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20 Milton Park Abingdon Oxfordshire OX14 4SH	Land North of Green Lane Chesterton Basin 2 A	
Date 07/11/2016 File Basin 2 infiltration A....	Designed by HSS Checked by JR	
Causeway		Source Control 2014.1.1

Summary of Results for 100 year Return Period (+30%)

Half Drain Time : 113 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	74.718	0.418	13.9	131.1	O K
30 min Summer	74.808	0.508	15.6	166.6	O K
60 min Summer	74.872	0.572	16.8	193.7	O K
120 min Summer	74.894	0.594	17.2	203.1	O K
180 min Summer	74.889	0.589	17.1	200.8	O K
240 min Summer	74.876	0.576	16.9	195.2	O K
360 min Summer	74.845	0.545	16.3	182.2	O K
480 min Summer	74.816	0.516	15.7	169.9	O K
600 min Summer	74.788	0.488	15.2	158.6	O K
720 min Summer	74.762	0.462	14.7	148.1	O K
960 min Summer	74.715	0.415	13.8	129.6	O K
1440 min Summer	74.634	0.334	12.4	100.0	O K
2160 min Summer	74.541	0.241	10.7	68.6	O K
2880 min Summer	74.472	0.172	9.6	47.1	O K
4320 min Summer	74.383	0.083	8.0	21.6	O K
5760 min Summer	74.348	0.048	7.1	12.2	O K
7200 min Summer	74.340	0.040	6.0	10.2	O K
8640 min Summer	74.335	0.035	5.2	8.9	O K
10080 min Summer	74.331	0.031	4.6	7.8	O K
15 min Winter	74.761	0.461	14.7	147.7	O K


Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	128.285	0.0	24
30 min Summer	84.226	0.0	37
60 min Summer	52.662	0.0	64
120 min Summer	31.800	0.0	104
180 min Summer	23.353	0.0	136
240 min Summer	18.644	0.0	170
360 min Summer	13.543	0.0	240
480 min Summer	10.792	0.0	308
600 min Summer	9.043	0.0	376
720 min Summer	7.823	0.0	442
960 min Summer	6.219	0.0	574
1440 min Summer	4.493	0.0	826
2160 min Summer	3.241	0.0	1192
2880 min Summer	2.568	0.0	1556
4320 min Summer	1.847	0.0	2252
5760 min Summer	1.461	0.0	2936
7200 min Summer	1.217	0.0	3672
8640 min Summer	1.048	0.0	4392
10080 min Summer	0.923	0.0	5088
15 min Winter	128.285	0.0	24

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Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	74.860	0.560	16.6	188.4	O K
60 min Winter	74.924	0.624	21.6	217.9	O K
120 min Winter	74.942	0.642	21.9	227.4	O K
180 min Winter	74.937	0.637	21.8	224.5	O K
240 min Winter	74.923	0.623	21.5	217.3	O K
360 min Winter	74.894	0.594	17.2	203.4	O K
480 min Winter	74.853	0.553	16.4	185.4	O K
600 min Winter	74.814	0.514	15.7	168.9	O K
720 min Winter	74.777	0.477	15.0	154.0	O K
960 min Winter	74.710	0.410	13.8	128.0	O K
1440 min Winter	74.601	0.301	11.8	88.8	O K
2160 min Winter	74.483	0.183	9.7	50.4	O K
2880 min Winter	74.401	0.101	8.4	26.6	O K
4320 min Winter	74.344	0.044	6.6	11.2	O K
5760 min Winter	74.335	0.035	5.2	8.9	O K
7200 min Winter	74.330	0.030	4.4	7.5	O K
8640 min Winter	74.326	0.026	3.8	6.4	O K
10080 min Winter	74.323	0.023	3.3	5.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	84.226	0.0	37
60 min Winter	52.662	0.0	62
120 min Winter	31.800	0.0	102
180 min Winter	23.353	0.0	140
240 min Winter	18.644	0.0	178
360 min Winter	13.543	0.0	258
480 min Winter	10.792	0.0	332
600 min Winter	9.043	0.0	402
720 min Winter	7.823	0.0	472
960 min Winter	6.219	0.0	606
1440 min Winter	4.493	0.0	864
2160 min Winter	3.241	0.0	1232
2880 min Winter	2.568	0.0	1584
4320 min Winter	1.847	0.0	2200
5760 min Winter	1.461	0.0	2872
7200 min Winter	1.217	0.0	3672
8640 min Winter	1.048	0.0	4416
10080 min Winter	0.923	0.0	5112

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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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.601

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From:	To:	(ha)	From:	To:	(ha)
0	4	0.200	4	8	0.200
			8	12	0.201

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Model Details

Storage is Online Cover Level (m) 75.300

Infiltration Basin Structure

Invert Level (m) 74.300 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.19370 Porosity 1.00
 Infiltration Coefficient Side (m/hr) 0.19370

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	248.0	0.400	375.0	0.610	517.0	1.000	676.0
0.200	310.0	0.600	444.0	0.800	595.0		