

Mayer Brown Limited			Page 1		
Lion House Oriental Road Woking GU22 8AP		Berewood Development Western Network Pond 3A			
Date 22/01/2019 File Cascade Phase 3B and 8...		Designed by A May Checked by RHA			
Micro Drainage		Source Control 2017.1.2			
<u>Cascade Summary of Results for Source Control Phase 3A.SRCX</u>					
Upstream Structures		Outflow To	Overflow To		
Phase 8 Source Control Pond 8D.SRCX		Swale 3B-1.SRCX	(None)		
Phase 8 Source Control Pond 8C.SRCX					
Phase 8 Source Control Pond 8B.SRCX					
Phase 8 Source Control Pond 8A.SRCX					
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	47.928	0.428	2.6	287.1	O K
30 min Summer	48.017	0.517	2.6	361.3	O K
60 min Summer	48.118	0.618	2.6	453.9	O K
120 min Summer	48.234	0.734	2.6	568.1	O K
180 min Summer	48.307	0.807	2.6	645.7	O K
240 min Summer	48.361	0.861	2.6	705.7	O K
360 min Summer	48.439	0.939	2.6	797.1	O K
480 min Summer	48.495	0.995	2.6	866.2	O K
600 min Summer	48.539	1.039	2.6	921.8	O K
720 min Summer	48.574	1.074	2.6	968.1	O K
960 min Summer	48.588	1.088	2.6	986.9	O K
1440 min Summer	48.596	1.096	2.6	998.6	O K
2160 min Summer	48.586	1.086	2.6	984.5	O K
2880 min Summer	48.562	1.062	2.6	952.9	O K
4320 min Summer	48.547	1.047	2.6	932.5	O K
5760 min Summer	48.529	1.029	2.6	909.3	O K
7200 min Summer	48.511	1.011	2.6	886.0	O K
8640 min Summer	48.492	0.992	2.6	862.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
15 min Summer	134.198	0.0	222.0	23	
30 min Summer	84.742	0.0	221.8	38	
60 min Summer	53.513	0.0	422.3	68	
120 min Summer	33.792	0.0	404.7	128	
180 min Summer	25.824	0.0	388.5	188	
240 min Summer	21.339	0.0	381.2	248	
360 min Summer	16.307	0.0	382.9	368	
480 min Summer	13.475	0.0	394.9	488	
600 min Summer	11.621	0.0	403.9	606	
720 min Summer	10.298	0.0	410.6	726	
960 min Summer	8.098	0.0	412.5	966	
1440 min Summer	5.772	0.0	410.8	1446	
2160 min Summer	4.114	0.0	795.5	2164	
2880 min Summer	3.235	0.0	792.9	2804	
4320 min Summer	2.389	0.0	779.1	3504	
5760 min Summer	1.926	0.0	1555.7	4272	
7200 min Summer	1.630	0.0	1507.7	5048	
8640 min Summer	1.422	0.0	1439.9	5888	
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Lion House Oriental Road Woking GU22 8AP		Berewood Development Western Network Pond 3A			
Date 22/01/2019 File Cascade Phase 3B and 8...		Designed by A May Checked by RHA			
Micro Drainage		Source Control 2017.1.2			
<u>Cascade Summary of Results for Source Control Phase 3A.SRCX</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
10080 min Summer	48.473	0.973	2.6	838.8	O K
15 min Winter	47.970	0.470	2.6	321.7	O K
30 min Winter	48.066	0.566	2.6	405.1	O K
60 min Winter	48.176	0.676	2.6	509.3	O K
120 min Winter	48.299	0.799	2.6	637.7	O K
180 min Winter	48.378	0.878	2.6	725.5	O K
240 min Winter	48.436	0.936	2.6	793.6	O K
360 min Winter	48.520	1.020	2.6	897.9	O K
480 min Winter	48.580	1.080	2.6	977.3	O K
600 min Winter	48.665	1.165	2.7	1096.0	O K
720 min Winter	48.772	1.272	2.8	1261.6	Flood Risk
960 min Winter	48.776	1.276	2.8	1266.8	Flood Risk
1440 min Winter	48.732	1.232	2.7	1198.0	Flood Risk
2160 min Winter	48.693	1.193	2.7	1137.7	O K
2880 min Winter	48.676	1.176	2.7	1113.3	O K
4320 min Winter	48.661	1.161	2.7	1091.2	O K
5760 min Winter	48.639	1.139	2.6	1059.5	O K
7200 min Winter	48.616	1.116	2.6	1026.8	O K
8640 min Winter	48.591	1.091	2.6	991.3	O K
10080 min Winter	48.563	1.063	2.6	954.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
10080 min Summer	1.267	0.0	1379.4	6760	
15 min Winter	134.198	0.0	223.8	23	
30 min Winter	84.742	0.0	217.3	38	
60 min Winter	53.513	0.0	420.0	68	
120 min Winter	33.792	0.0	391.7	126	
180 min Winter	25.824	0.0	381.6	186	
240 min Winter	21.339	0.0	382.5	246	
360 min Winter	16.307	0.0	399.0	364	
480 min Winter	13.475	0.0	411.1	482	
600 min Winter	11.621	0.0	426.9	652	
720 min Winter	10.298	0.0	443.1	772	
960 min Winter	8.098	0.0	439.9	982	
1440 min Winter	5.772	0.0	427.0	1428	
2160 min Winter	4.114	0.0	829.4	2100	
2880 min Winter	3.235	0.0	825.0	2768	
4320 min Winter	2.389	0.0	809.6	3984	
5760 min Winter	1.926	0.0	1596.2	4504	
7200 min Winter	1.630	0.0	1547.7	5472	
8640 min Winter	1.422	0.0	1507.0	6392	
10080 min Winter	1.267	0.0	1470.9	7272	
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Lion House Oriental Road Woking GU22 8AP		Berewood Development Western Network Pond 3B-1					
Date 22/01/2019 File Cascade Phase 3B and 8...		Designed by A May Checked by RHA					
Micro Drainage		Source Control 2017.1.2					
<u>Cascade Summary of Results for Swale 3B-1.SRCX</u>							
Upstream Structures		Outflow To		Overflow To			
Phase 8 Source Control Pond 8A.SRCX Swale 3B-2.SRCX Swale 3B-2.SRCX							
Phase 8 Source Control Pond 8B.SRCX							
Phase 8 Source Control Pond 8C.SRCX							
Phase 8 Source Control Pond 8D.SRCX							
Source Control Phase 3A.SRCX							
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	45.103	0.970	20.0	0.0	20.0	30.3	O K
30 min Summer	45.197	1.064	21.0	0.0	21.0	37.9	Flood Risk
60 min Summer	45.292	1.159	22.0	0.0	22.0	46.4	Flood Risk
120 min Summer	45.341	1.208	22.5	4.2	26.6	51.1	Flood Risk
180 min Summer	45.346	1.213	22.5	8.8	31.3	51.6	Flood Risk
240 min Summer	45.347	1.214	22.5	9.9	32.4	51.6	Flood Risk
360 min Summer	45.346	1.213	22.5	8.8	31.3	51.5	Flood Risk
480 min Summer	45.345	1.212	22.5	7.8	30.3	51.4	Flood Risk
600 min Summer	45.344	1.211	22.5	6.8	29.3	51.3	Flood Risk
720 min Summer	45.343	1.210	22.5	6.4	28.8	51.3	Flood Risk
960 min Summer	45.341	1.208	22.5	4.2	26.6	51.0	Flood Risk
1440 min Summer	45.338	1.205	22.4	2.0	24.4	50.7	Flood Risk
2160 min Summer	45.334	1.201	22.4	0.3	22.7	50.4	Flood Risk
2880 min Summer	45.290	1.157	22.0	0.0	22.0	46.2	Flood Risk
4320 min Summer	45.235	1.102	21.4	0.0	21.4	41.2	Flood Risk
5760 min Summer	45.183	1.050	20.9	0.0	20.9	36.7	Flood Risk
7200 min Summer	45.131	0.998	20.3	0.0	20.3	32.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Summer	134.198	0.0	1127.9	0.0	22		
30 min Summer	84.742	0.0	1301.1	0.0	37		
60 min Summer	53.513	0.0	2011.4	0.0	66		
120 min Summer	33.792	0.0	2299.8	4.7	86		
180 min Summer	25.824	0.0	2492.3	11.0	112		
240 min Summer	21.339	0.0	2648.4	15.9	140		
360 min Summer	16.307	0.0	2902.6	23.5	200		
480 min Summer	13.475	0.0	3110.1	29.6	260		
600 min Summer	11.621	0.0	3278.9	35.0	320		
720 min Summer	10.298	0.0	3402.0	40.0	382		
960 min Summer	8.098	0.0	3460.4	35.2	516		
1440 min Summer	5.772	0.0	3419.1	18.7	824		
2160 min Summer	4.114	0.0	4977.5	1.2	1344		
2880 min Summer	3.235	0.0	5100.0	0.0	1848		
4320 min Summer	2.389	0.0	5333.2	0.0	2728		
5760 min Summer	1.926	0.0	7049.4	0.0	3568		
7200 min Summer	1.630	0.0	7317.8	0.0	4392		
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Woking GU22 8AP

