

Cellular Storage Details

Infil Coef - Base (m/hr)	0.036000	Porosity	0.95
Infil Coef - Sides (m/hr)	0.036000	Invert Level (m)	0.000
Safety Factor	2.0	Ground Level (m)	0.400

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	13.5	13.5	0.70	0.0	19.5	1.40	0.0	19.5	2.10	0.0	19.5
0.10	13.5	15.0	0.80	0.0	19.5	1.50	0.0	19.5	2.20	0.0	19.5
0.20	13.5	16.5	0.90	0.0	19.5	1.60	0.0	19.5	2.30	0.0	19.5
0.30	13.5	18.0	1.00	0.0	19.5	1.70	0.0	19.5	2.40	0.0	19.5
0.40	13.5	19.5	1.10	0.0	19.5	1.80	0.0	19.5	2.50	0.0	19.5
0.50	0.0	19.5	1.20	0.0	19.5	1.90	0.0	19.5			
0.60	0.0	19.5	1.30	0.0	19.5	2.00	0.0	19.5			

Note:

Infiltration Rate = 1×10^{-5} m/s

Area = 4.5m x 3.0m x 0.4m deep

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	30	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	18.600	Shortest Storm (mins)	15	Climate Change %	+0
Ratio-R	0.400	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.010

Time (mins)		Area (ha)
from:	to:	
0	4	0.010

Summary of Results for 10 year Return Period

Half Drain Time : 215 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	0.0778	0.0778	1.0	0 K
30 Summer	0.1	0.1	0.0978	0.0978	1.3	0 K
60 Summer	0.1	0.1	0.1163	0.1163	1.5	0 K
120 Summer	0.1	0.1	0.1288	0.1288	1.7	0 K
180 Summer	0.1	0.1	0.1318	0.1318	1.7	0 K
240 Summer	0.1	0.1	0.1323	0.1323	1.7	0 K
360 Summer	0.1	0.1	0.1308	0.1308	1.7	0 K
480 Summer	0.1	0.1	0.1273	0.1273	1.6	0 K
600 Summer	0.1	0.1	0.1233	0.1233	1.6	0 K
720 Summer	0.1	0.1	0.1188	0.1188	1.5	0 K
960 Summer	0.1	0.1	0.1098	0.1098	1.4	0 K
1440 Summer	0.1	0.1	0.0923	0.0923	1.2	0 K
2160 Summer	0.1	0.1	0.0713	0.0713	0.9	0 K
2880 Summer	0.1	0.1	0.0563	0.0563	0.7	0 K
4320 Summer	0.1	0.1	0.0432	0.0432	0.6	0 K
5760 Summer	0.1	0.1	0.0362	0.0362	0.5	0 K
7200 Summer	0.0	0.0	0.0312	0.0312	0.4	0 K
8640 Summer	0.0	0.0	0.0277	0.0277	0.4	0 K
10080 Summer	0.0	0.0	0.0247	0.0247	0.3	0 K
15 Winter	0.1	0.1	0.0873	0.0873	1.1	0 K
30 Winter	0.1	0.1	0.1103	0.1103	1.4	0 K
60 Winter	0.1	0.1	0.1313	0.1313	1.7	0 K
120 Winter	0.1	0.1	0.1468	0.1468	1.9	0 K
180 Winter	0.1	0.1	0.1512	0.1512	1.9	0 K
240 Winter	0.1	0.1	0.1508	0.1508	1.9	0 K
360 Winter	0.1	0.1	0.1478	0.1478	1.9	0 K
480 Winter	0.1	0.1	0.1428	0.1428	1.8	0 K
600 Winter	0.1	0.1	0.1363	0.1363	1.7	0 K
720 Winter	0.1	0.1	0.1293	0.1293	1.7	0 K
960 Winter	0.1	0.1	0.1148	0.1148	1.5	0 K
1440 Winter	0.1	0.1	0.0883	0.0883	1.1	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
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Note:

1 in 10 year water level below invert of incoming pipe

15 Summer	55.64	18
30 Summer	35.95	33
60 Summer	22.31	62
120 Summer	13.50	120
180 Summer	9.99	164
240 Summer	8.04	192
360 Summer	5.91	258
480 Summer	4.75	326
600 Summer	4.00	394
720 Summer	3.48	462
960 Summer	2.79	596
1440 Summer	2.04	852
2160 Summer	1.50	1212
2880 Summer	1.20	1556
4320 Summer	0.88	2248
5760 Summer	0.70	2992
7200 Summer	0.59	3680
8640 Summer	0.51	4416
10080 Summer	0.45	5144
15 Winter	55.64	18
30 Winter	35.95	32
60 Winter	22.31	62
120 Winter	13.50	118
180 Winter	9.99	174
240 Winter	8.04	222
360 Winter	5.91	278
480 Winter	4.75	354
600 Winter	4.00	428
720 Winter	3.48	504
960 Winter	2.79	644
1440 Winter	2.04	908

