

Ambiental

Science Park Square

Brighton

East Sussex, BN1 9SB

6 Raisins Hill

HA5 2BS

6369

Date 06/04/2022 13:20

File PROPOSED.SRCX

Designed by OH

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Source Control 2018.1

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Summary of Results for 30 year Return Period (+40%)

Half Drain Time : 149 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	53.390	0.190	0.0	0.2	0.2	2.1	O K
30 min Summer	53.429	0.229	0.0	0.2	0.2	2.7	O K
60 min Summer	53.460	0.260	0.0	0.2	0.2	3.2	O K
120 min Summer	53.474	0.274	0.0	0.2	0.2	3.4	O K
180 min Summer	53.474	0.274	0.0	0.2	0.2	3.4	O K
240 min Summer	53.471	0.271	0.0	0.2	0.2	3.3	O K
360 min Summer	53.461	0.261	0.0	0.2	0.2	3.2	O K
480 min Summer	53.450	0.250	0.0	0.2	0.2	3.0	O K
600 min Summer	53.438	0.238	0.0	0.2	0.2	2.8	O K
720 min Summer	53.427	0.227	0.0	0.2	0.2	2.7	O K
960 min Summer	53.407	0.207	0.0	0.2	0.2	2.4	O K
1440 min Summer	53.374	0.174	0.0	0.2	0.2	1.9	O K
2160 min Summer	53.339	0.139	0.0	0.2	0.2	1.3	O K
2880 min Summer	53.314	0.114	0.0	0.2	0.2	1.0	O K
4320 min Summer	53.284	0.084	0.0	0.1	0.1	0.5	O K
5760 min Summer	53.263	0.063	0.0	0.1	0.1	0.3	O K
7200 min Summer	53.250	0.050	0.0	0.1	0.1	0.2	O K
8640 min Summer	53.241	0.041	0.0	0.1	0.1	0.1	O K
10080 min Summer	53.234	0.034	0.0	0.1	0.1	0.1	O K
15 min Winter	53.409	0.209	0.0	0.2	0.2	2.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	110.151	0.0	2.2	18
30 min Summer	71.230	0.0	3.0	32
60 min Summer	44.012	0.0	3.7	62
120 min Summer	26.390	0.0	4.5	110
180 min Summer	19.361	0.0	5.0	140
240 min Summer	15.475	0.0	5.3	172
360 min Summer	11.268	0.0	5.8	242
480 min Summer	8.991	0.0	6.2	310
600 min Summer	7.542	0.0	6.5	378
720 min Summer	6.532	0.0	6.7	446
960 min Summer	5.202	0.0	7.1	578
1440 min Summer	3.771	0.0	7.7	836
2160 min Summer	2.731	0.0	8.4	1192
2880 min Summer	2.170	0.0	8.8	1556
4320 min Summer	1.569	0.0	9.5	2252
5760 min Summer	1.245	0.0	9.9	2944
7200 min Summer	1.041	0.0	10.2	3672
8640 min Summer	0.899	0.0	10.5	4400
10080 min Summer	0.794	0.0	10.7	5136
15 min Winter	110.151	0.0	2.5	18

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Summary of Results for 30 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
30 min Winter	53.454	0.254	0.0	0.2	0.2	3.1	O K
60 min Winter	53.490	0.290	0.0	0.2	0.2	3.6	O K
120 min Winter	53.509	0.309	0.0	0.3	0.3	3.9	O K
180 min Winter	53.507	0.307	0.0	0.3	0.3	3.9	O K
240 min Winter	53.503	0.303	0.0	0.3	0.3	3.8	O K
360 min Winter	53.488	0.288	0.0	0.2	0.2	3.6	O K
480 min Winter	53.471	0.271	0.0	0.2	0.2	3.3	O K
600 min Winter	53.454	0.254	0.0	0.2	0.2	3.1	O K
720 min Winter	53.438	0.238	0.0	0.2	0.2	2.8	O K
960 min Winter	53.409	0.209	0.0	0.2	0.2	2.4	O K
1440 min Winter	53.365	0.165	0.0	0.2	0.2	1.7	O K
2160 min Winter	53.320	0.120	0.0	0.2	0.2	1.0	O K
2880 min Winter	53.292	0.092	0.0	0.1	0.1	0.6	O K
4320 min Winter	53.259	0.059	0.0	0.1	0.1	0.3	O K
5760 min Winter	53.241	0.041	0.0	0.1	0.1	0.1	O K
7200 min Winter	53.231	0.031	0.0	0.1	0.1	0.1	O K
8640 min Winter	53.225	0.025	0.0	0.1	0.1	0.0	O K
10080 min Winter	53.221	0.021	0.0	0.1	0.1	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
30 min Winter	71.230	0.0	3.3	32
60 min Winter	44.012	0.0	4.2	60
120 min Winter	26.390	0.0	5.1	116
180 min Winter	19.361	0.0	5.6	146
240 min Winter	15.475	0.0	6.0	184
360 min Winter	11.268	0.0	6.5	260
480 min Winter	8.991	0.0	7.0	336
600 min Winter	7.542	0.0	7.3	408
720 min Winter	6.532	0.0	7.6	478
960 min Winter	5.202	0.0	8.0	616
1440 min Winter	3.771	0.0	8.7	878
2160 min Winter	2.731	0.0	9.4	1236
2880 min Winter	2.170	0.0	10.0	1588
4320 min Winter	1.569	0.0	10.7	2252
5760 min Winter	1.245	0.0	11.2	2944
7200 min Winter	1.041	0.0	11.6	3664
8640 min Winter	0.899	0.0	11.9	4384
10080 min Winter	0.794	0.0	12.2	5136

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.400	Shortest Storm (mins)	15
Ratio R	0.416	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

Time (mins)	Area
From:	To: (ha)
0	4 0.012

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<u>Model Details</u> Storage is Online Cover Level (m) 53.800 <u>Porous Car Park Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.00000</td> <td>Width (m)</td> <td>5.0</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> <td>Length (m)</td> <td>10.0</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>13.9</td> <td>Slope (1:X)</td> <td>100.0</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> <td>Depression Storage (mm)</td> <td>5</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Invert Level (m)</td> <td>53.200</td> <td>Membrane Depth (m)</td> <td>0</td> </tr> </table> <u>Orifice Outflow Control</u> Diameter (m) 0.015 Discharge Coefficient 0.600 Invert Level (m) 53.200			Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	5.0	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	13.9	Slope (1:X)	100.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	53.200	Membrane Depth (m)	0
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