Date 22/01/2019

File Cascade Phase 3B and 8...

Berewood Development

Western Network

Pond 3B-1

Designed by A May

Checked by RHA

Micro Drainage

Source Control 2017.1.2

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Cascade Summary of Results for Swale 3B-1.SRCX

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
8640 min Summer	45.099	0.966	20.0	0.0	20.0	30.1	O K
10080 min Summer	45.100	0.967	20.0	0.0	20.0	30.1	O K
15 min Winter	45.148	1.015	20.5	0.0	20.5	33.9	Flood Risk
30 min Winter	45.247	1.114	21.5	0.0	21.5	42.3	Flood Risk
60 min Winter	45.339	1.206	22.4	3.0	25.5	50.9	Flood Risk
120 min Winter	45.348	1.215	22.5	11.0	33.5	51.7	Flood Risk
180 min Winter	45.348	1.215	22.5	11.6	34.1	51.8	Flood Risk
240 min Winter	45.347	1.214	22.5	10.4	33.0	51.7	Flood Risk
360 min Winter	45.345	1.212	22.5	8.3	30.8	51.5	Flood Risk
480 min Winter	45.344	1.211	22.5	6.8	29.3	51.3	Flood Risk
600 min Winter	45.343	1.210	22.5	5.9	28.4	51.2	Flood Risk
720 min Winter	45.342	1.209	22.5	5.5	27.9	51.2	Flood Risk
960 min Winter	45.340	1.207	22.5	3.8	26.2	51.0	Flood Risk
1440 min Winter	45.338	1.205	22.4	2.3	24.8	50.8	Flood Risk
2160 min Winter	45.337	1.204	22.4	1.4	23.8	50.6	Flood Risk
2880 min Winter	45.335	1.202	22.4	0.7	23.1	50.5	Flood Risk
4320 min Winter	45.294	1.161	22.0	0.0	22.0	46.6	Flood Risk
5760 min Winter	45.219	1.086	21.2	0.0	21.2	39.8	Flood Risk
7200 min Winter	45.142	1.009	20.4	0.0	20.4	33.4	Flood Risk
8640 min Winter	45.096	0.963	19.9	0.0	19.9	29.8	O K
10080 min Winter	45.093	0.960	19.9	0.0	19.9	29.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
8640 min Summer	1.422	0.0	7522.5	0.0	4200
10080 min Summer	1.267	0.0	7638.6	0.0	4968
15 min Winter	134.198	0.0	1207.3	0.0	22
30 min Winter	84.742	0.0	1397.0	0.0	36
60 min Winter	53.513	0.0	2163.7	1.0	62
120 min Winter	33.792	0.0	2459.6	12.5	82
180 min Winter	25.824	0.0	2680.1	20.4	112
240 min Winter	21.339	0.0	2860.8	26.7	144
360 min Winter	16.307	0.0	3154.8	37.1	202
480 min Winter	13.475	0.0	3361.8	47.2	274
600 min Winter	11.621	0.0	3503.8	57.8	328
720 min Winter	10.298	0.0	3560.2	66.8	398
960 min Winter	8.098	0.0	3571.4	66.4	552
1440 min Winter	5.772	0.0	3565.6	59.0	870
2160 min Winter	4.114	0.0	5452.6	35.5	1316
2880 min Winter	3.235	0.0	5527.0	8.0	1860
4320 min Winter	2.389	0.0	5793.5	0.0	2984
5760 min Winter	1.926	0.0	7748.2	0.0	3856
7200 min Winter	1.630	0.0	8056.0	0.0	4688
8640 min Winter	1.422	0.0	8313.7	0.0	4096
10080 min Winter	1.267	0.0	8355.5	0.0	4896

