/07/2012 | End Date: 10/07/2012

Standpipe Installation	Samples and Testing: Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	DPSH Profile Blows/100mm (5 15 25)	Legend	Strata: Depth / Reduced Level	Strata Descriptions
							0.00	Ground Level
	J	0.10					0.20	Topsoil with occasional medium gravel of brick, ash/ clinker and flint.
	J	0.30						Firm light brown slightly gravelly silty CLAY. Gravel is fine flint. (River Terrace Deposits)
	H	0.50		50				
	D H	1.00		80				becoming very gravelly below 1.2m depth.
							1.50	Dense orange brown medium to coarse SAND and angular fine to coarse GRAVEL of flint. (River Terrace Deposits)
	D	2.00						
							2.80	Stiff orange brown CLAY with occasional partings of silty sand. (Earnley Sand Formation and Marsh Farm Formation)
	D H	3.00		80			3.20	Firm to stiff dark grey CLAY thinly interlaminated with light blue grey silty SAND. (Earnley Sand Formation and Marsh Farm Formation)
	D H	3.50		80			4.00	
								End of Borehole



Remarks:

No further progress below 4.0m depth - borehole collapsing in sand and gravel.

Groundwater seepage noted below 1.8m depth. Groundwater at 1.0m depth 30 minutes after completion of borehole.

Borehole collapsed to 1.5m depth on completion.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

ASHDOWN SITE INVESTIGATION
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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS4

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 10/07/2012 | End Date: 10/07/2012

Standpipe Installation	Samples and Testing: Sample Type	Depths: From (m)	Depths: To (m)	Vane/ Pen Test N Value	Strata: Legend	Depth / Reduced Level	Strata Descriptions
						0.00	Ground Level
	J	0.10				0.25	Topsoil with rare fragments of brick and clinker/ ash.
	J H	0.40 0.50		35		1.30	Firm brown slightly gravelly silty CLAY. Gravel is medium to coarse flint. (River Terrace Deposits)
	D H	1.00		40			
	D	1.40				1.50	Dense orange brown slightly clayey very gravelly medium to coarse SAND. Gravel is fine to coarse flint. (River Terrace Deposits)
	D	1.80				1.90	Dense orange brown and grey mottled gravelly silty medium SAND. Gravel is angular fine to medium flint. (River Terrace Deposits)
	D	3.00				3.30	Dense light brown medium to coarse SAND and angular fine to coarse GRAVEL of flint. (River Terrace Deposits)
	D H	3.50		90		3.70	Stiff orange brown slightly sandy CLAY. (Earnley Sand Formation and Marsh Farm Formation)
	D H	4.00		80		4.00	Firm dark grey CLAY thinly interlaminated with light grey silty SAND. (Earnley Sand Formation and Marsh Farm Formation)
							End of Borehole

Remarks:

No further progress below 4.0m depth - borehole collapsing in sand and gravel.

Moderate groundwater seepage noted below 2.0m depth. Groundwater at 1.3m depth 10 minutes after completion of borehole.

Running sand noted below 2.0m depth. Borehole collapsed to 3.5m depth on completion.

Standpipe installed to 3.5m depth; 3.5m to 1.0m slotted pipe with gravel surround; 1.0m to ground level plain pipe with bentonite seal; completed with gas tap and security cover concreted flush with ground surface.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS5

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 10/07/2012 | End Date: 10/07/2012

Standpipe Installation	Samples and Testing: Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	DPSH Profile Blows/100mm (5 15 25)	Legend	Strata: Depth / Reduced Level	Strata Descriptions
							0.00	Ground Level
	J	0.10					0.30	Topsoil.
	J H	0.40 0.50		50				Firm orange brown slightly gravelly silty CLAY. Gravel is fine flint. (River Terrace Deposits)
	D H	1.00		50			1.10	Dense orange coarse SAND and angular fine to coarse GRAVEL of flint. (River Terrace Deposits)
	D	2.00					3.30	
	D H	3.40		100			3.60	Stiff orange brown slightly sandy CLAY. (Earnley Sand Formation and Marsh Farm Formation)
	D H	4.00		65			4.00	Firm dark grey thinly interlaminated fine SAND and CLAY. (Earnley Sand Formation and Marsh Farm Formation)
								End of Borehole

Remarks:

No further progress below 4.0m depth - borehole collapsing in sand and gravel.

Groundwater at 1.35m depth 30 minutes after completion of borehole.

Running sand noted below 2.0m depth.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS6

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 11/07/2012

End Date: 11/07/2012

Standpipe Installation	Samples and Testing				Strata		
	Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	Legend	Depth / Reduced Level	Strata Descriptions
						0.00	Ground Level
	J	0.10				0.15	Topsoil.
	J	0.20					Firm brown slightly sandy slightly gravelly CLAY. Gravel is fine to medium flint. (River Terrace Deposits)
	D	0.40				0.50	
	J	0.60				0.70	Orange brown sandy very clayey angular fine to coarse GRAVEL of flint. (River Terrace Deposits)
	D	0.65					Dense brown very sandy angular fine to coarse GRAVEL of flint. (River Terrace Deposits)
	D	1.00	2.00			2.00	
	D	2.00	3.00			3.00	Dense light orange brown medium to coarse SAND and fine to coarse GRAVEL of flint. (River Terrace Deposits)
							End of Borehole

Remarks:

No further progress below 3.0m depth - borehole collapsing in gravel.

Groundwater at 1.0m depth on completion.

Borehole collapsed to 2.0m depth on completion.

Hand dug starter pit excavated to 1.0m depth.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

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Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS7

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 11/07/2012

End Date: 11/07/2012

Standpipe Installation	Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	DPSH Profile Blows/100mm (5 15 25)	Legend	Depth / Reduced Level	Strata Descriptions
							0.00	Ground Level
	J	0.25					0.30	Asphalt (120mm) over, MADE GROUND: Brown silty sandy coarse gravel and cobbles of flint (80mm) over,
	J	0.40					0.50	MADE GROUND: Brown slightly gravelly sandy clay. Gravel is fine to medium flint and rare brick.
	D	0.60						Firm light brown slightly sandy slightly gravelly CLAY. Gravel is fine flint. (River Terrace Deposits)
							1.10	Firm to stiff brown slightly gravelly CLAY. Gravel is fine to medium flint. (River Terrace Deposits)
	D	1.50	2.00				2.30	Dense dark grey brown slightly clayey medium to coarse SAND and angular fine to coarse GRAVEL of flint. (River Terrace Deposits)
	D	2.50					2.80	Stiff orange brown sandy gravelly CLAY. Gravel is angular fine to coarse flint. (River Terrace Deposits)
	D H	3.00		65			3.30	Firm brown slightly sandy CLAY. (Earnley Sand Formation and Marsh Farm Formation)
								End of Borehole

Remarks:
No further progress below 3.3m depth - borehole collapsing.

