

Project:		210 Dunsbury /way, Havant		By:	
Calculation:		Soakaway Design			
		Wallingford Procedure Rainfall		Approved:	
Sheet Number:	1	Date:	13/11/2021		

Catchment Details					
Catchment Area			107	m ²	
Location			England & Wales		
City/Town			Portsmouth		
M5-60	18.69	Override-			
r Ratio	0.35	Override-			
Runoff Coefficient			100	%	

Design Storm Details					
Return Period			30	years	
Climate Change Allowance			1.4		

Ground Information					
Infiltration Rate			0.378	m/hr	
Factor of Safety			1.5		

Soakaway Design					
Soakaway Shape		Rectangular Trench/Pit			
Number of Soakaways		1			
Length		1.80	m		
Width		1.80	m		
Effective Depth		1.50	m		
Backfill Porosity		95	%		
Additional Outflow (If Any)		0	l/s		
Base Infiltration Factor		0			

Soakaway Plan

Soakaway Cross Section

1.05E-04 m/s

Your Logo / Company Details Here	Project:		By:									
	Calculation:		Soakaway Design									
	Sheet Number:		1 Date:									
Approved:												
Results												
<table><tr><td>Maximum Storage Volume Required:</td><td>4.34 m³ (1.4166666666)</td><td></td></tr><tr><td>Storage Volume Provided:</td><td>4.62 m³</td><td>Acceptable</td></tr><tr><td>Time of Emptying:</td><td>1.6 Hours</td><td>Acceptable</td></tr></table>				Maximum Storage Volume Required:	4.34 m³ (1.4166666666)		Storage Volume Provided:	4.62 m³	Acceptable	Time of Emptying:	1.6 Hours	Acceptable
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PERCOLATION TEST

Site

210 Dunsbury Way, Havant, Hampshire

Test Date

8th November 2021

Weather

Overcast

Description

Two pits at 1m x 1m dug to proposed soakaway inlet invert level, with 300x300x300mm deep sump to base. Hole filled and left to drain overnight. Duration measured from 75% full to 25% full (150mm) 3 times in both pits.

Method

Building Regulations Part H, Paragraphs 1.34 – 1.38

Results

Pit 1

Test 1: 23.02 (1382 seconds)

Test 2: 31.56 (1916 seconds)

Test 3: 46.32 (2792 seconds)

Pit 2

Test 1: 10.08 (608 seconds)

Test 2: 13.40 (820 seconds)

Test 3: 17.43 (1063 seconds)

Average duration

$(1382 + 1916 + 2792 + 608 + 820 + 1063) / 6 = 1430$ seconds

$1430 / 60 / 60 = 0.397$ hours

$0.15\text{m} / 0.397 \text{ hours} = 0.378$

Infiltration Rate = 0.378m/h

AREA TO BE DRAINED

Roof - plan area: $11.91\text{m} \times 4.76\text{m} = 56.69\text{m}^2$

Patio - plan area: $8.17\text{m} \times 4.75\text{m} = 38.81\text{m}^2$

Path - plan area: $11.91\text{m} \times 1.0\text{m} = 11.91\text{m}^2$

Total 107.41m^2