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Micro Drainage		
Source Control W.11.4 net		

Summary of Results for 10 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
2160 Winter	0.1	0.1	0.0588	0.0588	0.8	0 K
2880 Winter	0.1	0.1	0.0457	0.0457	0.6	0 K
4320 Winter	0.0	0.0	0.0347	0.0347	0.4	0 K
5760 Winter	0.0	0.0	0.0282	0.0282	0.4	0 K
7200 Winter	0.0	0.0	0.0242	0.0242	0.3	0 K
8640 Winter	0.0	0.0	0.0207	0.0207	0.3	0 K
10080 Winter	0.0	0.0	0.0188	0.0188	0.2	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
2160 Winter	1.50	1252
2880 Winter	1.20	1560
4320 Winter	0.88	2292
5760 Winter	0.70	3000
7200 Winter	0.59	3736
8640 Winter	0.51	4496
10080 Winter	0.45	5144

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Summary of Results for 30 year Return Period

Half Drain Time : 287 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	0.0988	0.0988	1.3	0 K
30 Summer	0.1	0.1	0.1263	0.1263	1.6	0 K
60 Summer	0.1	0.1	0.1517	0.1517	1.9	0 K
120 Summer	0.1	0.1	0.1712	0.1712	2.2	0 K
180 Summer	0.1	0.1	0.1767	0.1767	2.3	0 K
240 Summer	0.1	0.1	0.1772	0.1772	2.3	0 K
360 Summer	0.1	0.1	0.1752	0.1752	2.2	0 K
480 Summer	0.1	0.1	0.1717	0.1717	2.2	0 K
600 Summer	0.1	0.1	0.1672	0.1672	2.1	0 K
720 Summer	0.1	0.1	0.1617	0.1617	2.1	0 K
960 Summer	0.1	0.1	0.1513	0.1513	1.9	0 K
1440 Summer	0.1	0.1	0.1303	0.1303	1.7	0 K
2160 Summer	0.1	0.1	0.1033	0.1033	1.3	0 K
2880 Summer	0.1	0.1	0.0818	0.0818	1.0	0 K
4320 Summer	0.1	0.1	0.0543	0.0543	0.7	0 K
5760 Summer	0.1	0.1	0.0442	0.0442	0.6	0 K
7200 Summer	0.1	0.1	0.0377	0.0377	0.5	0 K
8640 Summer	0.0	0.0	0.0332	0.0332	0.4	0 K
10080 Summer	0.0	0.0	0.0302	0.0302	0.4	0 K
15 Winter	0.1	0.1	0.1113	0.1113	1.4	0 K
30 Winter	0.1	0.1	0.1423	0.1423	1.8	0 K
60 Winter	0.1	0.1	0.1712	0.1712	2.2	0 K
120 Winter	0.1	0.1	0.1947	0.1947	2.5	0 K
180 Winter	0.1	0.1	0.2027	0.2027	2.6	FLOOD RISK
240 Winter	0.1	0.1	0.2042	0.2042	2.6	FLOOD RISK
360 Winter	0.1	0.1	0.1997	0.1997	2.6	0 K
480 Winter	0.1	0.1	0.1947	0.1947	2.5	0 K
600 Winter	0.1	0.1	0.1882	0.1882	2.4	0 K
720 Winter	0.1	0.1	0.1802	0.1802	2.3	0 K
960 Winter	0.1	0.1	0.1643	0.1643	2.1	0 K
1440 Winter	0.1	0.1	0.1323	0.1323	1.7	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	70.41	18
30 Summer	45.87	33
60 Summer	28.61	62
120 Summer	17.34	122
180 Summer	12.81	180
240 Summer	10.29	214
360 Summer	7.52	276
480 Summer	6.02	340
600 Summer	5.06	410
720 Summer	4.39	478
960 Summer	3.51	614
1440 Summer	2.55	880
2160 Summer	1.86	1256
2880 Summer	1.48	1616
4320 Summer	1.07	2288
5760 Summer	0.86	2992
7200 Summer	0.72	3680
8640 Summer	0.62	4416
10080 Summer	0.55	5144
15 Winter	70.41	18
30 Winter	45.87	33
60 Winter	28.61	62
120 Winter	17.34	118
180 Winter	12.81	176
240 Winter	10.29	230
360 Winter	7.52	292
480 Winter	6.02	366
600 Winter	5.06	444
720 Winter	4.39	520
960 Winter	3.51	666
1440 Winter	2.55	940

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Summary of Results for 30 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
2160 Winter	0.1	0.1	0.0923	0.0923	1.2	0 K
2880 Winter	0.1	0.1	0.0633	0.0633	0.8	0 K
4320 Winter	0.1	0.1	0.0427	0.0427	0.5	0 K
5760 Winter	0.0	0.0	0.0347	0.0347	0.4	0 K
7200 Winter	0.0	0.0	0.0292	0.0292	0.4	0 K
8640 Winter	0.0	0.0	0.0252	0.0252	0.3	0 K
10080 Winter	0.0	0.0	0.0227	0.0227	0.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
2160 Winter	1.86	1320
2880 Winter	1.48	1644
4320 Winter	1.07	2288
5760 Winter	0.86	3000
7200 Winter	0.72	3744
8640 Winter	0.62	4488
10080 Winter	0.55	5240

