

Ref: C2042

Nicholas Moss

30th March 2022**Re: 8 Dukes Road, Fontwell – Soakaway Testing – Infiltration Test Result Summary**

Dear Nicholas

The following investigation was carried out at the above location in accordance with our quotation.

1. Site Works

The purpose of the investigation was to supply soakaway test data in general accordance with BRE document 365 (Soakaway Design) at one location which would be the approximate intended location for a possible infiltration device to serve an extension to an existing dwelling.

In addition to the soakaway test pit, a borehole was dug to a depth of 1.5m using a hand auger. This was covered and monitored over 48 hours and remained dry.

The appended drawing illustrates the position of the test pit. The BRE365 pit was excavated to a depth of 0.9m in line with the approximate depth of the proposed soakaway.

The testing commenced on 3rd March 2022 with three tests being undertaken in accordance with BRE 365.

2. BRE 365 Soakaway Test Findings

Testing of the sub soils which was noted as chalk produced a BRE 365 design infiltration rate of **2.62x10⁻⁵m/s**. This rate was the slowest taken from all three tests. This is considered a good rate and will likely be suitable for most infiltration devices.

3. BRE 365 Soakaway Test Results

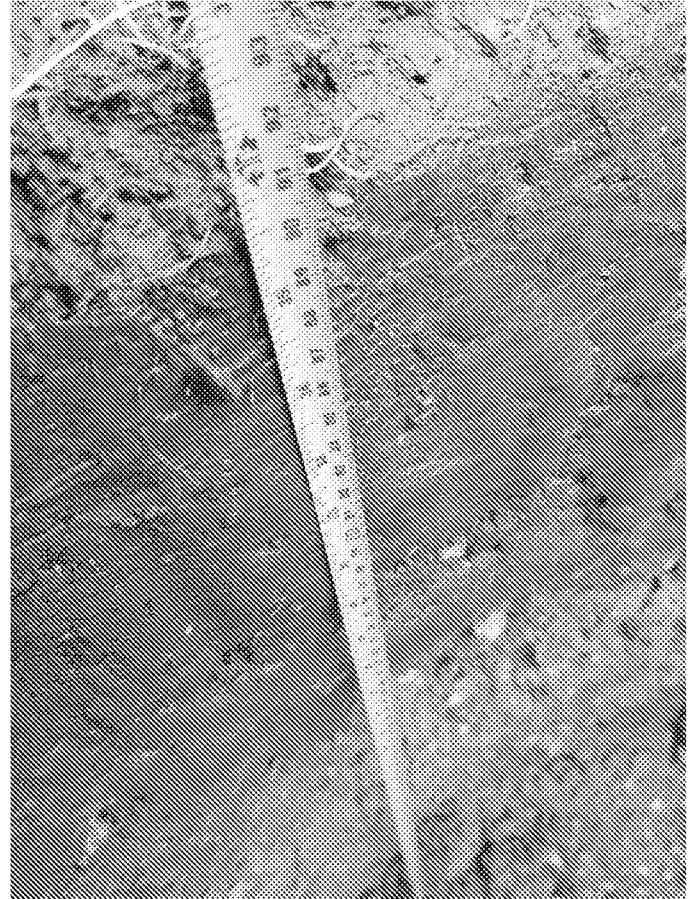
Test Pit No	Infiltration Rate (1-3 Tests)			Depth of Test	Soil Type
SAT1	3.53x10 ⁻⁵ m/s	3.28x10 ⁻⁵ m/s	2.62x10⁻⁵m/s	0.9m	Silty, sandy clay

Appendix A – Soakaway Test Location Plan



Richard Cobden House, Lion Street, Chichester, West Sussex, PO19 1LW

Appendix B – Site Photographs



Appendix C – Soakaway Test Results

Job: Dukes Road, Fontwell - Test 1

Infiltration Calculator

$$f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

V_{p75-25} = Effective storage volume between 75% and 25% effective depth

a_{p50} = 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

f = Infiltration rate

Trial pit width	=	0.3
Trial pit depth	=	0.9
Trial pit length	=	1

a_{p50} = 1.32 m/squared

t_{p75-25} = 2900 seconds

V_{p75-25} = 0.135 m/cubed

F =

3.53E-05



Job: Dukes Road, Fontwell - Test 2

Infiltration Calculator

$$f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

V_{p75-25} = Effective storage volume between 75% and 25% effective depth

a_{p50} = 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

f = Infiltration rate

Trial pit width	=	0.3
Trial pit depth	=	0.9
Trial pit length	=	1

a_{p50} = 1.32 m/squared

t_{p75-25} = 3120 seconds

V_{p75-25} = 0.135 m/cubed

F =

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3.28E-05	

Job: Dukes Road, Fontwell - Test 3

Infiltration Calculator

$$f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

V_{p75-25} = Effective storage volume between 75% and 25% effective depth

a_{p50} = 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

f = Infiltration rate

Trial pit width	=	0.3
Trial pit depth	=	0.9
Trial pit length	=	1

a_{p50} = 1.32 m/squared

t_{p75-25} = 3900 seconds

V_{p75-25} = 0.135 m/cubed

F = 2.62E-05