

Paul Basham Associates		Page 1
Lancaster Court 8 Barnes Wallis Road Fareham PO15 5TU	PLOT 2 SIDE INFILTRATION ONLY INFILTRATION CRATES	
Date 09.07.2021 File 108.5009 - PLOT 2.SRCX	Designed by CLP Checked by RW	
XP Solutions Source Control 2014.1		

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

Half Drain Time : 327 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	16.577	0.277	0.1	1.8	O K
30 min Summer	16.672	0.372	0.1	2.5	O K
60 min Summer	16.770	0.470	0.1	3.1	O K
120 min Summer	16.855	0.555	0.1	3.7	O K
180 min Summer	16.887	0.587	0.1	3.9	O K
240 min Summer	16.900	0.600	0.1	4.0	O K
360 min Summer	16.917	0.617	0.1	4.1	O K
480 min Summer	16.925	0.625	0.1	4.2	O K
600 min Summer	16.928	0.628	0.1	4.2	O K
720 min Summer	16.926	0.626	0.1	4.2	O K
960 min Summer	16.916	0.616	0.1	4.1	O K
1440 min Summer	16.886	0.586	0.1	3.9	O K
2160 min Summer	16.837	0.537	0.1	3.6	O K
2880 min Summer	16.793	0.493	0.1	3.3	O K
4320 min Summer	16.725	0.425	0.1	2.8	O K
5760 min Summer	16.675	0.375	0.1	2.5	O K
7200 min Summer	16.637	0.337	0.1	2.2	O K
8640 min Summer	16.607	0.307	0.1	2.0	O K
10080 min Summer	16.583	0.283	0.1	1.9	O K
15 min Winter	16.610	0.310	0.1	2.1	O K
30 min Winter	16.717	0.417	0.1	2.8	O K
60 min Winter	16.827	0.527	0.1	3.5	O K
120 min Winter	16.924	0.624	0.1	4.2	O K
180 min Winter	16.962	0.662	0.2	4.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	125.250	0.0	19
30 min Summer	85.368	0.0	33
60 min Summer	55.544	0.0	62
120 min Summer	34.816	0.0	122
180 min Summer	26.038	0.0	180
240 min Summer	21.042	0.0	210
360 min Summer	15.601	0.0	270
480 min Summer	12.593	0.0	336
600 min Summer	10.656	0.0	404
720 min Summer	9.290	0.0	472
960 min Summer	7.475	0.0	608
1440 min Summer	5.489	0.0	880
2160 min Summer	4.021	0.0	1276
2880 min Summer	3.220	0.0	1648
4320 min Summer	2.348	0.0	2420
5760 min Summer	1.878	0.0	3168
7200 min Summer	1.581	0.0	3888
8640 min Summer	1.373	0.0	4584
10080 min Summer	1.219	0.0	5344
15 min Winter	125.250	0.0	18
30 min Winter	85.368	0.0	33
60 min Winter	55.544	0.0	62
120 min Winter	34.816	0.0	118
180 min Winter	26.038	0.0	174

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
240 min Winter	16.976	0.676	0.2	4.5	O K
360 min Winter	16.991	0.691	0.2	4.6	O K
480 min Winter	16.995	0.695	0.2	4.6	O K
600 min Winter	16.992	0.692	0.2	4.6	O K
720 min Winter	16.984	0.684	0.2	4.5	O K
960 min Winter	16.962	0.662	0.2	4.4	O K
1440 min Winter	16.910	0.610	0.1	4.1	O K
2160 min Winter	16.839	0.539	0.1	3.6	O K
2880 min Winter	16.781	0.481	0.1	3.2	O K
4320 min Winter	16.695	0.395	0.1	2.6	O K
5760 min Winter	16.636	0.336	0.1	2.2	O K
7200 min Winter	16.593	0.293	0.1	2.0	O K
8640 min Winter	16.561	0.261	0.1	1.7	O K
10080 min Winter	16.536	0.236	0.1	1.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
240 min Winter	21.042	0.0	226
360 min Winter	15.601	0.0	280
480 min Winter	12.593	0.0	358
600 min Winter	10.656	0.0	434
720 min Winter	9.290	0.0	508
960 min Winter	7.475	0.0	654
1440 min Winter	5.489	0.0	938
2160 min Winter	4.021	0.0	1340
2880 min Winter	3.220	0.0	1732
4320 min Winter	2.348	0.0	2504
5760 min Winter	1.878	0.0	3232
7200 min Winter	1.581	0.0	3968
8640 min Winter	1.373	0.0	4680
10080 min Winter	1.219	0.0	5448

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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) 0.008

Time (mins)		Area
From:	To:	(ha)
0	4	0.008

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Model Details

Storage is Online Cover Level (m) 17.750

Cellular Storage Structure

Invert Level (m) 16.300 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	7.0	7.0	0.800	7.0	15.5	0.801	0.0	15.5