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58-62 Ock Street Abingdon Oxon OX14 5BZ	Fringford Road Bicester Cala Homes	
Date 20/09/2013 13:59 File POND - 100YR + C...	Designed by mcshane Checked by	
Micro Drainage		Source Control 2013.1

Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	9.190	0.690	21.4	0.0	21.4	745.9	O K
30 min Summer	9.342	0.842	23.6	0.0	23.6	972.0	O K
60 min Summer	9.474	0.974	25.4	0.0	25.4	1192.6	O K
120 min Summer	9.580	1.080	26.7	0.0	26.7	1386.5	O K
180 min Summer	9.623	1.123	27.3	0.0	27.3	1471.3	O K
240 min Summer	9.642	1.142	27.5	0.0	27.5	1509.3	O K
360 min Summer	9.652	1.152	27.6	0.0	27.6	1528.8	O K
480 min Summer	9.646	1.146	27.5	0.0	27.5	1517.1	O K
600 min Summer	9.638	1.138	27.4	0.0	27.4	1501.0	O K
720 min Summer	9.628	1.128	27.3	0.0	27.3	1481.6	O K
960 min Summer	9.606	1.106	27.1	0.0	27.1	1437.7	O K
1440 min Summer	9.556	1.056	26.4	0.0	26.4	1340.9	O K
2160 min Summer	9.480	0.980	25.5	0.0	25.5	1201.6	O K
2880 min Summer	9.407	0.907	24.5	0.0	24.5	1077.3	O K
4320 min Summer	9.276	0.776	22.7	0.0	22.7	869.8	O K
5760 min Summer	9.161	0.661	20.9	0.0	20.9	706.7	O K
7200 min Summer	9.061	0.561	19.3	0.0	19.3	576.1	O K
8640 min Summer	8.970	0.470	18.4	0.0	18.4	465.4	O K
10080 min Summer	8.872	0.372	18.4	0.0	18.4	355.8	O K
15 min Winter	9.254	0.754	22.3	0.0	22.3	837.2	O K
30 min Winter	9.416	0.916	24.6	0.0	24.6	1091.8	O K
60 min Winter	9.557	1.057	26.4	0.0	26.4	1342.3	O K
120 min Winter	9.671	1.171	27.8	0.0	27.8	1566.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Summer	128.285	0.0	755.7	0.0	30		
30 min Summer	84.226	0.0	992.9	0.0	44		
60 min Summer	52.662	0.0	1257.7	0.0	72		
120 min Summer	31.800	0.0	1519.6	0.0	130		
180 min Summer	23.353	0.0	1674.1	0.0	188		
240 min Summer	18.644	0.0	1782.2	0.0	246		
360 min Summer	13.543	0.0	1941.9	0.0	362		
480 min Summer	10.792	0.0	2063.1	0.0	428		
600 min Summer	9.043	0.0	2160.6	0.0	488		
720 min Summer	7.823	0.0	2242.5	0.0	552		
960 min Summer	6.219	0.0	2375.8	0.0	682		
1440 min Summer	4.493	0.0	2570.6	0.0	958		
2160 min Summer	3.241	0.0	2796.5	0.0	1368		
2880 min Summer	2.568	0.0	2954.0	0.0	1768		
4320 min Summer	1.847	0.0	3184.7	0.0	2552		
5760 min Summer	1.461	0.0	3363.6	0.0	3296		
7200 min Summer	1.217	0.0	3502.2	0.0	4040		
8640 min Summer	1.048	0.0	3617.7	0.0	4768		
10080 min Summer	0.923	0.0	3715.5	0.0	5456		
15 min Winter	128.285	0.0	846.8	0.0	30		
30 min Winter	84.226	0.0	1111.6	0.0	44		
60 min Winter	52.662	0.0	1409.1	0.0	72		
120 min Winter	31.800	0.0	1702.3	0.0	128		

