

Summary of Results for 100 year Return Period (+20%)

Storm Duration (mins)	Maximum Control (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
15 Summer	15.5	15.5	100.6127	0.6128	1456.3	0 K
30 Summer	16.3	16.3	100.7588	0.7588	1904.9	0 K
60 Summer	17.3	17.3	100.8963	0.8963	2364.0	0 K
120 Summer	18.2	18.2	101.0218	1.0218	2814.1	0 K
180 Summer	18.8	18.8	101.0863	1.0863	3057.6	0 K
240 Summer	19.1	19.1	101.1263	1.1263	3211.6	0 K
360 Summer	19.5	19.5	101.1768	1.1768	3410.7	0 K
480 Summer	19.7	19.7	101.2078	1.2078	3534.8	0 K
600 Summer	19.9	19.9	101.2268	1.2268	3613.0	0 K
720 Summer	20.0	20.0	101.2388	1.2388	3661.3	0 K
960 Summer	20.1	20.1	101.2483	1.2483	3700.9	0 K
1440 Summer	20.0	20.0	101.2378	1.2378	3657.1	0 K
2160 Summer	19.8	19.8	101.2098	1.2098	3543.9	0 K
2880 Summer	19.5	19.5	101.1798	1.1798	3423.0	0 K
4320 Summer	19.0	19.0	101.1173	1.1173	3177.2	0 K
5760 Summer	18.5	18.5	101.0558	1.0558	2942.1	0 K
7200 Summer	18.0	18.0	100.9973	0.9973	2724.2	0 K
8640 Summer	17.6	17.6	100.9408	0.9408	2520.2	0 K
10080 Summer	17.2	17.2	100.8868	0.8868	2331.1	0 K
15 Winter	15.8	15.8	100.6718	0.6718	1632.0	0 K
30 Winter	16.7	16.7	100.8288	0.8288	2135.2	0 K
60 Winter	17.9	17.9	100.9773	0.9773	2651.2	0 K
120 Winter	19.0	19.0	101.1133	1.1133	3160.8	0 K
180 Winter	19.5	19.5	101.1838	1.1838	3438.5	0 K
240 Winter	19.9	19.9	101.2278	1.2278	3616.4	0 K
360 Winter	20.3	20.3	101.2842	1.2842	3849.3	0 K
480 Winter	20.6	20.6	101.3197	1.3197	3998.9	0 K
600 Winter	20.8	20.8	101.3427	1.3427	4097.5	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	118.42	19
30 Summer	77.75	34
60 Summer	48.61	64
120 Summer	29.35	124
180 Summer	21.56	184
240 Summer	17.21	242
360 Summer	12.50	362
480 Summer	9.96	482
600 Summer	8.35	602
720 Summer	7.22	722
960 Summer	5.74	960
1440 Summer	4.15	1368
2160 Summer	2.99	1704
2880 Summer	2.37	2076
4320 Summer	1.71	2896
5760 Summer	1.35	3696
7200 Summer	1.12	4536
8640 Summer	0.97	5360
10080 Summer	0.85	6152
15 Winter	118.42	19
30 Winter	77.75	34
60 Winter	48.61	64
120 Winter	29.35	122
180 Winter	21.56	180
240 Winter	17.21	240
360 Winter	12.50	358
480 Winter	9.96	474
600 Winter	8.35	590

Rightwell House
Bretton
Peterborough PE3 8DW

Catchment 1B Pond + CC
Kent Int. Gateway
9T4125



Date 18 June 2009
File 2009.06.18 PQ Catchment 1B 100y...

Designed By PQ
Checked By

Micro Drainage

Source Control W.11.4

Summary of Results for 100 year Return Period (+20%)

Storm Duration (mins)	Maximum Control (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
720 Winter	20.9	20.9	101.3577	1.3577	4163.0	OK
960 Winter	21.0	21.0	101.3732	1.3732	4230.7	OK
1440 Winter	21.0	21.0	101.3727	1.3727	4226.8	OK
2160 Winter	20.7	20.7	101.3372	1.3372	4074.4	OK
2880 Winter	20.5	20.5	101.3027	1.3028	3928.7	OK
4320 Winter	19.9	19.9	101.2228	1.2228	3596.8	OK
5760 Winter	19.2	19.2	101.1393	1.1393	3262.2	OK
7200 Winter	18.5	18.5	101.0568	1.0568	2945.7	OK
8640 Winter	17.9	17.9	100.9768	0.9768	2650.4	OK
10080 Winter	17.3	17.3	100.8998	0.8998	2377.4	OK

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	7.22	706
960 Winter	5.74	934
1440 Winter	4.15	1372
2160 Winter	2.99	1796
2880 Winter	2.37	2216
4320 Winter	1.71	3116
5760 Winter	1.35	4032
7200 Winter	1.12	4904
8640 Winter	0.97	5784
10080 Winter	0.85	6560

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Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+20
Ratio-R	0.400	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 6.612

Time (mins)	Area (ha)
from: to:	
0 4	6.612

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Tank/Pond Details

Invert Level (m) 100.000 Ground Level (m) 102.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.00	1808.0	0.50	2734.5	1.00	3661.0	1.50	4587.5	2.00	5514.0	2.50	5514.0
0.10	1993.3	0.60	2919.8	1.10	3846.3	1.60	4772.8	2.10	5514.0		
0.20	2178.6	0.70	3105.1	1.20	4031.6	1.70	4958.1	2.20	5514.0		
0.30	2363.9	0.80	3290.4	1.30	4216.9	1.80	5143.4	2.30	5514.0		
0.40	2549.2	0.90	3475.7	1.40	4402.2	1.90	5328.7	2.40	5514.0		

Hydro-Brake Outflow Control

Design Head (m) 1.800 Hydro-Brake Type MD5 Invert Level (m) 100.000
Design Flow (l/s) 24.1 Diameter (mm) 173

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.10	6.0	0.60	15.4	1.60	22.7	2.60	28.9	5.00	40.1	7.50	49.1
0.20	12.8	0.80	16.5	1.80	24.1	3.00	31.1	5.50	42.0	8.00	50.7
0.30	15.2	1.00	18.1	2.00	25.4	3.50	33.5	6.00	43.9	8.50	52.3
0.40	15.5	1.20	19.7	2.20	26.6	4.00	35.9	6.50	45.7	9.00	53.8
0.50	15.3	1.40	21.2	2.40	27.8	4.50	38.0	7.00	47.4	9.50	55.3