Surface water/ groundwater at ground level on completion.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
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Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS8

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 11/07/2012 | End Date: 11/07/2012

Standpipe Installation	Samples and Testing: Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	DPSH Profile Blows/100mm (5 15 25)	Strata: Legend	Depth / Reduced Level	Strata Descriptions
							0.00	Ground Level
	J	0.15					0.30	Topsoil.
	J	0.40						Firm light grey and orange mottled CLAY. (River Terrace Deposits)
	H	0.50		65				
	D H	1.00		75				
							1.70	
	D	1.80					2.00	Medium dense light grey very gravelly medium to coarse SAND. Gravel is angular medium to coarse flint. (River Terrace Deposits)
								Firm to stiff grey and orange brown very sandy CLAY. (Earnley Sand Formation and Marsh Farm Formation)
	H	2.50		90				
	D	3.00					3.30	
								End of Borehole

Remarks:

No further progress below 3.3m depth - borehole collapsing in sand.

Groundwater at 0.5m depth on completion of borehole.

Borehole collapsed to 2.0m depth on completion.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

ASHDOWN SITE INVESTIGATION
L•I•M•I•T•E•D
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Borehole No.: WS9

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 11/07/2012

End Date: 11/07/2012

Standpipe Installation	Samples and Testing: Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	DPSH Profile Blows/100mm (5, 15, 25)	Strata: Legend	Depth / Reduced Level	Strata Descriptions
							0.00	Ground Level
	J	0.10					0.30	Topsoil.
	J D H	0.40 0.50		65			0.80	Firm light brown slightly gravelly CLAY. Gravel is fine to medium flint. (River Terrace Deposits) becoming gravelly below 0.5m depth.
	D	1.00	2.00				2.20	Dense light brown medium to coarse SAND and angular fine to coarse GRAVEL of flint. (River Terrace Deposits)
								End of Borehole

Remarks:

No further progress below 2.2m depth - borehole collapsing in sand and gravel.

Borehole collapsed to 1.0m depth on completion.

Standpipe installed to 2.0m depth; 2.0m to 1.0m slotted pipe with gravel surround; 1.0m to ground level plain pipe with bentonite seal; completed with gas tap and security cover concreted flush with ground surface.

Excavation Method: Dynamic Sampler

Borehole Diameter: Various

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Trial Pit No.: TP1

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 10/07/2012 | End Date: 10/07/2012

Samples and Testing				Strata		
Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	Legend	Depth / Reduced Level	Strata Descriptions
					0.00	Ground Level
D	0.35				0.30	Pea shingle surface (50mm) over, Brown slightly gravelly silty CLAY. Gravel is fine to medium flint. (River Terrace Deposits)
P*	0.35	0.75	40		0.35	Stiff very gravelly CLAY. Gravel is subangular to rounded fine to coarse flint. (River Terrace Deposits)
						End of Pit

Remarks:

Trial pit dry and stable on completion.

P* - blow count for 250mm penetration only.

Excavation Method: Hand Dug

Dimensions:

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Trial Pit No.: TP2

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 10/07/2012 | End Date: 10/07/2012

Samples and Testing				Strata		
Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	Legend	Depth / Reduced Level	Strata Descriptions
					0.00	Ground Level
D	0.40				0.30	Pea shingle surface (50mm) over, Firm dark brown slightly gravelly silty CLAY. Gravel is fine flint. (River Terrace Deposits)
P*	0.40	0.70	23		0.40	Stiff dark brown sandy gravelly CLAY. Gravel is subangular medium to coarse flint. (River Terrace Deposits)
						End of Pit

Remarks:

Trial pit dry and stable on completion.

P* - blow count for 150mm penetration only.

Excavation Method: Hand Dug

Dimensions:

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Trial Pit No.: Soak Pit 1

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 11/07/2012 | End Date: 11/07/2012

Samples and Testing				Strata		
Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	Legend	Depth / Reduced Level	Strata Descriptions
					0.00	Ground Level
					0.25	Topsoil with rare fragments of brick and clinker/ ash.
					0.40	Firm brown slightly gravelly silty CLAY. Gravel is medium to coarse flint. (River Terrace Deposits)
						End of Pit

Remarks:
Trial pit dry and stable on completion.

Excavation Method: Hand Dug

Dimensions: 0.45m x 0.35m

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
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Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Trial Pit No.: Soak Pit 2

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 11/07/2012 | End Date: 11/07/2012

Samples and Testing				Strata		
Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	Legend	Depth / Reduced Level	Strata Descriptions
					0.00	Ground Level
J T	0.15				0.20	Topsoil (100mm) over, MADE GROUND: Brown silty clay with fine to coarse gravel of flint and concrete.
D	0.30				0.30	Firm light brown CLAY.
						End of Pit

Remarks:
Trial pit dry and stable on completion.

Excavation Method: Hand Dug

Dimensions: 0.45m x 0.35m

Made By: PC

ASHDOWN SITE INVESTIGATION LIMITED
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS
Swanborough Farm
Swanborough
Lewes, East Sussex
BN7 3PF

Trial Pit No.: Soak Pit 3

Site Name: Stubbington Study Centre, Fareham, Hampshire

Job No.: LW23157

Start Date: 11/07/2012 | End Date: 11/07/2012

Samples and Testing				Strata		
Sample Type	Depths From (m)	Depths To (m)	Vane/ Pen Test N Value	Legend	Depth / Reduced Level	Strata Descriptions
					0.00	Ground Level
					0.12	Topsoil (50mm) over, MADE GROUND: Brown slightly sandy clay with rare cobbles and medium to coarse gravel of brick.
D	0.40				0.40	Firm light brown CLAY.
						End of Pit

Remarks:
Trial pit dry and stable on completion.

