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

Half Drain Time : 210 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	164.240	0.440	0.0	1.5	1.5	20.1	O K
30 min Summer	164.376	0.576	0.0	1.6	1.6	26.3	O K
60 min Summer	164.502	0.702	0.0	1.8	1.8	32.0	O K
120 min Summer	164.589	0.789	0.0	1.9	1.9	36.0	O K
180 min Summer	164.604	0.804	0.0	1.9	1.9	36.7	O K
240 min Summer	164.601	0.801	0.0	1.9	1.9	36.5	O K
360 min Summer	164.575	0.775	0.0	1.8	1.8	35.3	O K
480 min Summer	164.543	0.743	0.0	1.8	1.8	33.9	O K
600 min Summer	164.513	0.713	0.0	1.8	1.8	32.5	O K
720 min Summer	164.484	0.684	0.0	1.8	1.8	31.2	O K
960 min Summer	164.430	0.630	0.0	1.7	1.7	28.7	O K
1440 min Summer	164.335	0.535	0.0	1.6	1.6	24.4	O K
2160 min Summer	164.217	0.417	0.0	1.5	1.5	19.0	O K
2880 min Summer	164.126	0.326	0.0	1.3	1.3	14.9	O K
4320 min Summer	163.998	0.198	0.0	1.2	1.2	9.0	O K
5760 min Summer	163.914	0.114	0.0	1.0	1.0	5.2	O K
7200 min Summer	163.859	0.059	0.0	0.9	0.9	2.7	O K
8640 min Summer	163.822	0.022	0.0	0.9	0.9	1.0	O K
10080 min Summer	163.801	0.001	0.0	0.8	0.8	0.1	O K
15 min Winter	164.296	0.496	0.0	1.6	1.6	22.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	118.728	0.0	21.8	25
30 min Summer	79.453	0.0	29.2	39
60 min Summer	50.812	0.0	37.3	66
120 min Summer	31.453	0.0	46.2	122
180 min Summer	23.449	0.0	51.6	162
240 min Summer	18.923	0.0	55.6	194
360 min Summer	13.867	0.0	61.1	260
480 min Summer	11.129	0.0	65.4	328
600 min Summer	9.376	0.0	68.8	398
720 min Summer	8.146	0.0	71.9	466
960 min Summer	6.520	0.0	76.6	604
1440 min Summer	4.755	0.0	83.9	868
2160 min Summer	3.461	0.0	91.6	1252
2880 min Summer	2.760	0.0	97.3	1620
4320 min Summer	2.002	0.0	105.9	2340
5760 min Summer	1.592	0.0	112.3	3056
7200 min Summer	1.332	0.0	117.5	3752
8640 min Summer	1.151	0.0	121.8	4416
10080 min Summer	1.017	0.0	125.6	5136
15 min Winter	118.728	0.0	24.4	25

©1982-2014 XP Solutions

Summary of Results for 100 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	164.452	0.652	0.0	1.7	1.7	29.7	O K
60 min Winter	164.598	0.798	0.0	1.9	1.9	36.4	O K
120 min Winter	164.707	0.907	0.0	2.0	2.0	41.3	O K
180 min Winter	164.731	0.931	0.0	2.0	2.0	42.5	O K
240 min Winter	164.725	0.925	0.0	2.0	2.0	42.2	O K
360 min Winter	164.695	0.895	0.0	2.0	2.0	40.8	O K
480 min Winter	164.654	0.854	0.0	1.9	1.9	38.9	O K
600 min Winter	164.608	0.808	0.0	1.9	1.9	36.8	O K
720 min Winter	164.562	0.762	0.0	1.8	1.8	34.7	O K
960 min Winter	164.481	0.681	0.0	1.7	1.7	31.0	O K
1440 min Winter	164.341	0.541	0.0	1.6	1.6	24.7	O K
2160 min Winter	164.180	0.380	0.0	1.4	1.4	17.3	O K
2880 min Winter	164.064	0.264	0.0	1.3	1.3	12.0	O K
4320 min Winter	163.915	0.115	0.0	1.0	1.0	5.2	O K
5760 min Winter	163.831	0.031	0.0	0.9	0.9	1.4	O K
7200 min Winter	163.800	0.000	0.0	0.8	0.8	0.0	O K
8640 min Winter	163.800	0.000	0.0	0.7	0.7	0.0	O K
10080 min Winter	163.800	0.000	0.0	0.6	0.6	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
30 min Winter	79.453	0.0	32.7	38
60 min Winter	50.812	0.0	41.8	66
120 min Winter	31.453	0.0	51.7	120
180 min Winter	23.449	0.0	57.9	174
240 min Winter	18.923	0.0	62.3	204
360 min Winter	13.867	0.0	68.5	278
480 min Winter	11.129	0.0	73.2	354
600 min Winter	9.376	0.0	77.2	430
720 min Winter	8.146	0.0	80.5	504
960 min Winter	6.520	0.0	85.8	648
1440 min Winter	4.755	0.0	93.9	922
2160 min Winter	3.461	0.0	102.6	1308
2880 min Winter	2.760	0.0	109.0	1680
4320 min Winter	2.002	0.0	118.6	2388
5760 min Winter	1.592	0.0	125.8	3064
7200 min Winter	1.332	0.0	131.6	0
8640 min Winter	1.151	0.0	136.5	0
10080 min Winter	1.017	0.0	140.7	0

©1982-2014 XP Solutions

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)	18.000	Shortest Storm (mins)	15
Ratio R	0.361	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.098

Time (mins) From:	To:	Area (ha)	Time (mins) From:	To:	Area (ha)	Time (mins) From:	To:	Area (ha)
0	4	0.033	4	8	0.033	8	12	0.033

©1982-2014 XP Solutions

Model Details

Storage is Online Cover Level (m) 165.400

Cellular Storage Structure

Invert Level (m) 163.800 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	48.0	0.0	1.300	0.0	0.0
0.100	48.0	0.0	1.400	0.0	0.0
0.200	48.0	0.0	1.500	0.0	0.0
0.300	48.0	0.0	1.600	0.0	0.0
0.400	48.0	0.0	1.700	0.0	0.0
0.500	48.0	0.0	1.800	0.0	0.0
0.600	48.0	0.0	1.900	0.0	0.0
0.700	48.0	0.0	2.000	0.0	0.0
0.800	48.0	0.0	2.100	0.0	0.0
0.900	48.0	0.0	2.200	0.0	0.0
1.000	48.0	0.0	2.300	0.0	0.0
1.001	0.0	0.0	2.400	0.0	0.0
1.200	0.0	0.0	2.500	0.0	0.0

Orifice Outflow Control

Diameter (m) 0.030 Discharge Coefficient 0.600 Invert Level (m) 163.600

©1982-2014 XP Solutions