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Lion House Oriental Road Woking GU22 8AP																																																																																																																																																		
Date 22/01/2019 18:26 File Cascade Phase 3B and 8...	Designed by rakerman Checked by																																																																																																																																																	
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<table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Control (l/s)</th><th>Max Overflow (l/s)</th><th>Max Outflow (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>44.387</td><td>0.973</td><td>20.1</td><td>0.0</td><td>20.1</td><td>30.6</td><td>O K</td></tr><tr><td>30 min Summer</td><td>44.489</td><td>1.075</td><td>21.1</td><td>0.0</td><td>21.1</td><td>38.8</td><td>Flood Risk</td></tr><tr><td>60 min Summer</td><td>44.604</td><td>1.190</td><td>22.3</td><td>0.0</td><td>22.3</td><td>49.4</td><td>Flood Risk</td></tr><tr><td>120 min Summer</td><td>44.629</td><td>1.215</td><td>22.5</td><td>11.6</td><td>34.1</td><td>51.8</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>44.637</td><td>1.223</td><td>22.6</td><td>21.0</td><td>43.7</td><td>52.5</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>44.637</td><td>1.223</td><td>22.6</td><td>21.7</td><td>44.4</td><td>52.6</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>44.637</td><td>1.223</td><td>22.6</td><td>21.0</td><td>43.7</td><td>52.5</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>44.635</td><td>1.221</td><td>22.6</td><td>18.3</td><td>40.9</td><td>52.4</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>44.633</td><td>1.219</td><td>22.6</td><td>16.4</td><td>39.0</td><td>52.2</td><td>Flood Risk</td></tr><tr><td>720 min Summer</td><td>44.632</td><td>1.218</td><td>22.6</td><td>15.1</td><td>37.7</td><td>52.0</td><td>Flood Risk</td></tr><tr><td>960 min Summer</td><td>44.628</td><td>1.214</td><td>22.5</td><td>10.4</td><td>33.0</td><td>51.7</td><td>Flood Risk</td></tr><tr><td>1440 min Summer</td><td>44.623</td><td>1.209</td><td>22.5</td><td>5.5</td><td>27.9</td><td>51.2</td><td>Flood Risk</td></tr><tr><td>2160 min Summer</td><td>44.620</td><td>1.206</td><td>22.4</td><td>2.7</td><td>25.1</td><td>50.8</td><td>Flood Risk</td></tr><tr><td>2880 min Summer</td><td>44.617</td><td>1.203</td><td>22.4</td><td>1.1</td><td>23.6</td><td>50.6</td><td>Flood Risk</td></tr><tr><td>4320 min Summer</td><td>44.602</td><td>1.188</td><td>22.3</td><td>0.0</td><td>22.3</td><td>49.1</td><td>Flood Risk</td></tr><tr><td>5760 min Summer</td><td>44.535</td><td>1.121</td><td>21.6</td><td>0.0</td><td>21.6</td><td>42.8</td><td>Flood Risk</td></tr><tr><td>7200 min Summer</td><td>44.490</td><td>1.076</td><td>21.1</td><td>0.0</td><td>21.1</td><td>38.9</td><td>Flood Risk</td></tr></table>			Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status	15 min Summer	44.387	0.973	20.1	0.0	20.1	30.6	O K	30 min Summer	44.489	1.075	21.1	0.0	21.1	38.8	Flood Risk	60 min Summer	44.604	1.190	22.3	0.0	22.3	49.4	Flood Risk	120 min Summer	44.629	1.215	22.5	11.6	34.1	51.8	Flood Risk	180 min Summer	44.637	1.223	22.6	21.0	43.7	52.5	Flood Risk	240 min Summer	44.637	1.223	22.6	21.7	44.4	52.6	Flood Risk	360 min Summer	44.637	1.223	22.6	21.0	43.7	52.5	Flood Risk	480 min Summer	44.635	1.221	22.6	18.3	40.9	52.4	Flood Risk	600 min Summer	44.633	1.219	22.6	16.4	39.0	52.2	Flood Risk	720 min Summer	44.632	1.218	22.6	15.1	37.7	52.0	Flood Risk	960 min Summer	44.628	1.214	22.5	10.4	33.0	51.7	Flood Risk	1440 min Summer	44.623	1.209	22.5	5.5	27.9	51.2	Flood Risk	2160 min Summer	44.620	1.206	22.4	2.7	25.1	50.8	Flood Risk	2880 min Summer	44.617	1.203	22.4	1.1	23.6	50.6	Flood Risk	4320 min Summer	44.602	1.188	22.3	0.0	22.3	49.1	Flood Risk	5760 min Summer	44.535	1.121	21.6	0.0	21.6	42.8	Flood Risk	7200 min Summer	44.490	1.076	21.1	0.0	21.1	38.9	Flood Risk
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5760 min Summer	44.535	1.121	21.6	0.0	21.6	42.8	Flood Risk																																																																																																																																											
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<table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Discharge Volume (m³)</th><th>Overflow Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>134.198</td><td>0.0</td><td>1158.1</td><td>0.0</td><td>23</td></tr><tr><td>30 min Summer</td><td>84.742</td><td>0.0</td><td>1339.3</td><td>0.0</td><td>38</td></tr><tr><td>60 min Summer</td><td>53.513</td><td>0.0</td><td>2060.0</td><td>0.0</td><td>68</td></tr><tr><td>120 min Summer</td><td>33.792</td><td>0.0</td><td>2360.9</td><td>17.8</td><td>86</td></tr><tr><td>180 min Summer</td><td>25.824</td><td>0.0</td><td>2562.4</td><td>34.1</td><td>112</td></tr><tr><td>240 min Summer</td><td>21.339</td><td>0.0</td><td>2725.6</td><td>46.9</td><td>142</td></tr><tr><td>360 min Summer</td><td>16.307</td><td>0.0</td><td>2991.1</td><td>66.6</td><td>200</td></tr><tr><td>480 min Summer</td><td>13.475</td><td>0.0</td><td>3207.6</td><td>81.7</td><td>260</td></tr><tr><td>600 min Summer</td><td>11.621</td><td>0.0</td><td>3383.9</td><td>94.0</td><td>320</td></tr><tr><td>720 min Summer</td><td>10.298</td><td>0.0</td><td>3512.1</td><td>104.5</td><td>380</td></tr><tr><td>960 min Summer</td><td>8.098</td><td>0.0</td><td>3562.1</td><td>101.9</td><td>514</td></tr><tr><td>1440 min Summer</td><td>5.772</td><td>0.0</td><td>3523.5</td><td>84.2</td><td>800</td></tr><tr><td>2160 min Summer</td><td>4.114</td><td>0.0</td><td>5111.6</td><td>48.2</td><td>1120</td></tr><tr><td>2880 min Summer</td><td>3.235</td><td>0.0</td><td>5240.7</td><td>20.3</td><td>1504</td></tr><tr><td>4320 min Summer</td><td>2.389</td><td>0.0</td><td>5488.9</td><td>0.0</td><td>2640</td></tr><tr><td>5760 min Summer</td><td>1.926</td><td>0.0</td><td>7217.2</td><td>0.0</td><td>3464</td></tr><tr><td>7200 min Summer</td><td>1.630</td><td>0.0</td><td>7495.2</td><td>0.0</td><td>3584</td></tr></table>			Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)	15 min Summer	134.198	0.0	1158.1	0.0	23	30 min Summer	84.742	0.0	1339.3	0.0	38	60 min Summer	53.513	0.0	2060.0	0.0	68	120 min Summer	33.792	0.0	2360.9	17.8	86	180 min Summer	25.824	0.0	2562.4	34.1	112	240 min Summer	21.339	0.0	2725.6	46.9	142	360 min Summer	16.307	0.0	2991.1	66.6	200	480 min Summer	13.475	0.0	3207.6	81.7	260	600 min Summer	11.621	0.0	3383.9	94.0	320	720 min Summer	10.298	0.0	3512.1	104.5	380	960 min Summer	8.098	0.0	3562.1	101.9	514	1440 min Summer	5.772	0.0	3523.5	84.2	800	2160 min Summer	4.114	0.0	5111.6	48.2	1120	2880 min Summer	3.235	0.0	5240.7	20.3	1504	4320 min Summer	2.389	0.0	5488.9	0.0	2640	5760 min Summer	1.926	0.0	7217.2	0.0	3464	7200 min Summer	1.630	0.0	7495.2	0.0	3584																																				