Excavation Method: Hand Dug

Dimensions: 0.3m x 0.3m

Made By: PC

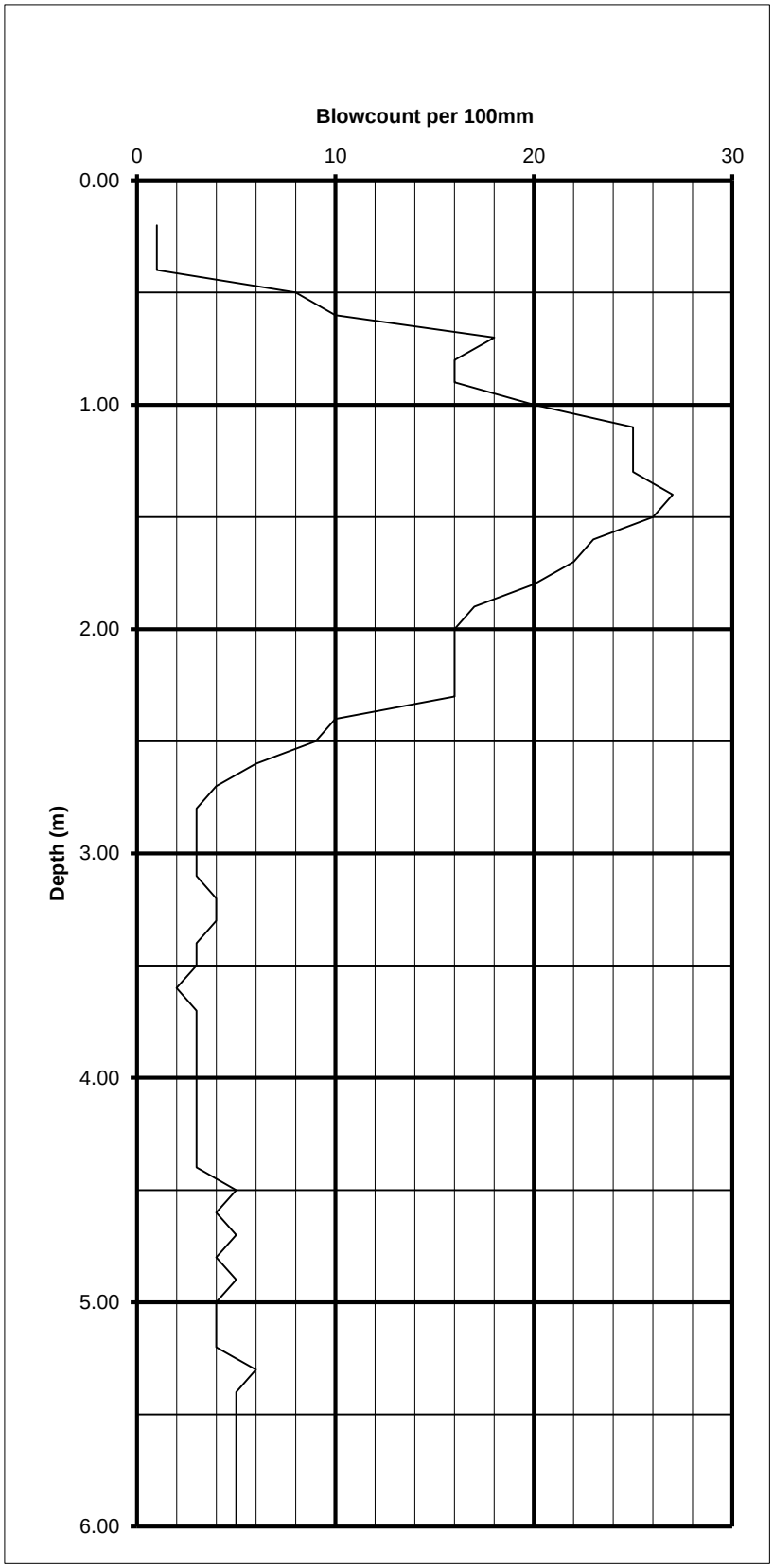
ASHDOWN SITE INVESTIGATION LTD

DPSH Continuous Dynamic Probe N_{100} vs Depth Profile

SITE Stubbington Study Centre, Fareham, Hampshire **Report Ref.** LW23157

DP No. WS1

Depth (m)	Blows	Torque (kgm)
0.00		
0.10		
0.20	1	
0.30	1	
0.40	1	
0.50	8	
0.60	10	
0.70	18	
0.80	16	
0.90	16	
1.00	20	
1.10	25	
1.20	25	
1.30	25	
1.40	27	
1.50	26	
1.60	23	
1.70	22	
1.80	20	
1.90	17	
2.00	16	
2.10	16	
2.20	16	
2.30	16	
2.40	10	
2.50	9	
2.60	6	
2.70	4	
2.80	3	
2.90	3	
3.00	3	
3.10	3	
3.20	4	
3.30	4	
3.40	3	
3.50	3	
3.60	2	
3.70	3	
3.80	3	
3.90	3	
4.00	3	
4.10	3	
4.20	3	
4.30	3	
4.40	3	
4.50	5	
4.60	4	
4.70	5	
4.80	4	
4.90	5	
5.00	4	
5.10	4	
5.20	4	
5.30	6	
5.40	5	
5.50	5	
5.60	5	
5.70	5	
5.80	5	
5.90	5	
6.00	5	



