

Flo_Consult UK Ltd				Page 1																																																																																																																																																																																																																			
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<u>Summary of Results for 30 year Return Period</u> Half Drain Time : 133 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>11.274</td><td>1.274</td><td>0.7</td><td>6.7</td><td>0 K</td></tr><tr><td>30 min Summer</td><td>11.663</td><td>1.663</td><td>0.8</td><td>8.8</td><td>0 K</td></tr><tr><td>60 min Summer</td><td>12.008</td><td>2.008</td><td>1.0</td><td>10.6</td><td>0 K</td></tr><tr><td>120 min Summer</td><td>12.221</td><td>2.221</td><td>1.1</td><td>11.8</td><td>0 K</td></tr><tr><td>180 min Summer</td><td>12.293</td><td>2.293</td><td>1.1</td><td>12.1</td><td>0 K</td></tr><tr><td>240 min Summer</td><td>12.309</td><td>2.309</td><td>1.1</td><td>12.2</td><td>0 K</td></tr><tr><td>360 min Summer</td><td>12.270</td><td>2.270</td><td>1.1</td><td>12.0</td><td>0 K</td></tr><tr><td>480 min Summer</td><td>12.201</td><td>2.201</td><td>1.0</td><td>11.6</td><td>0 K</td></tr><tr><td>600 min Summer</td><td>12.121</td><td>2.121</td><td>1.0</td><td>11.2</td><td>0 K</td></tr><tr><td>720 min Summer</td><td>12.040</td><td>2.040</td><td>1.0</td><td>10.8</td><td>0 K</td></tr><tr><td>960 min Summer</td><td>11.887</td><td>1.887</td><td>0.9</td><td>10.0</td><td>0 K</td></tr><tr><td>1440 min Summer</td><td>11.635</td><td>1.635</td><td>0.8</td><td>8.7</td><td>0 K</td></tr><tr><td>2160 min Summer</td><td>11.356</td><td>1.356</td><td>0.7</td><td>7.2</td><td>0 K</td></tr><tr><td>2880 min Summer</td><td>11.150</td><td>1.150</td><td>0.6</td><td>6.1</td><td>0 K</td></tr><tr><td>4320 min Summer</td><td>10.865</td><td>0.865</td><td>0.5</td><td>4.6</td><td>0 K</td></tr><tr><td>5760 min Summer</td><td>10.673</td><td>0.673</td><td>0.4</td><td>3.6</td><td>0 K</td></tr><tr><td>7200 min Summer</td><td>10.538</td><td>0.538</td><td>0.4</td><td>2.8</td><td>0 K</td></tr><tr><td>8640 min 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Summer	11.663	1.663	0.8	8.8	0 K	60 min Summer	12.008	2.008	1.0	10.6	0 K	120 min Summer	12.221	2.221	1.1	11.8	0 K	180 min Summer	12.293	2.293	1.1	12.1	0 K	240 min Summer	12.309	2.309	1.1	12.2	0 K	360 min Summer	12.270	2.270	1.1	12.0	0 K	480 min Summer	12.201	2.201	1.0	11.6	0 K	600 min Summer	12.121	2.121	1.0	11.2	0 K	720 min Summer	12.040	2.040	1.0	10.8	0 K	960 min Summer	11.887	1.887	0.9	10.0	0 K	1440 min Summer	11.635	1.635	0.8	8.7	0 K	2160 min Summer	11.356	1.356	0.7	7.2	0 K	2880 min Summer	11.150	1.150	0.6	6.1	0 K	4320 min Summer	10.865	0.865	0.5	4.6	0 K	5760 min Summer	10.673	0.673	0.4	3.6	0 K	7200 min Summer	10.538	0.538	0.4	2.8	0 K	8640 min Summer	10.433	0.433	0.3	2.3	0 K	10080 min Summer	10.352	0.352	0.3	1.9	0 K	15 min Winter	11.432	1.432	0.7	7.6	0 K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	63.195	0.0	24	30 min Summer	42.665	0.0	37	60 min Summer	27.653	0.0	62	120 min Summer	17.420	0.0	102	180 min Summer	13.146	0.0	134	240 min 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Summary of Results for 30 year Return Period

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	11.874	1.874	0.9	9.9	0 K
60 min Winter	12.271	2.271	1.1	12.0	0 K
120 min Winter	12.585	2.585	1.1	13.3	Flood Risk
180 min Winter	12.699	2.699	1.1	13.7	Flood Risk
240 min Winter	12.695	2.695	1.1	13.7	Flood Risk
360 min Winter	12.542	2.542	1.1	13.2	Flood Risk
480 min Winter	12.365	2.365	1.1	12.5	0 K
600 min Winter	12.239	2.239	1.1	11.8	0 K
720 min Winter	12.117	2.117	1.0	11.2	0 K
960 min Winter	11.898	1.898	0.9	10.0	0 K
1440 min Winter	11.554	1.554	0.8	8.2	0 K
2160 min Winter	11.203	1.203	0.7	6.4	0 K
2880 min Winter	10.961	0.961	0.6	5.1	0 K
4320 min Winter	10.652	0.652	0.4	3.4	0 K
5760 min Winter	10.461	0.461	0.4	2.4	0 K
7200 min Winter	10.332	0.332	0.3	1.8	0 K
8640 min Winter	10.239	0.239	0.3	1.3	0 K
10080 min Winter	10.168	0.168	0.2	0.9	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	42.665	0.0	37
60 min Winter	27.653	0.0	62
120 min Winter	17.420	0.0	110
180 min Winter	13.146	0.0	142
240 min Winter	10.710	0.0	182
360 min Winter	7.988	0.0	256
480 min Winter	6.486	0.0	326
600 min Winter	5.515	0.0	396
720 min Winter	4.828	0.0	466
960 min Winter	3.911	0.0	600
1440 min Winter	2.902	0.0	860
2160 min Winter	2.150	0.0	1240
2880 min Winter	1.736	0.0	1616
4320 min Winter	1.283	0.0	2340
5760 min Winter	1.034	0.0	3064
7200 min Winter	0.875	0.0	3816
8640 min Winter	0.764	0.0	4504
10080 min Winter	0.681	0.0	5248

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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)	18.000	Shortest Storm (mins)	15
Ratio R	0.322	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.062

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.021	4 8	0.021	8 12	0.020

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<u>Model Details</u> Storage is Online Cover Level (m) 12.700 <u>Lined Soakaway Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.13176</td> <td>Ring Diameter (m)</td> <td>1.20</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.13176</td> <td>Pit Multiplier</td> <td>1.5</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> <td>Number Required</td> <td>3</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Cap Volume Depth (m)</td> <td>0.000</td> </tr> <tr> <td>Invert Level (m)</td> <td>10.000</td> <td>Cap Infiltration Depth (m)</td> <td>2.400</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.13176	Ring Diameter (m)	1.20	Infiltration Coefficient Side (m/hr)	0.13176	Pit Multiplier	1.5	Safety Factor	2.0	Number Required	3	Porosity	0.30	Cap Volume Depth (m)	0.000	Invert Level (m)	10.000	Cap Infiltration Depth (m)	2.400
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