

STORM WATER - PROPOSED SITE RUN-OFFS

Document C

Job No.:	405000		
Job Name:	5-7 Station Road		
Total site Area		1895	m2
Surface	Area (m2)	Run-off coeff	Eff Area (m2)
Building Island tyres	330	1.00	330
Cycle store	76	1.00	76
Bin store	37	1.00	37
Soft landscaping	139	1.00	139
Hardstanding	410	1.00	410
New flats roof	447	1.00	447
Permeable paving	456	1.00	456
			Roof and hard paved impermeable areas
			Roof and hard paved impermeable areas
			Well compacted gravel (Conservative)
			Permeable areas, lawns etc
			Roof and hard paved impermeable areas
			Roof and hard paved impermeable areas
			Semi permeable surfacing
			Permeable areas, lawns etc
Sum	1895		

1 in 30 year event + 40% climate change									
Eff Area	1895	m2							
1 year return period + climate change			Storm duration (Min.)		T	N	r	Climate allowance 40%	
R5	0.02207	m	5	0.08 hrs	0.083333	0.333333	0.015764		
R10	0.02759	m	10	0.17 hrs	0.166667	0.333333	0.01971		
R15	0.03136	m	15	0.25 hrs	0.25	0.333333	0.022402		
R30	0.03889	m	30	0.50 hrs	0.5	0.333333	0.02778		
R60	0.04805	m	60	1.00 hrs	1	0.333333	0.034318		
R120	0.05917	m	120	2.00 hrs	2	0.333333	0.042265		
R240	0.07270	m	240	4.00 hrs	4	0.333333	0.051926		
R360	0.08192	m	360	6.00 hrs	6	0.333333	0.058516		
Run-off from site during 6 Hour event									
Volume of total run-off			Flow in Ltrs / second during event						
I360	155.244	m3	Flow	7.187	L/s				

Check New drainage pipe flows / sizes										Max discharge pipe capacity (Pipes flowing full)			
Start	Area	1in30yr	Foul (L/s)	Storm (L/s)	Total (L/s)	Size (Dia.)	I (from surv	Ks (Comb)	Peak Flow (Q)	Max velocity Pipe V (m/s)	Max flow cap. pipe Q (L/s)	Usage in Peak Flow	Approx. Vel Peak Flow (m/s)
New flats roof	447	17.38		9.66	9.66	0.15	100	1.5	9.658	0.8752	15.466	0.624	0.547
Half new flats roof	223.5	8.69		4.83	4.83	0.1	100	0.6	4.829	0.7673	6.026	0.801	0.615
East of site	330	12.83		7.13	7.13	0.15	100	1.5	7.130	0.8752	15.466	0.461	0.403