Comments

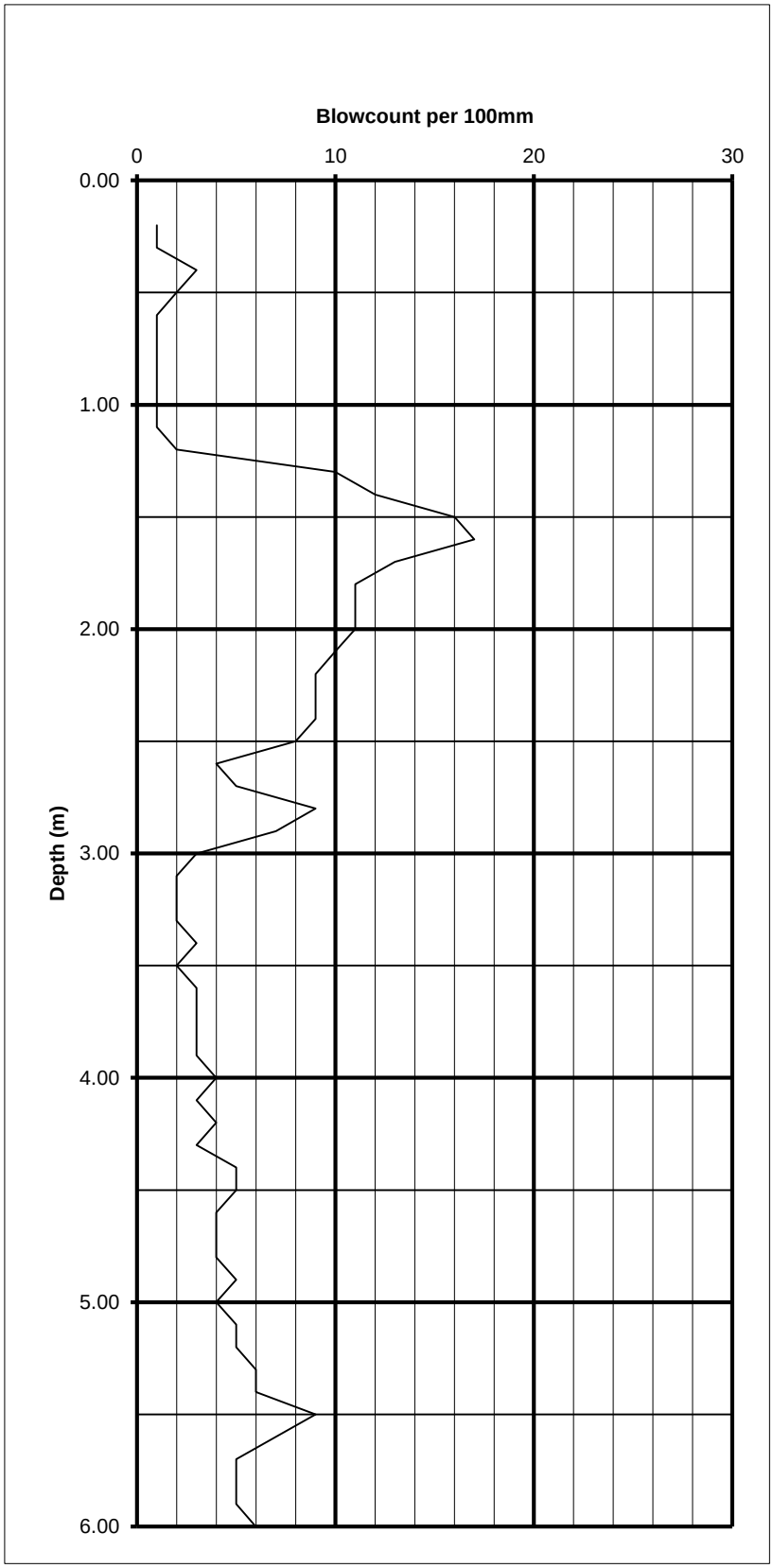
ASHDOWN SITE INVESTIGATION LTD

DPSH Continuous Dynamic Probe N_{100} vs Depth Profile

SITE Stubbington Study Centre, Fareham, Hampshire **Report Ref.** LW23157

DP No. WS3

Depth (m)	Blows	Torque (kgm)
0.00		
0.10		
0.20	1	
0.30	1	
0.40	3	
0.50	2	
0.60	1	
0.70	1	
0.80	1	
0.90	1	
1.00	1	
1.10	1	
1.20	2	
1.30	10	
1.40	12	
1.50	16	
1.60	17	
1.70	13	
1.80	11	
1.90	11	
2.00	11	
2.10	10	
2.20	9	
2.30	9	
2.40	9	
2.50	8	
2.60	4	
2.70	5	
2.80	9	
2.90	7	
3.00	3	
3.10	2	
3.20	2	
3.30	2	
3.40	3	
3.50	2	
3.60	3	
3.70	3	
3.80	3	
3.90	3	
4.00	4	
4.10	3	
4.20	4	
4.30	3	
4.40	5	
4.50	5	
4.60	4	
4.70	4	
4.80	4	
4.90	5	
5.00	4	
5.10	5	
5.20	5	
5.30	6	
5.40	6	
5.50	9	
5.60	7	
5.70	5	
5.80	5	
5.90	5	
6.00	6	



Comments

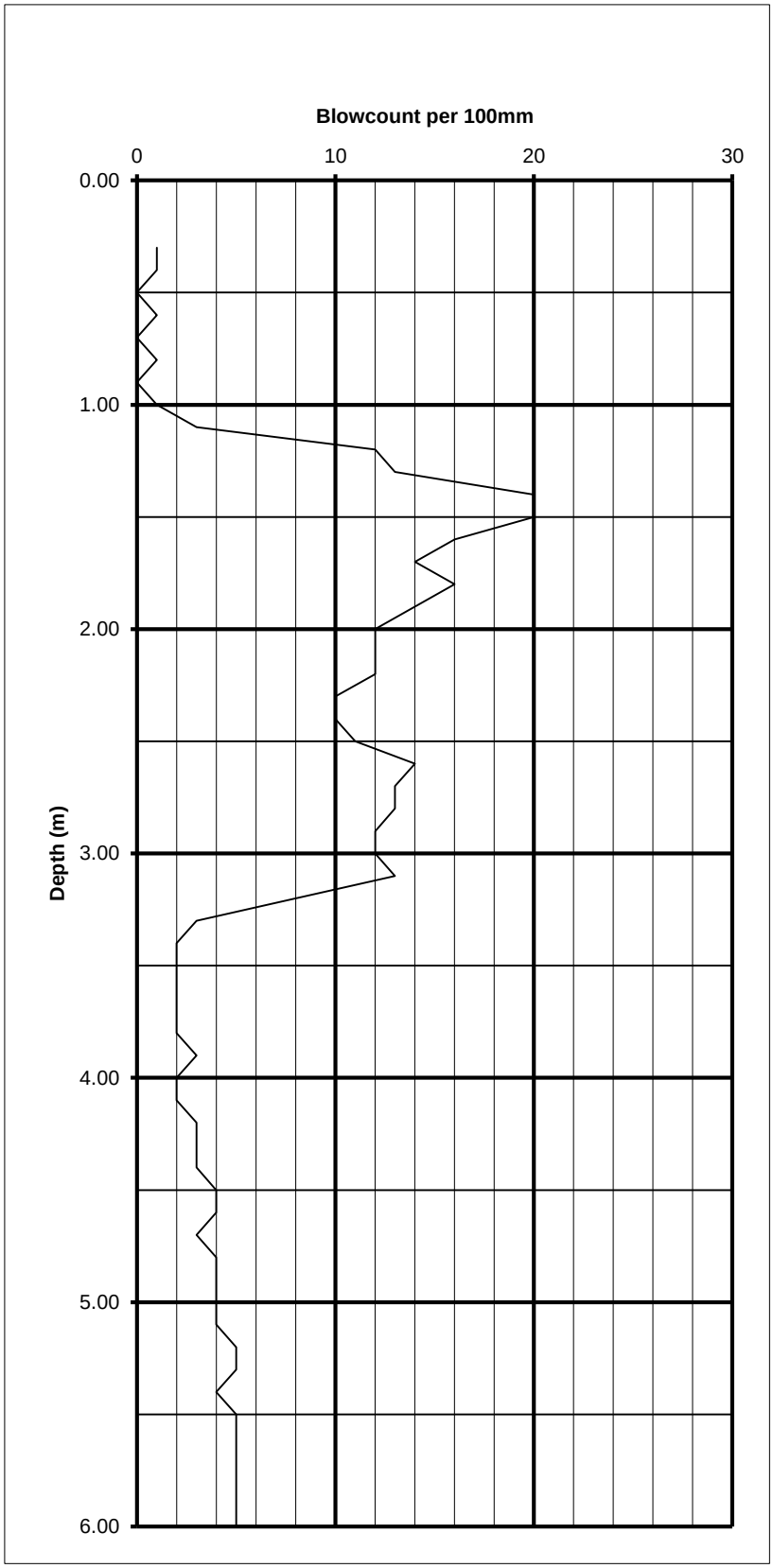
ASHDOWN SITE INVESTIGATION LTD

DPSH Continuous Dynamic Probe N_{100} vs Depth Profile

SITE Stubbington Study Centre, Fareham, Hampshire **Report Ref.** LW23157

DP No. WS5

Depth (m)	Blows	Torque (kgm)
0.00		
0.10		
0.20		
0.30	1	
0.40	1	
0.50	0	
0.60	1	
0.70	0	
0.80	1	
0.90	0	
1.00	1	
1.10	3	
1.20	12	
1.30	13	
1.40	20	
1.50	20	
1.60	16	
1.70	14	
1.80	16	
1.90	14	
2.00	12	
2.10	12	
2.20	12	
2.30	10	
2.40	10	
2.50	11	
2.60	14	
2.70	13	
2.80	13	
2.90	12	
3.00	12	
3.10	13	
3.20	8	
3.30	3	
3.40	2	
3.50	2	
3.60	2	
3.70	2	
3.80	2	
3.90	3	
4.00	2	
4.10	2	
4.20	3	
4.30	3	
4.40	3	
4.50	4	
4.60	4	
4.70	3	
4.80	4	
4.90	4	
5.00	4	
5.10	4	
5.20	5	
5.30	5	
5.40	4	
5.50	5	
5.60	5	
5.70	5	
5.80	5	
5.90	5	
6.00	5	



