

Paul Basham Associates		Page 1
Lancaster Court 8 Barnes Wallis Road Fareham PO15 5TU	PLOTS 21 -23 SIDE INFILTRATION ONLY INFILTRATION CRATES	
Date 09.07.2021 File 108.5009 - PLOT 21,22&23.SRCX	Designed by RD Checked by RW	
XP Solutions	Source Control 2014.1	

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 581 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	15.655	0.255	0.1	5.3	O K
30 min Summer	15.745	0.345	0.1	7.2	O K
60 min Summer	15.841	0.441	0.2	9.2	O K
120 min Summer	15.935	0.535	0.2	11.2	O K
180 min Summer	15.980	0.580	0.2	12.1	O K
240 min Summer	16.005	0.605	0.2	12.6	O K
360 min Summer	16.030	0.630	0.3	13.2	O K
480 min Summer	16.043	0.643	0.3	13.4	O K
600 min Summer	16.051	0.651	0.3	13.6	O K
720 min Summer	16.057	0.657	0.3	13.7	O K
960 min Summer	16.061	0.661	0.3	13.8	O K
1440 min Summer	16.055	0.655	0.3	13.7	O K
2160 min Summer	16.029	0.629	0.3	13.2	O K
2880 min Summer	15.999	0.599	0.2	12.5	O K
4320 min Summer	15.941	0.541	0.2	11.3	O K
5760 min Summer	15.894	0.494	0.2	10.3	O K
7200 min Summer	15.855	0.455	0.2	9.5	O K
8640 min Summer	15.822	0.422	0.2	8.8	O K
10080 min Summer	15.794	0.394	0.2	8.2	O K
15 min Winter	15.686	0.286	0.1	6.0	O K
30 min Winter	15.786	0.386	0.2	8.1	O K
60 min Winter	15.895	0.495	0.2	10.3	O K
120 min Winter	16.001	0.601	0.2	12.6	O K
180 min Winter	16.052	0.652	0.3	13.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	125.250	0.0	23
30 min Summer	85.368	0.0	37
60 min Summer	55.544	0.0	66
120 min Summer	34.816	0.0	126
180 min Summer	26.038	0.0	184
240 min Summer	21.042	0.0	242
360 min Summer	15.601	0.0	350
480 min Summer	12.593	0.0	402
600 min Summer	10.656	0.0	462
720 min Summer	9.290	0.0	524
960 min Summer	7.475	0.0	658
1440 min Summer	5.489	0.0	930
2160 min Summer	4.021	0.0	1344
2880 min Summer	3.220	0.0	1736
4320 min Summer	2.348	0.0	2512
5760 min Summer	1.878	0.0	3288
7200 min Summer	1.581	0.0	4032
8640 min Summer	1.373	0.0	4760
10080 min Summer	1.219	0.0	5544
15 min Winter	125.250	0.0	22
30 min Winter	85.368	0.0	37
60 min Winter	55.544	0.0	66
120 min Winter	34.816	0.0	122
180 min Winter	26.038	0.0	180

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Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
240 min Winter	16.081	0.681	0.3	14.2	O K
360 min Winter	16.112	0.712	0.3	14.9	O K
480 min Winter	16.122	0.722	0.3	15.1	O K
600 min Winter	16.129	0.729	0.3	15.2	O K
720 min Winter	16.133	0.733	0.3	15.3	O K
960 min Winter	16.132	0.732	0.3	15.3	O K
1440 min Winter	16.111	0.711	0.3	14.8	O K
2160 min Winter	16.065	0.665	0.3	13.9	O K
2880 min Winter	16.018	0.618	0.2	12.9	O K
4320 min Winter	15.937	0.537	0.2	11.2	O K
5760 min Winter	15.874	0.474	0.2	9.9	O K
7200 min Winter	15.825	0.425	0.2	8.9	O K
8640 min Winter	15.786	0.386	0.2	8.1	O K
10080 min Winter	15.754	0.354	0.1	7.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
240 min Winter	21.042	0.0	236
360 min Winter	15.601	0.0	346
480 min Winter	12.593	0.0	442
600 min Winter	10.656	0.0	474
720 min Winter	9.290	0.0	550
960 min Winter	7.475	0.0	704
1440 min Winter	5.489	0.0	1000
2160 min Winter	4.021	0.0	1432
2880 min Winter	3.220	0.0	1848
4320 min Winter	2.348	0.0	2640
5760 min Winter	1.878	0.0	3408
7200 min Winter	1.581	0.0	4184
8640 min Winter	1.373	0.0	4928
10080 min Winter	1.219	0.0	5656

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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)	19.600	Shortest Storm (mins)	15
Ratio R	0.322	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.023

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.010	4	8	0.013

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Model Details

Storage is Online Cover Level (m) 16.800

Cellular Storage Structure

Invert Level (m) 15.400 Safety Factor 4.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.30852

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	22.0	22.0	0.800	22.0	37.0	0.801	0.0	37.0