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62 Reservoir Road Solihull West Midlands B92 8AN	RYBROOK HANDY CROSS SOAKAWAY - CATCHMENT 1	
Date 30/06/2021 15:46 File CATCHMENT 1 - BENTLEY SO...	Designed by PCS Checked by	
Micro Drainage	Source Control 2018.1	

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

Half Drain Time : 1496 minutes.


Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	147.721	0.721	0.9	68.5	O K
30 min Summer	147.942	0.942	0.9	89.5	O K
60 min Summer	148.166	1.166	1.0	110.8	O K
120 min Summer	148.383	1.383	1.0	131.4	O K
180 min Summer	148.497	1.497	1.1	142.2	O K
240 min Summer	148.566	1.566	1.1	148.8	O K
360 min Summer	148.651	1.651	1.1	156.8	O K
480 min Summer	148.699	1.699	1.1	161.4	O K
600 min Summer	148.724	1.724	1.1	163.8	O K
720 min Summer	148.735	1.735	1.1	164.8	O K
960 min Summer	148.728	1.728	1.1	164.2	O K
1440 min Summer	148.676	1.676	1.1	159.3	O K
2160 min Summer	148.591	1.591	1.1	151.2	O K
2880 min Summer	148.510	1.510	1.1	143.4	O K
4320 min Summer	148.370	1.370	1.0	130.1	O K
5760 min Summer	148.247	1.247	1.0	118.5	O K
7200 min Summer	148.134	1.134	1.0	107.8	O K
8640 min Summer	148.031	1.031	0.9	97.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	128.285	0.0	19
30 min Summer	84.226	0.0	34
60 min Summer	52.662	0.0	64
120 min Summer	31.800	0.0	124
180 min Summer	23.353	0.0	184
240 min Summer	18.644	0.0	242
360 min Summer	13.543	0.0	362
480 min Summer	10.792	0.0	482
600 min Summer	9.043	0.0	602
720 min Summer	7.823	0.0	720
960 min Summer	6.219	0.0	960
1440 min Summer	4.493	0.0	1212
2160 min Summer	3.241	0.0	1584
2880 min Summer	2.568	0.0	1992
4320 min Summer	1.847	0.0	2812
5760 min Summer	1.461	0.0	3632
7200 min Summer	1.217	0.0	4464
8640 min Summer	1.048	0.0	5272

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
10080 min Summer	147.935	0.935	0.9	88.8	O K
15 min Winter	147.809	0.809	0.9	76.8	O K
30 min Winter	148.057	1.057	0.9	100.4	O K
60 min Winter	148.310	1.310	1.0	124.4	O K
120 min Winter	148.556	1.556	1.1	147.8	O K
180 min Winter	148.687	1.687	1.1	160.3	O K
240 min Winter	148.768	1.768	1.1	168.0	O K
360 min Winter	148.871	1.871	1.2	177.7	O K
480 min Winter	148.931	1.931	1.2	183.5	O K
600 min Winter	148.967	1.967	1.2	186.9	O K
720 min Winter	148.987	1.987	1.2	188.8	O K
960 min Winter	148.996	1.996	1.2	189.6	O K
1440 min Winter	148.951	1.951	1.2	185.3	O K
2160 min Winter	148.850	1.850	1.2	175.8	O K
2880 min Winter	148.745	1.745	1.1	165.8	O K
4320 min Winter	148.547	1.547	1.1	146.9	O K
5760 min Winter	148.369	1.369	1.0	130.0	O K
7200 min Winter	148.205	1.205	1.0	114.5	O K
8640 min Winter	148.056	1.056	0.9	100.4	O K


Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
10080 min Summer	0.923	0.0	6048
15 min Winter	128.285	0.0	19
30 min Winter	84.226	0.0	34
60 min Winter	52.662	0.0	64
120 min Winter	31.800	0.0	122
180 min Winter	23.353	0.0	180
240 min Winter	18.644	0.0	240
360 min Winter	13.543	0.0	356
480 min Winter	10.792	0.0	472
600 min Winter	9.043	0.0	588
720 min Winter	7.823	0.0	702
960 min Winter	6.219	0.0	924
1440 min Winter	4.493	0.0	1344
2160 min Winter	3.241	0.0	1684
2880 min Winter	2.568	0.0	2136
4320 min Winter	1.847	0.0	3068
5760 min Winter	1.461	0.0	3928
7200 min Winter	1.217	0.0	4760
8640 min Winter	1.048	0.0	5616

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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
10080 min Winter	147.921	0.921	0.9	87.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
10080 min Winter	0.923	0.0	6448

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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) 0.288

Time (mins)		Area
From:	To:	(ha)
0	4	0.288

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Model Details

Storage is Online Cover Level (m) 150.600

Cellular Storage Structure

Invert Level (m) 147.000 Safety Factor 1.5
 Infiltration Coefficient Base (m/hr) 0.03600 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.03600

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	100.0	100.0	2.000	100.0	180.0
1.000	100.0	140.0	2.001	0.0	180.0