Comments

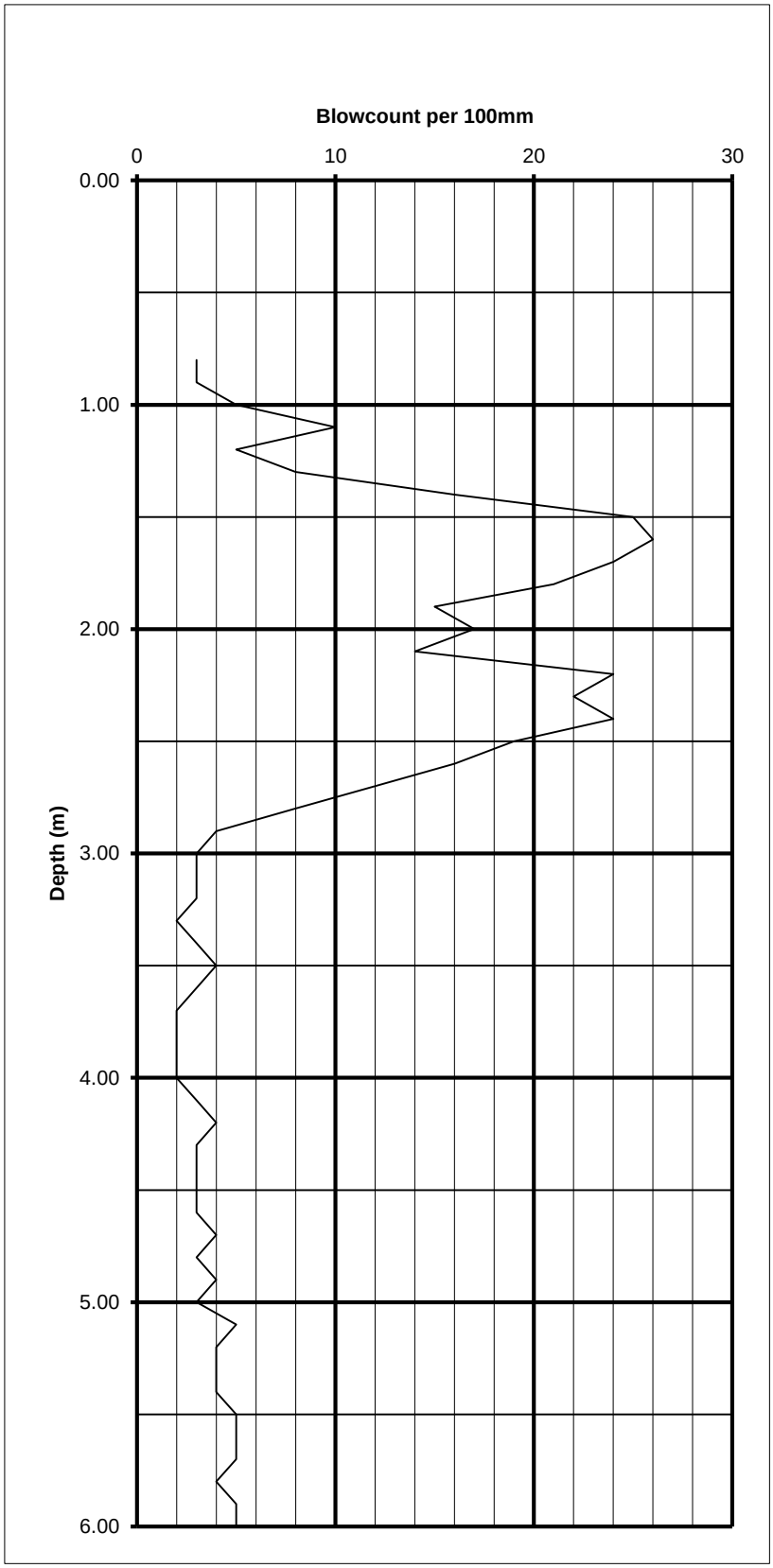
ASHDOWN SITE INVESTIGATION LTD

DPSH Continuous Dynamic Probe N_{100} vs Depth Profile

SITE Stubbington Study Centre, Fareham, Hampshire **Report Ref.** LW23157

DP No. WS7

Depth (m)	Blows	Torque (kgm)
0.00		
0.10		
0.20		
0.30		
0.40		
0.50		
0.60		
0.70		
0.80	3	
0.90	3	
1.00	5	
1.10	10	
1.20	5	
1.30	8	
1.40	16	
1.50	25	
1.60	26	
1.70	24	
1.80	21	
1.90	15	
2.00	17	
2.10	14	
2.20	24	
2.30	22	
2.40	24	
2.50	19	
2.60	16	
2.70	12	
2.80	8	
2.90	4	
3.00	3	
3.10	3	
3.20	3	
3.30	2	
3.40	3	
3.50	4	
3.60	3	
3.70	2	
3.80	2	
3.90	2	
4.00	2	
4.10	3	
4.20	4	
4.30	3	
4.40	3	
4.50	3	
4.60	3	
4.70	4	
4.80	3	
4.90	4	
5.00	3	
5.10	5	
5.20	4	
5.30	4	
5.40	4	
5.50	5	
5.60	5	
5.70	5	
5.80	4	
5.90	5	
6.00	5	



