

Polypipe Building Products Ltd							Page 1
Broomhouse Lane Edlington Doncaster DN12 1ES			Slaithwaite Drive, Manchester Polystorm Attenuation Tank				
Date 16.12.20 File 55440.SRCX			Designed by C. Mars Checked by				
Micro Drainage			Source Control 2016.1				
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 23 minutes.							
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	99.114	0.514	0.0	3.0	3.0	5.1	O K
30 min Summer	99.240	0.640	0.0	3.0	3.0	6.4	O K
60 min Summer	99.257	0.657	0.0	3.0	3.0	6.6	O K
120 min Summer	99.183	0.583	0.0	3.0	3.0	5.8	O K
180 min Summer	99.061	0.461	0.0	3.0	3.0	4.6	O K
240 min Summer	98.949	0.349	0.0	3.0	3.0	3.5	O K
360 min Summer	98.799	0.199	0.0	3.0	3.0	2.0	O K
480 min Summer	98.728	0.128	0.0	2.8	2.8	1.3	O K
600 min Summer	98.700	0.100	0.0	2.6	2.6	1.0	O K
720 min Summer	98.687	0.087	0.0	2.3	2.3	0.9	O K
960 min Summer	98.673	0.073	0.0	1.9	1.9	0.7	O K
1440 min Summer	98.658	0.058	0.0	1.4	1.4	0.6	O K
2160 min Summer	98.648	0.048	0.0	1.0	1.0	0.5	O K
2880 min Summer	98.642	0.042	0.0	0.8	0.8	0.4	O K
4320 min Summer	98.635	0.035	0.0	0.6	0.6	0.4	O K
5760 min Summer	98.631	0.031	0.0	0.5	0.5	0.3	O K
7200 min Summer	98.628	0.028	0.0	0.4	0.4	0.3	O K
8640 min Summer	98.626	0.026	0.0	0.3	0.3	0.3	O K
10080 min Summer	98.625	0.025	0.0	0.3	0.3	0.2	O K
15 min Winter	99.198	0.598	0.0	3.0	3.0	6.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)			
15 min Summer	118.613	0.0	7.8	21			
30 min Summer	79.413	0.0	10.4	31			
60 min Summer	50.812	0.0	13.3	48			
120 min Summer	31.468	0.0	16.5	82			
180 min Summer	23.466	0.0	18.5	114			
240 min Summer	18.940	0.0	19.9	144			
360 min Summer	13.882	0.0	21.9	200			
480 min Summer	11.143	0.0	23.4	256			
600 min Summer	9.389	0.0	24.6	312			
720 min Summer	8.158	0.0	25.7	372			
960 min Summer	6.531	0.0	27.4	490			
1440 min Summer	4.764	0.0	30.0	734			
2160 min Summer	3.468	0.0	32.8	1092			
2880 min Summer	2.766	0.0	34.8	1460			
4320 min Summer	2.007	0.0	37.9	2172			
5760 min Summer	1.596	0.0	40.2	2912			
7200 min Summer	1.336	0.0	42.1	3640			
8640 min Summer	1.154	0.0	43.6	4264			
10080 min Summer	1.020	0.0	45.0	5120			
15 min Winter	118.613	0.0	8.7	22			
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Micro Drainage			Source Control 2016.1				
<u>Summary of Results for 100 year Return Period (+40%)</u>							
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
30 min Winter	99.340	0.740	0.0	3.0	3.0	7.4	O K
60 min Winter	99.348	0.748	0.0	3.0	3.0	7.5	O K
120 min Winter	99.220	0.620	0.0	3.0	3.0	6.2	O K
180 min Winter	99.018	0.418	0.0	3.0	3.0	4.2	O K
240 min Winter	98.860	0.260	0.0	3.0	3.0	2.6	O K
360 min Winter	98.714	0.114	0.0	2.7	2.7	1.1	O K
480 min Winter	98.688	0.088	0.0	2.3	2.3	0.9	O K
600 min Winter	98.675	0.075	0.0	1.9	1.9	0.7	O K
720 min Winter	98.667	0.067	0.0	1.7	1.7	0.7	O K
960 min Winter	98.658	0.058	0.0	1.4	1.4	0.6	O K
1440 min Winter	98.648	0.048	0.0	1.0	1.0	0.5	O K
2160 min Winter	98.640	0.040	0.0	0.7	0.7	0.4	O K
2880 min Winter	98.635	0.035	0.0	0.6	0.6	0.4	O K
4320 min Winter	98.630	0.030	0.0	0.4	0.4	0.3	O K
5760 min Winter	98.626	0.026	0.0	0.3	0.3	0.3	O K
7200 min Winter	98.624	0.024	0.0	0.3	0.3	0.2	O K
8640 min Winter	98.622	0.022	0.0	0.2	0.2	0.2	O K
10080 min Winter	98.621	0.021	0.0	0.2	0.2	0.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)			
30 min Winter	79.413	0.0	11.7	32			
60 min Winter	50.812	0.0	14.9	52			
120 min Winter	31.468	0.0	18.5	88			
180 min Winter	23.466	0.0	20.7	120			
240 min Winter	18.940	0.0	22.3	148			
360 min Winter	13.882	0.0	24.5	196			
480 min Winter	11.143	0.0	26.2	252			
600 min Winter	9.389	0.0	27.6	310			
720 min Winter	8.158	0.0	28.8	372			
960 min Winter	6.531	0.0	30.7	490			
1440 min Winter	4.764	0.0	33.6	738			
2160 min Winter	3.468	0.0	36.7	1088			
2880 min Winter	2.766	0.0	39.0	1436			
4320 min Winter	2.007	0.0	42.5	2244			
5760 min Winter	1.596	0.0	45.0	2896			
7200 min Winter	1.336	0.0	47.1	3672			
8640 min Winter	1.154	0.0	48.9	4200			
10080 min Winter	1.020	0.0	50.4	5128			
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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	18.000	Shortest Storm (mins)	15
Ratio R	0.360	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.035

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.012	4 8	0.012	8 12	0.012