Brief soil description and strata for borehole DTS17:

DESCRIPTION	LEGEND	DEPTH (m)
Bituminous bound material. (MADE GROUND)		0.0
Cobbles of red brick recovered as sandy GRAVEL. (MADE GROUND)		0.1
Medium dense light brown sandy GRAVEL with occasional cobbles of concrete. Gravel consists of flint, brick and concrete. (MADE GROUND)		0.3
Very stiff brown CLAY. (KEMPTON PARK GRAVEL)		0.5
Medium dense light brown orange clayey gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.7
Medium dense light brown and orange very gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		1.0
BOREHOLE TERMINATED AT 2.0m		2.0

Notes:

1. Temporary slotted standpipe installed to 2.0m to maintain borehole stability.

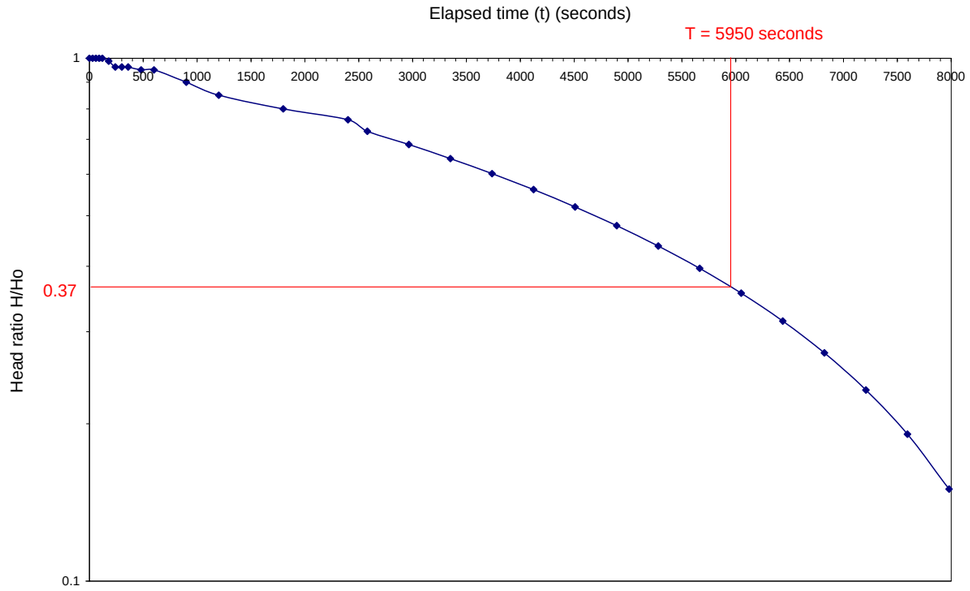
Test observations:

Time (seconds)	Water level (from GL)	Head of water above ground water level (H)
0	0.61	0.8
30	0.61	0.8
60	0.61	0.8
90	0.61	0.8
120	0.61	0.8
180	0.62	0.79
240	0.64	0.77
300	0.64	0.77
360	0.64	0.77
480	0.65	0.76
600	0.65	0.76
900	0.69	0.72
1200	0.73	0.68
1800	0.77	0.64
2400	0.8	0.61

Note:

1. The graph has been extrapolated to obtain a value for t -value as the time taken to achieve the H/Ho was restricted thus only an indicative soil infiltration rate can be calculated.

The basic time lag (T) is obtained from the plot of the head ratio H/Ho (log scale) against elapsed time t (seconds). The basic time lag corresponds to a value of H/Ho = 0.37 where Ho denotes the head at the start of the test and H is time measured head at the elapsed time t. The plot and identification of T is shown below.



DETERMINATION OF PERMEABILITY OF Soils between 0.61 and 0.8m in borehole DTS17

Following BS 5930: 1999, (Section 25.4) and CIRIA special publication 25 'site investigation manual'
(Variable Head Test)

Test 1

Permanent slotted casing installed between 1.0 m - 2.0 m

Borehole depth - 2.00 m

L	=	Length of borehole test area	0.61	m
D	=	diameter of borehole	0.101	m
A	=	cross sectional area	0.008	m^2
G	=	Groundwater level	1.41	m

Adopting the basic time lag method

k = permeability = $\frac{A}{FT}$

Where F = intake factor (adopting fig 6D of BS5930)

$$F = \frac{2\pi L}{In\left[\frac{L}{D} + \sqrt{1+\left(\frac{L}{D}\right)^2}\right]} = \mathbf{1.6}$$

Then indicative soil infiltration rate

$$k = \frac{0.008}{1.6 \times 5950} = \mathbf{8.4 \times 10^{-7}\ ms^{-1}}$$

SOILTECHNICS
GEOTECHNICAL ENGINEERS, ENVIRONMENTAL CONSULTANTS

Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
Falling Head Test carried out in borehole DTS17 following BS 5930: 1999, (Section 25.4) and CIRIA special publication 25 'site investigation manual'

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	

project ref	location	revision
STE1297R	DTS17	

Brief soil description and strata for trial pit SA01:

DESCRIPTION	LEGEND	DEPTH (m)
Dark brown sandy slightly gravelly silty TOPSOIL. Gravel consists of flint.		0.0
Brown sandy gravelly silty TOPSOIL. Gravel consists of sub-angular to sub-rounded flint.		0.4
Loose orange brown clayey SAND and GRAVEL. Gravel consists of flint (KEMPTON PARK GRAVEL)		0.6
TRIAL PIT TERMINATED AT 0.85m		0.85

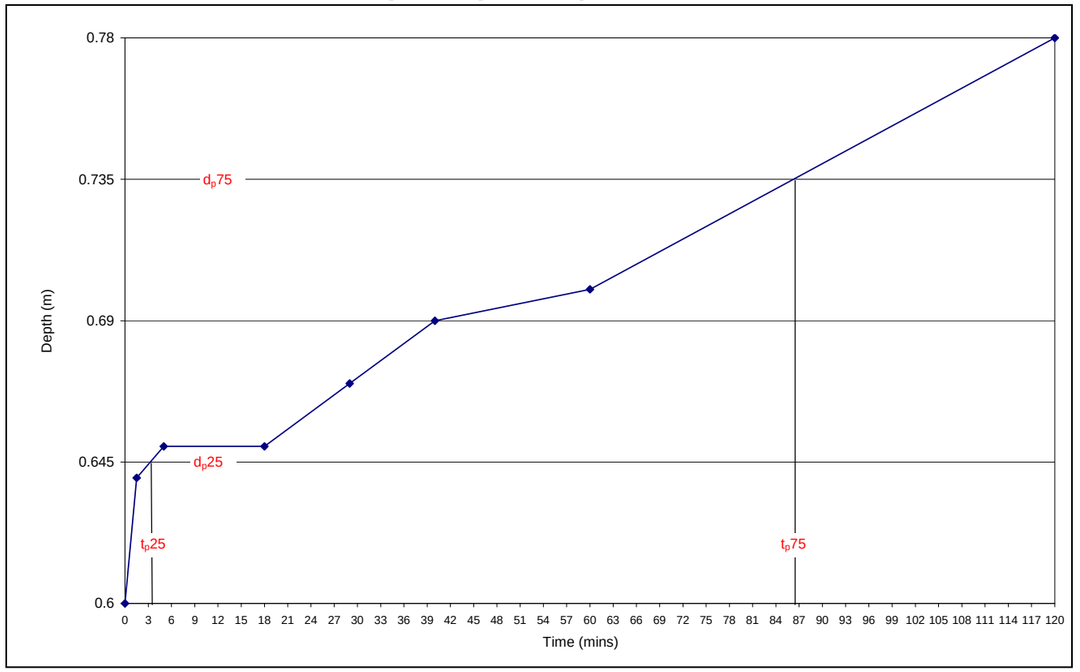
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.6
1.3	0.64
5	0.65
18	0.65
29	0.67
40	0.69
60	0.7
120	0.78

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.85m
Depth to water at start of test:	0.6m
Trial pit width:	0.26m
Trial pit breadth:	0.26m
Trial pit depth at completion of test:	0.85m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.735 – 0.645) x 0.26 x 0.26 = **0.00608m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.735 – 0.645) x (0.26 + 0.26) x 2 + (0.26 x 0.26) = **0.1612m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth
= 87 - 3 = **84 (mins)**
= 84 x 60 = **5040 (seconds)**

therefore:

$f = \frac{0.00608}{0.1612 \times 5040}$ = **7.5 x 10^{-6} ms^{-1}**

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Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA01 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA01	

Brief soil description and strata for trial pit SA02:

DESCRIPTION	LEGEND	DEPTH (m)
Loose brown silty sandy GRAVEL, with occasional cobbles of brick. Gravel consists of flint, brick and timber. (MADE GROUND)		0.0
Loose orange brown clayey SAND and GRAVEL. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.7
TRIAL PIT TERMINATED AT 1.0m		1.0

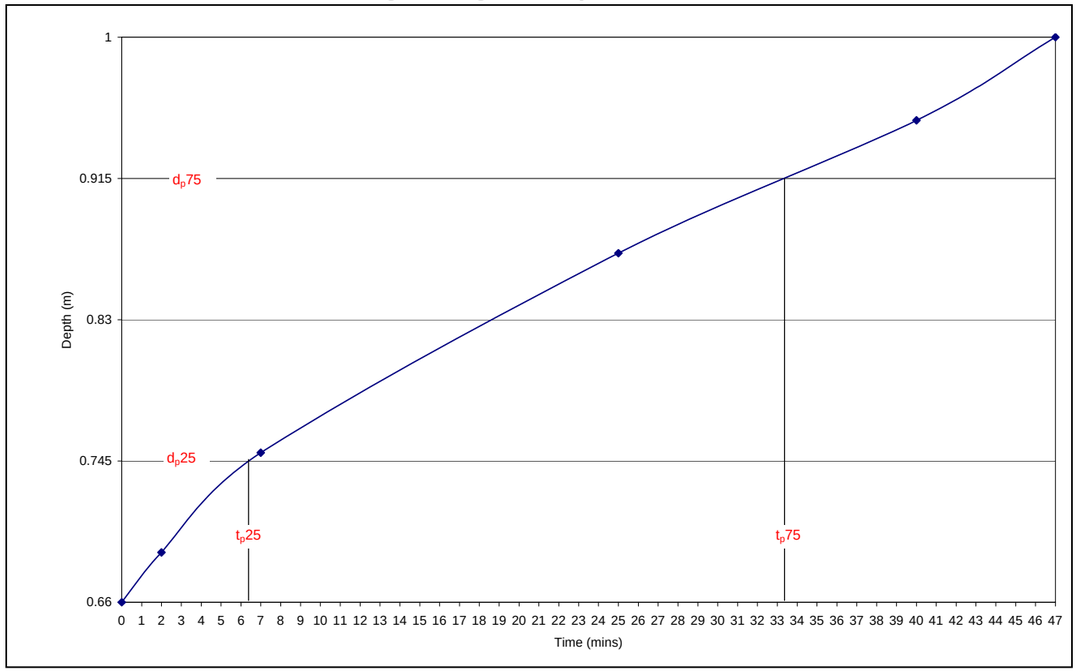
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.66
2	0.69
7	0.75
25	0.87
40	0.95
47	1.0

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	1.0m
Depth to water at start of test:	0.66m
Trial pit width:	0.3m
Trial pit breadth:	0.3m
Trial pit depth at completion of test:	1.0m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.915 – 0.745) x 0.3 x 0.3 = **0.0153m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.915 – 0.745) x (0.3 + 0.3) x 2 + (0.3 x 0.3) = **0.294m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth = 33.5 - 6.5 = **27 (mins)**
= 27 x 60 = **1620 (seconds)**

therefore:

$f = \frac{0.0153}{0.294 \times 1620}$ = **3.2 x 10^{-5} ms^{-1}**

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Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA02 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA02	