Comments

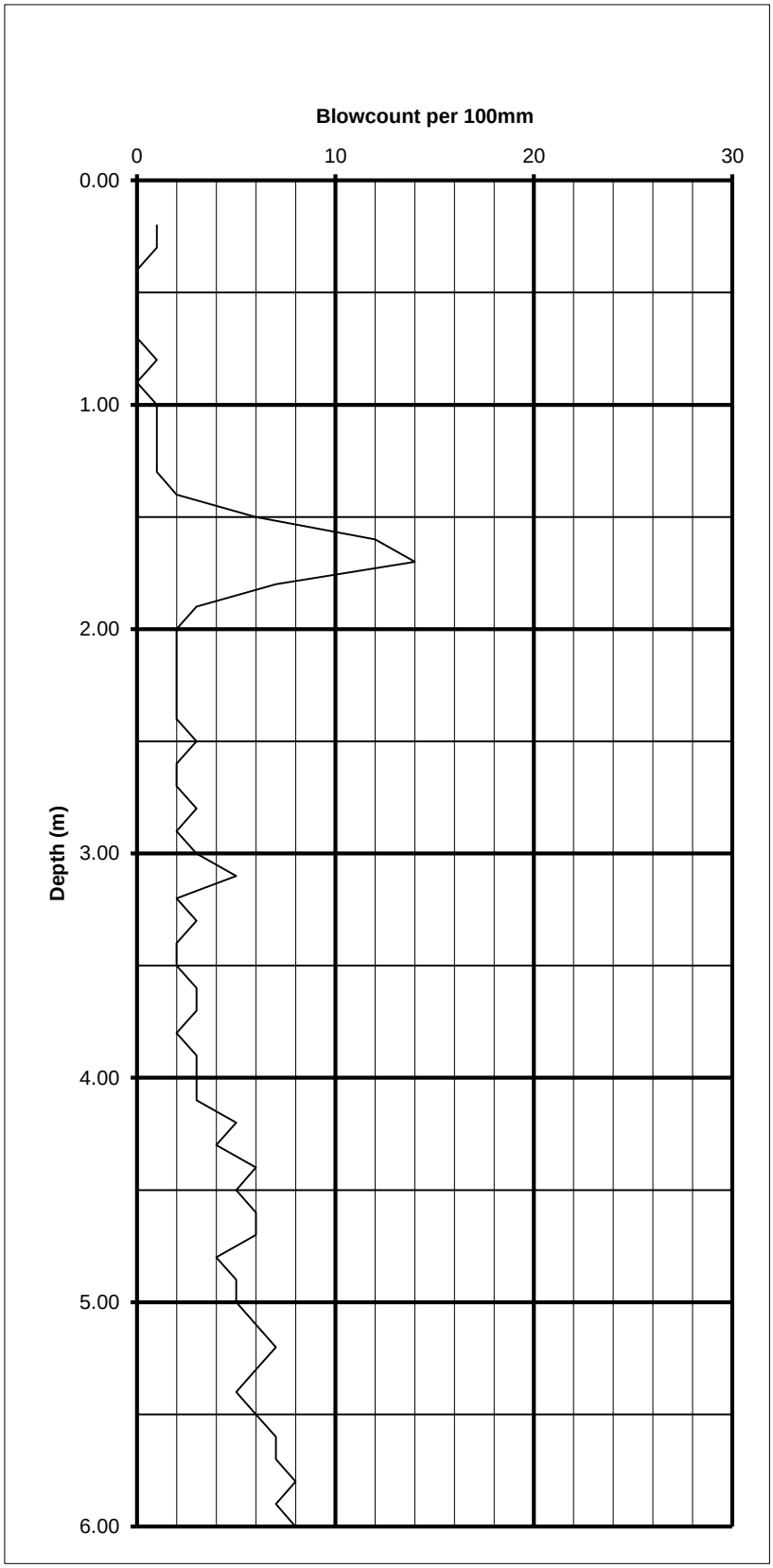
ASHDOWN SITE INVESTIGATION LTD

DPSH Continuous Dynamic Probe N_{100} vs Depth Profile

SITE Stubbington Study Centre, Fareham, Hampshire **Report Ref.** LW23157

DP No. WS8

Depth (m)	Blows	Torque (kgm)
0.00		
0.10		
0.20	1	
0.30	1	
0.40	0	
0.50	0	
0.60	0	
0.70	0	
0.80	1	
0.90	0	
1.00	1	
1.10	1	
1.20	1	
1.30	1	
1.40	2	
1.50	6	
1.60	12	
1.70	14	
1.80	7	
1.90	3	
2.00	2	
2.10	2	
2.20	2	
2.30	2	
2.40	2	
2.50	3	
2.60	2	
2.70	2	
2.80	3	
2.90	2	
3.00	3	
3.10	5	
3.20	2	
3.30	3	
3.40	2	
3.50	2	
3.60	3	
3.70	3	
3.80	2	
3.90	3	
4.00	3	
4.10	3	
4.20	5	
4.30	4	
4.40	6	
4.50	5	
4.60	6	
4.70	6	
4.80	4	
4.90	5	
5.00	5	
5.10	6	
5.20	7	
5.30	6	
5.40	5	
5.50	6	
5.60	7	
5.70	7	
5.80	8	
5.90	7	
6.00	8	



Comments

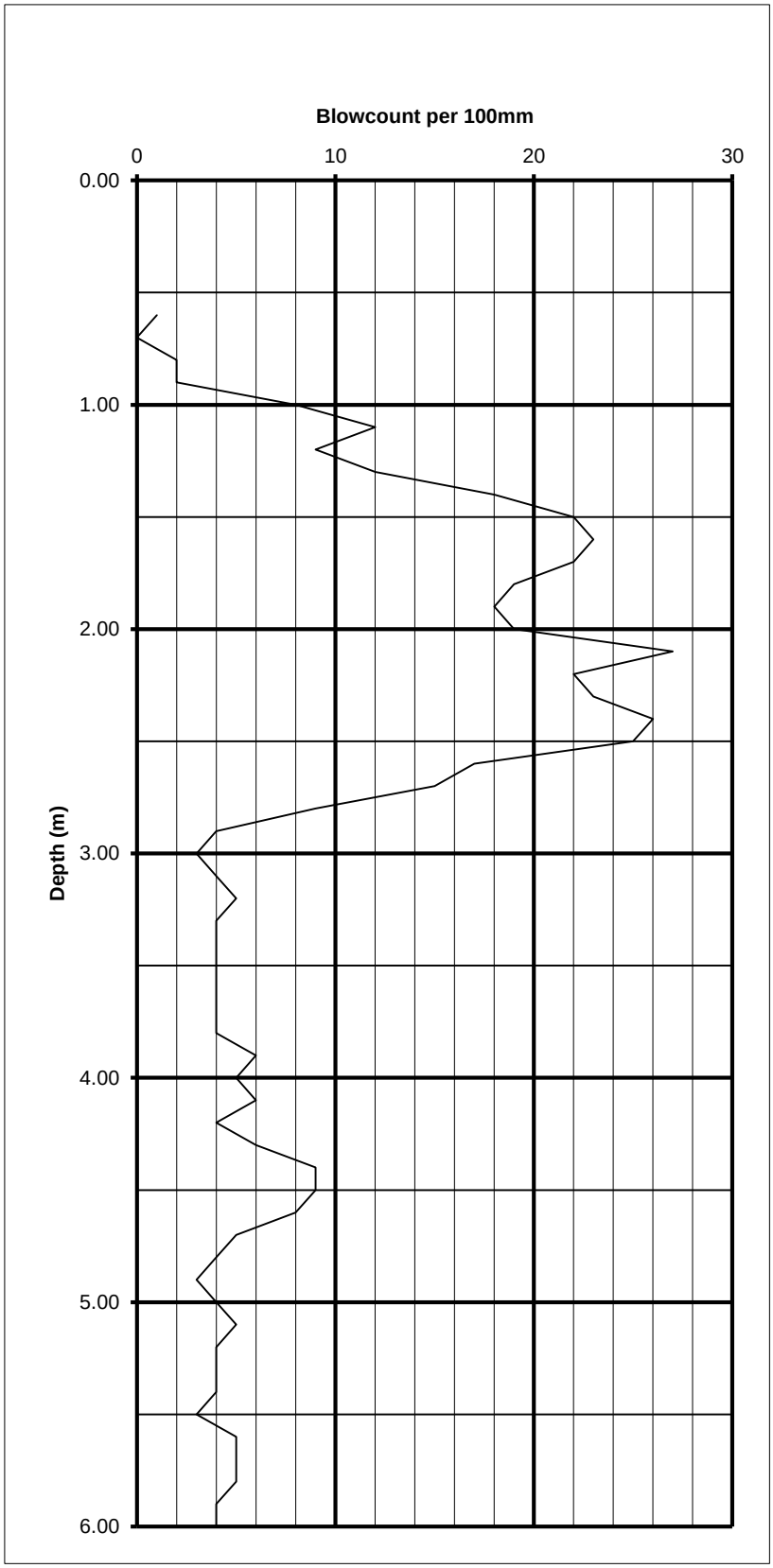
ASHDOWN SITE INVESTIGATION LTD

DPSH Continuous Dynamic Probe N_{100} vs Depth Profile

SITE Stubbington Study Centre, Fareham, Hampshire **Report Ref.** LW23157

DP No. WS9

Depth (m)	Blows	Torque (kgm)
0.00		
0.10		
0.20		
0.30		
0.40		
0.50		
0.60	1	
0.70	0	
0.80	2	
0.90	2	
1.00	8	
1.10	12	
1.20	9	
1.30	12	
1.40	18	
1.50	22	
1.60	23	
1.70	22	
1.80	19	
1.90	18	
2.00	19	
2.10	27	
2.20	22	
2.30	23	
2.40	26	
2.50	25	
2.60	17	
2.70	15	
2.80	9	
2.90	4	
3.00	3	
3.10	4	
3.20	5	
3.30	4	
3.40	4	
3.50	4	
3.60	4	
3.70	4	
3.80	4	
3.90	6	
4.00	5	
4.10	6	
4.20	4	
4.30	6	
4.40	9	
4.50	9	
4.60	8	
4.70	5	
4.80	4	
4.90	3	
5.00	4	
5.10	5	
5.20	4	
5.30	4	
5.40	4	
5.50	3	
5.60	5	
5.70	5	
5.80	5	
5.90	4	
6.00	4	