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)																																																																																																																																													
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180 min Summer	25.824	0.0	2562.4	34.1	112																																																																																																																																													
240 min Summer	21.339	0.0	2725.6	46.9	142																																																																																																																																													
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2880 min Summer	3.235	0.0	5240.7	20.3	1504																																																																																																																																													
4320 min Summer	2.389	0.0	5488.9	0.0	2640																																																																																																																																													
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Lion House Oriental Road Woking GU22 8AP								
Date 22/01/2019 18:26 File Cascade Phase 3B and 8...				Designed by rakerman Checked by				
Micro Drainage				Source Control 2017.1.2				
Cascade Summary of Results for Swale 3B-2.SRCX								
Storm Event		Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
8640 min Summer		44.484	1.070	21.1	0.0	21.1	38.4	Flood Risk
10080 min Summer		44.478	1.064	21.0	0.0	21.0	37.9	Flood Risk
15 min Winter		44.433	1.019	20.5	0.0	20.5	34.2	Flood Risk
30 min Winter		44.540	1.126	21.7	0.0	21.7	43.3	Flood Risk
60 min Winter		44.626	1.212	22.5	8.3	30.8	51.5	Flood Risk
120 min Winter		44.639	1.225	22.6	23.9	46.5	52.7	Flood Risk
180 min Winter		44.640	1.226	22.6	25.3	48.0	52.9	Flood Risk
240 min Winter		44.638	1.224	22.6	23.2	45.8	52.7	Flood Risk
360 min Winter		44.635	1.221	22.6	19.0	41.6	52.4	Flood Risk
480 min Winter		44.633	1.219	22.6	15.7	38.3	52.1	Flood Risk
600 min Winter		44.631	1.217	22.6	13.9	36.4	52.0	Flood Risk
720 min Winter		44.630	1.216	22.5	12.1	34.7	51.9	Flood Risk
960 min Winter		44.627	1.213	22.5	9.4	31.9	51.6	Flood Risk
1440 min Winter		44.624	1.210	22.5	5.9	28.4	51.2	Flood Risk
2160 min Winter		44.621	1.207	22.4	3.4	25.9	51.0	Flood Risk
2880 min Winter		44.619	1.205	22.4	2.0	24.4	50.7	Flood Risk
4320 min Winter		44.616	1.202	22.4	0.4	22.9	50.5	Flood Risk
5760 min Winter		44.566	1.152	21.9	0.0	21.9	45.7	Flood Risk
7200 min Winter		44.482	1.068	21.1	0.0	21.1	38.2	Flood Risk
8640 min Winter		44.460	1.046	20.8	0.0	20.8	36.4	Flood Risk
10080 min Winter		44.451	1.037	20.7	0.0	20.7	35.6	Flood Risk
Storm Event		Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)		
8640 min Summer		1.422	0.0	7708.3	0.0	4320		
10080 min Summer		1.267	0.0	7831.5	0.0	5072		
15 min Winter		134.198	0.0	1241.1	0.0	23		
30 min Winter		84.742	0.0	1439.8	0.0	38		
60 min Winter		53.513	0.0	2217.8	5.7	62		
120 min Winter		33.792	0.0	2528.1	32.5	84		
180 min Winter		25.824	0.0	2758.6	51.3	112		
240 min Winter		21.339	0.0	2947.3	66.2	142		
360 min Winter		16.307	0.0	3254.0	89.8	200		
480 min Winter		13.475	0.0	3470.4	109.8	260		
600 min Winter		11.621	0.0	3614.2	128.1	330		
720 min Winter		10.298	0.0	3666.9	143.2	382		
960 min Winter		8.098	0.0	3681.5	144.9	528		
1440 min Winter		5.772	0.0	3681.8	134.9	824		
2160 min Winter		4.114	0.0	5602.9	100.3	1296		
2880 min Winter		3.235	0.0	5684.5	54.3	1844		
4320 min Winter		2.389	0.0	5967.9	9.6	2744		
5760 min Winter		1.926	0.0	7936.1	0.0	3808		
7200 min Winter		1.630	0.0	8254.7	0.0	4680		
8640 min Winter		1.422	0.0	8521.5	0.0	4224		
10080 min Winter		1.267	0.0	8571.6	0.0	5088		
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Lion House Oriental Road Woking GU22 8AP		Berewood Development Wetsern Network Pond 3B-3			
Date 22/01/2019 File Cascade Phase 3B and 8...		Designed by A May Checked by RHA			
Micro Drainage		Source Control 2017.1.2			
<u>Cascade Summary of Results for Swale 3B-3.SRCX</u>					
Upstream Structures		Outflow To Overflow To			
Swale 3B-2.SRCX		(None)		(None)	
Swale 3B-1.SRCX					
Phase 8 Source Control Pond 8A.SRCX					
Phase 8 Source Control Pond 8B.SRCX					
Phase 8 Source Control Pond 8C.SRCX					
Phase 8 Source Control Pond 8D.SRCX					
Source Control Phase 3A.SRCX					
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	43.296	0.820	30.0	20.3	O K
30 min Summer	43.323	0.847	30.0	22.1	O K
60 min Summer	43.338	0.862	30.0	23.2	O K
120 min Summer	43.560	1.084	30.0	42.2	O K
180 min Summer	43.670	1.194	30.0	53.9	O K
240 min Summer	43.722	1.246	30.0	60.0	Flood Risk
360 min Summer	43.790	1.314	30.0	68.4	Flood Risk
480 min Summer	43.827	1.351	30.0	73.3	Flood Risk
600 min Summer	43.846	1.370	30.0	75.8	Flood Risk
720 min Summer	43.852	1.376	30.0	76.7	Flood Risk
960 min Summer	43.763	1.287	30.0	65.0	Flood Risk
1440 min Summer	43.274	0.798	30.0	18.9	O K
2160 min Summer	42.760	0.284	28.8	1.4	O K
2880 min Summer	42.701	0.225	26.3	0.8	O K
4320 min Summer	42.683	0.207	24.0	0.7	O K
5760 min Summer	42.677	0.201	23.2	0.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
15 min Summer	134.198	0.0	1188.5	20	
30 min Summer	84.742	0.0	1377.7	34	
60 min Summer	53.513	0.0	2108.5	54	
120 min Summer	33.792	0.0	2422.2	126	
180 min Summer	25.824	0.0	2632.6	184	
240 min Summer	21.339	0.0	2803.0	212	
360 min Summer	16.307	0.0	3079.8	270	
480 min Summer	13.475	0.0	3305.4	340	
600 min Summer	11.621	0.0	3489.3	412	
720 min Summer	10.298	0.0	3624.1	482	
960 min Summer	8.098	0.0	3679.3	624	
1440 min Summer	5.772	0.0	3648.8	870	
2160 min Summer	4.114	0.0	5246.0	1108	
2880 min Summer	3.235	0.0	5381.6	1500	
4320 min Summer	2.389	0.0	5644.9	2204	
5760 min Summer	1.926	0.0	7385.0	2848	
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Lion House Oriental Road Woking GU22 8AP		Berewood Development Wetsern Network Pond 3B-3			
Date 22/01/2019 File Cascade Phase 3B and 8...		Designed by A May Checked by RHA			
Micro Drainage		Source Control 2017.1.2			
<u>Cascade Summary of Results for Swale 3B-3.SRCX</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
7200 min Summer	42.674	0.198	22.8	0.6	O K
8640 min Summer	42.672	0.196	22.5	0.6	O K
10080 min Summer	42.671	0.195	22.3	0.6	O K
15 min Winter	43.351	0.875	30.0	24.1	O K
30 min Winter	43.390	0.914	30.0	27.0	O K
60 min Winter	43.477	1.001	30.0	34.3	O K
120 min Winter	43.720	1.244	30.0	59.7	Flood Risk
180 min Winter	43.813	1.337	30.0	71.4	Flood Risk
240 min Winter	43.861	1.385	30.0	77.8	Flood Risk
360 min Winter	43.916	1.440	30.0	85.7	Flood Risk
480 min Winter	43.947	1.471	30.0	90.2	Flood Risk
600 min Winter	43.958	1.482	30.0	91.8	Flood Risk
720 min Winter	43.956	1.480	30.0	91.5	Flood Risk
