

Ref: CS/C1261

Jacob Napthine

7th October 2019**Re: Normandie, Yapton – Soakaway Testing – Infiltration Test Result Summary**

Dear Jacob

The following investigation was carried out at the above location in accordance with our quotation dated 21st August 2019.

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.

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.

In addition to the soakaway test, a deeper borehole was dug adjacent to the soakaway pit to a depth of 1.2m. The borehole remained dry throughout the test therefore groundwater is deemed as not affecting the surface water system.

The testing commenced at 08:00 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 sandy clays produced a BRE 365 design infiltration rate of **9.38x10⁻⁶m/s** at a depth of 0.9m. This rate was the slowest taken from all three tests. This is considered a poor rate but will likely be suitable for infiltration devices providing a large contact surface.

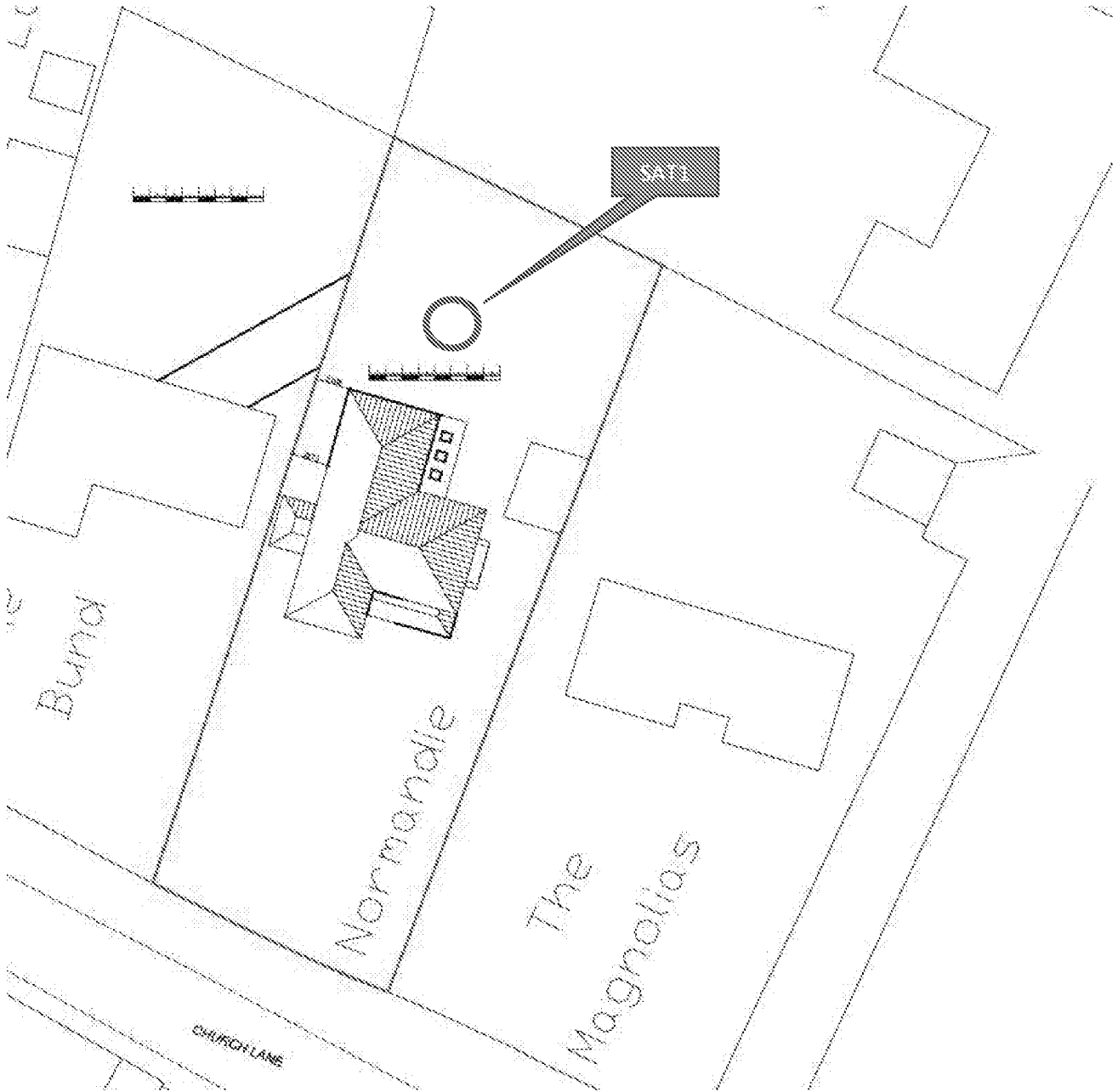
3. BRE 365 Soakaway Test Results

Test Pit No	Infiltration Rate (1-3 Tests)			Depth of Test	Soil Type
SAT1	1.26x10 ⁻⁵ m/s	1.09x10 ⁻⁵ m/s	9.38x10⁻⁶m/s	0.9m	Sandy clays

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

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Appendix A – Soakaway Test Location Plan



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

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Appendix B – Site Photographs

Groundwater monitoring pit



BRE 365 test pit





Consulting Civil Engineers

Appendix C – Soakaway Test Results

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Job: Normandie, Yapton - 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	=	0.4

a_{p50} = 0.75 m/squared

t_{p75-25} = 5700 seconds

V_{p75-25} = 0.054 m/cubed

F =

1.26E-05

Job: Normandie, Yapton - 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	=	0.4

a_{p50} = 0.75 m/squared

t_{p75-25} = 6600 seconds

V_{p75-25} = 0.054 m/cubed

F = 1.09E-05

Job: Job: Normandie, Yapton - 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	=	0.4

a_{p50} = 0.75 m/squared

t_{p75-25} = 7680 seconds

V_{p75-25} = 0.054 m/cubed

F = 9.38E-06