

**BRE 365 - SITE POROSITY TEST PIT READINGS AND RATE CALCULATION**

Project:	41 Overmead Shoreham by sea			Project No:	26002
Test Pit no:	1	Location:	Test 1	Date:	Mar-26

1. Test pit values			2. Area as50- (no base)		3. Porosity Rate result		
Test pit L:	1.25	Tot vol.:	0.5	a _{s50} (sq.m):	1.65	Porosity rate (f) (m/s):	6.460E-05
Test pit W:	0.40	a _{p50} :	2.150			Porosity rate (m/hr):	0.23256
Test pit D:	1.00	V _{p75-25} :	0.25			Porosity rate (Vp)(s/mm):	15
Free vol (%):	100	t _{p75-25} :	30	a _{s50} = the internal surface area of the soakaway to 50% effective depth: this excludes the base area which is assumed to clog with fine particles and become ineffective in the long-term;			
Effective depth:		1.000					

Field notes and observations:- The field recorder noticed a general trend of 80mm drop every 5 minutes and recorded thus. Test results were in made ground above the chalk.

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

where:

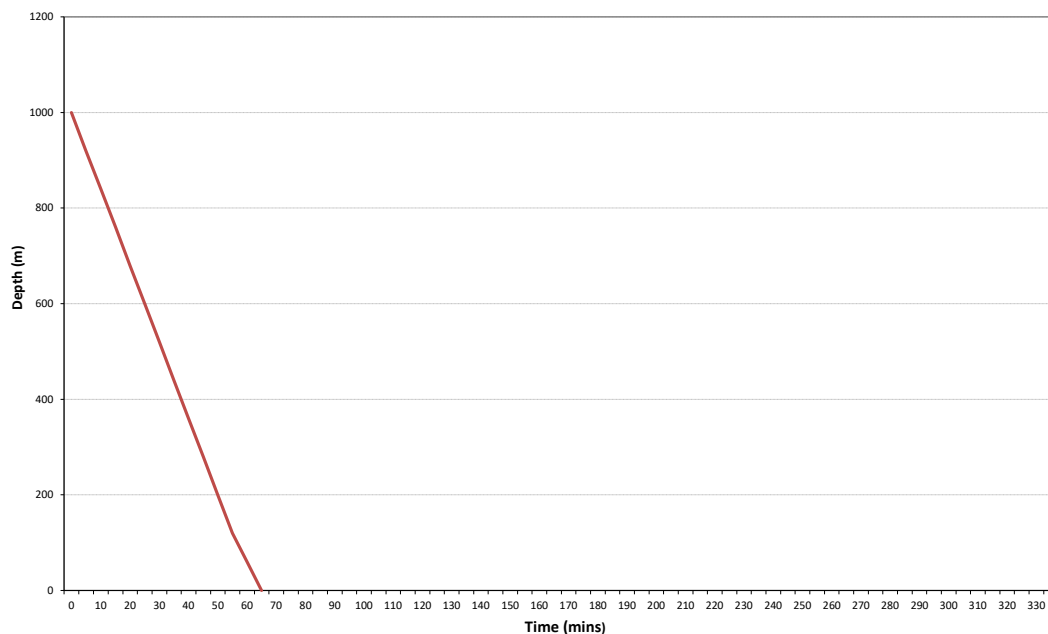
V_{p75-25} = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area;

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth.

Log of falling head test

Time	Depth	Time	Depth	Time	Depth	Time	Depth
5	920	90	0	175	0	260	0
10	840	95	0	180	0	265	0
15	760	100	0	185	0	270	0
20	680	105	0	190	0	275	0
25	600	110	0	195	0	280	0
30	520	115	0	200	0	285	0
35	440	120	0	205	0	290	0
40	360	125	0	210	0	295	0
45	280	130	0	215	0	300	0
50	200	135	0	220	0	305	0
55	120	140	0	225	0	310	0
60	60	145	0	230	0	315	0
65	0	150	0	235	0	320	0
70	0	155	0	240	0	325	0
75	0	160	0	245	0	330	0
80	0	165	0	250	0	335	0
85	0	170	0	255	0	340	0



Calculated infiltration rates are used in the design of soakways and other infiltrating SuDS features. Use CIRIA document C753 - SuDS Manual to prepare design calculations