960 min Winter	43.843	1.367	30.0	75.4	Flood Risk
1440 min Winter	43.115	0.639	30.0	10.6	O K
2160 min Winter	42.717	0.241	28.0	0.9	O K
2880 min Winter	42.697	0.221	25.8	0.8	O K
4320 min Winter	42.683	0.207	24.0	0.7	O K
5760 min Winter	42.674	0.198	22.8	0.6	O K
7200 min Winter	42.669	0.193	22.1	0.6	O K
8640 min Winter	42.668	0.192	21.9	0.5	O K
10080 min Winter	42.667	0.191	21.8	0.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
7200 min Summer	1.630	0.0	7672.7	3616	
8640 min Summer	1.422	0.0	7894.1	4328	
10080 min Summer	1.267	0.0	8024.6	5040	
15 min Winter	134.198	0.0	1275.2	21	
30 min Winter	84.742	0.0	1482.8	35	
60 min Winter	53.513	0.0	2272.1	68	
120 min Winter	33.792	0.0	2596.7	124	
180 min Winter	25.824	0.0	2837.3	180	
240 min Winter	21.339	0.0	3034.0	232	
360 min Winter	16.307	0.0	3353.4	288	
480 min Winter	13.475	0.0	3579.8	366	
600 min Winter	11.621	0.0	3732.0	446	
720 min Winter	10.298	0.0	3792.1	524	
960 min Winter	8.098	0.0	3812.8	684	
1440 min Winter	5.772	0.0	3822.2	916	
2160 min Winter	4.114	0.0	5753.4	1300	
2880 min Winter	3.235	0.0	5842.3	1848	
4320 min Winter	2.389	0.0	6142.6	2676	
5760 min Winter	1.926	0.0	8124.0	3760	
7200 min Winter	1.630	0.0	8453.5	3424	
8640 min Winter	1.422	0.0	8729.6	4264	
10080 min Winter	1.267	0.0	8788.0	4888	
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Lion House Oriental Road Woking GU22 8AP			Berewood Development Western Network Pond 8A				
Date 22/01/2019 File Cascade Phase 3B and 8...			Designed by A May Checked by RHA				
Micro Drainage			Source Control 2017.1.2				
<u>Cascade Summary of Results for Phase 8 Source Control Pond 8A.SRCX</u>							
Upstream Structures		Outflow To		Overflow To			
(None) Swale 3B-1.SRCX Phase 8 Source Control Pond 8B.SRCX							
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	53.302	0.902	4.3	0.0	4.3	197.4	O K
30 min Summer	53.450	1.050	4.3	0.0	4.3	247.0	O K
60 min Summer	53.610	1.210	4.3	0.0	4.3	306.9	O K
120 min Summer	53.779	1.379	4.3	0.0	4.3	376.9	O K
180 min Summer	53.878	1.478	4.4	0.0	4.4	421.6	O K
240 min Summer	53.946	1.546	4.5	0.0	4.5	453.9	O K
360 min Summer	54.035	1.635	4.7	0.0	4.7	498.6	O K
480 min Summer	54.089	1.689	4.7	0.0	4.7	527.9	Flood Risk
600 min Summer	54.125	1.725	4.8	0.0	4.8	547.7	Flood Risk
720 min Summer	54.149	1.749	4.8	0.0	4.8	561.4	Flood Risk
960 min Summer	54.113	1.713	4.8	0.0	4.8	540.9	Flood Risk
1440 min Summer	54.045	1.645	4.7	0.0	4.7	504.0	O K
2160 min Summer	53.960	1.560	4.6	0.0	4.6	460.9	O K
2880 min Summer	53.887	1.487	4.5	0.0	4.5	425.5	O K
4320 min Summer	53.799	1.399	4.3	0.0	4.3	385.6	O K
5760 min Summer	53.708	1.308	4.3	0.0	4.3	346.4	O K
7200 min Summer	53.616	1.216	4.3	0.0	4.3	309.0	O K
8640 min Summer	53.524	1.124	4.3	0.0	4.3	274.0	O K
10080 min Summer	53.432	1.032	4.3	0.0	4.3	240.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Summer	134.198	0.0	200.0	0.0	23		
30 min Summer	84.742	0.0	252.3	0.0	38		
60 min Summer	53.513	0.0	320.0	0.0	68		
120 min Summer	33.792	0.0	404.1	0.0	128		
180 min Summer	25.824	0.0	463.2	0.0	186		
240 min Summer	21.339	0.0	510.2	0.0	246		
360 min Summer	16.307	0.0	584.6	0.0	366		
480 min Summer	13.475	0.0	643.5	0.0	486		
600 min Summer	11.621	0.0	691.2	0.0	604		
720 min Summer	10.298	0.0	713.8	0.0	724		
960 min Summer	8.098	0.0	708.7	0.0	900		
1440 min Summer	5.772	0.0	690.6	0.0	1128		
2160 min Summer	4.114	0.0	886.1	0.0	1516		
2880 min Summer	3.235	0.0	929.1	0.0	1932		
4320 min Summer	2.389	0.0	1028.5	0.0	2768		
5760 min Summer	1.926	0.0	1106.6	0.0	3576		
7200 min Summer	1.630	0.0	1170.5	0.0	4392		
8640 min Summer	1.422	0.0	1225.4	0.0	5184		
10080 min Summer	1.267	0.0	1273.8	0.0	5952		
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Lion House Oriental Road Woking GU22 8AP			Berewood Development Western Network Pond 8A																																																																																																																																																																				
Date 22/01/2019 File Cascade Phase 3B and 8...			Designed by A May Checked by RHA																																																																																																																																																																				
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Mayer Brown Limited					Page 1		
Lion House Oriental Road Woking GU22 8AP			Berewood Development Western Network Pond 8B				
Date 22/01/2019 File Cascade Phase 3B and 8...			Designed by A May Checked by RHA				
Micro Drainage			Source Control 2017.1.2				
<u>Cascade Summary of Results for Phase 8 Source Control Pond 8B.SRCX</u>							
Upstream Structures		Outflow To		Overflow To			
Phase 8 Source Control Pond 8A.SRCX Swale 3B-1.SRCX Phase 8 Source Control Pond 8C.SRCX							
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Outflow (l/s)	Max Volume (m³) Status	
15 min Summer	52.087	1.087	4.1	0.0	4.1	178.6 O K	
30 min Summer	52.234	1.234	4.1	0.0	4.1	223.1 O K	
60 min Summer	52.391	1.391	4.2	0.0	4.2	276.5 O K	
120 min Summer	52.551	1.551	4.4	0.0	4.4	338.4 O K	
180 min Summer	52.641	1.641	4.6	0.0	4.6	377.2 O K	
240 min Summer	52.701	1.701	4.6	0.0	4.6	405.0 O K	
360 min Summer	52.777	1.777	4.7	0.0	4.7	442.4 Flood Risk	
480 min Summer	52.822	1.822	4.8	0.0	4.8	465.8 Flood Risk	
600 min Summer	52.850	1.850	4.8	0.0	4.8	480.8 Flood Risk	
720 min Summer	52.867	1.867	4.8	0.0	4.8	490.2 Flood Risk	
960 min Summer	52.827	1.827	4.8	0.0	4.8	468.6 Flood Risk	
1440 min Summer	52.758	1.758	4.7	0.0	4.7	432.8 Flood Risk	
2160 min Summer	52.675	1.675	4.6	0.0	4.6	392.8 O K	
2880 min Summer	52.601	1.601	4.5	0.0	4.5	359.3 O K	
4320 min Summer	52.505	1.505	4.4	0.0	4.4	319.7 O K	
5760 min Summer	52.405	1.405	4.2	0.0	4.2	281.6 O K	
7200 min Summer	52.304	1.304	4.1	0.0	4.1	246.0 O K	
8640 min Summer	52.204	1.204	4.1	0.0	4.1	213.5 O K	
10080 min Summer	52.106	1.106	4.1	0.0	4.1	183.8 O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Summer	134.198	0.0	182.0	0.0	23		
30 min Summer	84.742	0.0	229.8	0.0	38		
60 min Summer	53.513	0.0	290.5	0.0	68		
120 min Summer	33.792	0.0	366.9	0.0	126		
180 min Summer	25.824	0.0	420.6	0.0	186		
240 min Summer	21.339	0.0	463.4	0.0	246		
360 min Summer	16.307	0.0	531.1	0.0	366		
480 min Summer	13.475	0.0	585.1	0.0	486		
600 min Summer	11.621	0.0	630.7	0.0	604		
720 min Summer	10.298	0.0	670.3	0.0	724		
960 min Summer	8.098	0.0	700.9	0.0	834		
1440 min Summer	5.772	0.0	690.4	0.0	1074		
2160 min Summer	4.114	0.0	804.1	0.0	1476		
2880 min Summer	3.235	0.0	843.2	0.0	1880		
4320 min Summer	2.389	0.0	933.7	0.0	2724		
5760 min Summer	1.926	0.0	1004.0	0.0	3512		
7200 min Summer	1.630	0.0	1062.0	0.0	4320		
8640 min Summer	1.422	0.0	1111.9	0.0	5096		
10080 min Summer	1.267	0.0	1155.9	0.0	5848		
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Woking GU22 8AP