Comments

ASHDOWN SITE INVESTIGATION LIMITED

Site: Stubbington Study Centre, Fareham, Hampshire	Report No.: LW23157 Sheet No.: 1 of 2

SUMMARY OF TRIAL PIT FALLING HEAD SOAKAGE TEST RESULTS

Borehole **Soak Pit 1**	
Time (mins)	Depth to water (m)
0	0.10
2	0.12
5	0.13
15	0.15
30	0.15
60	0.19
100	0.22
Pit Length - 0.20m Pit Width - 0.20m Pit Depth - 0.40m	

Borehole **Soak Pit 2**	
Time (mins)	Depth to water (m)
0	0.12
1	0.14
2	0.14
4	0.14
51	0.23
120	0.24
Pit Length - 0.40m Pit Width - 0.35m Pit Depth - 0.30m	

ASHDOWN SITE INVESTIGATION LIMITED

Site: Stubbington Study Centre, Fareham, Hampshire	Report No.: LW23157 Sheet No.: 2 of 2

SUMMARY OF TRIAL PIT FALLING HEAD SOAKAGE TEST RESULTS

Borehole **Soak Pit 3 (Test 1)**	
Time (mins)	Depth to water (m)
0	0.14
1	0.16
2	0.17
4	0.19
20	0.28
40	Dry
Pit Length - 0.30m Pit Width - 0.30m Pit Depth - 0.40m	

Borehole **Soak Pit 3 (Test 2)**	
Time (mins)	Depth to water (m)
0	0.16
1	0.16
2	0.17
4	0.17
6	0.18
42	0.24
73	0.27
150	0.34
Pit Length - 0.30m Pit Width - 0.30m Pit Depth - 0.40m	

ASHDOWN SITE INVESTIGATION LIMITED

Site: Stubbington Study Centre, Fareham, Hampshire	Report No.: LW23157 Sheet No.: 1 of 1

SUMMARY OF STANDING WATER DEPTHS

WS1

Date	Standing Water Depth (m bgl)
27/07/12	1.10

WS4

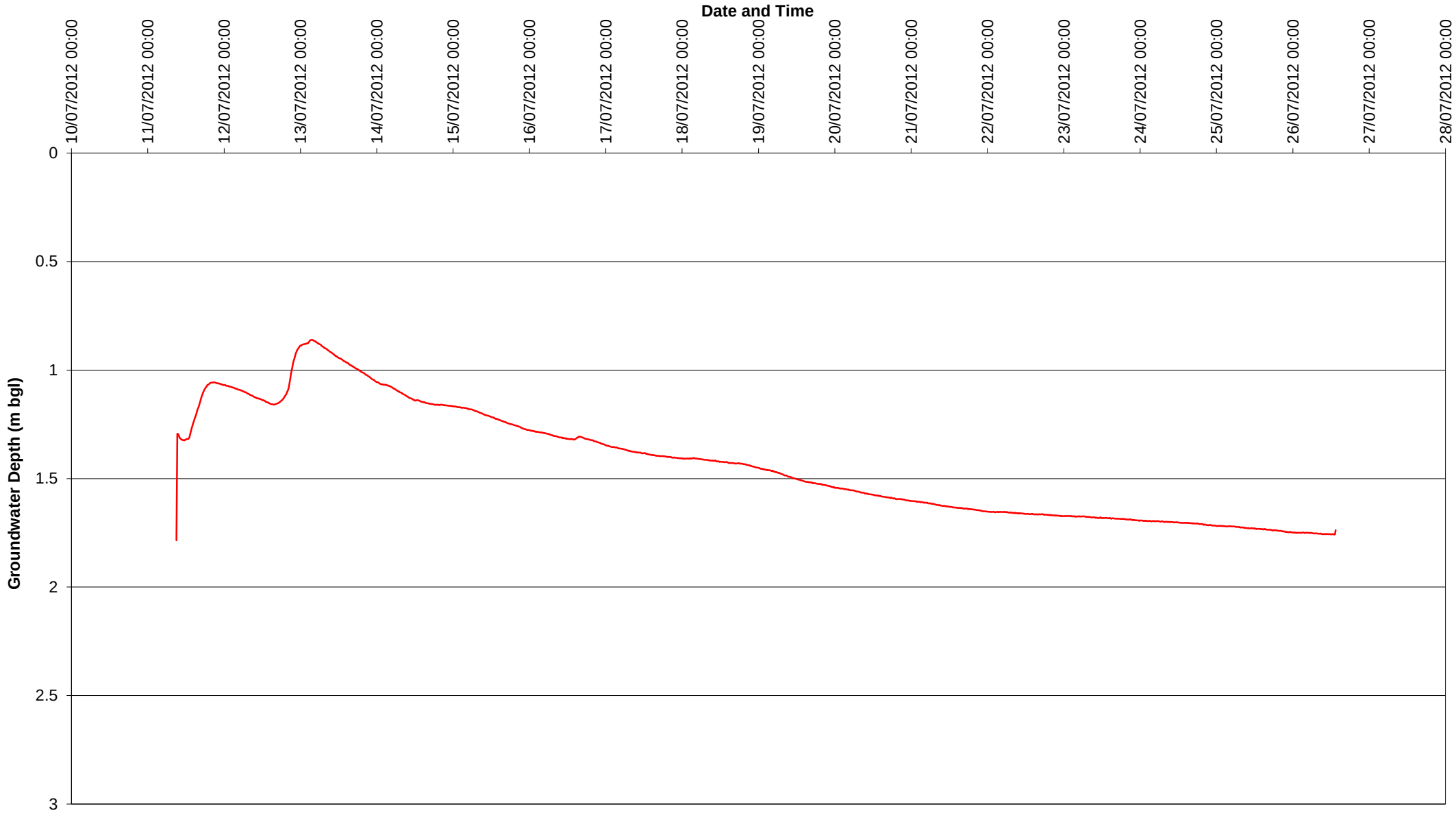
Date	Standing Water Depth (m bgl)
27/07/12	1.70

WS9

Date	Standing Water Depth (m bgl)
27/07/12	1.00

ASHDOWN SITE INVESTIGATION LIMITED
Standing Groundwater Monitoring Results - WS4

Site: Stubbington Study Centre, Fareham, Hampshire	Report No. : LW23157



APPENDIX B

Geotechnical Laboratory Testing Notes

Geotechnical Test Results

Contamination Test Results

GEOTECHNICAL LABORATORY TESTING NOTES

1 Index Tests

Index (Atterberg Limit) tests are undertaken on samples of fine grained soils provide the primary information for the classification of fine grained soils.

