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42 West Street London House Carshalton SM5 2PR	W01651 The Curlew, Havant Soakaway Calculations	
Date 01/02/2018 File W01651 Soakaway Calcs.SRCX	Designed by HH Checked by	
Micro Drainage	Source Control 2017.1	

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

Half Drain Time : 94 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	5.457	0.457	1.6	10.4	O K
30 min Summer	5.580	0.580	1.7	13.2	O K
60 min Summer	5.663	0.663	1.8	15.1	O K
120 min Summer	5.686	0.686	1.8	15.6	O K
180 min Summer	5.670	0.670	1.8	15.3	O K
240 min Summer	5.642	0.642	1.8	14.6	O K
360 min Summer	5.585	0.585	1.7	13.3	O K
480 min Summer	5.531	0.531	1.7	12.1	O K
600 min Summer	5.480	0.480	1.6	10.9	O K
720 min Summer	5.431	0.431	1.6	9.8	O K
960 min Summer	5.346	0.346	1.5	7.9	O K
1440 min Summer	5.215	0.215	1.4	4.9	O K
2160 min Summer	5.094	0.094	1.3	2.1	O K
2880 min Summer	5.049	0.049	1.2	1.1	O K
4320 min Summer	5.036	0.036	0.9	0.8	O K
5760 min Summer	5.029	0.029	0.7	0.7	O K
7200 min Summer	5.024	0.024	0.6	0.5	O K
8640 min Summer	5.021	0.021	0.5	0.5	O K
10080 min Summer	5.018	0.018	0.4	0.4	O K
15 min Winter	5.517	0.517	1.7	11.8	O K
30 min Winter	5.661	0.661	1.8	15.1	O K
60 min Winter	5.765	0.765	1.9	17.4	O K
120 min Winter	5.792	0.792	1.9	18.1	O K
180 min Winter	5.769	0.769	1.9	17.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	124.633	0.0	18
30 min Summer	83.789	0.0	32
60 min Summer	53.779	0.0	60
120 min Summer	33.337	0.0	92
180 min Summer	24.832	0.0	126
240 min Summer	20.006	0.0	160
360 min Summer	14.706	0.0	230
480 min Summer	11.818	0.0	296
600 min Summer	9.966	0.0	362
720 min Summer	8.665	0.0	428
960 min Summer	6.943	0.0	552
1440 min Summer	5.071	0.0	794
2160 min Summer	3.696	0.0	1128
2880 min Summer	2.949	0.0	1468
4320 min Summer	2.142	0.0	2192
5760 min Summer	1.705	0.0	2928
7200 min Summer	1.427	0.0	3648
8640 min Summer	1.235	0.0	4320
10080 min Summer	1.093	0.0	5032
15 min Winter	124.633	0.0	17
30 min Winter	83.789	0.0	31
60 min Winter	53.779	0.0	60
120 min Winter	33.337	0.0	96
180 min Winter	24.832	0.0	136

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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	5.728	0.728	1.9	16.6	O K
360 min Winter	5.640	0.640	1.8	14.6	O K
480 min Winter	5.557	0.557	1.7	12.7	O K
600 min Winter	5.481	0.481	1.6	11.0	O K
720 min Winter	5.411	0.411	1.6	9.4	O K
960 min Winter	5.292	0.292	1.5	6.7	O K
1440 min Winter	5.122	0.122	1.3	2.8	O K
2160 min Winter	5.044	0.044	1.1	1.0	O K
2880 min Winter	5.036	0.036	0.9	0.8	O K
4320 min Winter	5.026	0.026	0.6	0.6	O K
5760 min Winter	5.021	0.021	0.5	0.5	O K
7200 min Winter	5.017	0.017	0.4	0.4	O K
8640 min Winter	5.015	0.015	0.4	0.3	O K
10080 min Winter	5.013	0.013	0.3	0.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
240 min Winter	20.006	0.0	174
360 min Winter	14.706	0.0	248
480 min Winter	11.818	0.0	318
600 min Winter	9.966	0.0	386
720 min Winter	8.665	0.0	454
960 min Winter	6.943	0.0	580
1440 min Winter	5.071	0.0	808
2160 min Winter	3.696	0.0	1100
2880 min Winter	2.949	0.0	1460
4320 min Winter	2.142	0.0	2128
5760 min Winter	1.705	0.0	2856
7200 min Winter	1.427	0.0	3672
8640 min Winter	1.235	0.0	4312
10080 min Winter	1.093	0.0	5024

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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)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.050

Time (mins) Area
From: To: (ha)

0 4 0.050

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Model Details

Storage is Online Cover Level (m) 10.000

Cellular Storage Structure

Invert Level (m) 5.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.35388 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.35388

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	24.0	24.0	0.800	24.0	39.7	0.801	0.0	39.7