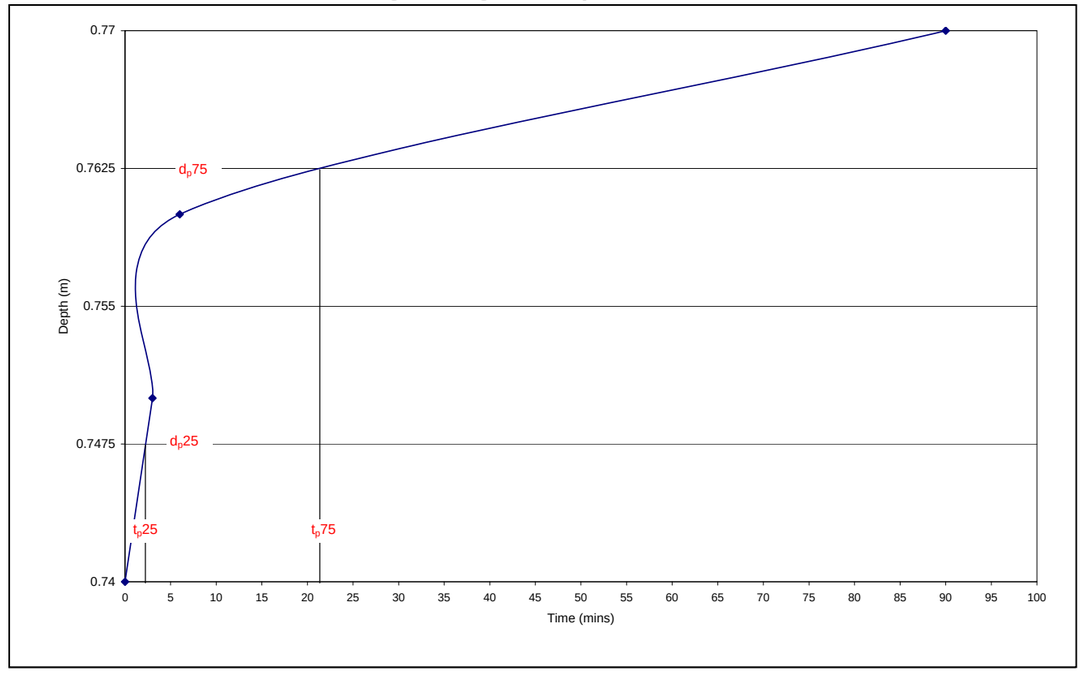
Brief soil description and strata for trial pit SA03:

DESCRIPTION	LEGEND	DEPTH (m)
Dark brown slightly clayey slightly silty sandy slightly gravelly TOPSOIL, with occasional rootlets and roots. Gravel consists of flint.		0.0 0.12
Brown slightly silty sandy slightly gravelly TOPSOIL, with occasional roots. Gravel consists of flint.		
Soft brown and orange slightly silty, sandy CLAY, with some roots. (KEMPTON PARK GRAVEL)		0.8 0.85
TRIAL PIT TERMINATED AT 0.85m Notes: 1. Trial pit sides were upright and stable. 2. No groundwater encountered.		

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.74
3	0.75
6	0.76
90	0.77
210	0.77

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.84m
Depth to water at start of test:	0.74m
Trial pit width:	0.3m
Trial pit breadth:	0.3m
Trial pit depth at completion of test:	0.77m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.7625 – 0.7475) x 0.3 x 0.3 = **0.00135m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.7625 – 0.7475) x (0.3 + 0.3) x 2 + (0.3 x 0.3) = **0.108m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth
= 45 – 3.5 = **41.5 (mins)**
= 41.5 x 60 = **2490 (seconds)**

therefore:

$f = \frac{0.00135}{0.108 \times 2490}$ = **5.0 x 10^{-6} ms^{-1}**

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Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA03 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA03	

Brief soil description and strata for trial pit SA04:

DESCRIPTION	LEGEND	DEPTH (m)
Loose orange SAND. (MADE GROUND)		0.0
		0.2
Medium dense brown, dark grey and light brown very gravelly SAND, with some cobbles of brick. Gravel consists of brick, ash, clinker and flint. (MADE GROUND)		0.44
Medium dense dark brown clayey slightly gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.64
Medium dense brown and orange very clayey slightly gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		1.0
TRIAL PIT TERMINATED AT 1.0m		

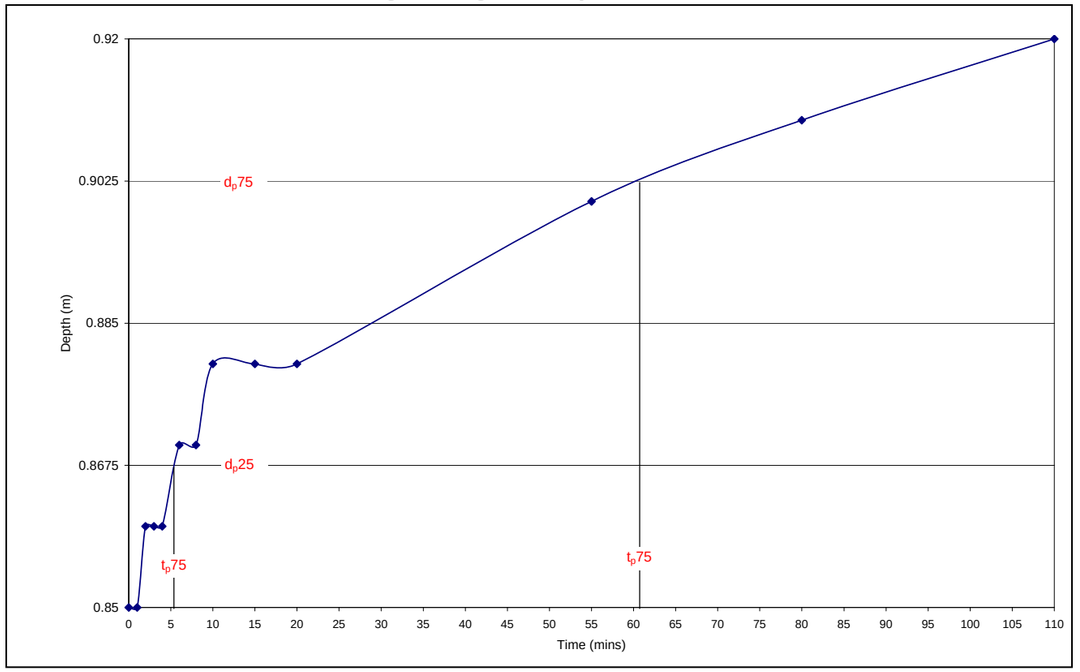
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.85
1	0.85
2	0.86
3	0.86
4	0.86
6	0.87
8	0.87
10	0.88
15	0.88
20	0.88
55	0.9
80	0.91
110	0.92

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	1.0m
Depth to water at start of test:	0.85m
Trial pit width:	0.2m
Trial pit breadth:	0.2m
Trial pit depth at completion of test:	0.92m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.9025 – 0.8675) x 0.2 x 0.2 = **0.0014m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.9025 – 0.8675) x (0.2 + 0.2) x 2 + (0.2 x 0.2) = **0.068m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth = 61 – 5.5 = **55.5 (mins)**
= 55.5 x 60 = **3330 (seconds)**

therefore:

$f = \frac{0.0014}{0.068 \times 3330}$ = **6.1 x 10^{-6} ms^{-1}**

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Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA04 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA04	

Brief soil description and strata for trial pit SA05:

DESCRIPTION	LEGEND	DEPTH (m)
Medium dense dark brown slightly clayey slightly silty gravelly SAND with many rootlets. Gravel consists of flint, chalk, limestone and brick. (MADE GROUND)		0.0
Medium dense brown gravelly SAND with occasional cobbles of brick and concrete. Gravel consists of flint, limestone, brick, concrete, glass, ceramic and bituminous bound material. (MADE GROUND)		0.1
TRIAL PIT TERMINATED AT 0.93m		0.93

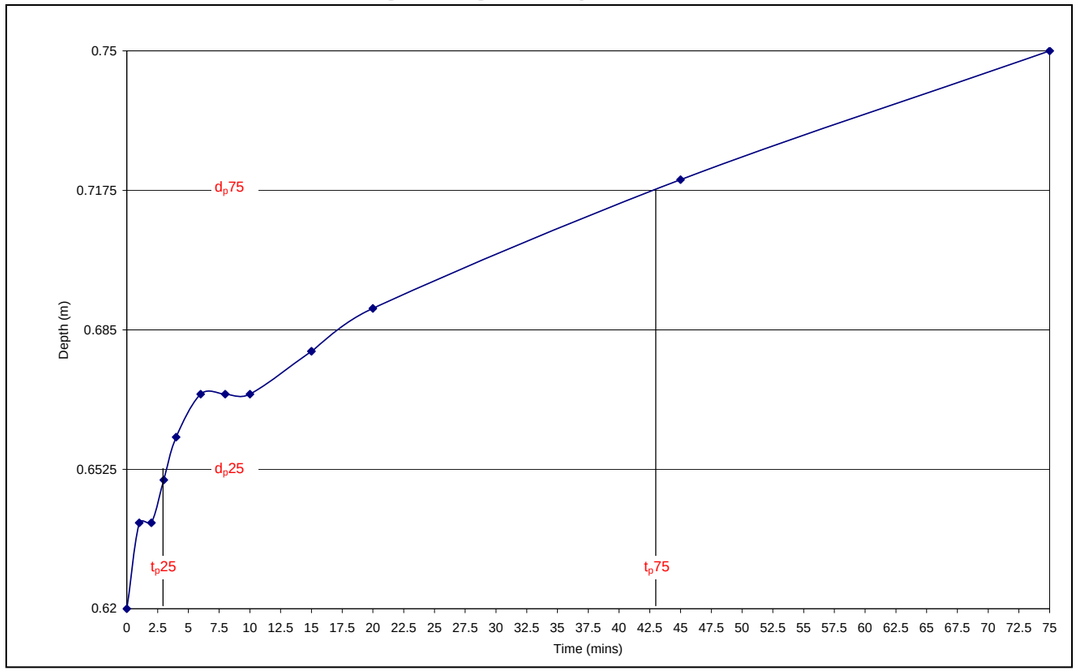
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.
3. Disturbed samples taken at 0.05m and 0.7m depths.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.62
1	0.64
2	0.64
3	0.65
4	0.66
6	0.67
8	0.67
10	0.67
15	0.68
20	0.69
45	0.72
75	0.75

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.93m
Depth to water at start of test:	0.62m
Trial pit width:	0.2m
Trial pit breadth:	0.2m
Trial pit depth at completion of test:	0.75m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.7175 – 0.6525) x 0.2 x 0.2 = **0.0026m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.7175 – 0.6525) x (0.2 + 0.2) x 2 + (0.2 x 0.2) = **0.092m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth = 43 – 3 = **40 (mins)**
= 40 x 60 = **2400 (seconds)**

therefore:

$f = \frac{0.0026}{0.092 \times 2400}$ = **1.2 x 10^{-5} ms^{-1}**

SOILTECHNICS
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Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA05 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA05	

Brief soil description and strata for trial pit SA06:

DESCRIPTION	LEGEND	DEPTH (m)
Firm brown very sandy slightly gravelly CLAY with some rootlets and occasional roots and a cobble of brick. Gravel consists of flint and occasional ash. (MADE GROUND)		0.0
Firm light brown mottled brown silty slightly sandy CLAY. (KEMPTON PARK GRAVEL)		0.7
TRIAL PIT TERMINATED AT 0.99m		0.99

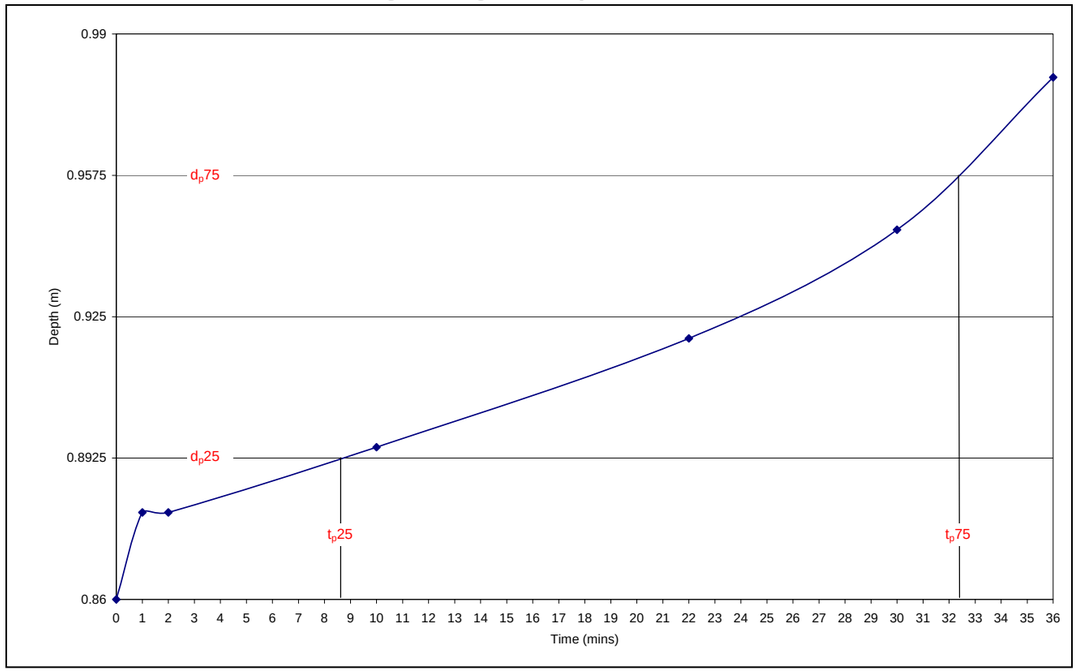
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.86
1	0.88
2	0.88
10	0.895
22	0.92
30	0.945
36	0.98

