

Veryards Ltd				Page 1																																																																																																																																																																																																																			
Burton House Rossett Wrexham LL12 0HY		Former ATS Garage Marford SA1																																																																																																																																																																																																																					
Date 30/11/2015 11:10 File SA1.SRCX		Designed by J RUSSELL Checked by																																																																																																																																																																																																																					
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Summary of Results for 100 year Return Period (+30%) Half Drain Time : 43 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>21.878</td><td>1.378</td><td>2.2</td><td>6.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>22.343</td><td>1.843</td><td>2.2</td><td>8.3</td><td>O K</td></tr><tr><td>60 min Summer</td><td>22.559</td><td>2.059</td><td>2.2</td><td>9.0</td><td>O K</td></tr><tr><td>120 min Summer</td><td>22.493</td><td>1.993</td><td>2.2</td><td>8.8</td><td>O K</td></tr><tr><td>180 min Summer</td><td>22.300</td><td>1.800</td><td>2.2</td><td>8.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>22.076</td><td>1.576</td><td>2.2</td><td>7.4</td><td>O K</td></tr><tr><td>360 min Summer</td><td>21.643</td><td>1.143</td><td>2.2</td><td>5.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>21.310</td><td>0.810</td><td>2.2</td><td>4.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>21.176</td><td>0.676</td><td>2.0</td><td>3.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>21.066</td><td>0.566</td><td>1.9</td><td>3.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>20.895</td><td>0.395</td><td>1.7</td><td>2.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>20.678</td><td>0.178</td><td>1.4</td><td>1.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>20.548</td><td>0.048</td><td>1.1</td><td>0.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>20.538</td><td>0.038</td><td>0.9</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>20.528</td><td>0.028</td><td>0.7</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>20.522</td><td>0.022</td><td>0.5</td><td>0.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>20.519</td><td>0.019</td><td>0.4</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min 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Summer	22.343	1.843	2.2	8.3	O K	60 min Summer	22.559	2.059	2.2	9.0	O K	120 min Summer	22.493	1.993	2.2	8.8	O K	180 min Summer	22.300	1.800	2.2	8.1	O K	240 min Summer	22.076	1.576	2.2	7.4	O K	360 min Summer	21.643	1.143	2.2	5.8	O K	480 min Summer	21.310	0.810	2.2	4.7	O K	600 min Summer	21.176	0.676	2.0	3.9	O K	720 min Summer	21.066	0.566	1.9	3.3	O K	960 min Summer	20.895	0.395	1.7	2.3	O K	1440 min Summer	20.678	0.178	1.4	1.0	O K	2160 min Summer	20.548	0.048	1.1	0.3	O K	2880 min Summer	20.538	0.038	0.9	0.2	O K	4320 min Summer	20.528	0.028	0.7	0.2	O K	5760 min Summer	20.522	0.022	0.5	0.1	O K	7200 min Summer	20.519	0.019	0.4	0.1	O K	8640 min Summer	20.516	0.016	0.4	0.1	O K	10080 min Summer	20.514	0.014	0.3	0.1	O K	15 min Winter	22.157	1.657	2.2	7.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	108.401	0.0	19	30 min Summer	73.137	0.0	31	60 min Summer	47.182	0.0	50	120 min Summer	29.450	0.0	84	180 min Summer	22.047	0.0	118	240 min Summer	17.834	0.0	150	360 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Micro Drainage Source Control 2015.1		

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
30 min Winter	22.719	2.219	2.2	9.6	Flood Risk
60 min Winter	22.990	2.490	2.2	10.5	Flood Risk
120 min Winter	22.852	2.352	2.2	10.0	Flood Risk
180 min Winter	22.524	2.024	2.2	8.9	O K
240 min Winter	22.164	1.664	2.2	7.7	O K
360 min Winter	21.512	1.012	2.2	5.4	O K
480 min Winter	21.195	0.695	2.1	4.0	O K
600 min Winter	21.033	0.533	1.8	3.1	O K
720 min Winter	20.905	0.405	1.7	2.4	O K
960 min Winter	20.716	0.216	1.4	1.3	O K
1440 min Winter	20.547	0.047	1.1	0.3	O K
2160 min Winter	20.535	0.035	0.8	0.2	O K
2880 min Winter	20.528	0.028	0.7	0.2	O K
4320 min Winter	20.520	0.020	0.5	0.1	O K
5760 min Winter	20.516	0.016	0.4	0.1	O K
7200 min Winter	20.514	0.014	0.3	0.1	O K
8640 min Winter	20.512	0.012	0.3	0.1	O K
10080 min Winter	20.511	0.011	0.3	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	73.137	0.0	32
60 min Winter	47.182	0.0	54
120 min Winter	29.450	0.0	92
180 min Winter	22.047	0.0	128
240 min Winter	17.834	0.0	162
360 min Winter	13.124	0.0	224
480 min Winter	10.563	0.0	284
600 min Winter	8.918	0.0	346
720 min Winter	7.762	0.0	408
960 min Winter	6.229	0.0	526
1440 min Winter	4.560	0.0	716
2160 min Winter	3.330	0.0	1100
2880 min Winter	2.661	0.0	1432
4320 min Winter	1.937	0.0	2196
5760 min Winter	1.544	0.0	2840
7200 min Winter	1.294	0.0	3648
8640 min Winter	1.119	0.0	4304
10080 min Winter	0.991	0.0	4968

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<u>Model Details</u> Storage is Online Cover Level (m) 23.000 <u>Lined Soakaway Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.36000</td> <td>Ring Diameter (m)</td> <td>2.10</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.36000</td> <td>Pit Multiplier</td> <td>1.6</td> </tr> <tr> <td>Safety Factor</td> <td>1.0</td> <td>Number Required</td> <td>1</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Cap Volume Depth (m)</td> <td>2.500</td> </tr> <tr> <td>Invert Level (m)</td> <td>20.500</td> <td>Cap Infiltration Depth (m)</td> <td>0.805</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.36000	Ring Diameter (m)	2.10	Infiltration Coefficient Side (m/hr)	0.36000	Pit Multiplier	1.6	Safety Factor	1.0	Number Required	1	Porosity	0.30	Cap Volume Depth (m)	2.500	Invert Level (m)	20.500	Cap Infiltration Depth (m)	0.805
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