

STORM WATER - PROPOSED SITE RUN-OFFS

Document B

Job No.: 414601
Job Name: East street Havant

Total site Area		14087.7	m2
Surface	Area (m2)	Run-off coeff	Eff Area (m2)
Existing roofs	750	1.00	750
Existing hardstanding	918	1.00	918

Grass / soft landscaping 0 0.00 0 Permeable surface

1 in 100 year event + 40% climate change

Eff Area 1668 m2

100 year return period + climate change

		Storm duration (Min.)	T	N	r	Climate allowance 40%
R5	0.03242	5	0.08 hrs	0.083333	0.1	0.023154
R10	0.04017	10	0.17 hrs	0.166667	0.1	0.028694
R15	0.04546	15	0.25 hrs	0.25	0.1	0.032473
R30	0.05603	30	0.50 hrs	0.5	0.1	0.040022
R60	0.06888	60	1.00 hrs	1	0.1	0.0492
R120	0.08450	120	2.00 hrs	2	0.1	0.060356
R240	0.10348	240	4.00 hrs	4	0.1	0.073917
R360	0.11643	360	6.00 hrs	6	0.1	0.083168

Run-off from site during 6 Hour event

Volume of total run-off	Flow in Ltrs / second during event
I360 194.213 m3	Flow 8.991 L/s

1 in 1 year event

Eff Area 1668 m2

1 year return period + climate change

		Storm duration (Min.)	T	N	r	Climate allowance 40%
R5	0.01416	5	0.08 hrs	0.083333	1	0.010892
R10	0.01792	10	0.17 hrs	0.166667	1	0.013788
R15	0.02049	15	0.25 hrs	0.25	1	0.015764
R30	0.02562	30	0.50 hrs	0.5	1	0.01971
R60	0.03186	60	1.00 hrs	1	1	0.024508
R120	0.03944	120	2.00 hrs	2	1	0.03034
R240	0.04866	240	4.00 hrs	4	1	0.037429
R360	0.05494	360	6.00 hrs	6	1	0.042265

Run-off from site during 6 Hour event

Volume of total run-off	Flow in Ltrs / second during event
I360 91.648 m3	Flow 4.243 L/s

The above run-off volumes will be contained on site and not run-off , see below:

Attenuation tank design for 1in100 yr + 40% climate change 6 hour event

Whole site

Inflow to attenuation tank system			
I360	194.213	m3	
Outflow from Tank			
f	6.42E-03	m3/s	Existing site run off 0.01 m3/s
			6.42 L/s
Soakaway dims for each dwelling:			
L	10.0	m	No. of tanks 1 No.
W	5.0	m	
Depth	1.2	m (below invert depth of inlet pipe)	
Void ratio	95.0	%	
Outflow from Tanks:			
O360	138.72	m3	
Storage required:			Time to drain:
S360	55.49	m3	ts50 1.20 hours
Storage provided	57.0	m3	
Critical storm =	S360		
Storage required =	55.49		
Time to discharge=	1.20	Hours	

Attenuation tank size proposed is satisfactory