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

Half Drain Time : 464 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	0.1687	0.1687	2.2	0 K
30 Summer	0.1	0.1	0.2187	0.2187	2.8	FLOOD RISK
60 Summer	0.1	0.1	0.2672	0.2672	3.4	FLOOD RISK
120 Summer	0.1	0.1	0.3087	0.3087	4.0	FLOOD RISK
180 Summer	0.1	0.1	0.3262	0.3262	4.2	FLOOD RISK
240 Summer	0.1	0.1	0.3327	0.3327	4.3	FLOOD RISK
360 Summer	0.1	0.1	0.3307	0.3307	4.2	FLOOD RISK
480 Summer	0.1	0.1	0.3262	0.3262	4.2	FLOOD RISK
600 Summer	0.1	0.1	0.3202	0.3202	4.1	FLOOD RISK
720 Summer	0.1	0.1	0.3142	0.3142	4.0	FLOOD RISK
960 Summer	0.1	0.1	0.3007	0.3007	3.9	FLOOD RISK
1440 Summer	0.1	0.1	0.2732	0.2732	3.5	FLOOD RISK
2160 Summer	0.1	0.1	0.2347	0.2347	3.0	FLOOD RISK
2880 Summer	0.1	0.1	0.2007	0.2007	2.6	FLOOD RISK
4320 Summer	0.1	0.1	0.1453	0.1453	1.9	0 K
5760 Summer	0.1	0.1	0.1038	0.1038	1.3	0 K
7200 Summer	0.1	0.1	0.0748	0.0748	1.0	0 K
8640 Summer	0.1	0.1	0.0563	0.0563	0.7	0 K
10080 Summer	0.1	0.1	0.0477	0.0477	0.6	0 K
15 Winter	0.1	0.1	0.1892	0.1892	2.4	0 K
30 Winter	0.1	0.1	0.2457	0.2457	3.2	FLOOD RISK
60 Winter	0.1	0.1	0.3012	0.3012	3.9	FLOOD RISK
120 Winter	0.1	0.1	0.3497	0.3497	4.5	FLOOD RISK
180 Winter	0.1	0.1	0.3712	0.3712	4.8	FLOOD RISK
240 Winter	0.1	0.1	0.3807	0.3807	4.9	FLOOD RISK
360 Winter	0.1	0.1	0.3827	0.3827	4.9	FLOOD RISK
480 Winter	0.1	0.1	0.3762	0.3762	4.8	FLOOD RISK
600 Winter	0.1	0.1	0.3682	0.3682	4.7	FLOOD RISK
720 Winter	0.1	0.1	0.3602	0.3602	4.6	FLOOD RISK
960 Winter	0.1	0.1	0.3422	0.3422	4.4	FLOOD RISK
1440 Winter	0.1	0.1	0.3022	0.3022	3.9	FLOOD RISK

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	118.47	19
30 Summer	77.88	33
60 Summer	48.84	62
120 Summer	29.64	122
180 Summer	21.86	182
240 Summer	17.52	240
360 Summer	12.72	342
480 Summer	10.14	396
600 Summer	8.50	458
720 Summer	7.36	520
960 Summer	5.85	656
1440 Summer	4.23	926
2160 Summer	3.06	1340
2880 Summer	2.42	1728
4320 Summer	1.75	2464
5760 Summer	1.38	3176
7200 Summer	1.15	3824
8640 Summer	0.99	4496
10080 Summer	0.87	5144
15 Winter	118.47	19
30 Winter	77.88	33
60 Winter	48.84	62
120 Winter	29.64	120
180 Winter	21.86	178
240 Winter	17.52	234
360 Winter	12.72	346
480 Winter	10.14	448
600 Winter	8.50	482
720 Winter	7.36	556
960 Winter	5.85	712
1440 Winter	4.23	1010

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

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
2160 Winter	0.1	0.1	0.2457	0.2457	3.2	FLOOD RISK
2880 Winter	0.1	0.1	0.1962	0.1962	2.5	0 K
4320 Winter	0.1	0.1	0.1178	0.1178	1.5	0 K
5760 Winter	0.1	0.1	0.0658	0.0658	0.8	0 K
7200 Winter	0.1	0.1	0.0467	0.0467	0.6	0 K
8640 Winter	0.1	0.1	0.0407	0.0407	0.5	0 K
10080 Winter	0.1	0.1	0.0357	0.0357	0.5	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
2160 Winter	3.06	1432
2880 Winter	2.42	1844
4320 Winter	1.75	2592
5760 Winter	1.38	3176
7200 Winter	1.15	3744
8640 Winter	0.99	4416
10080 Winter	0.87	5152