Date 22/01/2019
File Cascade Phase 3B and 8...

Micro Drainage

Berewood Development
Western Network
Pond 8B

Designed by A May
Checked by RHA

Source Control 2017.1.2

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Cascade Summary of Results for Phase 8 Source Control Pond 8B.SRCX

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
15 min Winter	52.162	1.162	4.1	0.0	4.1	200.4	O K
30 min Winter	52.318	1.318	4.1	0.0	4.1	250.7	O K
60 min Winter	52.484	1.484	4.3	0.0	4.3	311.5	O K
120 min Winter	52.653	1.653	4.6	0.0	4.6	382.8	O K
180 min Winter	52.749	1.749	4.7	0.0	4.7	428.4	O K
240 min Winter	52.814	1.814	4.8	0.0	4.8	461.4	Flood Risk
360 min Winter	52.898	1.898	4.9	0.0	4.9	507.4	Flood Risk
480 min Winter	52.921	1.921	4.9	4.6	9.5	520.5	Flood Risk
600 min Winter	52.925	1.925	4.9	6.0	10.9	522.9	Flood Risk
720 min Winter	52.930	1.930	4.9	8.1	13.0	526.0	Flood Risk
960 min Winter	52.923	1.923	4.9	5.3	10.2	521.7	Flood Risk
1440 min Winter	52.900	1.900	4.9	0.0	4.9	508.9	Flood Risk
2160 min Winter	52.801	1.801	4.8	0.0	4.8	455.0	Flood Risk
2880 min Winter	52.707	1.707	4.6	0.0	4.6	407.7	O K
4320 min Winter	52.567	1.567	4.5	0.0	4.5	345.0	O K
5760 min Winter	52.418	1.418	4.3	0.0	4.3	286.5	O K
7200 min Winter	52.266	1.266	4.1	0.0	4.1	233.4	O K
8640 min Winter	52.109	1.109	4.1	0.0	4.1	184.8	O K
10080 min Winter	51.929	0.929	4.1	0.0	4.1	136.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
15 min Winter	134.198	0.0	203.8	0.0	23
30 min Winter	84.742	0.0	257.3	0.0	37
60 min Winter	53.513	0.0	325.4	0.0	66
120 min Winter	33.792	0.0	410.9	0.0	126
180 min Winter	25.824	0.0	471.0	0.0	184
240 min Winter	21.339	0.0	518.9	0.0	242
360 min Winter	16.307	0.0	594.8	0.0	358
480 min Winter	13.475	0.0	655.2	22.1	450
600 min Winter	11.621	0.0	711.9	48.1	468
720 min Winter	10.298	0.0	775.0	81.5	530
960 min Winter	8.098	0.0	768.0	50.8	706
1440 min Winter	5.772	0.0	718.2	0.0	1144
2160 min Winter	4.114	0.0	900.6	0.0	1604
2880 min Winter	3.235	0.0	944.3	0.0	2052
4320 min Winter	2.389	0.0	1045.7	0.0	2940
5760 min Winter	1.926	0.0	1124.5	0.0	3752
7200 min Winter	1.630	0.0	1189.5	0.0	4608
8640 min Winter	1.422	0.0	1245.3	0.0	5368
10080 min Winter	1.267	0.0	1294.6	0.0	6256

