

Appendix 5

Soakaway Test Results

EASTWOOD & PARTNERS

(Consulting Engineers) Ltd

PROJECT:	Bamford Cottages, Upton E	Job No. 37617	Date 18.09.14				
SUBJECT:	Soakaway Test Results and	Prepared MM	Checked RW				
Test No.	TP1						
Test Pit Din							
Length =	1500 mm		Plan area	=	0.75 m ²		
Width =	500 mm						
Depth =	2200 mm (Total dep	ih)					
Depth to wa	ter after completion of pumpin	g:			1150 mm		
Time (min)	Depth (mm)				Time (min)		
0	1150		0	50	100	150	
1	1160	1150			100	150	
2	1160	1150					
3	1170	1250					
4	1170	1350	1				
10	1170						
15	1170	E 1550	1				
20	1180	5					
25	1180	a 1750	1				
38	1180	ă					
45	1190	1950					
75	1200						
195	1250	2150					
			1				

Sheet 1 of 2

Test Pit Log

0 - 0.4 Turf over red brown slightly clayey silty SAND

0.4 - 1.8 Firm red brown occasional mottled green grey CLAY From 1.80m: occasional sandstone gravel and cobbles

SEE PAGE 2 FOR CALCULATION OF INFILTRATION RATES

EASTWOOD & PARTNERS (Consulting Engineers) Ltd

PROJECT	Bamford Co	ottages, Unton	Bishop				Date			
THOULOT.	Baimora oc	Stragos, opton	Bioliop			37617	18.09.14			
SUBJECT: Soakaway Test Results and Calculation of Infiltration Rates							Checked			
						ММ	RW			
Test No.	TP1									
Soil Infiltration Rate in Accordance with BR365										
	T 7									
$f = \frac{1}{a}$	$\frac{V_{p75-25}}{xt_{p75-25}}$	_								
	50*** p75-2	5								
Where:		<i>V</i> _{p75-25}	is the effection pit between	ve storage volume 75% and 25% effe	of water in the trial ctive depth;					
		a_{p50}	is the interna effective dep	al surface area of th oth and including th	ne trial pit up to 50% e base area					
		t .75.25	is the time fo	or the water level to	fall from 75% to					
		p13-23	25% effectiv	e depth						
Initial param	<u>neters</u>									
Depth to wa	ter =	1150	mm	Average water de	pth: 1000	mm				
Start time	=	0	min	Channe in water	100					
Final naram	ators			Change in water o	aeptn: 100	mm				
Depth to wa	iter =	1250	mm	Time interval [.]	195	min				
End time	=	195	min	i into into i tai.	100					
					_					
Effective Sto	orage Volume	e of Water in the	e Trial Pit	=	• 0.7875 m³		1			
75% Effectiv	ve Depth			=	• 1413 mm fr	om ground le	evel			
Zo% Ellectiv	ve Deptri 4 Effoctivo Do	onth		=	• 1936 mm m • N/A minute	un ground ie	evel			
Time at 25%	6 Effective De	epth		=	N/A minute	55 95				
		. [water level did not	reach 75% e	ffective			
V_{p75-25}	=	0.394	m³		depth					
$a_{_{p50}}$	=	2.85	m²							
t _{p75-25}	=	0	sec							
f	=	n/a	m/sec							
Average Soa	akawav Rate	=	6.4E-06	m³/sec						
Average soa	akaway area	=	4.75	m² (sides + base)						
BR	<u>365 Soil Infi</u>	<u> tration Rate =</u>	unable	to calculate						
	Average Infilt	tration Rate =	1.3E-06	m/sec						

EASTWOOD & PARTNERS

(Consulting Engineers) Ltd

PROJECT:	Bamford Cottages, Upton Bishop							Date 18.09.14
SUBJECT:	Soakaway Test Results and Calculation of Infiltration Rates							Checked RW
Test No.	TP4							
Test Pit Dimensions								
Length =	1500 mm		Plar	n area	=	0.75 m ²		
Width =	500 mm							
Depth =	2000 mm (Total dept	:h)						
Depth to wat	ter after completion of pumpin	g:				1250 mm		
Time (min)	Depth (mm)					Time (min)		
0	1250		0	20	40	60	30 100	120
1	1260	1250	-					
2	1270	1250	~					
3	1270	1350						
4	1270							
5	1280	1450	1					
10	1280	Ê 1550						
20	1280	<u> </u>						
20	1280	£ 1650						
30	1280	Dep						
45	1280	u 1750	1					
60	1310	1850						
75	1310	1050						
90	1320	1950						
120	1330		1					
		L						

Sheet 1 of 2

<u>Test Pit Log</u>

- 0 0.2 Turf over TOPSOIL
- 0.2 2 Very weak very thinly bedded purple brown mottled green grey sandstone

SEE PAGE 2 FOR CALCULATION OF INFILTRATION RATES

EASTWOOD & PARTNERS (Consulting Engineers) Ltd

PROJECT	Bamford Co	ottages, Unton	Bishop				Date			
	37617	18.09.14								
SUBJECT: Soakaway Test Results and Calculation of Infiltration Rates							Checked			
						мм	RW			
T										
lest No.	1 124									
Soil Infiltration Rate in Accordance with BR365										
,	V ar ar									
f =	• p75–25	_								
a_{p}	$_{50}xt_{p75-2}$	5								
Where [.]			is the offecti	vo storado volumo	of water in the trial					
VVIICIC.		<i>V</i> _{p75-25}	pit between	75% and 25% effe	ctive depth;					
		a	is the interna	al surface area of tl	ne trial pit up to 50%					
		a _{p50}	effective dep	oth and including th	e base area					
		t +75 05	is the time fo	or the water level to	fall from 75% to					
		* p75-25	25% effectiv	e depth						
Initial naram	latars									
Depth to wa	ter =	1250	mm	Average water de	pth: 710	mm				
Start time	=	0	min	, norago nator de						
				Change in water of	depth: 80	mm				
Final param	<u>eters</u>									
Depth to wa	ter =	1330	mm	Time interval:	120	min				
End time	=	120	min							
Effective Sto	orage Volume	of Water in the	e Trial Pit	=	• 0.5625 m³					
75% Effectiv	/e Depth			=	= 1438 mm fro	om ground le	evel			
25% Effectiv	/e Depth			=	= 1813 mm fro	om ground le	evel			
Time at 75%	6 Effective De	epth		=	 N/A minute 	s				
Time at 25%	6 Effective De	pth		=	N/A minute	S	((
		0.001	m ³		water level did not r	each 75% e	ffective			
V_{p75-25}	=	V.281	111*		ueptii					
$a_{_{p50}}$	=	2.25	m²							
+	=	۵	sec							
ν _{p75-25}	_	Ū								
f	=	n/a	m/sec							
Average Soa	akaway Rate	=	8.3E-06	m³/sec						
Average soa	akaway area	=	3.59	m² (sides + base)						
BR	365 Soil Infi	tration Bate =	unable	to calculate						
<u></u>	Average Infil	tration Rate =	2.3E-06	m/sec						