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62 Reservoir Road Solihull West Midlands B92 8AN	RYBROOK HANDY CROSS SOAKAWAY - CATCHMENT 2	
Date 30/06/2021 16:30 File CATCHMENT 2 - VEHICLE PR...	Designed by PCS Checked by	
Micro Drainage	Source Control 2018.1	

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

Half Drain Time : 1599 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	144.717	0.717	1.2	102.1	O K
30 min Summer	144.937	0.937	1.3	133.5	O K
60 min Summer	145.161	1.161	1.4	165.4	O K
120 min Summer	145.378	1.378	1.5	196.3	O K
180 min Summer	145.492	1.492	1.5	212.7	O K
240 min Summer	145.563	1.563	1.5	222.7	O K
360 min Summer	145.650	1.650	1.6	235.1	O K
480 min Summer	145.701	1.701	1.6	242.4	O K
600 min Summer	145.729	1.729	1.6	246.4	O K
720 min Summer	145.742	1.742	1.6	248.3	O K
960 min Summer	145.742	1.742	1.6	248.2	O K
1440 min Summer	145.691	1.691	1.6	241.0	O K
2160 min Summer	145.606	1.606	1.5	228.9	O K
2880 min Summer	145.526	1.526	1.5	217.4	O K
4320 min Summer	145.388	1.388	1.5	197.7	O K
5760 min Summer	145.266	1.266	1.4	180.4	O K
7200 min Summer	145.154	1.154	1.4	164.5	O K
8640 min Summer	145.051	1.051	1.4	149.8	O K


Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	128.285	0.0	23
30 min Summer	84.226	0.0	38
60 min Summer	52.662	0.0	68
120 min Summer	31.800	0.0	126
180 min Summer	23.353	0.0	186
240 min Summer	18.644	0.0	246
360 min Summer	13.543	0.0	364
480 min Summer	10.792	0.0	484
600 min Summer	9.043	0.0	604
720 min Summer	7.823	0.0	722
960 min Summer	6.219	0.0	960
1440 min Summer	4.493	0.0	1254
2160 min Summer	3.241	0.0	1624
2880 min Summer	2.568	0.0	2020
4320 min Summer	1.847	0.0	2856
5760 min Summer	1.461	0.0	3688
7200 min Summer	1.217	0.0	4472
8640 min Summer	1.048	0.0	5272

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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 Summer	144.955	0.955	1.3	136.0	O K
15 min Winter	144.804	0.804	1.3	114.5	O K
30 min Winter	145.051	1.051	1.4	149.8	O K
60 min Winter	145.304	1.304	1.4	185.8	O K
120 min Winter	145.550	1.550	1.5	220.9	O K
180 min Winter	145.682	1.682	1.6	239.7	O K
240 min Winter	145.765	1.765	1.6	251.5	O K
360 min Winter	145.870	1.870	1.6	266.5	O K
480 min Winter	145.934	1.934	1.6	275.6	O K
600 min Winter	145.973	1.973	1.7	281.1	O K
720 min Winter	145.995	1.995	1.7	284.4	O K
960 min Winter	147.425	3.425	1.7	286.5	O K
1440 min Winter	145.975	1.975	1.7	281.4	O K
2160 min Winter	145.872	1.872	1.6	266.8	O K
2880 min Winter	145.771	1.771	1.6	252.3	O K
4320 min Winter	145.576	1.576	1.5	224.6	O K
5760 min Winter	145.401	1.401	1.5	199.6	O K
7200 min Winter	145.237	1.237	1.4	176.3	O K
8640 min Winter	145.087	1.087	1.4	154.8	O K


Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
10080 min Summer	0.923	0.0	6056
15 min Winter	128.285	0.0	23
30 min Winter	84.226	0.0	37
60 min Winter	52.662	0.0	66
120 min Winter	31.800	0.0	124
180 min Winter	23.353	0.0	184
240 min Winter	18.644	0.0	242
360 min Winter	13.543	0.0	358
480 min Winter	10.792	0.0	476
600 min Winter	9.043	0.0	590
720 min Winter	7.823	0.0	706
960 min Winter	6.219	0.0	932
1440 min Winter	4.493	0.0	1360
2160 min Winter	3.241	0.0	1712
2880 min Winter	2.568	0.0	2164
4320 min Winter	1.847	0.0	3076
5760 min Winter	1.461	0.0	3976
7200 min Winter	1.217	0.0	4832
8640 min Winter	1.048	0.0	5624

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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	144.949	0.949	1.3	135.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
10080 min Winter	0.923	0.0	6456

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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) 0.430

Time (mins)		Area	Time (mins)		Area
From:	To:	(ha)	From:	To:	(ha)
0	4	0.215	4	8	0.215

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Model Details

Storage is Online Cover Level (m) 148.150

Cellular Storage Structure

Invert Level (m) 144.000 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	150.0	150.0	2.000	150.0	250.0
1.000	150.0	200.0	2.001	0.0	250.0