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Date 22/01/2019 18:38 File Cascade Phase 3B and 8...		Designed by rakerman Checked by					
Micro Drainage		Source Control 2017.1.2					
<u>Cascade Summary of Results for Phase 8 Source Control Pond 8C.SRCX</u>							
Upstream Structures		Outflow To		Overflow To			
Phase 8 Source Control Pond 8B.SRCX		Swale 3B-1.SRCX		Phase 8 Source Control Pond 8D.SRCX			
Phase 8 Source Control Pond 8A.SRCX							
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	50.812	0.812	4.1	0.0	4.1	403.5	O K
30 min Summer	50.973	0.973	4.3	0.0	4.3	507.0	O K
60 min Summer	51.156	1.156	4.6	0.0	4.6	635.0	O K
120 min Summer	51.360	1.360	4.8	0.0	4.8	790.3	O K
180 min Summer	51.488	1.488	5.0	0.0	5.0	894.5	O K
240 min Summer	51.580	1.580	5.1	0.0	5.1	974.0	O K
360 min Summer	51.709	1.709	5.2	0.0	5.2	1092.9	O K
480 min Summer	51.798	1.798	5.3	0.0	5.3	1180.2	Flood Risk
600 min Summer	51.864	1.864	5.4	0.0	5.4	1248.8	Flood Risk
720 min Summer	51.917	1.917	5.5	0.0	5.5	1304.2	Flood Risk
960 min Summer	51.923	1.923	5.5	0.0	5.5	1310.6	Flood Risk
1440 min Summer	51.900	1.900	5.4	0.0	5.4	1286.6	Flood Risk
2160 min Summer	51.829	1.829	5.4	0.0	5.4	1212.1	Flood Risk
2880 min Summer	51.759	1.759	5.3	0.0	5.3	1141.6	Flood Risk
4320 min Summer	51.712	1.712	5.2	0.0	5.2	1096.2	O K
5760 min Summer	51.669	1.669	5.2	0.0	5.2	1054.9	O K
7200 min Summer	51.624	1.624	5.1	0.0	5.1	1013.4	O K
8640 min Summer	51.577	1.577	5.1	0.0	5.1	971.4	O K
10080 min Summer	51.529	1.529	5.0	0.0	5.0	929.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Summer	134.198	0.0	318.6	0.0	23		
30 min Summer	84.742	0.0	337.9	0.0	38		
60 min Summer	53.513	0.0	650.4	0.0	68		
120 min Summer	33.792	0.0	709.9	0.0	128		
180 min Summer	25.824	0.0	745.2	0.0	188		
240 min Summer	21.339	0.0	770.4	0.0	248		
360 min Summer	16.307	0.0	804.1	0.0	366		
480 min Summer	13.475	0.0	825.9	0.0	486		
600 min Summer	11.621	0.0	840.9	0.0	606		
720 min Summer	10.298	0.0	851.6	0.0	726		
960 min Summer	8.098	0.0	852.0	0.0	966		
1440 min Summer	5.772	0.0	843.6	0.0	1444		
2160 min Summer	4.114	0.0	1583.4	0.0	1884		
2880 min Summer	3.235	0.0	1582.5	0.0	2252		
4320 min Summer	2.389	0.0	1537.1	0.0	3032		
5760 min Summer	1.926	0.0	2248.8	0.0	3864		
7200 min Summer	1.630	0.0	2377.6	0.0	4688		
8640 min Summer	1.422	0.0	2489.1	0.0	5528		
10080 min Summer	1.267	0.0	2523.8	0.0	6352		
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Micro Drainage				Source Control 2017.1.2			
<u>Cascade Summary of Results for Phase 8 Source Control Pond 8D.SRCX</u>							
Upstream Structures		Outflow To			Overflow To		
Phase 8 Source Control Pond 8C.SRCX		Swale 3B-1.SRCX			Source Control Phase 3A.SRCX		
Phase 8 Source Control Pond 8B.SRCX							
Phase 8 Source Control Pond 8A.SRCX							
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	50.046	1.046	4.1	0.0	4.1	171.8	O K
30 min Summer	50.194	1.194	4.1	0.0	4.1	214.6	O K
60 min Summer	50.351	1.351	4.2	0.0	4.2	265.9	O K
120 min Summer	50.513	1.513	4.4	0.0	4.4	325.1	O K
180 min Summer	50.599	1.599	4.5	0.0	4.5	362.2	O K
240 min Summer	50.653	1.653	4.6	0.0	4.6	388.5	O K
360 min Summer	50.719	1.719	4.7	0.0	4.7	423.8	Flood Risk
480 min Summer	50.756	1.756	4.7	0.0	4.7	445.7	Flood Risk
600 min Summer	50.779	1.779	4.7	0.0	4.7	459.6	Flood Risk
720 min Summer	50.792	1.792	4.7	0.0	4.7	468.1	Flood Risk
960 min Summer	50.758	1.758	4.7	0.0	4.7	447.0	Flood Risk
1440 min Summer	50.698	1.698	4.6	0.0	4.6	412.4	O K
2160 min Summer	50.623	1.623	4.5	0.0	4.5	373.4	O K
2880 min Summer	50.551	1.551	4.4	0.0	4.4	340.6	O K
4320 min Summer	50.450	1.450	4.3	0.0	4.3	301.2	O K
5760 min Summer	50.345	1.345	4.2	0.0	4.2	263.7	O K
7200 min Summer	50.240	1.240	4.1	0.0	4.1	228.9	O K
8640 min Summer	50.135	1.135	4.1	0.0	4.1	197.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)		
15 min Summer	134.198	0.0	175.1	0.0	23		
30 min Summer	84.742	0.0	221.2	0.0	38		
60 min Summer	53.513	0.0	279.7	0.0	68		
120 min Summer	33.792	0.0	353.2	0.0	126		
180 min Summer	25.824	0.0	404.9	0.0	186		
240 min Summer	21.339	0.0	446.0	0.0	246		
360 min Summer	16.307	0.0	511.3	0.0	366		
480 min Summer	13.475	0.0	563.2	0.0	484		
600 min Summer	11.621	0.0	607.1	0.0	604		
720 min Summer	10.298	0.0	645.4	0.0	724		
960 min Summer	8.098	0.0	676.0	0.0	828		
1440 min Summer	5.772	0.0	681.4	0.0	1072		
2160 min Summer	4.114	0.0	774.1	0.0	1472		
2880 min Summer	3.235	0.0	811.7	0.0	1880		
4320 min Summer	2.389	0.0	898.9	0.0	2688		
5760 min Summer	1.926	0.0	966.6	0.0	3512		
7200 min Summer	1.630	0.0	1022.4	0.0	4320		
8640 min Summer	1.422	0.0	1070.4	0.0	5096		
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Lion House Oriental Road Woking GU22 8AP		
Date 22/01/2019 18:37 File Cascade Phase 3B and 8...	Designed by rakerman Checked by	
Micro Drainage	Source Control 2017.1.2	

