

Systra Ltd			Page 1		
Innovation Court 121 Edmund Street Birmingham B3 2HJ		Station Rd, Chirk, Wrexham, Soakaway Design Access Road South Section			
Date 23/10/2019 File Access Road south sectio...		Designed by GP Checked by GP			
Micro Drainage		Source Control 2019.1			
<u>Summary of Results for 100 year Return Period (+30%)</u>					
Half Drain Time : 33 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	0.530	0.530	9.9	25.2	O K
30 min Summer	0.673	0.673	11.7	32.0	O K
60 min Summer	0.753	0.753	12.7	35.8	O K
120 min Summer	0.761	0.761	12.8	36.1	O K
180 min Summer	0.719	0.719	12.3	34.1	O K
240 min Summer	0.669	0.669	11.6	31.8	O K
360 min Summer	0.580	0.580	10.5	27.6	O K
480 min Summer	0.508	0.508	9.6	24.1	O K
600 min Summer	0.449	0.449	8.8	21.3	O K
720 min Summer	0.399	0.399	8.2	18.9	O K
960 min Summer	0.319	0.319	7.2	15.2	O K
1440 min Summer	0.212	0.212	5.8	10.1	O K
2160 min Summer	0.117	0.117	4.6	5.6	O K
2880 min Summer	0.064	0.064	4.0	3.1	O K
4320 min Summer	0.040	0.040	3.0	1.9	O K
5760 min Summer	0.032	0.032	2.4	1.5	O K
7200 min Summer	0.027	0.027	2.1	1.3	O K
8640 min Summer	0.024	0.024	1.8	1.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer	103.327	0.0	21		
30 min Summer	71.348	0.0	31		
60 min Summer	47.182	0.0	48		
120 min Summer	30.146	0.0	82		
180 min Summer	22.825	0.0	116		
240 min Summer	18.579	0.0	148		
360 min Summer	13.848	0.0	212		
480 min Summer	11.235	0.0	274		
600 min Summer	9.543	0.0	336		
720 min Summer	8.346	0.0	398		
960 min Summer	6.748	0.0	520		
1440 min Summer	4.988	0.0	760		
2160 min Summer	3.678	0.0	1124		
2880 min Summer	2.957	0.0	1472		
4320 min Summer	2.170	0.0	2200		
5760 min Summer	1.742	0.0	2936		
7200 min Summer	1.471	0.0	3584		
8640 min Summer	1.281	0.0	4272		
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Summary of Results for 100 year Return Period (+30%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
10080 min Summer	0.021	0.021	1.6	1.0	O K
15 min Winter	0.598	0.598	10.7	28.4	O K
30 min Winter	0.761	0.761	12.8	36.2	O K
60 min Winter	1.482	1.482	14.8	39.8	Flood Risk
120 min Winter	1.438	1.438	14.3	39.0	Flood Risk
180 min Winter	0.752	0.752	12.7	35.7	O K
240 min Winter	0.677	0.677	11.7	32.1	O K
360 min Winter	0.552	0.552	10.1	26.2	O K
480 min Winter	0.458	0.458	8.9	21.7	O K
600 min Winter	0.384	0.384	8.0	18.3	O K
720 min Winter	0.325	0.325	7.3	15.4	O K
960 min Winter	0.237	0.237	6.1	11.3	O K
1440 min Winter	0.127	0.127	4.8	6.0	O K
2160 min Winter	0.049	0.049	3.7	2.3	O K
2880 min Winter	0.039	0.039	3.0	1.9	O K
4320 min Winter	0.029	0.029	2.2	1.4	O K
5760 min Winter	0.023	0.023	1.8	1.1	O K
7200 min Winter	0.020	0.020	1.5	0.9	O K
8640 min Winter	0.017	0.017	1.3	0.8	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
10080 min Summer	1.139	0.0	5072		
15 min Winter	103.327	0.0	22		
30 min Winter	71.348	0.0	32		
60 min Winter	47.182	0.0	50		
120 min Winter	30.146	0.0	86		
180 min Winter	22.825	0.0	122		
240 min Winter	18.579	0.0	156		
360 min Winter	13.848	0.0	222		
480 min Winter	11.235	0.0	284		
600 min Winter	9.543	0.0	348		
720 min Winter	8.346	0.0	410		
960 min Winter	6.748	0.0	532		
1440 min Winter	4.988	0.0	772		
2160 min Winter	3.678	0.0	1100		
2880 min Winter	2.957	0.0	1464		
4320 min Winter	2.170	0.0	2204		
5760 min Winter	1.742	0.0	2936		
7200 min Winter	1.471	0.0	3552		
8640 min Winter	1.281	0.0	4416		
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<u>Summary of Results for 100 year Return Period (+30%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
10080 min Winter	0.015	0.015	1.2	0.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
10080 min Winter	1.139	0.0	5128		
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