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.99m
Depth to water at start of test:	0.86m
Trial pit width:	0.25m
Trial pit breadth:	0.25m
Trial pit depth at completion of test:	0.98m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.9575 – 0.8925) x 0.25 x 0.25 = **0.00406m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.9575 – 0.8925) x (0.25 + 0.25) x 2 + (0.25 x 0.25) **0.1275m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth = 32.5 – 8.5 = **24 (mins)**
= 24 x 60 = **1440 (seconds)**

therefore:

$f = \frac{0.00406}{0.1275 \times 1440}$ = **2.2 x 10^{-5} ms^{-1}**

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Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA06 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	30.05.08	RC	
project ref		location	revision
STE1297R		SA06	

Brief soil description and strata for trial pit SA07:

DESCRIPTION	LEGEND	DEPTH (m)
Grass onto loose dark brown slightly clayey slightly silty slightly gravelly SAND with some roots and rootlets and occasional cobbles of brick. Gravel consists of flint, concrete and occasional brick. (MADE GROUND)		0.0
Firm light brown orange silty sand CLAY. (KEMPTON PARK GRAVEL)		0.4
TRIAL PIT TERMINATED AT 0.87m		0.87

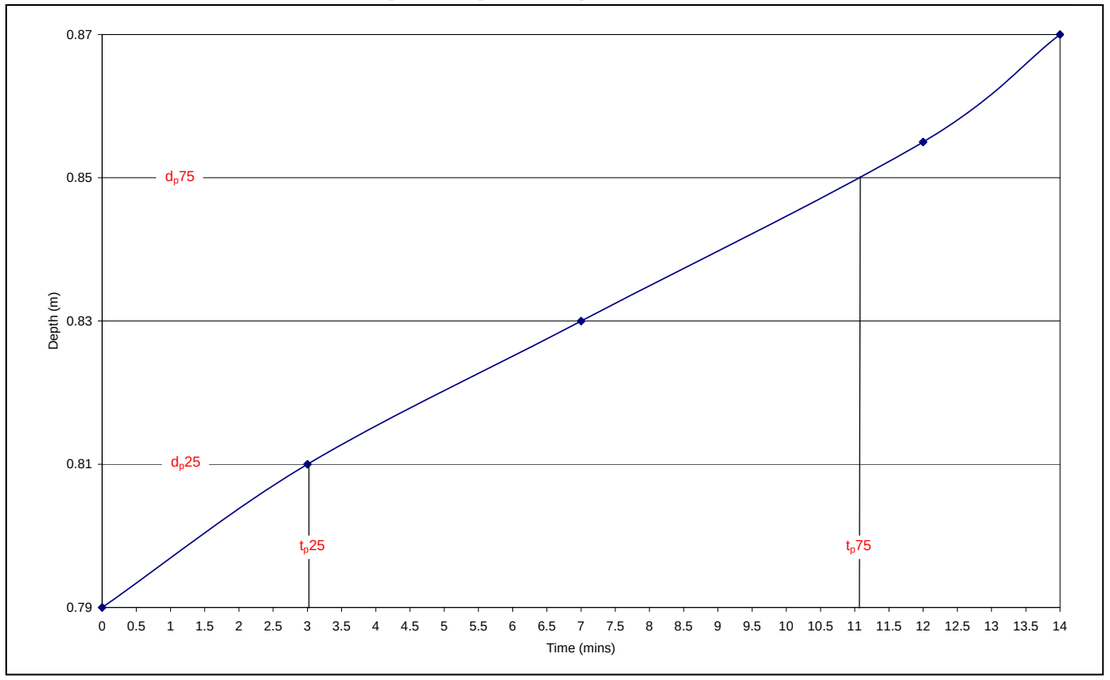
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.
3. Disturbed samples taken at 0.1m, 0.5m and 0.7m depths.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.79
3	0.81
7	0.83
12	0.855
14	0.87

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.87m
Depth to water at start of test:	0.79m
Trial pit width:	0.3m
Trial pit breadth:	0.25m
Trial pit depth at completion of test:	0.87m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.85 – 0.81) x 0.3 x 0.25 = **0.003m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.85 – 0.81) x (0.3 + 0.25) x 2 + (0.3 x 0.25) = **0.119m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth = 11 - 3 = **8 (mins)**
= 8 x 60 = **480 (seconds)**

therefore:

$f = \frac{0.003}{0.119 \times 480}$ = **5.2 x 10^{-5} ms^{-1}**

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Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA07 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	30.05.08	RC	
project ref		location	revision
STE1297R		SA07	

Brief soil description and strata for trial pit SA08:

DESCRIPTION	LEGEND	DEPTH (m)
Grass onto medium dense dark brown slightly clayey slightly silty gravelly SAND, with some roots and rootlets. Gravel consists of flint and occasional ash. (MADE GROUND)		0.0 0.16
Medium dense brown gravelly SAND, with occasional roots. Gravel consists of flint and occasional ash and clinker. (MADE GROUND)		0.6
Medium dense light brown and orange slightly clayey silty gravelly SAND. (KEMPTON PARK GRAVEL)		0.89
TRIAL PIT TERMINATED AT 0.89m		

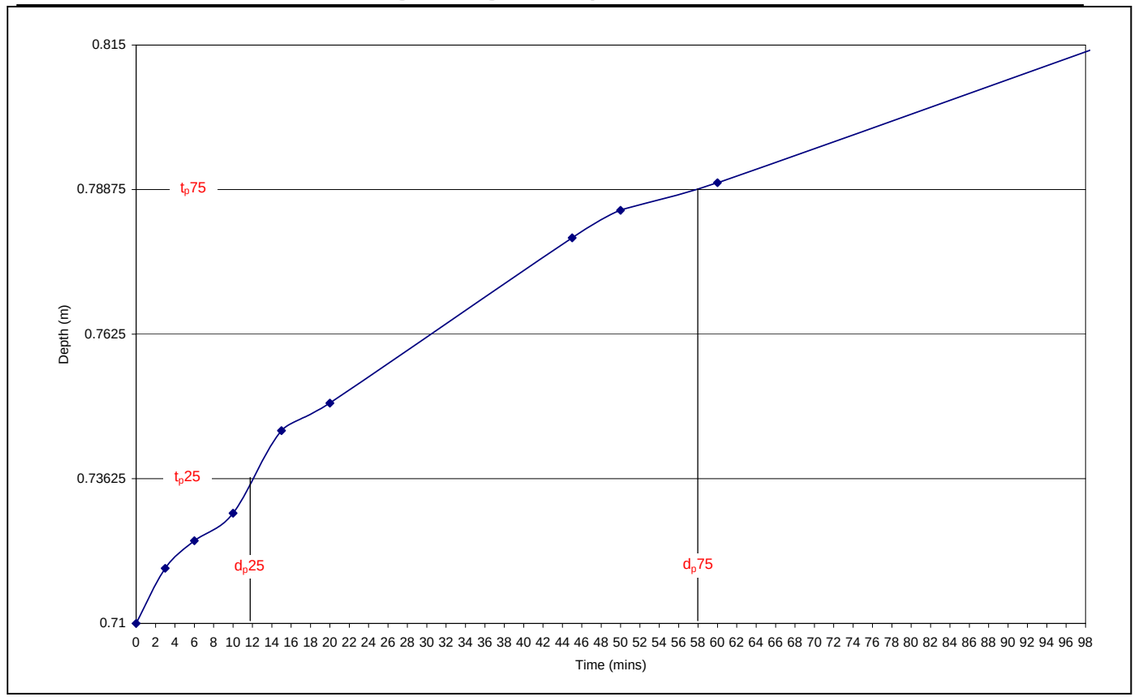
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.
3. Disturbed samples taken at 0.05m, 0.2m and 0.6m depths.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.71
3	0.72
6	0.725
10	0.73
15	0.745
20	0.75
45	0.78
50	0.785
60	0.79
100	0.815

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.89m
Depth to water at start of test:	0.71m
Trial pit width:	0.25m
Trial pit breadth:	0.3m
Trial pit depth at completion of test:	0.815m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.78875 – 0.73625) x 0.25 x 0.3 = **0.00394m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.78875 – 0.73625) x (0.25 + 0.3) x 2 + (0.25 x 0.3) = **0.13275m²**

$t_{p75} - t_{p25}$ = the time for the water level to fall from 75% to 25% effective depth
= 58 – 12 = **46 (mins)**
= 46 x 60 = **2760 (seconds)**

therefore:

$f = \frac{0.00394}{0.13275 \times 2760}$ = **1.1 x 10^{-5} ms^{-1}**

SOILTECHNICS
GEOTECHNICAL ENGINEERS, ENVIRONMENTAL CONSULTANTS

Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA08 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA08	

Brief soil description and strata for trial pit SA09:

DESCRIPTION	LEGEND	DEPTH (m)
Grass onto brown slightly clayey slightly silty slightly gravelly SAND with many rootlets. Gravel consists of flint and clinker. (MADE GROUND)		0.0 0.1 0.27
Loose dark brown slightly clayey slightly silty slightly gravelly SAND with some roots and rootlets. Gravel consists of flint. (MADE GROUND)		0.795
Medium dense orange brown clayey silty gravelly SAND becoming very gravelly SAND with occasional roots. Gravel consists of flint. (KEMPTON PARK GRAVEL)		
TRIAL PIT TERMINATED AT 0.795m		

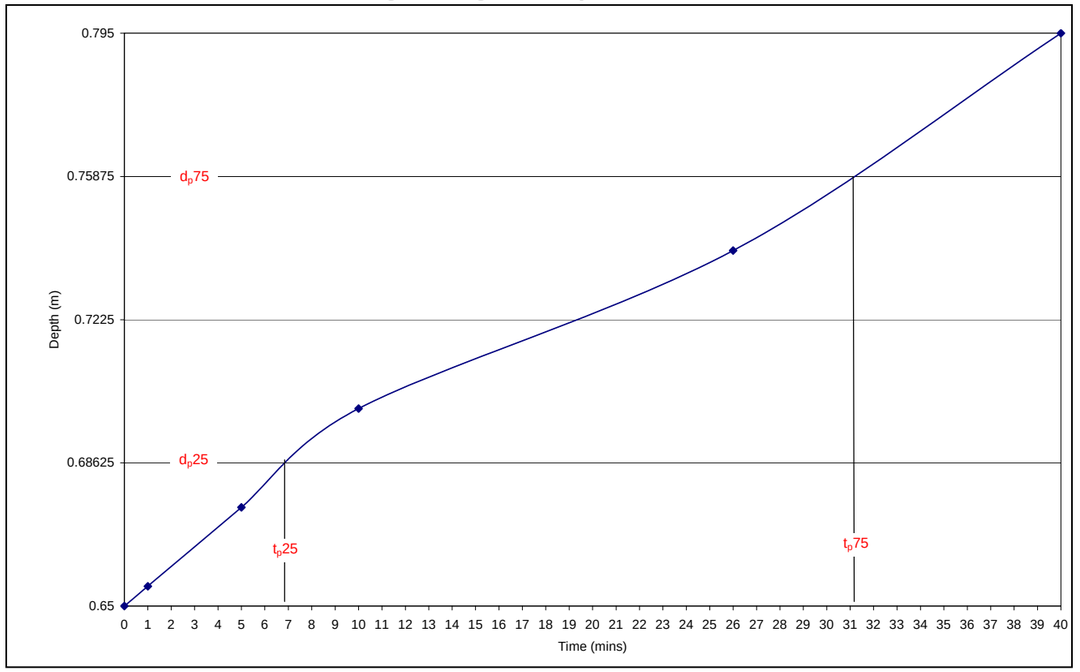
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.
3. Disturbed samples taken from 0.1m, 0.3m and 0.6m depths.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.65
1	0.655
5	0.675
10	0.7
26	0.74
40	0.795

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.795m
Depth to water at start of test:	0.65m
Trial pit width:	0.3m
Trial pit breadth:	0.25m
Trial pit depth at completion of test:	0.795m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.75875 – 0.68625) x 0.3 x 0.25 = **0.00544m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.75875 – 0.68625) x (0.3 + 0.25) x 2 + (0.3 x 0.25) = **0.1548m²**

$t_{p75-t_{p25}}$ = the time for the water level to fall from 75% to 25% effective depth
= 31 – 7 = **24 (mins)**
= 24 x 60 = **1440 (seconds)**

therefore:

$f = \frac{0.00544}{0.1548 \times 1440}$ = **2.4 x 10^{-5} ms^{-1}**

SOILTECHNICS
GEOTECHNICAL ENGINEERS, ENVIRONMENTAL CONSULTANTS

Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA09 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA09	

Brief soil description and strata for trial pit SA10:

DESCRIPTION	LEGEND	DEPTH (m)
Grass onto dark brown slightly clayey slightly silty slightly gravelly SAND with many rootlets and occasional roots. Gravel consists of flint and ash. (MADE GROUND)		0.0
Medium dense orange brown clayey slightly gravelly SAND with some roots. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.25
Medium dense orange brown clayey very gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.7
TRIAL PIT TERMINATED AT 0.9m		0.9

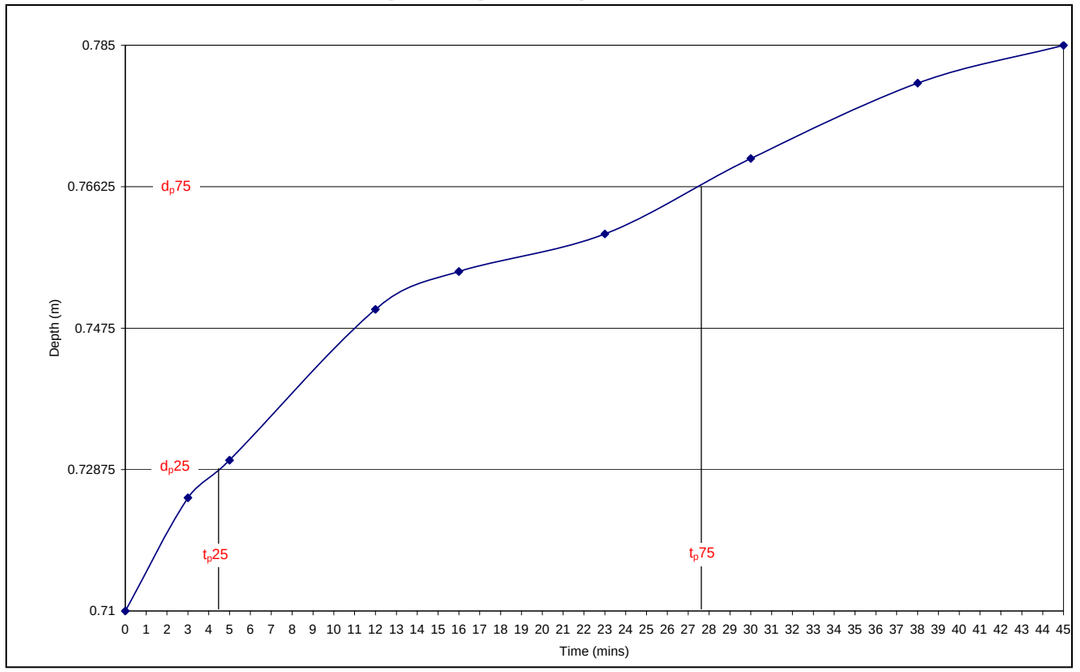
Notes:

1. Trial pit sides remained upright and stable.
2. No groundwater encountered.
3. Disturbed samples taken at 0.1m, 0.4m and 0.8m depths.

Test observations:

TIME (mins)	DEPTH TO WATER (m)
0	0.71
3	0.725
5	0.73
12	0.75
16	0.755
23	0.76
30	0.77
38	0.78
45	0.785

Plot showing time against depth of water:



Trial pit depths/dimensions:

Depth of trial pit at start of test:	0.9m
Depth to water at start of test:	0.71m
Trial pit width:	0.3m
Trial pit breadth:	0.2m
Trial pit depth at completion of test:	0.785m

Calculations:

Soil infiltration rate, $f = \frac{V_{p75-25}}{a_{p50} \times tp_{75-25}}$

where: V_{p75-25} = effective storage volume of water in the trial pit between 75% (d_{p75}) and 25% (d_{p25}) effective depth = (d_{p75} – d_{p25}) x width x breadth
(0.76625 – 0.72875) x 0.3 x 0.2 = **0.00225m³**

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area; = (d_{p75} – d_{p25}) x (width + breadth) x 2 + (width x breadth)
(0.76625 – 0.72875) x (0.3 + 0.2) x 2 + (0.3 x 0.2) = **0.0975m²**

$t_{p75-t_{p25}}$ = the time for the water level to fall from 75% to 25% effective depth = 27.5 – 4.5 = **23 (mins)**
= 23 x 60 = **1380 (seconds)**

therefore:

$f = \frac{0.00225}{0.0975 \times 1380}$ = **1.7 x 10^{-5} ms^{-1}**

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GEOTECHNICAL ENGINEERS, ENVIRONMENTAL CONSULTANTS

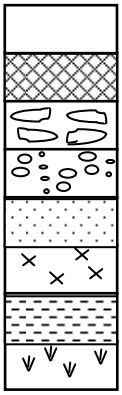
Project
Richmond-Upon-Thames College, Egerton Road, Twickenham.

Title
SOIL INFILTRATION TEST for trial pit SA10 (generally in accordance with Building Research Establishment Digest 365 2007).

Scale	Date	drawn by	checked by
N/A	27.05.08	RC	
project ref		location	revision
STE1297R		SA10	

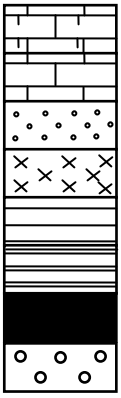
KEY TO LEGENDS (Extract from BS 5930;1999 table 11)

SOILS



Topsoil
Made ground
Boulders & Cobbles
Gravel
Sand
Silt
Clay
Peat/Organic clays

SEDIMENTARY ROCKS



Chalk
Limestone
Sandstone
Siltstone
Mudstone
Shale
Coal
Conglomerate

Note : Composite soil types are signified by combined symbols.

KEY TO TEST RESULTS COLUMN

Type and depth column: indicates depth that test was carried out i.e. at 2.1m or between 2.1m and 2.55m.

P or V: in this column, records of pocket penetrometer (P) or shear vane test (V) carried out on disturbed or undisturbed samples at depth shown, with results recorded in the test results column.

SPT / SPT (C): in this column records Standard Penetration Test (SPT) or Standard Penetration Test utilising a solid cone (SPT(C)).

Casing Depth and Water columns: record depth of casing and depth of water measured prior to each Standard Penetration Test (SPT)

Result column: records actual un-corrected test results obtained. For SPT results, seating blows are recorded in brackets before actual "N" value.

KEY TO SAMPLING COLUMNS

From (m) to (m): indicates depth(s) of sampling.

Type: indicates type of sample obtained.

U	undisturbed sample	**D**	disturbed sample	**W**	water sample
(32)	number of blows to obtain undisturbed sample	**B**	bulk sample	**J**	jar sample

WATER MEASUREMENTS

refer to notes at base of borehole sheet

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STANDARD KEY TO BOREHOLE RECORDS (CABLE AND TOOL PERCUSSION DRILLING)

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Dark brown slightly gravelly CLAY. Gravel consists of flint. (MADE GROUND)		0.0					
				0.4			0.6		D
		Firm dark brown and light brown slightly sandy slightly gravelly CLAY. Gravel		0.9					
--	Dry	consists of flint and ash. (MADE GROUND)			SPT(C)	(1)6			
					1.2-1.65m		1.4		D
		Loose brown very silty gravelly SAND. Gravel consists of fine		1.8					
2.1	1.1	to medium flint. (KEMPTON PARK GRAVEL)			SPT(C)	(4)18	2.0		D
					2.1-2.55m		2.2	2.6	B
		Medium dense brown slightly silty SAND and GRAVEL of flint.							
3.0	2.4	(KEMPTON PARK GRAVEL)			SPT(C)	(3)7			
				3.3	3.1-3.55m				
		Loose grey brown slightly gravelly very silty SAND. Gravel consists of flint.					3.4		D
4.0	2.6	(KEMPTON PARK GRAVEL)			SPT(C)	(1)6			
					4.0-4.45m				
							4.3		D
				4.6					
		Medium dense brown SAND and GRAVEL of flint.							
5.1	3.1	(KEMPTON PARK GRAVEL)			SPT(C)	(5)23	4.8		D
					5.1-5.55m				
							5.2	5.6	B
6.5	3.1				SPT(C)	(7)30			
					6.5-6.95m				

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.5m	Approximately 3.5m	Slow inflow, water being added to assist drilling at time of water strike	9.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 1 OF 4

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**22.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH01**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
							6.7		D
8.0	4.6				SPT(C) 8.0-8.45m	(3)26	8.1	8.5	B
				9.3					
		Stiff dark grey CLAY					9.5		D
9.5	9.1	(LONDON CLAY)			SPT 9.6-10.05m	(3)17	9.6	10.05	D
9.5	13.4						11.5	11.9	U100 (24)
							12.0		D
9.5	Dry				SPT 13.5-13.95m	(5)22	13.5	13.95	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.5m	Approximately 3.5m	Slow inflow, water being added to assist drilling at time of water strike	9.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 2 OF 4

SOILTECHNICS
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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**22.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH01**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff dark grey CLAY (LONDON CLAY)							
9.5	Dry				SPT 15.6-15.95m	(6)24	15.6	15.95	D
9.5	Dry				SPT 17-5-17.95m	(6)27	17.5	17.95	D
9.5	Dry				SPT 19.5-19.95m	(6)29	19.5	19.95	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.5m	Approximately 3.5m	Slow inflow, water being added to assist drilling at time of water strike	9.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 3 OF 4

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**22.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH01**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff becoming very stiff dark grey CLAY (LONDON CLAY)							
9.5	Dry						21.6	22.0	U100 (34)
							22.1		D
9.5	Dry				SPT 23.6-24.05m	(6)32	23.6	24.05	D
9.5	Dry	BOREHOLE TERMINATED AT 25.5m Note 1. Water added between 1.7-4.0m to assist drilling. 2. Gas/water monitoring standpipe installed to 6.0m.		25.5	SPT 25.5-25.95m	(8)35	25.5	25.95	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.5m	Approximately 3.5m	Slow inflow, water being added to assist drilling at time of water strike	9.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 4 OF 4

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**22.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH01**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Dark brown slightly gravelly CLAY. Gravel consists of flint. (MADE GROUND)		0.0					
				0.2			0.2		D
							0.5		D
		Medium dense orange brown very silty slightly gravelly SAND. Gravel consists of flint. (MADE GROUND)							
--	Dry			1.3	SPT(C)	(5)24			
		Medium dense brown sandy GRAVEL of flint. Grading to SAND with depth.			1.2-1.65m		1.4		D
2.0	1.1	(KEMPTON PARK GRAVEL)			SPT(C)	(4)17	2.1	2.5	B
					2.0-2.45m				
3.0	2.4				SPT(C)	(1)18			
					3.1-3.55m		3.3		D
4.0	2.6				SPT(C)	(1)20			
					4.1-4.55m				
5.0	3.1				SPT(C)	(5)22			
				5.3	5.0-5.45m		5.2		D
		Stiff dark grey CLAY (LONDON CLAY)					5.4		D
6.4	3.1						6.0	6.4	U100 (22)
							6.5		D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.0m	Approximately 3.0m	Slow inflow, water being added to assist drilling at time of water strike	5.6m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 1 OF 4

SOILTECHNICS
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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**26.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH02**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff dark grey CLAY (LONDON CLAY)							
5.6	Dry				SPT 8.1-8.55m	(4)20	8.1	8.55	D
5.6	Dry				SPT 10.0-10.45m	(4)21	10.0	10.45	D
5.6	Dry				SPT 12.2-12.65m	(5)22	12.2	12.65	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.0m	Approximately 3.0m	Slow inflow, water being added to assist drilling at time of water strike	5.6m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 2 OF 4

SOILTECHNICS
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Tel: (01604) 781877 Fax: (01604) 781007 E-mail: mail@soiltechnics.net

GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No: **STE1297R-02**	DATE OF EXCAVATION: **26.05.08**

PROJECT: **Richmond-Upon-Thames College, Egerton Road, Twickenham.**

PROJECT REF.	BOREHOLE No
STE1297R	**BH02**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
5.6	Dry	Stiff dark grey CLAY (LONDON CLAY)			SPT 14.1-14.55m	(6)22	14.1	14.55	D
5.6	Dry				SPT 16.1-16.55m	(6)25	16.1	16.55	D
5.6	Dry				SPT 18.0-18.45m	(6)26	18.0	18.45	D
5.6	Dry				SPT 20.1-20.55m	(6)32	20.1	20.55	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.0m	Approximately 3.0m	Slow inflow, water being added to assist drilling at time of water strike	5.6m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 3 OF 4

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No: **STE1297R-02**	DATE OF EXCAVATION: **26.05.08**

PROJECT: **Richmond-Upon-Thames College, Egerton Road, Twickenham.**

PROJECT REF.	BOREHOLE No
STE1297R	**BH02**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff becoming very stiff dark grey CLAY (LONDON CLAY)							
5.6	Dry				SPT 22.2-22.65m	(7)33	22.2		D
5.6	Dry						24.0	24.4	U100 (40)
							24.5		D
				25.0			25.0		D
		BOREHOLE TERMINATED AT 25.0m Note 1. Water added between 1.3-3.5m to assist drilling. 2. Gas/water monitoring standpipe installed to 6.0m.							

