

PRP

Catherine House
Old Harborough Road
Brixworth NN6 9BX

Date 01/06/2023
File 81270 - ATTENUATION BASIN

Kyngs Golf Club - 81270
1 in 1 year storm

Designed by AGS
Checked by DE

Micro Drainage

Source Control 2018.1.1

Summary of Results for 1 year Return Period

Half Drain Time: 295 minutes

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	98.345	0.040	3.1	2.0	1.1	39.36	O K
30 min Summer	98.356	0.051	3.4	2.0	1.4	50.184	O K
60 min Summer	98.071	0.065	3.5	2.0	1.5	63.960	O K
120 min Summer	98.385	0.080	3.5	2.0	1.5	78.720	O K
180 min Summer	98.395	0.090	3.5	2.0	1.5	88.560	O K
240 min Summer	98.402	0.097	3.5	2.0	1.5	95.448	O K
360 min Summer	98.410	0.105	3.5	2.0	1.5	103.32	O K
480 min Summer	98.414	0.109	3.5	2.0	1.5	107.256	O K
600 min Summer	98.417	0.112	3.5	2.0	1.5	110.208	O K
720 min Summer	98.418	0.113	3.5	2.0	1.5	111.192	O K
960 min Summer	98.420	0.115	3.5	2.0	1.5	113.160	O K
1440 min Summer	98.419	0.114	3.5	2.0	1.5	112.176	O K
2160 min Summer	98.414	0.109	3.5	2.0	1.5	107.256	O K
2880 min Summer	98.412	0.103	3.5	2.0	1.5	101.352	O K
4320 min Summer	98.400	0.091	3.5	2.0	1.5	89.544	O K
5760 min Summer	98.389	0.080	3.5	2.0	1.5	78.720	O K
7200 min Summer	98.381	0.072	3.5	2.0	1.5	70.848	O K
8640 min Summer	98.373	0.064	3.5	2.0	1.5	62.976	O K
10080 min Summer	98.368	0.059	3.4	2.0	1.4	58.056	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	29.863	0.0	94.9	23
30 min Summer	19.436	0.0	98.0	37
60 min Summer	12.298	0.0	196.5	66
120 min Summer	7.625	0.0	200.5	124
180 min Summer	5.737	0.0	203.1	184
240 min Summer	4.683	0.0	205.2	242
360 min Summer	3.507	0.0	208.3	360
480 min Summer	2.842	0.0	210.6	454
600 min Summer	2.415	0.0	212.5	508
720 min Summer	2.113	0.0	214.1	570
960 min Summer	1.713	0.0	216.9	696
1440 min Summer	1.274	0.0	221.1	972
2160 min Summer	0.948	0.0	416.1	1384
2880 min Summer	0.769	0.0	419.8	1788
4320 min Summer	0.572	0.0	425.5	2560
5760 min Summer	0.464	0.0	725.2	3336
7200 min Summer	0.394	0.0	729.0	4032
8640 min Summer	0.345	0.0	732.2	4752
10080 min Summer	0.309	0.0	735.1	5352

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PRP		Page 1					
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Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status
15 min Winter	98.349	0.044	3.3	2.0	1.3	39.776	O K
30 min Winter	98.362	0.057	3.4	2.0	1.4	51.528	O K
60 min Winter	98.377	0.072	3.5	2.0	1.5	65.088	O K
120 min Winter	98.394	0.089	3.5	2.0	1.5	80.456	O K
180 min Winter	98.404	0.099	3.5	2.0	1.5	89.496	O K
240 min Winter	98.412	0.107	3.5	2.0	1.5	96.728	O K
360 min Winter	98.421	0.116	3.5	2.0	1.5	104.864	O K
480 min Winter	98.426	0.121	3.5	2.0	1.5	109.384	O K
600 min Winter	98.429	0.124	3.5	2.0	1.5	112.096	O K
720 min Winter	98.430	0.125	3.5	2.0	1.5	113.000	O K
960 min Winter	98.431	0.126	3.5	2.0	1.5	113.904	O K
1440 min Winter	98.429	0.124	3.5	2.0	1.5	112.096	O K
2160 min Winter	98.421	0.116	3.5	2.0	1.5	104.846	O K
2880 min Winter	98.411	0.106	3.5	2.0	1.5	96.645	O K
4320 min Winter	98.381	0.087	3.5	2.0	1.5	78.648	O K
5760 min Winter	98.366	0.072	3.5	2.0	1.5	65.088	O K
7200 min Winter	98.353	0.059	3.5	2.0	1.5	53.336	O K
8640 min Winter	98.346	0.052	3.5	2.0	1.5	47.008	O K
10080 min Winter	98.343	0.049	3.4	2.0	1.4	44.296	O K
	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)		
	15 min Winter	29.863	0.0	96.1	22		
	30 min Winter	19.436	0.0	99.5	36		
	60 min Winter	12.298	0.0	198.5	64		
	120 min Winter	7.625	0.0	202.9	122		
	180 min Winter	5.737	0.0	205.9	180		
	240 min Winter	4.683	0.0	208.2	238		
	360 min Winter	3.507	0.0	211.7	352		
	480 min Winter	2.842	0.0	214.3	462		
	600 min Winter	2.415	0.0	216.4	568		
	720 min Winter	2.133	0.0	218.2	662		
	960 min Winter	1.713	0.0	221.3	750		
	1440 min Winter	1.274	0.0	226.0	1056		
	2160 min Winter	0.948	0.0	421.6	1512		
	2880 min Winter	0.769	0.0	425.8	1932		
	4320 min Winter	0.572	0.0	432.2	2728		
	5760 min Winter	0.464	0.0	732.4	3464		
	7200 min Winter	0.394	0.0	736.6	4112		
	8640 min Winter	0.345	0.0	740.3	4664		
	10080 min Winter	0.309	0.0	743.5	5240		
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PRP		Page 1																																				
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<u>Model Details</u> Storage is Online Cover Level (m) 100.40 <table> <tr> <td>Invert Level (m)</td> <td>98.305</td> <td>Safety Factor</td> <td>2.0</td> </tr> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.3816</td> <td>Porosity</td> <td>1.00</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.3816</td> <td></td> <td></td> </tr> </table> <table> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>934.0</td> <td>0.700</td> <td>984.0</td> </tr> </tbody> </table> <u>Pipe Outflow Control</u> <table> <tr> <td>Diameter (m)</td> <td>0.150</td> <td>Entry Loss Coefficient</td> <td>0.500</td> </tr> <tr> <td>Slope (1:x)</td> <td>150.0</td> <td>Coefficient of Contraction</td> <td>0.600</td> </tr> <tr> <td>Length (m)</td> <td>95.230</td> <td>Upstream Invert Level (m)</td> <td>101.640</td> </tr> <tr> <td>Roughness k (mm)</td> <td>0.600</td> <td></td> <td></td> </tr> </table>			Invert Level (m)	98.305	Safety Factor	2.0	Infiltration Coefficient Base (m/hr)	0.3816	Porosity	1.00	Infiltration Coefficient Side (m/hr)	0.3816			Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	0.000	934.0	0.700	984.0	Diameter (m)	0.150	Entry Loss Coefficient	0.500	Slope (1:x)	150.0	Coefficient of Contraction	0.600	Length (m)	95.230	Upstream Invert Level (m)	101.640	Roughness k (mm)	0.600		
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