BRE 365 - SITE POROSITY TEST PIT READINGS AND RATE CALCULATION

Project:	41 Overmead Shoreham by sea		Project No:	26002
Test Pit no:	1	Location:	Test 2	Date: Mar-26

1. Test pit values			2. Area as50- (no base)	3. Porosity Rate result
Test pit L:	1.25	Tot vol.:	0.5	Porosity rate (f) (m/s): 4.307E-05
Test pit W:	0.40	α_{p50} :	2.150	Porosity rate (m/hr): 0.15504
Test pit D:	1.00	V_{p75-25} :	0.25	Porosity rate (Vp)(s/mm): 23
Free vol (%):	100	t_{p75-25} :	45	
		Effective depth:	1.000	

Field notes and observations:- The field recorder noticed a general trend of 80mm drop every 5 minutes and recorded thus. Test results were in made ground above the chalk

a_{s50} = the internal surface area of the soakaway to 50% effective depth: this excludes the base area which is assumed to clog with fine particles and become ineffective in the long-term;

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

where:

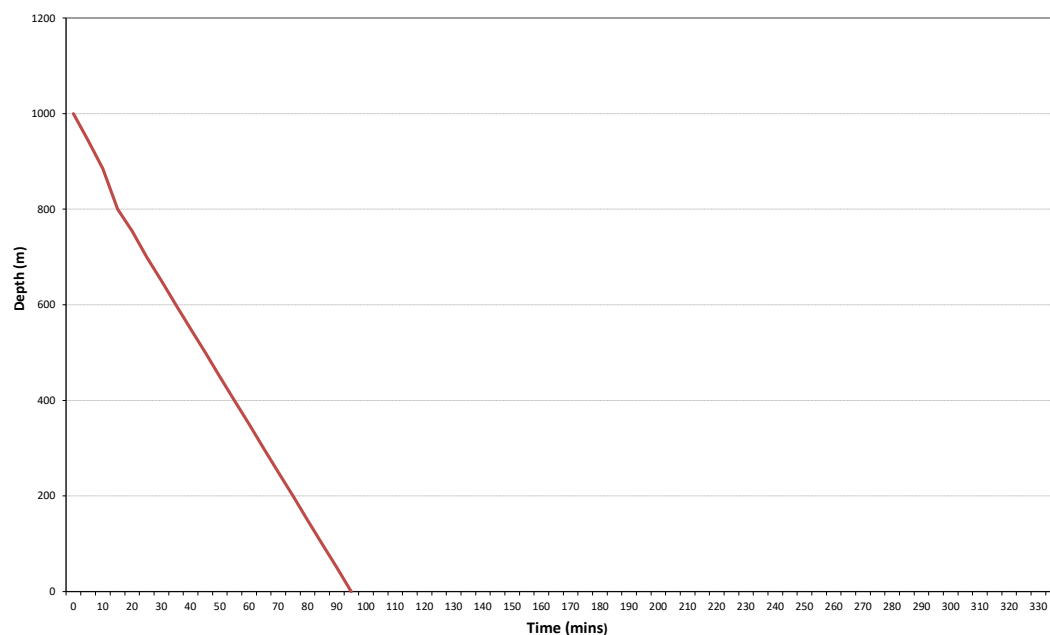
V_{p75-25} = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area;

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth.

Log of falling head test

Time	Depth	Time	Depth	Time	Depth	Time	Depth
5	945	90	50	175	0	260	0
10	885	95	0	180	0	265	0
15	800	100	0	185	0	270	0
20	755	105	0	190	0	275	0
25	700	110	0	195	0	280	0
30	650	115	0	200	0	285	0
35	600	120	0	205	0	290	0
40	550	125	0	210	0	295	0
45	500	130	0	215	0	300	0
50	450	135	0	220	0	305	0
55	400	140	0	225	0	310	0
60	350	145	0	230	0	315	0
65	300	150	0	235	0	320	0
70	250	155	0	240	0	325	0
75	200	160	0	245	0	330	0
80	150	165	0	250	0	335	0
85	100	170	0	255	0	340	0



Calculated infiltration rates are used in the design of soakways and other infiltrating SuDS features. Use CIRIA document C753 - SuDS Manual to prepare design calculations



BRE 365 - SITE POROSITY TEST PIT READINGS AND RATE CALCULATION

Project:

41 Overmead Shoreham by sea

Project No:

26002

Test Pit no:

1

Location:

Test 3

Date:

Mar-26

1. Test pit values

Test pit L:	1.25	Tot vol.:	0.5
Test pit W:	0.40	a_{p50} :	2.150
Test pit D:	1.00	V_{p75-25} :	0.25
Free vol (%):	100	t_{p75-25} :	60
		Effective depth:	1.000

2. Area a_{s50} - (no base) a_{s50} (sq.m):

1.65

3. Porosity Rate result

Porosity rate (f) (m/s):

3.230E-05

Porosity rate (m/hr):

0.11628

Porosity rate (Vp)(s/mm):

31

a_{s50} = the internal surface area of the soakaway to 50% effective depth: this excludes the base area which is assumed to clog with fine particles and become ineffective in the long-term;

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

where:

V_{p75-25} = the effective storage volume of water in the trial pit between 75% and 25% effective depth;

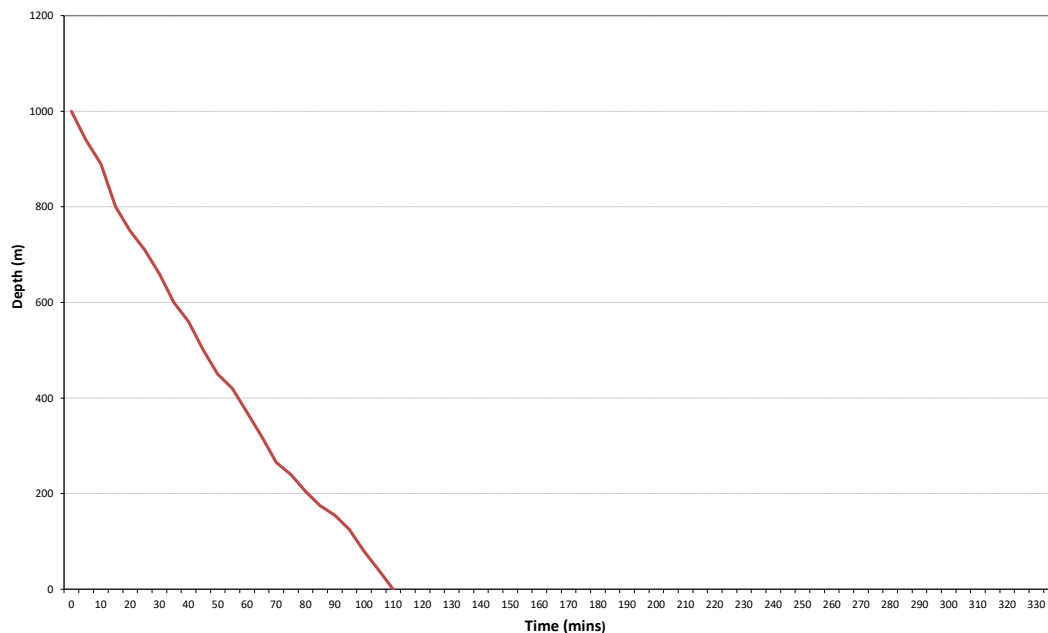
a_{p50} = the internal surface area of the trial pit up to 50% effective depth and including the base area;

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth.

Field notes and observations:- The field recorder noticed varying drops every 5 minutes and recorded thus. Test results were in made ground above the chalk.

Log of falling head test

Time	Depth	Time	Depth	Time	Depth	Time	Depth
5	940	90	155	175	0	260	0
10	890	95	125	180	0	265	0
15	800	100	80	185	0	270	0
20	750	105	40	190	0	275	0
25	710	110	0	195	0	280	0
30	660	115	0	200	0	285	0
35	600	120	0	205	0	290	0
40	560	125	0	210	0	295	0
45	500	130	0	215	0	300	0
50	450	135	0	220	0	305	0
55	420	140	0	225	0	310	0
60	370	145	0	230	0	315	0
65	320	150	0	235	0	320	0
70	265	155	0	240	0	325	0
75	240	160	0	245	0	330	0
80	205	165	0	250	0	335	0
85	175	170	0	255	0	340	0



Calculated infiltration rates are used in the design of soakways and other infiltrating SuDS features. Use CIRIA document C753 - SuDS Manual to prepare design calculations