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	25.0m	Approximately 3.0m	Slow inflow, water being added to assist drilling at time of water strike	5.6m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 4 OF 4

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No: **STE1297R-02**	DATE OF EXCAVATION: **26.05.08**

PROJECT: **Richmond-Upon-Thames College, Egerton Road, Twickenham.**

PROJECT REF.	BOREHOLE No
STE1297R	**BH02**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Black bituminous bound material		0.0					
		(MADE GROUND)		0.1					
		Firm brown and yellow brown gravelly sandy CLAY. Gravel consists of flint, brick and ash.		0.25			0.3		D
		(MADE GROUND)		1.2			0.5		D
1.5	0.6	Medium dense grey brown very clayey gravelly SAND. Gravel consists of flint, brick and ash.					1.3		D
		(MADE GROUND)			SPT(c) 1.5-1.95m	(11)41	1.6	2.0	B
		Medium dense brown SAND and GRAVEL of flint.							
2.6	1.2	(KEMPTON PARK GRAVEL)			SPT(c) 2.6-3.05m	(10)38	2.7		D
3.5	2.4				SPT(c) 3.5-3.95m	(7)31	3.7		D
				3.6			3.8	4.2	B
		Medium dense dark grey SAND and GRAVEL of flint.							
4.5	2.3	(KEMPTON PARK GRAVEL)			SPT(c) 4.5-4.95m	(4)16			
				4.8					
		Stiff dark grey CLAY (LONDON CLAY)					5.0		D
5.5	Dry				SPT 5.6-6.05m	(3)14			

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	5.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 1 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No **STE1297R-02**	DATE OF EXCAVATION **27-28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH03**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff dark grey CLAY. (LONDON CLAY)							
5.5	Dry						7.5	7.9	U100 (22)
							8.0		D
5.5	Dry				SPT 9.5-9.95m	(4)21	9.5	9.95	D
5.5	Dry				SPT 11.4-11.85m	(5)22	11.4	11.85	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	5.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 2 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No: **STE1297R-02**	DATE OF EXCAVATION: **27-28.05.08**

PROJECT: **Richmond-Upon-Thames College, Egerton Road, Twickenham.**

PROJECT REF.	BOREHOLE No
STE1297R	**BH03**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
5.5	Dry	Stiff dark grey CLAY. (LONDON CLAY)			SPT 13.6-14.05m	(5)24	13.6	14.05	D
5.5	Dry				SPT 15.5-15.95m	(6)25	15.5	15.95	D
5.5	Dry						17.5	17.9	U100 (38)
		BOREHOLE TERMINATED AT 20.0m		20.0					
5.5	Dry	Note 1. Water added between 1.2-3.0m to assist drilling. 2. Gas/water monitoring standpipe installed to 5.0m.			SPT 19.6-20.05m	(6)28	19.6	20.05	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	5.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 3 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27-28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH03**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Black bituminous bound material (MADE GROUND)		0.0 0.1 0.25			0.3		D
		Medium dense brown sandy GRAVEL of brick and concrete. (MADE GROUND)		0.9			0.6 1.1		D D
1.2	Dry	Firm grey mottled orange brown slightly sandy slightly gravelly CLAY. Gravel consists of brick, flint and ash. (MADE GROUND)			SPT(C) 1.2-1.85m	(16)47	1.3	1.6	B
2.0	1.1	Dense brown slightly silty SAND and GRAVEL of flint. (KEMPTON PARK GRAVEL)			SPT(C) 2.0-2.45m	(14)40	2.2		D
3.0	2.0	Medium dense dark grey SAND and GRAVEL of flint. Grading to grey brown SAND with depth. (KEMPTON PARK GRAVEL)		2.9	SPT(C) 3.1-3.55m	(10)36	3.2		D
4.0	2.1				SPT(C) 4.1-4.55m	(8)23	4.2	4.5	B
5.0	2.4				SPT(C) 5.1-5.55m	(1)19	5.2		D
6.0	2.7				SPT(C)	(4)18			
		Stiff dark grey CLAY. (LONDON CLAY)		6.3	6.0-6.45m		6.2 6.5		D D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	6.3m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 1 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**29.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH04**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff dark grey CLAY. (LONDON CLAY)							
4.5	Dry				SPT 7.6-8.05m	(3)18	7.6	8.05	D
4.5	Dry				SPT 9.5-9.95m	(4)21	9.5	9.95	D
4.5	Dry				SPT 11.6-12.05m	(5)24	11.6	12.05	D
4.5	Dry				SPT 13.5-13.95m	(5)25	13.5	13.95	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	6.3m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 2 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**29.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH04**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff dark grey CLAY. (LONDON CLAY)							
4.5	Dry						15.6	16.0	U100 (37)
							16.1		D
4.5	Dry				SPT 17.7-18.15m	(6)28	17.7	18.15	D
		BOREHOLE TERMINATED AT 20.0m		20.0					
4.5	Dry	Note 1. Water added between 1.2-3.0m to assist drilling. 2. Gas/water monitoring standpipe installed to 6.0m.			SPT 19.5-20.05m	(6)31	19.5	20.05	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	6.3m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 3 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No **STE1297R-02**	DATE OF EXCAVATION **29.05.08**

PROJECT
Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH04**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Dark brown slightly gravelly CLAY. Gravel consists of brick and flint.		0.0			0.2		D
		(MADE GROUND)		0.4			0.6		D
		Dark brown slightly clayey SAND and GRAVEL of flint and brick.		1.1			1.3		D
1.5	Dry	(MADE GROUND)			SPT(C) 1.5-1.95m	(2)17			
		Firm orange brown mottled dark brown slightly gravelly slightly sandy CLAY. Gravel consists of flint and brick.		1.9			2.0		D
							2.1	2.5	B
2.5	1.4	(MADE GROUND)			SPT(C) 2.5-2.95m	(12)30			
		Medium dense brown sandy GRAVEL of flint. (KEMPTON PARK GRAVEL)							
3.5	2.3				SPT(C) 3.5-3.95m	(15)29	3.7		D
		Stiff dark grey CLAY.		4.2			4.4		D
4.5	4.6	(LONDON CLAY)			SPT 4.6-5.05m	(2)12			
4.5	Dry						5.5	5.9	U100 (17)
							6.0		D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	4.2m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 1 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No **STE1297R-02**	DATE OF EXCAVATION **28-29.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH05**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
4.5	Dry	Stiff dark grey CLAY. (LONDON CLAY)			SPT 7.6-8.05m	(3)18	7.6	8.05	D
4.5	Dry				SPT 9.5-9.95m	(4)21	9.5	9.95	D
4.5	Dry				SPT 11.6-12.05m	(5)24	11.6	12.05	D
4.5	Dry				SPT 13.5-13.95m	(5)25	13.5	13.95	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	4.2m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 2 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No: **STE1297R-02**	DATE OF EXCAVATION: **28-29.05.08**

PROJECT: **Richmond-Upon-Thames College, Egerton Road, Twickenham.**

PROJECT REF.	BOREHOLE No
STE1297R	**BH05**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff dark grey CLAY. (LONDON CLAY)							
4.5	Dry						15.6	16.0	U100 (37)
							16.1		D
4.5	Dry				SPT 17.7-18.15m	(6)28	17.7	18.15	D
		BOREHOLE TERMINATED AT 20.0m		20.0					
4.5	Dry	Note 1. Water added between 1.9-3.0m to assist drilling. 2. Gas/water monitoring standpipe installed to 5.0m.			SPT 19.5-19.95m	(6)31	19.5	19.95	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.5m	Slow inflow, water being added to assist drilling at time of water strike	4.2m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 3 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No: **STE1297R-02**	DATE OF EXCAVATION: **28-29.05.08**

PROJECT: **Richmond-Upon-Thames College, Egerton Road, Twickenham.**

PROJECT REF.	BOREHOLE No
STE1297R	**BH05**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Black bituminous bound material		0.0					
		(MADE GROUND)		0.1			0.2		D
							0.5		D
		Soft dark grey very gravelly slightly sandy CLAY. Gravel consists of flint, brick and ash. (MADE GROUND)		1.3					
1.4	Dry	Dense brown sandy GRAVEL of flint. (KEMPTON PARK GRAVEL)			SPT(C) 1.4-1.85m	(15)43	1.5		D
2.0	1.1				SPT(C) 2.1-2.55m	(12)38	2.1	2.5	U100 (18)
3.0	2.2				SPT(C) 3.1-3.55m	(11)34	3.2		D
4.0	3.0				SPT(C) 4.0-4.45m	(5)14	4.3		D
				4.2					
		Stiff dark grey CLAY (LONDON CLAY)							
4.5	5.0				SPT 5.0-5.45m	(3)15	5.0	5.45	D
							6.0	6.4	U100 (38)
							6.5		D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.8m	Slow inflow, water being added to assist drilling at time of water strike	4.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 1 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH06**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
		Stiff dark grey CLAY. (LONDON CLAY)							
4.5	Dry				SPT 8.1-8.55m	(5)19	8.1	8.55	D
4.5	Dry				SPT 10.2-10.65m	(5)21	10.2	10.65	D
4.5	Dry				SPT 12.1-12.55m	(6)22	12.1	12.55	D

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.8m	Slow inflow, water being added to assist drilling at time of water strike	4.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 2 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH06**

CASING DEPTH (m)	WATER (m)	STRATA DESCRIPTION	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
					TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
4.5	Dry	Stiff dark grey CLAY. (LONDON CLAY)			SPT 14.0-14.45m	(6)24	14.0	14.45	D
4.5	Dry				SPT 16.1-16.55m	(6)26	16.1	16.55	D
4.5	Dry				SPT 18.2-18.65m	(6)29	18.2	18.65	D
4.5	Dry	BOREHOLE TERMINATED AT 20.0m Note 1. Water added to assist drilling. 2. Gas/water monitoring standpipe installed to 4.0m.		20.0			20.0	20.4	U100 (38)

DRILLING			GROUNDWATER		
DIAMETER	FROM	TO	DEPTH(S) STRUCK	BEHAVIOUR	DEPTH SEALED
150mm	0.0m	20.0m	Approximately 2.8m	Slow inflow, water being added to assist drilling at time of water strike	4.5m

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

BOREHOLE RECORD SHEET 3 OF 3

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

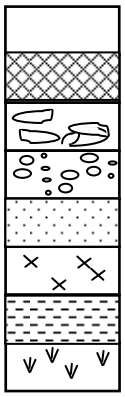
PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**BH06**

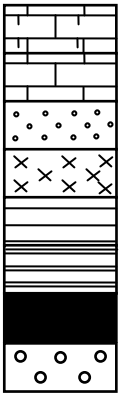
KEY TO LEGENDS (Extract from BS 5930;1999 table 11)

SOILS



Topsoil
Made ground
Boulders & Cobbles
Gravel
Sand
Silt
Clay
Peat/Organic clays

SEDIMENTARY ROCKS



Chalk
Limestone
Sandstone
Siltstone
Mudstone
Shale
Coal
Conglomerate

Note : Composite soil types are signified by combined symbols.

KEY TO TEST RESULTS COLUMN

Type and depth column: Records depth that test was carried out i.e. at 2.1m or between 2.1m and 2.55m.

P or V : in this column records pocket penetrometer (P) or hand held shear vane test (V) carried out on disturbed or undisturbed sample at depth shown with results recorded in the test results column.

SPT / SPT ©: in this column records Standard Penetration Test (SPT)or Standard Penetration Test utilising an end cone (SPT©) carried out.

Result Column : records actual un-corrected test results obtained. For SPT results, seating blows are recorded in brackets before actual "N" value.

KEY TO SAMPLING COLUMNS

From (m) to (m) : indicates depth(s) of sampling.

Type: indicates type of sample obtained.

U	undisturbed sample	**B**	small bulk disturbed sample
(32)	number of blows to obtain undisturbed sample	**W**	water sample
		J	jar sample
D	disturbed sample		

WATER MEASUREMENTS

refer to notes at base of borehole sheet

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STANDARD KEY TO DRIVEN TUBE SAMPLING BOREHOLE RECORDS

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Brown slightly silty slightly gravelly sandy TOPSOIL with some rootlets and occasional roots. Gravel consists of flint.		0.0			0.1	0.25	D
Brown and light brown, slightly gravelly sandy TOPSOIL with occasional roots. Gravel consists of flint.		0.3			0.4	0.55	D
Loose light brown, slightly silty, very clayey, slightly gravelly SAND. Gravel consists of flint. (KEPMTON PARK GRAVEL)		0.6			0.6	0.8	D
Medium dense to dense light brown sandy GRAVEL, with occasional lenses of soft light brown, very sandy CLAY. (KEPMTON PARK GRAVEL)		0.95			1.0	1.5	D
					1.8	2.0	D
					2.4	2.6	D
BOREHOLE TERMINATED AT 3.0m		3.0					

Notes:

1. Unable to excavate below 3m due to density of gravel

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	None encountered	NA	DCP01	NA

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS01**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown very clayey slightly silty gravelly SAND with some rootlets. Gravel consists of flint, ash, timber and glass. (MADE GROUND)		0.0 0.2					
Loose brown slightly gravelly SAND. (KEMPTON PARK GRAVEL)		0.4	0.4m P	1.0	0.4	0.6	D
Firm slightly gravelly very sandy CLAY. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.8					
Medium dense light brown thinly to medium bedded sandy GRAVEL. Gravel consists of flint. (KEMPTON PARK GRAVEL)					1.0	1.2	D
					2.0	2.2	D
		3.0					
BOREHOLE TERMINATED AT 3.0m Notes: 1. Unable to excavate below 3m due to density of gravel							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	1.1m measured 5 minutes after drilling	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS02**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Dark grey bituminous-bound material.		0.0					
(MADE GROUND)		0.06			0.06	0.2	D
Medium dense light brown very sandy GRAVEL. Gravel consists of flint.		0.2			0.2	0.4	D
(MADE GROUND)							
Medium dense light brown and red gravelly SAND. Gravel consists of brick and flint.		0.6					
(MADE GROUND)			0.7m P	0.5	0.7	0.9	D
Soft brown sandy slightly gravelly CLAY. Gravel consists of flint.							
(KEMPTON PARK GRAVEL)		1.0			1.0	1.4	D
Medium dense light brown very gravelly SAND. Gravel consists of flint.							
(KEMPTON PARK GRAVEL)							
		3.0					
BOREHOLE TERMINATED AT 3.0m							
Notes:							
1. Unable to excavate below 3m due to density of gravel							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	None encountered	Yes	DCP02	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS03**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Loose brown and dark grey sandy GRAVEL. Gravel consists of flint and clinker. (MADE GROUND)		0.0					
		0.3			0.3	0.35	J
Loose dark grey and dark brown clayey slightly gravelly SAND. Gravel consists of brick and ash (MADE GROUND)		0.55					
Loose brown, slightly clayey, slightly silty, gravelly SAND, with occasional roots. Gravel consists of flint and clinker. (MADE GROUND)		0.8					
Grey concrete recovered as sandy GRAVEL. (MADE GROUND)		0.81					
BOREHOLE TERMINATED AT 0.81m							
Notes: 1. Unable to excavate below 0.81m due to concrete.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	None observed	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS04**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Loose GRAVEL.		0.0					
(MADE GROUND)		0.06			0.2	0.35	D
Loose dark grey, sandy GRAVEL. Gravel consists of clinker.		0.18					
(MADE GROUND)		0.36	0.4m P	2.0			
Medium dense light brown and grey, sandy GRAVEL. Gravel consists of brick, clinker and flint.							
(MADE GROUND)			0.7m P	2.0			
Stiff dark brown, slightly silty, very sandy, slightly gravelly CLAY, becoming stiff orange, slightly sandy CLAY. Gravel consists of flint and occasional ash.					0.8	1.0	D
(MADE GROUND)		1.0					
Medium dense becoming dense orange very gravelly SAND. Gravel consists of flint.							
(KEMPTON PARK GRAVEL)					1.5	1.7	D
					2.5	2.7	D

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	1.55m measured 5 minutes after drilling	NA	DCP03a and DCP03b	NA

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 2

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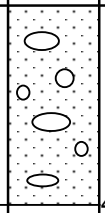
GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS05**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Dense orange very gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		4.0					
BOREHOLE TERMINATED AT 4.0m Notes: 1. Unable to excavate below 4m due to density of gravel							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	1.55m measured 5 minutes after drilling	None	DCP03a and DCP03b	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 2 OF 2

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS05**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown clayey slightly silty slightly gravelly SAND with many rootlets. Gravel consists of flint, ash and brick.		0.0			0.05	0.2	D
(MADE GROUND)		0.26	0.3m P	4.0			
Very stiff becoming stiff light brown orange sandy CLAY. (KEMPTON PARK GRAVEL)					0.5	0.7	D
			0.6m P	2.5			
		0.85					
Loose becoming medium dense light brown sandy GRAVEL. Gravel consists of flint. (KEMPTON PARK GRAVEL)					1.5	2.0	D
		3.0					
BOREHOLE TERMINATED AT 3.0m Notes: 1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	1.34m measured 5 minutes after drilling	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS06**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass onto clayey, slightly silty, slightly gravelly SAND, with some rootlets. Gravel consists of flint and ash. (MADE GROUND)		0.0			0.05	0.2	D
Stiff light brown orange sandy gravelly CLAY. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.35			0.5	0.7	D
Medium dense light brown orange very gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.9			1.3	1.5	D
					2.3	2.5	D
BOREHOLE TERMINATED AT 3.0m Notes: 1. Unable to excavate below 3m due to density of gravel.		3.0					

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	1.05m measured 5 minutes after drilling	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS07**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass onto dark brown slightly clayey slightly silty slightly gravelly SAND with some rootlets. Gravel consists of ash and flint. (MADE GROUND)		0.0			0.05	0.2	D
Loose becoming medium dense light brown orange very gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)		0.3			1.2	1.5	D
BOREHOLE TERMINATED AT 2.0m		2.0					

Notes:

1. Infiltration test undertaken - refer to Appendix D.

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	Standing water level of 1.09m	No	DCP06 approximately 15m to north east	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS08**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound material.		0.0					
(MADE GROUND)		0.1					
Loose brown grey and red sandy GRAVEL with occasional cobbles of brick. Gravel consists of brick, flint and limestone.					0.2	0.4	D
(MADE GROUND)		0.4			0.5	0.7	D
Loose becoming medium dense light brown slightly clayey sandy GRAVEL. Gravel consists of flint.							
(KEMPTON PARK GRAVEL)							
					2.0	2.4	D
		3.0					
BOREHOLE TERMINATED AT 3.0m							
Notes:							
1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	1.17m measured 5 minutes after drilling	Yes	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS09**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound material.		0.0					
(MADE GROUND)		0.08			0.1	0.3	D
Loose light brown sandy GRAVEL. Gravel consists of flint, brick and limestone.							
(MADE GROUND)		0.35	0.4m P	2.5	0.35	0.55	D
Stiff brown sandy CLAY with some roots.		0.56					
(KEMPTON PARK GRAVEL)							
Loose becoming medium dense light brown orange very sandy GRAVEL. Gravel consists of flint.					0.8	1.0	D
(KEMPTON PARK GRAVEL)					1.2	1.7	D
					2.0	2.3	D
		3.0					
BOREHOLE TERMINATED AT 3.0m							
Notes:							
1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	0.87m measured 5 minutes after drilling	Yes	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS10**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass over dark brown silty slightly gravelly SAND (MADE GROUND)		0.0			0.1	0.2	D
		0.2			0.2	0.3	D
Soft brown sandy slightly gravelly CLAY. Gravel consist of quartz, sandstone, coal and brick (MADE GROUND)					0.3	0.4	D
		0.5	0.5-0.6m P	1.5/1.5/1.5	0.5	0.6	D
Stiff light brown mottled orange slightly gravelly sandy CLAY. Gravel consists of angular flint (KEMPTON PARK GRAVEL)			0.6-0.7m P	2.0/2.0/1.5			
			0.8-0.9m P	2.0/2.0/2.0			
					0.9	1.0	D
		1.0					
Medium dense orange brown SAND and GRAVEL (KEMPTON PARK GRAVEL)		1.1					
Medium dense orange brown gravelly silty fine SAND (KEMPTON PARK GRAVEL)					1.3	1.4	D
					1.7	2.5	D
		1.8					
Medium dense orange brown SAND and GRAVEL (KEMPTON PARK GRAVEL)							
Stiff grey gravelly CLAY (KEMPTON PARK GRAVEL)		2.9	2.9m P	2.0/2.0/1.5	2.9	3.0	D
		3.0					
BOREHOLE TERMINATED AT 3.0m							

Notes:

1. Unable to excavate below 3m due to density of gravel.

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	Struck at 2m rising to 1.5m in 10mins	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS11**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass over dark brown sandy SILT		0.0			0.0	0.1	D
(MADE GROUND)		0.1					
Orange brown slightly gravelly silty SAND					0.2	0.3	D
(MADE GROUND)		0.35					
Loose brown slightly gravelly silty SAND. Gravel consists of flint, brick and coal					0.5	0.6	D
(MADE GROUND)		0.7			0.7	0.8	D
Soft light brown very sandy CLAY		0.8	0.8-0.9m P	2.0/2.0/2.5	0.8	0.9	D
(KEMPTON PARK GRAVEL)							
Stiff light brown mottled orange slightly gravelly slightly sandy CLAY			1.1-1.2m P	2.0/2.0/2.0			
(KEMPTON PARK GRAVEL)		1.2					
Medium dense orange brown clayey SAND and GRAVEL		1.3					
(KEMPTON PARK GRAVEL)					1.4	1.5	D
Medium dense orange and grey silty fine SAND							
(KEMPTON PARK GRAVEL)		1.6					
Medium dense orange brown SAND and GRAVEL							
(KEMPTON PARK GRAVEL)							
		2.9					
Medium dense orange brown silty fine SAND		3.0					
(KEMPTON PARK GRAVEL)							
BOREHOLE TERMINATED AT 3.0m							
1. Borehole sides unstable and therefore not possible to excavate below 3m.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	Struck at 1.8m. Standing water level at 1.8m	No	DCP09	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS12**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Moss over loose brown slightly gravelly clayey SAND. Gravel consists of coal, glass, sandstone, brick and flint. (MADE GROUND)		0.0			0.0	0.1	D
					0.2	0.3	D
					0.5	0.6	D
		0.6					
Loose brown slightly gravelly clayey SAND (MADE GROUND)		0.7	0.7-1.0m P	2.0/2.0/2.0	0.7	0.8	D
					0.8	0.9	D
Stiff orange light brown slightly gravelly slightly sandy CLAY (KEMPTON PARK GRAVEL)							
		1.1					
Medium dense orange brown clayey SAND and GRAVEL (KEMPTON PARK GRAVEL)							
		1.35			1.4	1.5	D
Medium dense orange, buff, grey and light brown SAND and GRAVEL (KEMPTON PARK GRAVEL)							
		3.0					
BOREHOLE TERMINATED AT 3.0m Notes: 1. Unable to excavate below 3m due to density of gravel							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	Struck at 2.0m. Standing water level at 2.45m	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS13**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound GRAVEL (MADE GROUND)		0.0			0.2	0.3	D
		0.3					
Firm black and grey green sandy CLAY exhibiting slight organic odour (MADE GROUND)			0.5m P	1.0/0.5/1.0	0.4	0.5	D
					0.7	0.8	D
		0.7					
Firm orange light brown very sandy very gravelly CLAY (KEMPTON PARK GRAVEL)					0.9	1.0	D
		0.9					
Medium dense orange brown clayey SAND and GRAVEL (KEMPTON PARK GRAVEL)							
					1.5	2.0	D
		1.9					
Medium dense grey silty fine SAND (KEMPTON PARK GRAVEL)		2.0					
Medium dense orange brown clayey SAND and GRAVEL (KEMPTON PARK GRAVEL)							
		3.0					
BOREHOLE TERMINATED AT 3.0m Notes: 1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	Struck at 2.5m. Standing water level at 1.3m	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

SOILTECHNICS
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Tel: (01604) 781877 Fax: (01604) 781007 E-mail: mail@soiltechnics.net

GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS14**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass onto loose dark brown slightly clayey slightly silty slightly gravelly SAND with some rootlets. Gravel consists of flint.		0.0					
(MADE GROUND)		0.15			0.05	0.15	D
Loose light yellow sandy GRAVEL with many cobbles of limestone. Gravel consists of limestone.		0.3					
(MADE GROUND)					0.65	0.85	D
Loose brown, sandy GRAVEL with occasional cobbles of brick and limestone. Gravel consists of concrete, limestone, flint and brick.							
(MADE GROUND)		1.15					
Very stiff dark grey and dark brown, sandy, slightly gravelly CLAY. Gravel consists of flint and ash.			1.2m P	3.5	1.2	1.4	D
(MADE GROUND)		1.3	1.4m P	2.5			
Stiff becoming firm brown and light brown, sandy, slightly gravelly CLAY. Gravel consists of flint.					1.6	1.8	D
(KEMPTON PARK GRAVEL)			1.8m P	1.0			
		2.0					
Dense light brown orange slightly clayey slightly silty gravelly SAND. Gravel consists of flint.					2.2	2.5	D
(KEMPTON PARK GRAVEL)							
		3.0					
BOREHOLE TERMINATED AT 3.0m							
Notes:							
1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	None observed	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**29.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS15**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Grass onto loose brown slightly clayey slightly gravelly SAND with some rootlets. Gravel consists of flint. (MADE GROUND)		0.0 0.1			0.1	0.25	D
Loose orange and brown slightly clayey very gravelly SAND. Gravel consists of flint. (MADE GROUND)		0.3	0.4m P	4.5	0.45	0.65	D
Very stiff brown, orange and dark grey, sandy, slightly gravelly CLAY. Gravel consists of ash, brick and flint. (MADE GROUND)		0.7	0.6m P	4.5			
Medium dense becoming dense orange and light brown gravelly SAND. Gravel consists of flint. (KEMPTON PARK GRAVEL)					1.0	1.5	D
BOREHOLE TERMINATED AT 2.5m Notes: 1. Unable to excavate below 3m due to density of gravel.		2.5					

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	1.2m measured 5 minutes after drilling	NA	DCP11 15m to north east	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**29.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS16**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound material.		0.0					
(MADE GROUND)		0.1					
Cobbles of red brick recovered as sandy GRAVEL.							
(MADE GROUND)		0.3			0.3	0.5	D
Medium dense light brown sandy GRAVEL with occasional cobbles of concrete. Gravel consists of flint, brick and concrete.		0.5			0.5	0.0.7	D
(MADE GROUND)		0.7					
Very stiff brown sandy slightly gravelly CLAY					0.8	1.0	D
(KEMPTON PARK GRAVEL)							
Medium dense light brown orange clayey gravelly SAND. Gravel consists of flint.		1.0					
(KEMPTON PARK GRAVEL)							
Medium dense Light brown and orange very gravelly SAND. Gravel consists of flint.							
(KEMPTON PARK GRAVEL)					1.7	2.0	D
		2.0					
BOREHOLE TERMINATED AT 2.0m							
Notes:							
1. Infiltration test undertaken – refer to Appendix D.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	Standing water level at 1.41m	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**27.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS17**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound material		0.0					
(MADE GROUND)		0.03					
Loose dark grey gravelly SAND. Gravel consists of ash and clinker.		0.2			0.2	0.4	
(MADE GROUND)							
Loose brown and dark grey clayey slightly gravelly SAND with occasional roots. Gravel consists of ash, brick and flint.		0.6			0.6	0.8	
(MADE GROUND)							
Loose becoming medium dense light brown and light grey sandy GRAVEL. Gravel consists of flint.					1.3	1.5	
(KEMPTON PARK GRAVEL)							
					2.7	3.0	

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	2.3m measured 5 minutes after drilling	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 2

SOILTECHNICS
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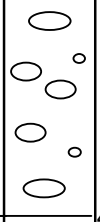
GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS18**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Loose becoming medium dense light brown and light grey sandy GRAVEL. Gravel consists of flint. (KEMPTON PARK GRAVEL)							
		4.0					
BOREHOLE TERMINATED AT 4.0m							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	2.3m measured 5 minutes after drilling	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 2 OF 2

SOILTECHNICS
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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS18**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound material.		0.0					
(MADE GROUND)		0.03					
Loose dark grey sandy GRAVEL. Gravel consists of ash and clinker.		0.2			0.2	0.4	D
(MADE GROUND)							
Loose dark grey and brown slightly clayey slightly silty gravelly SAND. Gravel consists of ash, clinker, flint and limestone.		0.61					
(MADE GROUND)		0.8			0.8	1.0	D
Loose red light brown and grey gravelly SAND. Gravel consists of brick ash and flint.							
(MADE GROUND)							
Loose brown clayey, silty, gravelly SAND. Gravel consists of ash, flint and concrete.		1.2					
(MADE GROUND)							
BOREHOLE TERMINATED AT 1.2m							
Notes:							
1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	None observed	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS19**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound material.		0.0					
(MADE GROUND)		0.03					
Loose dark grey sandy GRAVEL. Gravel consists of ash and clinker.							
(MADE GROUND)		0.3			0.4	0.6	D
Loose dark grey slightly clayey slightly silty gravelly SAND. Gravel consists of ash, clinker, flint and brick.							
(MADE GROUND)					0.7	0.9	D
		0.9					
Loose light brown, very clayey, sandy GRAVEL. Gravel consists of flint.		1.0					
(KEMPTON PARK GRAVEL)					1.2	1.5	D
Medium dense light brown sandy GRAVEL. Gravel consists of flint.							
(KEMPTON PARK GRAVEL)					2.1	2.5	D
		3.0					
BOREHOLE TERMINATED AT 3.0m							
Notes:							
1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	2.0m measured 5 minutes after drilling	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS20**

STRATA DESCRIPTION (following BS5930:1999)	LEGEND	DEPTH (m)	TEST RESULTS		SAMPLING		
			TYPE AND DEPTH	RESULT	FROM (m)	TO (m)	TYPE
Bituminous bound material.		0.0					
(MADE GROUND)		0.03					
Loose dark grey sandy GRAVEL. Gravel consists of ash and clinker.		0.2	0.3m P	1.0	0.2	0.4	D
(MADE GROUND)							
Firm becoming soft dark grey becoming light brown very sandy CLAY, with occasional roots.					0.6	0.8	D
(KEMPTON PARK GRAVEL)			0.7m P	0.5			
		0.95					
Medium dense becoming dense light brown sandy GRAVEL. Gravel consists of flint.					1.0	1.5	D
(KEMPTON PARK GRAVEL)							
		3.0					
BOREHOLE TERMINATED AT 3.0m							
Notes:							
1. Unable to excavate below 3m due to density of gravel.							

SAMPLER DIAMETER RANGE	GROUNDWATER OBSERVATIONS	SURFACE CORING	DYNAMIC PROBING WITHIN 1.0m	STANDPIPE INSTALLATION
101mm – 68mm	None observed	No	No	None

REFER TO KEY AT BEGINNING OF THIS APPENDIX FOR EXPLANATION OF SYMBOLS

DRIVEN TUBE SAMPLER BOREHOLE RECORD SHEET 1 OF 1

SOILTECHNICS
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GROUND LEVEL	CO-ORDINATES
LOCATION PLAN ON DRAWING No	DATE OF EXCAVATION
STE1297R-02	**28.05.08**

PROJECT

Richmond-Upon-Thames College, Egerton Road, Twickenham.

PROJECT REF.	BOREHOLE No
STE1297R	**DTS21**

2304

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TEST CERTIFICATE

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Method 4.4 & 5: One Point Method

Client:	Soiltechnics	Certificate Number:	PL1419-2/4/704
Client Address:	Cedar Barn White Lodge, Walgrave, Northampton, NN6 9PY	Client Reference:	STE1297R
		Job Number:	PL1419-2
		Date Sampled:	Unknown
Contact:	Lydia Drew	Date Received:	04.06.2008
		Date Tested:	16.06.2008
Site Name:	Richmond Upon Thames College	Sampling Certificate No.:	N/A
Site Address:		Certificate of Sampling:	N/A
		Sampled By:	Client

Test Results:

Laboratory Reference: PL1419-2/4

Sample Reference: Not Given

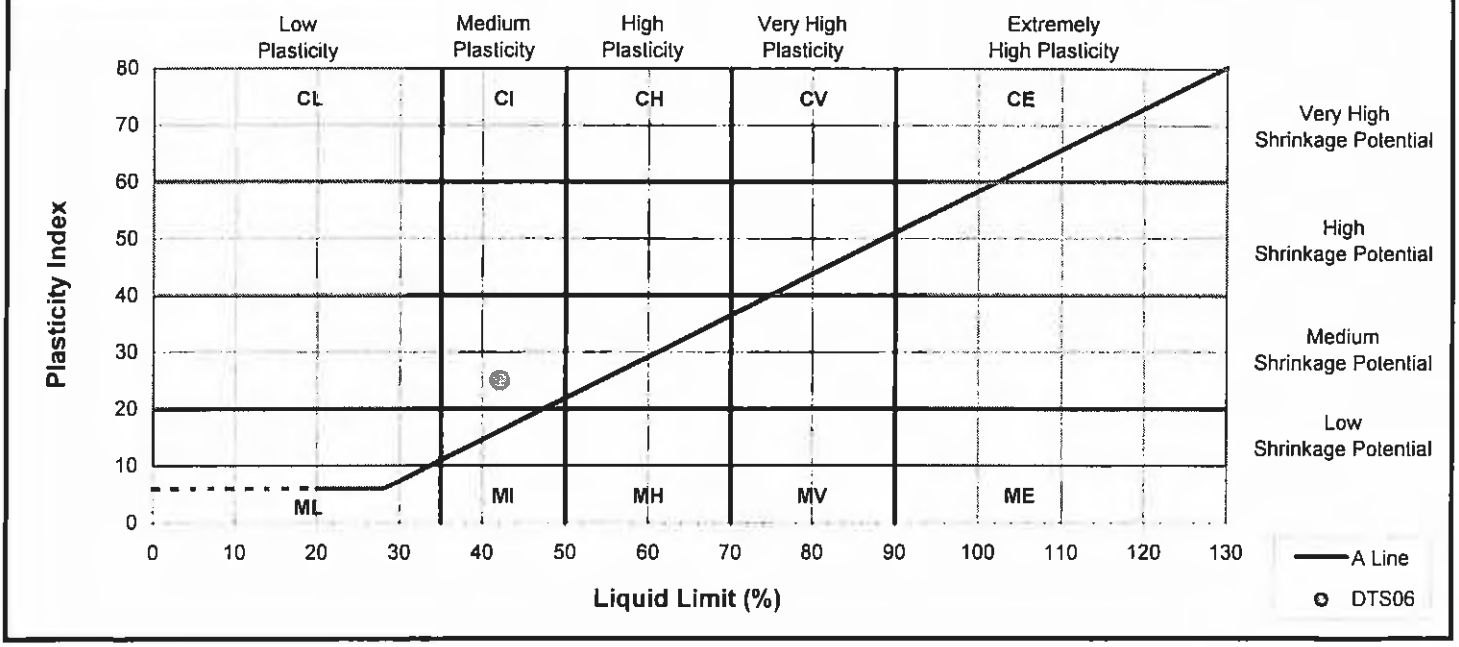
Sample Description: Firm brown orange brown slightly gravelly sandy CLAY

Location: DTS06 **Depth Top:** 0.50m

Sample Preparation: As Received **Depth Base:** 0.70m

Estimated % Passing 425µm BS Test Sieve

Moisture Content (%)	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index	% Passing 425µm BS Test Sieve
N/A	42	17	25	99



Comments:

Approved Signatory: [ ] G. Meadows - Deputy Lab Manager
[ ] C. Reynolds - Deputy Lab Manager
[ ] J. Chapman - Team Leader

Signed:

for and on behalf of Enverity

Date Reported: 20.06.2008 Page 1 of 1

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TEST CERTIFICATE

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Method 4.4 & 5: One Point Method

Client:	Soiltechnics	Certificate Number:	PL1419-2/5/704
Client Address:	Cedar Barn White Lodge, Walgrave, Northampton, NN6 9PY	Client Reference:	STE1297R
		Job Number:	PL1419-2
		Date Sampled:	Unknown
Contact:	Lydia Drew	Date Received:	04.06.2008
		Date Tested:	16.06.2008
Site Name:	Richmond Upon Thames College	Sampling Certificate No.:	N/A
Site Address:		Certificate of Sampling:	N/A
		Sampled By:	Client

Test Results:

Laboratory Reference: PL1419-2/5

Sample Reference: Not Given

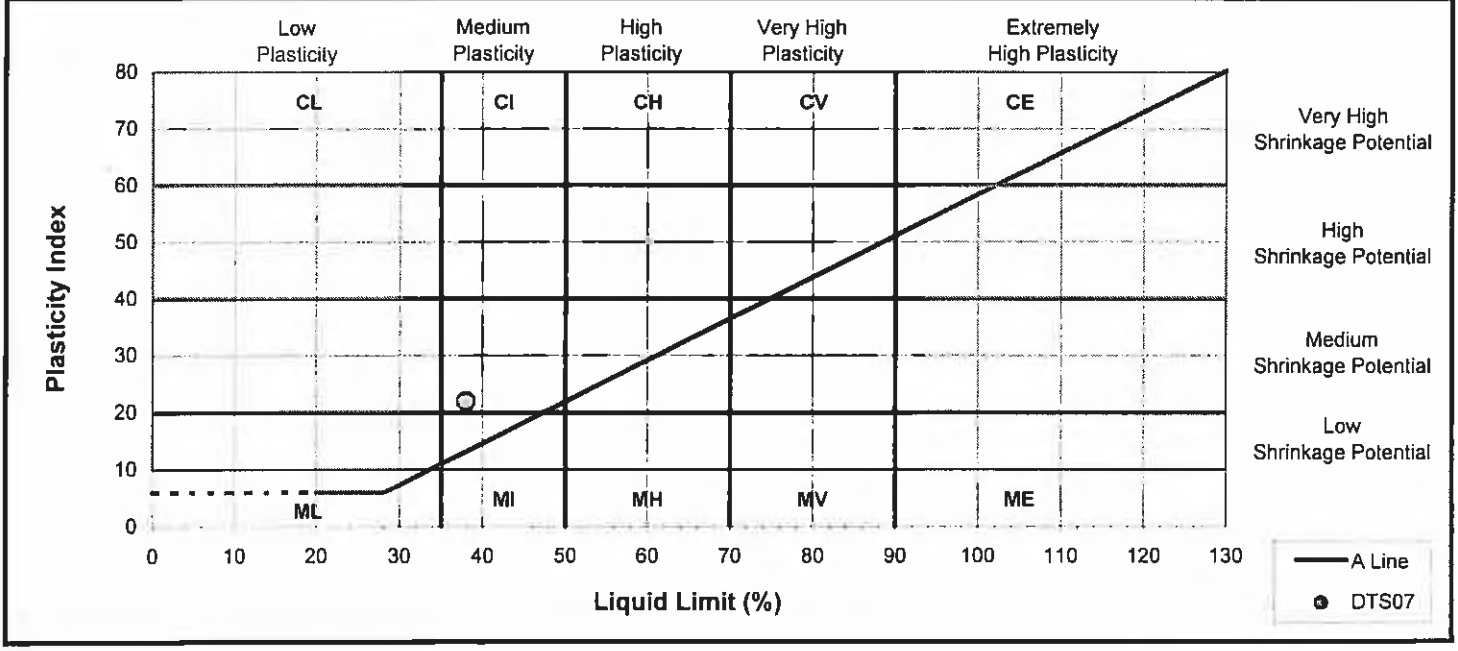
Sample Description: Stiff brown slightly sandy slightly gravelly CLAY

Location: DTS07 **Depth Top:** 0.50m

Sample Preparation: As Received **Depth Base:** 0.70m

Estimated % Passing 425µm BS Test Sieve

Moisture Content (%)	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index	% Passing 425µm BS Test Sieve
N/A	38	16	22	93



Comments:

Approved Signatory: [ ] G. Meadows - Deputy Lab Manager
[ ] C. Reynolds - Deputy Lab Manager
[✓] J. Chapman - Team Leader

Signed:

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TEST CERTIFICATE

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Method 4.4 & 5: One Point Method

Client:	Soiltechnics	Certificate Number:	PL1419-2/7/704
Client Address:	Cedar Barn White Lodge, Walgrave, Northampton, NN6 9PY	Client Reference:	STE1297R
		Job Number:	PL1419-2
		Date Sampled:	Unknown
Contact:	Lydia Drew	Date Received:	04.06.2008
		Date Tested:	17.06.2008
Site Name:	Richmond Upon Thames College	Sampling Certificate No.:	N/A
Site Address:		Certificate of Sampling:	N/A
		Sampled By:	Client

Test Results:

Laboratory Reference: PL1419-2/7

Sample Reference: Not Given

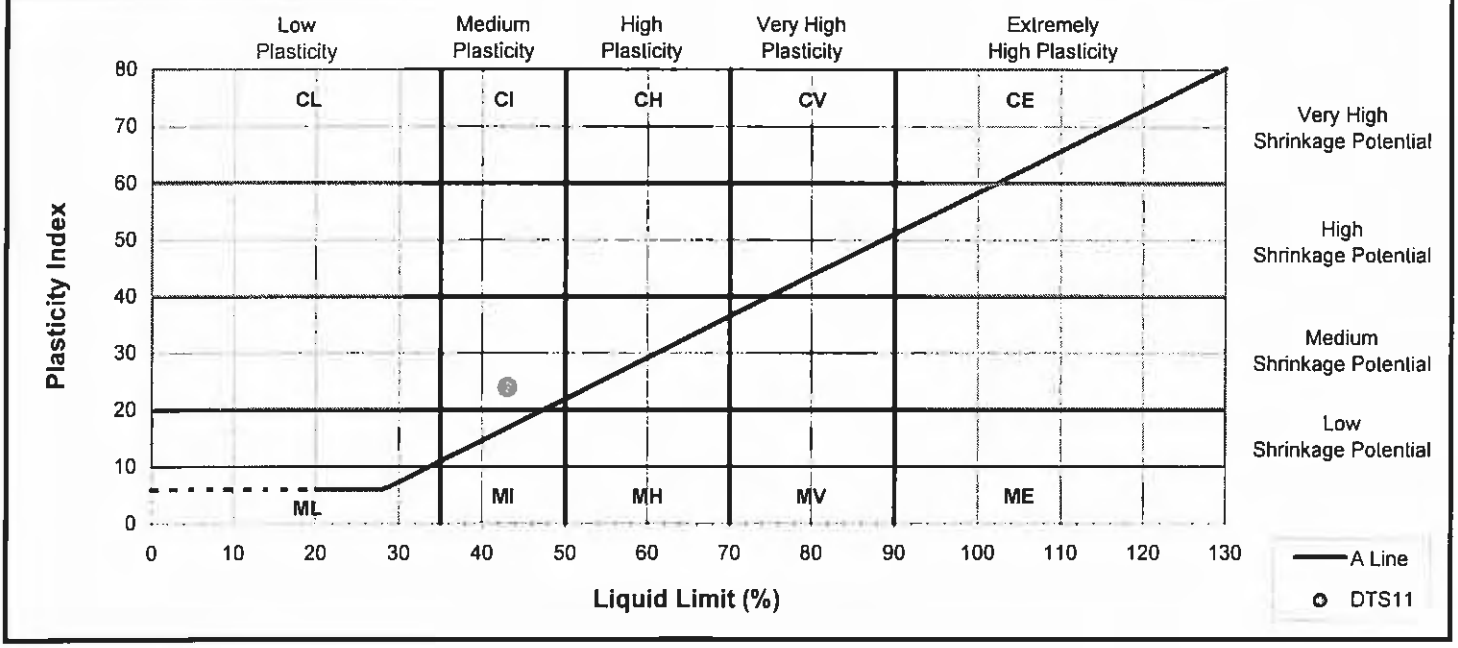
Sample Description: Firm brown grey slightly gravelly sandy CLAY

Location: DTS11 **Depth Top:** 0.50m

Sample Preparation: As Received **Depth Base:** 0.70m

Estimated % Passing 425µm BS Test Sieve

Moisture Content (%)	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index	% Passing 425µm BS Test Sieve
N/A	43	19	24	98



Comments:

Approved Signatory: [ ] G. Meadows - Deputy Lab Manager
[ ] C. Reynolds - Deputy Lab Manager
[ ] J. Chapman - Team Leader

Signed:

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TEST CERTIFICATE

Determination of Liquid & Plastic Limits

Tested in accordance with BS 1377-2:1990: Method 4.4 & 5: One Point Method

Client:	Soiltechnics	Certificate Number:	PL1419-2/8/704
Client Address:	Cedar Barn White Lodge, Walgrave, Northampton, NN6 9PY	Client Reference:	STE1297R
		Job Number:	PL1419-2
		Date Sampled:	Unknown
Contact:	Lydia Drew	Date Received:	04.06.2008
		Date Tested:	16.06.2008
Site Name:	Richmond Upon Thames College	Sampling Certificate No.:	N/A
Site Address:		Certificate of Sampling:	N/A
		Sampled By:	Client

Test Results:

Laboratory Reference: PL1419-2/8
Sample Reference: Not Given

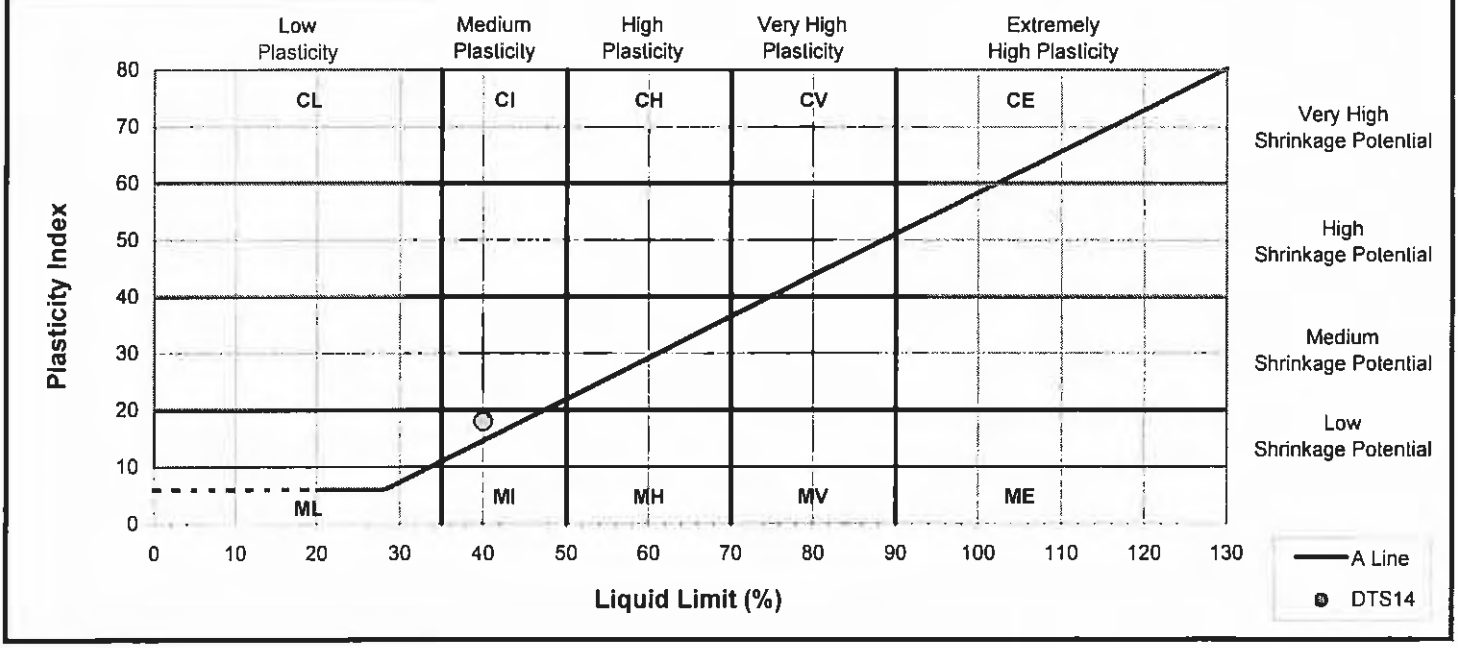
Sample Description: Firm dark brown slightly sandy slightly gravelly slightly organic CLAY

Location: DTS14 **Depth Top:** 0.40m

Sample Preparation: As Received **Depth Base:** 0.50m

Estimated % Passing 425µm BS Test Sieve

Moisture Content (%)	Liquid Limit [%]	Plastic Limit [%]	Plasticity Index	% Passing 425µm BS Test Sieve
N/A	40	22	18	96



Comments:

Approved Signatory: [ ] G. Meadows - Deputy Lab Manager
[ ] C. Reynolds - Deputy Lab Manager
[✓] J. Chapman - Team Leader

Signed:

for and on behalf of Enverity

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