Fine grained soil is tested to determine its liquid and plastic limits, which are moisture contents that define boundaries between material consistency states. These tests are used to evaluate indices used for soil identification and to help determine the shrinkage and swelling characteristics of the soil under conditions of changing moisture content. The tests are carried out in accordance with BS1377: Part 2: 1990 + A1:1996 Classification tests.

The consistency index is derived from the Index Tests and is summarized in the following table. These divisions may be approximate, particularly for low plasticity soils.

Consistency	Consistency Index
Very Soft	<0.25
Soft	0.25 to 0.50
Firm	0.50 to 0.75
Stiff	0.75 to 1.00
Very Stiff	>1.00

Based on BN EN ISO 14688-2:2004

2 Particle Size Distribution Tests

Sieve analyses are carried out soil samples to establish their particle size distribution that can assist in the assessment of the permeability and classification of granular soils.

The tests are carried out in accordance with BS1377: Part 2: 1990 + A1:1996 Classification tests.

3 Natural Moisture/ Saturated Moisture Content Determination of Chalk

The results of natural moisture or saturated moisture content tests of disturbed samples of chalk are used to assist in the classification of the chalk to determine key geotechnical parameters of strength, density and crushing properties.

The tests are carried out in accordance with BS1377: Part 2: 1990 + A1:1996 Classification tests.

4 Soil Suction Testing

Soil suction tests are undertaken for the determination of the state of desiccation in clay soils.

The testing is carried out in accordance with the Building Research Establishment Information Paper IP4/93, dated February 1993.

5 Triaxial Compression Tests

Undrained triaxial compression tests are carried out on undisturbed samples of cohesive soil in order to assist in the determination of the undrained shear strength of the soil. The results of moisture content and density determinations are also included.

The tests are carried out in accordance with BS1377: Part 7: 1990 + A1:1994 Shear strength tests (total stress).

6 Shear Vane and Hand Penetrometer Testing

Undisturbed samples are tested in the laboratory using a Geonor Hand Shear Vane for the determination of their undrained shear strength.

The vane tests are carried out in general accordance with BS1377: Part 7: 1990 + A1:1994 Shear strength tests (total stress).

7 One Dimensional Consolidation Tests

One-dimensional consolidation tests are performed on undisturbed soil samples to ascertain their settlement characteristics.

The tests are carried out in accordance with BS1377: Part 5: 1990 + A1:1994 Compressibility, Permeability and Durability tests.

8 Dry Density / Moisture Content Relationship (Compaction) Testing

Compaction testing for the determination of the dry density / moisture content relationship is carried out on using either a 2.5kg, 4.5kg hammer or a vibrating hammer.

The tests are carried out in accordance with the British Standard BS1377: Part 4: 1990 + A1 & A2:2002 Compaction-related tests.

9 California Bearing Ratio

The soil is usually compacted at the as dug “natural” moisture content and often at moisture contents around the natural moisture content.

The California bearing ratio is determined in accordance with the British Standard BS1377: Part 4: 1990 + A1 & A2:2002 Compaction related tests.

10 Chemical Testing

Soil samples are tested for their concentration of water soluble sulphate and pH for use in concrete mix design.

Water samples are tested for total sulphate concentration and pH value.

Where a water soluble sulphate content in soils or a total sulphate content in groundwater exceeds 3000mg/l SO_4 the magnesium sulphate content of the samples is required to be determined (BRE Special Digest 1:2005).

ASHDOWN SITE INVESTIGATION LTD

Site:	Stubbington Study Centre, Fareham, Hampshire	Report No: Sheet No:	LW23157 1 of 2

SOIL CLASSIFICATION SUMMARY

Sample No.	Depth (m)	Nat. Moist. Cont. (w %)	Equiv. Moist. Cont. (w_a %)	Atterberg Limits W_l %	W_p %	I_p %	Class'n	Cons.Index (I_c)	% passing 425 μm sieve	Visual Description of Sample
WS1	3.00	23	23	38	18	20	CI	0.77	100	Stiff brown slightly sandy CLAY.
WS2	0.50	18	28	42	16	26	CI	0.54	60	Firm brown grey and orange brown mottled gravelly sandy CLAY. Gravel is fine to medium flint and ironstone.
	3.00	23	24	47	16	31	CI	0.75	98	Firm orange brown, grey brown and dark brown (occasionally black stained) slightly gravelly sandy CLAY. Gravel is fine to coarse flint.
	4.00	18	18	34	17	17	CL	0.92	100	Stiff black, grey and (occasionally) brown slightly sandy CLAY.
WS3	1.00	14	24	44	16	28	CI	0.70	54	Firm orange brown and light grey slightly sandy gravelly silty CLAY. Gravel (38%) is fine to coarse flint.
WS4	1.00	19	19	31	18	13	CL	0.92	98	Stiff brown slightly gravelly slightly sandy CLAY. Gravel is fine flint.
WS5	1.00	20	23	38	16	22	CI	0.68	76	Firm brown slightly gravelly slightly sandy CLAY. Gravel (7%) is fine to medium flint.
	3.40	20	20	61	21	40	CH	1.03	99	Very stiff thinly laminated brown, black and grey slightly sandy CLAY with rare fine flint gravel.
	4.00	25	25	50	21	29	CI/CH	0.86	100	Stiff dark grey and light grey silty CLAY thinly interlaminated with light grey silty sand.
WS6	0.40	26	33	36	18	18	CI	0.17	70	Soft dark orange brown slightly gravelly silty CLAY. Gravel is fine flint.
WS7	2.50	11	41	81	20	61	CV	0.66	17	Brown clayey very sandy GRAVEL. Gravel (69%) is fine to coarse flint.
	3.00	20	20	37	18	19	CI	0.87	98	Stiff brown, orange brown and grey slightly gravelly sandy CLAY. Gravel is fine to medium flint.

Remarks: WS2 – 0.50m and WS7 – 2.50m liquid limit tested using Casagrande falling cup method.

ASHDOWN SITE INVESTIGATION LTD

Site:	Stubbington Study Centre, Fareham, Hamphire.	Report No: Sheet No:	LW23157 2 of 2

SOIL CLASSIFICATION SUMMARY

Sample No.	Depth (m)	Nat. Moist. Cont. (w %)	Equiv. Moist. Cont. (w_a %)	Atterberg Limits W_l %	W_p %	I_p %	Class'n	Cons.Index (I_c)	% passing 425 μm sieve	Visual Description of Sample
WS8	1.00	21	26	43	16	27	CI	0.65	80	Firm orange brown and grey slightly gravelly sandy CLAY. Gravel is fine to medium flint.
	3.00	25	25	33	19	14	CL	0.57	99	Soft to firm brown, orange brown and grey sandy CLAY with rare fine flint gravel.
TP2	0.40	12	21	30	16	14	CL	0.64	35	Soft to firm dark brown slightly gravelly slightly sandy CLAY. Gravel (11%) is fine to coarse flint.

Remarks: