

Ambiental

Science Park Square
Brighton
East Sussex, BN1 9SB

Date 06/04/2022 13:20
File PROPOSED.SRCX

Innovyze

6 Raisins Hill
HA5 2BS
6369

Designed by OH
Checked by SB

Source Control 2018.1

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Summary of Results for 1 year Return Period (+40%)

Half Drain Time : 75 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	53.295	0.095	0.0	0.1	0.1	0.7	O K
30 min Summer	53.310	0.110	0.0	0.2	0.2	0.9	O K
60 min Summer	53.321	0.121	0.0	0.2	0.2	1.1	O K
120 min Summer	53.327	0.127	0.0	0.2	0.2	1.2	O K
180 min Summer	53.328	0.128	0.0	0.2	0.2	1.2	O K
240 min Summer	53.327	0.127	0.0	0.2	0.2	1.2	O K
360 min Summer	53.322	0.122	0.0	0.2	0.2	1.1	O K
480 min Summer	53.315	0.115	0.0	0.2	0.2	1.0	O K
600 min Summer	53.309	0.109	0.0	0.1	0.1	0.9	O K
720 min Summer	53.304	0.104	0.0	0.1	0.1	0.8	O K
960 min Summer	53.294	0.094	0.0	0.1	0.1	0.7	O K
1440 min Summer	53.278	0.078	0.0	0.1	0.1	0.5	O K
2160 min Summer	53.261	0.061	0.0	0.1	0.1	0.3	O K
2880 min Summer	53.248	0.048	0.0	0.1	0.1	0.2	O K
4320 min Summer	53.234	0.034	0.0	0.1	0.1	0.1	O K
5760 min Summer	53.225	0.025	0.0	0.1	0.1	0.0	O K
7200 min Summer	53.221	0.021	0.0	0.1	0.1	0.0	O K
8640 min Summer	53.219	0.019	0.0	0.0	0.0	0.0	O K
10080 min Summer	53.218	0.018	0.0	0.0	0.0	0.0	O K
15 min Winter	53.303	0.103	0.0	0.1	0.1	0.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	44.872	0.0	0.8	18
30 min Summer	29.136	0.0	1.1	32
60 min Summer	18.324	0.0	1.4	58
120 min Summer	11.286	0.0	1.8	90
180 min Summer	8.457	0.0	2.0	124
240 min Summer	6.884	0.0	2.2	158
360 min Summer	5.115	0.0	2.5	226
480 min Summer	4.133	0.0	2.7	292
600 min Summer	3.503	0.0	2.8	358
720 min Summer	3.060	0.0	3.0	420
960 min Summer	2.473	0.0	3.2	546
1440 min Summer	1.831	0.0	3.6	782
2160 min Summer	1.357	0.0	3.9	1144
2880 min Summer	1.096	0.0	4.2	1496
4320 min Summer	0.811	0.0	4.6	2204
5760 min Summer	0.656	0.0	4.8	2912
7200 min Summer	0.556	0.0	5.0	3608
8640 min Summer	0.486	0.0	5.1	4264
10080 min Summer	0.434	0.0	5.3	5080
15 min Winter	44.872	0.0	0.9	17

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Micro Drainage

Summary of Results for 1 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	53.320	0.120	0.0	0.2	0.2	1.0	O K
60 min Winter	53.333	0.133	0.0	0.2	0.2	1.2	O K
120 min Winter	53.339	0.139	0.0	0.2	0.2	1.3	O K
180 min Winter	53.338	0.138	0.0	0.2	0.2	1.3	O K
240 min Winter	53.336	0.136	0.0	0.2	0.2	1.3	O K
360 min Winter	53.327	0.127	0.0	0.2	0.2	1.2	O K
480 min Winter	53.317	0.117	0.0	0.2	0.2	1.0	O K
600 min Winter	53.308	0.108	0.0	0.1	0.1	0.9	O K
720 min Winter	53.300	0.100	0.0	0.1	0.1	0.8	O K
960 min Winter	53.287	0.087	0.0	0.1	0.1	0.6	O K
1440 min Winter	53.265	0.065	0.0	0.1	0.1	0.3	O K
2160 min Winter	53.245	0.045	0.0	0.1	0.1	0.1	O K
2880 min Winter	53.233	0.033	0.0	0.1	0.1	0.1	O K
4320 min Winter	53.222	0.022	0.0	0.1	0.1	0.0	O K
5760 min Winter	53.219	0.019	0.0	0.0	0.0	0.0	O K
7200 min Winter	53.217	0.017	0.0	0.0	0.0	0.0	O K
8640 min Winter	53.215	0.015	0.0	0.0	0.0	0.0	O K
10080 min Winter	53.214	0.014	0.0	0.0	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
30 min Winter	29.136	0.0	1.2	31
60 min Winter	18.324	0.0	1.6	58
120 min Winter	11.286	0.0	2.0	94
180 min Winter	8.457	0.0	2.3	134
240 min Winter	6.884	0.0	2.5	172
360 min Winter	5.115	0.0	2.8	244
480 min Winter	4.133	0.0	3.0	314
600 min Winter	3.503	0.0	3.2	380
720 min Winter	3.060	0.0	3.4	444
960 min Winter	2.473	0.0	3.6	568
1440 min Winter	1.831	0.0	4.0	806
2160 min Winter	1.357	0.0	4.5	1144
2880 min Winter	1.096	0.0	4.8	1496
4320 min Winter	0.811	0.0	5.2	2180
5760 min Winter	0.656	0.0	5.5	2856
7200 min Winter	0.556	0.0	5.7	3592
8640 min Winter	0.486	0.0	5.9	4256
10080 min Winter	0.434	0.0	6.1	5096

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	1	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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