

Project 2 THE SPINNEY HAYWARDS HEATH		Project No.
Subject STORM DRAINAGE		
By MK9	Checked	Date 19-08-2025
		Sheet No. 1

DATA:

Area houses 115m² each ie ~~115m²~~ 127m² new
 T path 12m x 3m in
 Area new drive + concrete removed = ~~115m²~~ 131m² (4)m² less permeable
 Infiltration rate see Land Science Report.

Test 1 poor seepage Test 2 $k = 8.76 \times 10^{-7}$ m/s
 Soils: light brown silty gravelly CLAY in Head

$$h_{max} = \frac{D(R_L - q)}{n} \quad R = \frac{A_2}{A_1} \quad \text{For plane seepage}$$

 CIRIA Report 158

$q = 0.00365$ m/h for Test 2, use $q = 0.003$ m/h.

100y Storm + 40% Climate Change

Durata 100y	Recharged	h_{max} (m)	
(h)	Rainfall (mm/h)	rainfall (mm/h)	$r = 0.3$ $r = 0.4$
1	39	4.9	0.256
2	24	2.8	0.286
6	12.9	12.1	0.460 0.345
12	7.8	4.8	0.220

Allow for greenfield run-off of 16.6 l/s/ha or 6 mm/h.

Time to half empty = $\frac{0.345 \times 0.4}{0.003 \times 2} = \underline{23 \text{ hours}} < 24 \text{h}$

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Subject STORM DRAINAGE

By MKR

Checked

Date 19-08-2025

Sheet No. 2

20 yr Storm Ab Runoff

Duration	Rainfall	$n=0.8$	$n=0.4$
(h)	(mm/h)		
1	27.2		0.139
2	17.5		0.175
6	8.8		0.219
12	5.03	0.312	0.234
24	2.70		0.168

PROVIDE 19/m²

~~200mm~~ of permeable stone constructed with a sub-base of

- (i) 0.35m 20mm single size stone
or (ii) 0.46m Type 1 crushed stone

(Type 3 m²)