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Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
180 min Winter	9.722	1.222	28.4	0.0	28.4	1668.8	O K
240 min Winter	9.746	1.246	28.7	0.0	28.7	1718.6	O K
360 min Winter	9.763	1.263	28.9	0.0	28.9	1754.7	O K
480 min Winter	9.761	1.261	28.9	0.0	28.9	1750.2	O K
600 min Winter	9.749	1.249	28.7	0.0	28.7	1724.3	O K
720 min Winter	9.736	1.236	28.6	0.0	28.6	1698.2	O K
960 min Winter	9.709	1.209	28.3	0.0	28.3	1642.1	O K
1440 min Winter	9.641	1.141	27.5	0.0	27.5	1507.1	O K
2160 min Winter	9.536	1.036	26.2	0.0	26.2	1304.1	O K
2880 min Winter	9.435	0.935	24.9	0.0	24.9	1123.8	O K
4320 min Winter	9.253	0.753	22.3	0.0	22.3	835.3	O K
5760 min Winter	9.096	0.596	19.9	0.0	19.9	619.7	O K
7200 min Winter	8.947	0.447	18.4	0.0	18.4	439.0	O K
8640 min Winter	8.779	0.279	18.4	0.0	18.4	255.9	O K
10080 min Winter	8.726	0.226	16.9	0.0	16.9	202.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
180 min Winter	23.353	0.0	1875.4	0.0	186
240 min Winter	18.644	0.0	1996.4	0.0	242
360 min Winter	13.543	0.0	2175.1	0.0	354
480 min Winter	10.792	0.0	2310.8	0.0	462
600 min Winter	9.043	0.0	2419.8	0.0	558
720 min Winter	7.823	0.0	2511.4	0.0	580
960 min Winter	6.219	0.0	2660.2	0.0	732
1440 min Winter	4.493	0.0	2876.5	0.0	1036
2160 min Winter	3.241	0.0	3132.4	0.0	1476
2880 min Winter	2.568	0.0	3308.8	0.0	1888
4320 min Winter	1.847	0.0	3567.8	0.0	2688
5760 min Winter	1.461	0.0	3767.5	0.0	3464
7200 min Winter	1.217	0.0	3922.8	0.0	4256
8640 min Winter	1.048	0.0	4052.5	0.0	4672
10080 min Winter	0.923	0.0	4162.7	0.0	5336

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Abingdon  
Oxon OX14 5BZ

Fringford Road  
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Cala Homes



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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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 3.200

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)				
From:	To:	From:	To:	From:	To:	From:	To:				
0	4	0.500	4	8	1.000	8	12	0.900	12	16	0.800

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Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 8.500

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	664.1	0.700	1394.7	1.400	2291.3	2.100	6641.3
0.100	929.8	0.800	1527.5	1.500	2390.9	2.200	6641.3
0.200	996.2	0.900	1660.4	1.600	6641.3	2.300	6641.3
0.300	1062.6	1.000	1793.2	1.700	6641.3	2.400	6641.3
0.400	1095.9	1.100	1959.2	1.800	6641.3	2.500	6641.3
0.500	1195.4	1.200	2025.7	1.900	6641.3		
0.600	1295.1	1.300	2125.2	2.000	6641.3		

Hydro-Brake® Outflow Control

Design Head (m) 1.250 Hydro-Brake® Type Mdl Invert Level (m) 8.500  
Design Flow (l/s) 29.0 Diameter (mm) 152

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	6.1	1.200	28.2	3.000	44.5	7.000	68.0
0.200	15.5	1.400	30.4	3.500	48.1	7.500	70.4
0.300	18.3	1.600	32.5	4.000	51.4	8.000	72.7
0.400	17.1	1.800	34.5	4.500	54.6	8.500	75.0
0.500	18.3	2.000	36.4	5.000	57.5	9.000	77.2
0.600	19.9	2.200	38.1	5.500	60.3	9.500	79.3
0.800	23.0	2.400	39.8	6.000	63.0		
1.000	25.7	2.600	41.5	6.500	65.6		

Weir Overflow Control

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 9.950