

Sutcliffe		Page 1																																																																																																																																																																																																																		
18-20 Harrington Street Liverpool L2 9QA	Grosvenor Road Soakaway 100yr + 30% CC																																																																																																																																																																																																																			
Date 13/02/2018 09:04 File 27856 - Soakaway Volume...	Designed by SB Checked by																																																																																																																																																																																																																			
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<u>Summary of Results for 100 year Return Period (+30%)</u> Half Drain Time : 60 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>82.544</td><td>0.399</td><td>12.9</td><td>53.0</td><td>O K</td></tr><tr><td>30 min Summer</td><td>82.666</td><td>0.521</td><td>13.3</td><td>69.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>82.744</td><td>0.599</td><td>13.6</td><td>79.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>82.762</td><td>0.617</td><td>13.7</td><td>82.0</td><td>O K</td></tr><tr><td>180 min Summer</td><td>82.741</td><td>0.596</td><td>13.6</td><td>79.3</td><td>O K</td></tr><tr><td>240 min Summer</td><td>82.708</td><td>0.563</td><td>13.5</td><td>74.9</td><td>O K</td></tr><tr><td>360 min Summer</td><td>82.635</td><td>0.490</td><td>13.2</td><td>65.2</td><td>O K</td></tr><tr><td>480 min Summer</td><td>82.565</td><td>0.420</td><td>12.9</td><td>55.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>82.501</td><td>0.356</td><td>12.7</td><td>47.3</td><td>O K</td></tr><tr><td>720 min Summer</td><td>82.442</td><td>0.297</td><td>12.5</td><td>39.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>82.345</td><td>0.200</td><td>12.1</td><td>26.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>82.225</td><td>0.080</td><td>11.6</td><td>10.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>82.188</td><td>0.043</td><td>9.8</td><td>5.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>82.179</td><td>0.034</td><td>7.9</td><td>4.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>82.170</td><td>0.025</td><td>5.8</td><td>3.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>82.165</td><td>0.020</td><td>4.7</td><td>2.7</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>82.162</td><td>0.017</td><td>4.0</td><td>2.3</td><td>O K</td></tr><tr><td>8640 min 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min Summer</td><td>9.346</td><td>0.0</td><td>356</td></tr><tr><td>720 min Summer</td><td>8.162</td><td>0.0</td><td>416</td></tr><tr><td>960 min Summer</td><td>6.584</td><td>0.0</td><td>534</td></tr><tr><td>1440 min Summer</td><td>4.852</td><td>0.0</td><td>756</td></tr><tr><td>2160 min Summer</td><td>3.567</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>2.863</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>2.095</td><td>0.0</td><td>2196</td></tr><tr><td>5760 min Summer</td><td>1.677</td><td>0.0</td><td>2880</td></tr><tr><td>7200 min Summer</td><td>1.413</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>1.228</td><td>0.0</td><td>4264</td></tr><tr><td>10080 min Summer</td><td>1.091</td><td>0.0</td><td>4992</td></tr><tr><td>15 min Winter</td><td>104.874</td><td>0.0</td><td>23</td></tr></tbody></table>			Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	82.544	0.399	12.9	53.0	O K	30 min Summer	82.666	0.521	13.3	69.4	O K	60 min Summer	82.744	0.599	13.6	79.7	O K	120 min Summer	82.762	0.617	13.7	82.0	O K	180 min Summer	82.741	0.596	13.6	79.3	O K	240 min Summer	82.708	0.563	13.5	74.9	O K	360 min Summer	82.635	0.490	13.2	65.2	O K	480 min Summer	82.565	0.420	12.9	55.9	O K	600 min Summer	82.501	0.356	12.7	47.3	O K	720 min Summer	82.442	0.297	12.5	39.4	O K	960 min Summer	82.345	0.200	12.1	26.5	O K	1440 min Summer	82.225	0.080	11.6	10.6	O K	2160 min Summer	82.188	0.043	9.8	5.7	O K	2880 min Summer	82.179	0.034	7.9	4.6	O K	4320 min Summer	82.170	0.025	5.8	3.3	O K	5760 min Summer	82.165	0.020	4.7	2.7	O K	7200 min Summer	82.162	0.017	4.0	2.3	O K	8640 min Summer	82.160	0.015	3.4	2.0	O K	10080 min Summer	82.158	0.013	3.0	1.8	O K	15 min Winter	82.600	0.455	13.1	60.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	104.874	0.0	22	30 min Summer	71.898	0.0	34	60 min Summer	47.182	0.0	58	120 min Summer	29.929	0.0	92	180 min Summer	22.583	0.0	126	240 min 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18-20 Harrington Street Liverpool L2 9QA	Grosvenor Road Soakaway 100yr + 30% CC				
Date 13/02/2018 09:04 File 27856 - Soakaway Volume...	Designed by SB Checked by				
Micro Drainage		Source Control 2017.1.2			
<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
30 min Winter	82.743	0.598	13.6	79.6	O K
60 min Winter	82.844	0.699	14.0	92.9	O K
120 min Winter	82.860	0.715	14.1	95.1	O K
180 min Winter	82.823	0.678	13.9	90.2	O K
240 min Winter	82.769	0.624	13.7	83.0	O K
360 min Winter	82.652	0.507	13.3	67.5	O K
480 min Winter	82.544	0.399	12.9	53.1	O K
600 min Winter	82.448	0.303	12.5	40.3	O K
720 min Winter	82.364	0.219	12.2	29.2	O K
960 min Winter	82.240	0.095	11.7	12.6	O K
1440 min Winter	82.187	0.042	9.7	5.6	O K
2160 min Winter	82.176	0.031	7.2	4.1	O K
2880 min Winter	82.170	0.025	5.7	3.3	O K
4320 min Winter	82.163	0.018	4.2	2.4	O K
5760 min Winter	82.160	0.015	3.4	1.9	O K
7200 min Winter	82.157	0.012	2.8	1.6	O K
8640 min Winter	82.156	0.011	2.5	1.4	O K
10080 min Winter	82.155	0.010	2.2	1.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	71.898	0.0	35		
60 min Winter	47.182	0.0	60		
120 min Winter	29.929	0.0	98		
180 min Winter	22.583	0.0	136		
240 min Winter	18.348	0.0	174		
360 min Winter	13.620	0.0	244		
480 min Winter	11.023	0.0	312		
600 min Winter	9.346	0.0	374		
720 min Winter	8.162	0.0	434		
960 min Winter	6.584	0.0	538		
1440 min Winter	4.852	0.0	736		
2160 min Winter	3.567	0.0	1096		
2880 min Winter	2.863	0.0	1472		
4320 min Winter	2.095	0.0	2148		
5760 min Winter	1.677	0.0	2928		
7200 min Winter	1.413	0.0	3552		
8640 min Winter	1.228	0.0	4400		
10080 min Winter	1.091	0.0	4896		
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Micro Drainage		Source Control 2017.1.2																		
<u>Model Details</u> Storage is Online Cover Level (m) 85.105 <u>Cellular Storage Structure</u> Invert Level (m) 82.145 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.58158 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.58158 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>140.0</td> <td>140.0</td> <td>0.900</td> <td>0.0</td> <td>178.4</td> </tr> <tr> <td>0.800</td> <td>140.0</td> <td>178.4</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	140.0	140.0	0.900	0.0	178.4	0.800	140.0	178.4			
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