

Rightwell House
Bretton
Peterborough PE3 8DW

Catchment 3B Cellular
Kent Int. Gateway
9T4125



Date 18 June 2009
File 2009.06.18 PQ Catchment 3B Stor...

Designed By PQ
Checked By

Micro Drainage

Source Control W.11.4

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

Half Drain Time : 1626 minutes

Storm Duration (mins)	Maximum Control (l/s)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	3.9	0.0	3.9	56.3858	0.8858	348.1	OK
30 Summer	4.3	0.0	4.3	56.5648	1.0648	455.0	OK
60 Summer	4.6	0.0	4.6	56.7478	1.2478	564.0	OK
120 Summer	5.0	0.0	5.0	56.9257	1.4257	670.1	OK
180 Summer	5.1	0.0	5.1	57.0207	1.5207	726.7	OK
240 Summer	5.2	0.0	5.2	57.0802	1.5802	762.0	OK
360 Summer	5.3	0.0	5.3	57.1547	1.6547	806.4	OK
480 Summer	5.4	0.0	5.4	57.1992	1.6992	832.8	OK
600 Summer	5.5	0.0	5.5	57.2252	1.7252	848.3	OK
720 Summer	5.5	0.0	5.5	57.2392	1.7392	856.8	OK
960 Summer	5.5	0.0	5.5	57.2452	1.7452	860.2	OK
1440 Summer	5.4	0.0	5.4	57.2182	1.7182	844.3	OK
2160 Summer	5.4	0.0	5.4	57.1692	1.6692	815.1	OK
2880 Summer	5.3	0.0	5.3	57.1157	1.6157	783.1	OK
4320 Summer	5.1	0.0	5.1	57.0072	1.5072	718.6	OK
5760 Summer	4.9	0.0	4.9	56.9117	1.4117	661.6	OK
7200 Summer	4.8	0.0	4.8	56.8273	1.3273	611.1	OK
8640 Summer	4.6	0.0	4.6	56.7503	1.2503	565.5	OK
10080 Summer	4.5	0.0	4.5	56.6808	1.1808	523.9	OK
15 Winter	4.1	0.0	4.1	56.4563	0.9563	390.2	OK
30 Winter	4.5	0.0	4.5	56.6578	1.1578	510.2	OK
60 Winter	4.8	0.0	4.8	56.8632	1.3632	632.8	OK
120 Winter	5.2	0.0	5.2	57.0652	1.5652	753.2	OK
180 Winter	5.4	0.0	5.4	57.1742	1.6742	818.0	OK
240 Winter	5.5	0.0	5.5	57.2427	1.7427	858.9	OK
360 Winter	5.6	0.0	5.6	57.3307	1.8307	911.4	OK
480 Winter	5.7	0.0	5.7	57.3857	1.8857	943.9	OK

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	1240
2160 Summer	2.99	1604
2880 Summer	2.37	2016
4320 Summer	1.71	2848
5760 Summer	1.35	3640
7200 Summer	1.12	4472
8640 Summer	0.97	5272
10080 Summer	0.85	6056
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	356
480 Winter	9.96	474

Rightwell House
Bretton
Peterborough PE3 8DW

Catchment 3B Cellular
Kent Int. Gateway
9T4125



Date 18 June 2009
File 2009.06.18 PQ Catchment 3B Stor...

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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
600 Winter	5.7	0.0	5.7	57.4197	1.9197	964.3	0 K
720 Winter	5.8	0.0	5.8	57.4407	1.9407	976.9	0 K
960 Winter	5.8	0.0	5.8	57.4582	1.9582	987.2	0 K
1440 Winter	5.8	0.0	5.8	57.4397	1.9397	976.0	0 K
2160 Winter	5.7	0.0	5.7	57.3762	1.8762	938.2	0 K
2880 Winter	5.6	0.0	5.6	57.3102	1.8102	898.9	0 K
4320 Winter	5.4	0.0	5.4	57.1642	1.6642	812.0	0 K
5760 Winter	5.1	0.0	5.1	57.0252	1.5252	729.2	0 K
7200 Winter	4.9	0.0	4.9	56.9027	1.4027	656.4	0 K
8640 Winter	4.7	0.0	4.7	56.7938	1.2938	591.4	0 K
10080 Winter	4.5	0.0	4.5	56.6958	1.1958	532.8	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	8.35	590
720 Winter	7.22	702
960 Winter	5.74	926
1440 Winter	4.15	1356
2160 Winter	2.99	1688
2880 Winter	2.37	2160
4320 Winter	1.71	3068
5760 Winter	1.35	3968
7200 Winter	1.12	4824
8640 Winter	0.97	5624
10080 Winter	0.85	6456

Rightwell House
 Bretton
 Peterborough PE3 8DW

Catchment 3B Cellular
 Kent Int. Gateway
 9T4125



Date 18 June 2009
 File 2009.06.18 PQ Catchment 3B Stor...

Designed By PQ
 Checked By

Micro Drainage

Source Control W.11.4

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) = 1.582

Time (mins)	Area (ha)
from: 0	to: 4 1.582

Rightwell House
Bretton
Peterborough PE3 8DW

Catchment 3B Cellular
Kent Int. Gateway
9T4125



Date 18 June 2009
File 2009.06.18 PQ Catchment 3B Stor...

Designed By PQ
Checked By

Micro Drainage

Source Control W.11.4

Cellular Storage Details

Infil Coef - Base (m/hr) 0.000000 Safety Factor 2.0 Invert Level (m) 55.500
Infil Coef - Sides (m/hr) 0.000000 Porosity 1.00 Ground Level (m) 58.000

Depth (m)	Area (m ²)	Infil. Area (m ²)	Depth (m)	Area (m ²)	Infil. Area (m ²)	Depth (m)	Area (m ²)	Infil. Area (m ²)	Depth (m)	Area (m ²)	Infil. Area (m ²)
0.00	196.9	595.8	0.70	595.8	622.6	1.40	595.8	649.5	2.10	595.8	676.4
0.10	196.9	599.6	0.80	595.8	626.5	1.50	595.8	653.4	2.20	595.8	680.2
0.20	196.9	603.4	0.90	595.8	630.3	1.60	595.8	657.2	2.30	595.8	684.0
0.30	196.9	607.4	1.00	595.8	634.1	1.70	595.8	661.0	2.40	595.8	687.9
0.40	196.9	611.1	1.10	595.8	638.0	1.80	595.8	664.8	2.50	595.8	691.7
0.50	595.8	614.9	1.20	595.8	642.0	1.90	595.8	668.7			
0.60	595.8	618.8	1.30	595.8	645.7	2.00	595.8	672.7			

Hydro-Brake Outflow Control

Design Head (m) 2.000 Hydro-Brake Type MD5 Invert Level (m) 55.500
Design Flow (l/s) 5.8 Diameter (mm) 83

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	2.1	0.60	3.2	1.60	5.3	2.60	6.7	5.00	9.3	7.50	11.4
0.20	2.5	0.80	3.7	1.80	5.6	3.00	7.2	5.50	9.7	8.00	11.7
0.30	2.5	1.00	4.2	2.00	5.9	3.50	7.8	6.00	10.2	8.50	12.1
0.40	2.7	1.20	4.5	2.20	6.2	4.00	8.3	6.50	10.6	9.00	12.5
0.50	3.0	1.40	4.9	2.40	6.4	4.50	8.8	7.00	11.0	9.50	12.8