Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 319 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	88.711	0.191	0.9	17.3	Flood Risk
30 min Summer	88.743	0.223	1.0	23.6	Flood Risk
60 min Summer	88.770	0.250	1.1	29.5	Flood Risk
120 min Summer	88.789	0.269	1.2	34.1	Flood Risk
180 min Summer	88.795	0.275	1.2	35.6	Flood Risk
240 min Summer	88.796	0.276	1.2	35.9	Flood Risk
360 min Summer	88.796	0.276	1.2	36.0	Flood Risk
480 min Summer	88.795	0.275	1.2	35.7	Flood Risk
600 min Summer	88.793	0.273	1.2	35.2	Flood Risk
720 min Summer	88.790	0.270	1.2	34.5	Flood Risk
960 min Summer	88.784	0.264	1.2	33.0	Flood Risk
1440 min Summer	88.771	0.251	1.1	29.7	Flood Risk
2160 min Summer	88.751	0.231	1.1	25.3	Flood Risk
2880 min Summer	88.734	0.214	1.0	21.7	Flood Risk
4320 min Summer	88.707	0.187	0.9	16.5	Flood Risk
5760 min Summer	88.685	0.165	0.8	12.9	O K
7200 min Summer	88.668	0.148	0.7	10.3	O K
8640 min Summer	88.654	0.134	0.6	8.4	O K
10080 min Summer	88.642	0.122	0.6	7.1	O K
15 min Winter	88.725	0.205	0.9	19.9	Flood Risk
30 min Winter	88.759	0.239	1.1	27.0	Flood Risk
60 min Winter	88.787	0.267	1.2	33.6	Flood Risk
120 min Winter	88.808	0.288	1.2	39.1	Flood Risk
180 min Winter	88.816	0.296	1.2	41.2	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	138.754	0.0	19
30 min Summer	90.906	0.0	33
60 min Summer	56.713	0.0	62
120 min Summer	34.176	0.0	122
180 min Summer	25.072	0.0	180
240 min Summer	20.006	0.0	224
360 min Summer	14.514	0.0	280
480 min Summer	11.557	0.0	344
600 min Summer	9.678	0.0	410
720 min Summer	8.369	0.0	478
960 min Summer	6.648	0.0	616
1440 min Summer	4.799	0.0	882
2160 min Summer	3.459	0.0	1276
2880 min Summer	2.739	0.0	1648
4320 min Summer	1.968	0.0	2380
5760 min Summer	1.556	0.0	3112
7200 min Summer	1.295	0.0	3824
8640 min Summer	1.115	0.0	4576
10080 min Summer	0.982	0.0	5248
15 min Winter	138.754	0.0	18
30 min Winter	90.906	0.0	33
60 min Winter	56.713	0.0	62
120 min Winter	34.176	0.0	120
180 min Winter	25.072	0.0	176

©1982-2017 XP Solutions

Odyssey Health Club
SW Drainage
Permeable Paved Car Park

Date 20/11/2017 | Designed by PS
File 2017-11-20 Odyssey Health Clu... | Checked by
Micro Drainage | Source Control 2017.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
240 min Winter	88.819	0.299	1.2	41.8	Flood Risk
360 min Winter	88.817	0.297	1.2	41.4	Flood Risk
480 min Winter	88.815	0.295	1.2	40.9	Flood Risk
600 min Winter	88.812	0.292	1.2	39.9	Flood Risk
720 min Winter	88.807	0.287	1.2	38.8	Flood Risk
960 min Winter	88.797	0.277	1.2	36.2	Flood Risk
1440 min Winter	88.777	0.257	1.2	31.3	Flood Risk
2160 min Winter	88.751	0.231	1.1	25.1	Flood Risk
2880 min Winter	88.728	0.208	1.0	20.4	Flood Risk
4320 min Winter	88.692	0.172	0.8	13.9	O K
5760 min Winter	88.665	0.145	0.7	10.0	O K
7200 min Winter	88.645	0.125	0.6	7.4	O K
8640 min Winter	88.630	0.110	0.5	5.7	O K
10080 min Winter	88.617	0.097	0.4	4.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
240 min Winter	20.006	0.0	232
360 min Winter	14.514	0.0	326
480 min Winter	11.557	0.0	372
600 min Winter	9.678	0.0	448
720 min Winter	8.369	0.0	522
960 min Winter	6.648	0.0	666
1440 min Winter	4.799	0.0	952
2160 min Winter	3.459	0.0	1344
2880 min Winter	2.739	0.0	1732
4320 min Winter	1.968	0.0	2468
5760 min Winter	1.556	0.0	3176
7200 min Winter	1.295	0.0	3896
8640 min Winter	1.115	0.0	4584
10080 min Winter	0.982	0.0	5344

©1982-2017 XP Solutions

Odyssey Health Club
SW Drainage
Permeable Paved Car Park

Date 20/11/2017 | Designed by PS
File 2017-11-20 Odyssey Health Clu... | Checked by
Micro Drainage | Source Control 2017.1

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	0.405	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.085

Time (mins) From:	To:	Area (ha)
0	4	0.085

©1982-2017 XP Solutions

Model Details

Storage is Online Cover Level (m) 89.000

Porous Car Park Structure

Infiltration Coefficient Base (m/hr)	0.01048	Width (m)	52.5
Membrane Percolation (mm/hr)	1000	Length (m)	16.2
Max Percolation (l/s)	236.3	Slope (1:X)	60.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	88.520	Cap Volume Depth (m)	0.350

©1982-2017 XP Solutions