

Paul Basham Associates		Page 1
Lancaster Court Fareham Hampshire, PO15 5TU	1:10+40%CC ROAD CATCHMENT 4 INFILTRATION CRATES	
Date 28/10/2021 09:57	Designed by CLP	
File 108.5009 - ROAD CATCHMENT 4.SRCX	Checked by RW	
Innovyze	Source Control 2020.1.3	

Summary of Results for 10 year Return Period (+40%)

Half Drain Time : 52 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	15.335	0.323	0.9	3.1	O K
30 min Summer	15.414	0.402	0.9	3.9	O K
60 min Summer	15.454	0.442	0.9	4.3	O K
120 min Summer	15.452	0.440	0.9	4.3	O K
180 min Summer	15.432	0.420	0.9	4.1	O K
240 min Summer	15.406	0.394	0.9	3.8	O K
360 min Summer	15.353	0.341	0.9	3.3	O K
480 min Summer	15.302	0.290	0.9	2.8	O K
600 min Summer	15.256	0.244	0.8	2.3	O K
720 min Summer	15.215	0.203	0.8	1.9	O K
960 min Summer	15.149	0.137	0.8	1.2	O K
1440 min Summer	15.073	0.061	0.7	0.5	O K
2160 min Summer	15.053	0.041	0.6	0.3	O K
2880 min Summer	15.046	0.034	0.5	0.2	O K
4320 min Summer	15.039	0.027	0.4	0.1	O K
5760 min Summer	15.037	0.025	0.3	0.1	O K
7200 min Summer	15.035	0.023	0.3	0.1	O K
8640 min Summer	15.033	0.021	0.2	0.1	O K
10080 min Summer	15.032	0.020	0.2	0.1	O K
15 min Winter	15.379	0.367	0.9	3.6	O K
30 min Winter	15.473	0.461	0.9	4.5	O K
60 min Winter	15.524	0.512	1.0	5.0	O K
120 min Winter	15.515	0.503	1.0	4.9	O K
180 min Winter	15.479	0.467	0.9	4.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	76.566	0.0	22
30 min Summer	51.183	0.0	33
60 min Summer	32.926	0.0	54
120 min Summer	20.664	0.0	88
180 min Summer	15.602	0.0	122
240 min Summer	12.744	0.0	156
360 min Summer	9.573	0.0	222
480 min Summer	7.806	0.0	288
600 min Summer	6.660	0.0	350
720 min Summer	5.849	0.0	410
960 min Summer	4.762	0.0	528
1440 min Summer	3.561	0.0	748
2160 min Summer	2.660	0.0	1100
2880 min Summer	2.162	0.0	1456
4320 min Summer	1.613	0.0	2200
5760 min Summer	1.311	0.0	2864
7200 min Summer	1.116	0.0	3648
8640 min Summer	0.978	0.0	4256
10080 min Summer	0.875	0.0	4976
15 min Winter	76.566	0.0	23
30 min Winter	51.183	0.0	34
60 min Winter	32.926	0.0	58
120 min Winter	20.664	0.0	94
180 min Winter	15.602	0.0	132

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Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
240 min Winter	15.435	0.423	0.9	4.1	O K
360 min Winter	15.349	0.337	0.9	3.3	O K
480 min Winter	15.272	0.260	0.8	2.5	O K
600 min Winter	15.205	0.193	0.8	1.8	O K
720 min Winter	15.149	0.137	0.8	1.2	O K
960 min Winter	15.073	0.061	0.7	0.5	O K
1440 min Winter	15.052	0.040	0.6	0.3	O K
2160 min Winter	15.042	0.030	0.4	0.2	O K
2880 min Winter	15.039	0.027	0.4	0.1	O K
4320 min Winter	15.035	0.023	0.3	0.1	O K
5760 min Winter	15.033	0.021	0.2	0.1	O K
7200 min Winter	15.031	0.019	0.2	0.1	O K
8640 min Winter	15.030	0.018	0.2	0.1	O K
10080 min Winter	15.029	0.017	0.2	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
240 min Winter	12.744	0.0	168
360 min Winter	9.573	0.0	238
480 min Winter	7.806	0.0	302
600 min Winter	6.660	0.0	364
720 min Winter	5.849	0.0	422
960 min Winter	4.762	0.0	520
1440 min Winter	3.561	0.0	738
2160 min Winter	2.660	0.0	1096
2880 min Winter	2.162	0.0	1428
4320 min Winter	1.613	0.0	2172
5760 min Winter	1.311	0.0	2840
7200 min Winter	1.116	0.0	3656
8640 min Winter	0.978	0.0	4304
10080 min Winter	0.875	0.0	5096

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	10	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) 0.028

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.009	4 8	0.009	8 12	0.010

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Model Details

Storage is Online Cover Level (m) 16.112

Infiltration Trench Structure

Infiltration Coefficient Base (m/hr)	0.30852	Trench Width (m)	5.8
Infiltration Coefficient Side (m/hr)	0.30852	Trench Length (m)	5.8
Safety Factor	4.0	Slope (1:X)	200.0
Porosity	0.30	Cap Volume Depth (m)	0.000
Invert Level (m)	15.012	Cap Infiltration Depth (m)	0.000