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status
10080 min Summer	50.031	1.031	4.1	0.0	4.1	167.9	O K
15 min Winter	50.121	1.121	4.1	0.0	4.1	192.8	O K
30 min Winter	50.278	1.278	4.1	0.0	4.1	241.3	O K
60 min Winter	50.446	1.446	4.3	0.0	4.3	299.6	O K
120 min Winter	50.611	1.611	4.5	0.0	4.5	367.8	O K
180 min Winter	50.696	1.696	4.6	0.0	4.6	411.4	O K
240 min Winter	50.751	1.751	4.7	0.0	4.7	442.9	Flood Risk
360 min Winter	50.820	1.820	4.8	0.0	4.8	486.5	Flood Risk
480 min Winter	50.864	1.864	4.8	0.0	4.8	516.7	Flood Risk
600 min Winter	50.943	1.943	4.9	13.8	18.7	576.4	Flood Risk
720 min Winter	50.955	1.955	4.9	19.6	24.6	585.5	Flood Risk
960 min Winter	50.942	1.942	4.9	13.3	18.2	575.4	Flood Risk
1440 min Winter	50.920	1.920	4.9	4.3	9.2	558.0	Flood Risk
2160 min Winter	50.810	1.810	4.8	0.0	4.8	479.5	Flood Risk
2880 min Winter	50.646	1.646	4.6	0.0	4.6	385.0	O K
4320 min Winter	50.507	1.507	4.4	0.0	4.4	322.9	O K
5760 min Winter	50.350	1.350	4.2	0.0	4.2	265.4	O K
7200 min Winter	50.189	1.189	4.1	0.0	4.1	213.2	O K
8640 min Winter	50.018	1.018	4.1	0.0	4.1	164.4	O K
10080 min Winter	49.736	0.736	4.1	0.0	4.1	98.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
10080 min Summer	1.267	0.0	1112.7	0.0	5848
15 min Winter	134.198	0.0	196.1	0.0	23
30 min Winter	84.742	0.0	247.6	0.0	37
60 min Winter	53.513	0.0	313.2	0.0	66
120 min Winter	33.792	0.0	395.6	0.0	126
180 min Winter	25.824	0.0	453.4	0.0	184
240 min Winter	21.339	0.0	499.5	0.0	242
360 min Winter	16.307	0.0	572.6	0.0	358
480 min Winter	13.475	0.0	635.6	0.0	480
600 min Winter	11.621	0.0	776.5	64.4	588
720 min Winter	10.298	0.0	900.2	176.8	668
960 min Winter	8.098	0.0	875.1	153.1	806
1440 min Winter	5.772	0.0	785.6	57.5	1224
2160 min Winter	4.114	0.0	954.8	0.0	1852
2880 min Winter	3.235	0.0	919.3	0.0	2048
4320 min Winter	2.389	0.0	1006.7	0.0	2904
5760 min Winter	1.926	0.0	1082.5	0.0	3752
7200 min Winter	1.630	0.0	1145.1	0.0	4608
8640 min Winter	1.422	0.0	1198.9	0.0	5440
10080 min Winter	1.267	0.0	1246.3	0.0	6056

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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Network Pond 3A																																															
Date 22/01/2019	Designed by A May																																															
File Source Control Phase 3...	Checked by RHA																																															
Micro Drainage		Source Control 2017.1.2																																														
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>1999</td> </tr> <tr> <td>Site Location</td> <td>GB 467450 109700 SU 67450 09700</td> </tr> <tr> <td>C (1km)</td> <td>-0.027</td> </tr> <tr> <td>D1 (1km)</td> <td>0.461</td> </tr> <tr> <td>D2 (1km)</td> <td>0.289</td> </tr> <tr> <td>D3 (1km)</td> <td>0.376</td> </tr> <tr> <td>E (1km)</td> <td>0.304</td> </tr> <tr> <td>F (1km)</td> <td>2.245</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 1.149 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From: To:</th> <th>(ha)</th> <th>From: To:</th> <th>(ha)</th> </tr> </thead> <tbody> <tr> <td>0 4</td> <td>0.000</td> <td>4 8</td> <td>1.149</td> </tr> </tbody> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	1999	Site Location	GB 467450 109700 SU 67450 09700	C (1km)	-0.027	D1 (1km)	0.461	D2 (1km)	0.289	D3 (1km)	0.376	E (1km)	0.304	F (1km)	2.245	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+40	Time (mins)	Area	Time (mins)	Area	From: To:	(ha)	From: To:	(ha)	0 4	0.000	4 8	1.149
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Model Details Storage is Online Cover Level (m) 49.000 Tank or Pond Structure Invert Level (m) 47.500 <table><tr><td>Depth (m)</td><td>Area (m²)</td><td>Depth (m)</td><td>Area (m²)</td><td>Depth (m)</td><td>Area (m²)</td></tr><tr><td>0.000</td><td>540.0</td><td>1.000</td><td>1254.2</td><td>1.500</td><td>1942.0</td></tr></table> Hydro-Brake® Optimum Outflow Control <table><tr><td>Unit Reference</td><td>MD-SCL-0072-3000-1500-3000</td></tr><tr><td>Design Head (m)</td><td>1.500</td></tr><tr><td>Design Flow (l/s)</td><td>3.0</td></tr><tr><td>Flush-Flo™</td><td>Calculated</td></tr><tr><td>Objective</td><td>Minimise blockage risk</td></tr><tr><td>Application</td><td>Surface</td></tr><tr><td>Sump Available</td><td>Yes</td></tr><tr><td>Diameter (mm)</td><td>72</td></tr><tr><td>Invert Level (m)</td><td>47.500</td></tr><tr><td>Minimum Outlet Pipe Diameter (mm)</td><td>100</td></tr><tr><td>Suggested Manhole Diameter (mm)</td><td>1200</td></tr></table> <table><tr><td>Control Points</td><td>Head (m)</td><td>Flow (l/s)</td><td>Control Points</td><td>Head (m)</td><td>Flow (l/s)</td></tr><tr><td>Design Point (Calculated)</td><td>1.500</td><td>3.0</td><td>Kick-Flo®</td><td>0.644</td><td>2.0</td></tr><tr><td>Flush-Flo™</td><td>0.292</td><td>2.6</td><td>Mean Flow over Head Range</td><td>-</td><td>2.4</td></tr></table> The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated <table><tr><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td><td>Depth (m)</td><td>Flow (l/s)</td></tr><tr><td>0.100</td><td>2.1</td><td>1.200</td><td>2.7</td><td>3.000</td><td>4.1</td><td>7.000</td><td>6.1</td></tr><tr><td>0.200</td><td>2.6</td><td>1.400</td><td>2.9</td><td>3.500</td><td>4.4</td><td>7.500</td><td>6.3</td></tr><tr><td>0.300</td><td>2.6</td><td>1.600</td><td>3.1</td><td>4.000</td><td>4.7</td><td>8.000</td><td>6.5</td></tr><tr><td>0.400</td><td>2.6</td><td>1.800</td><td>3.3</td><td>4.500</td><td>5.0</td><td>8.500</td><td>6.7</td></tr><tr><td>0.500</td><td>2.5</td><td>2.000</td><td>3.4</td><td>5.000</td><td>5.2</td><td>9.000</td><td>6.9</td></tr><tr><td>0.600</td><td>2.2</td><td>2.200</td><td>3.6</td><td>5.500</td><td>5.5</td><td>9.500</td><td>7.1</td></tr><tr><td>0.800</td><td>2.3</td><td>2.400</td><td>3.7</td><td>6.000</td><td>5.7</td><td></td><td></td></tr><tr><td>1.000</td><td>2.5</td><td>2.600</td><td>3.9</td><td>6.500</td><td>5.9</td><td></td><td></td></tr></table>						Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	0.000	540.0	1.000	1254.2	1.500	1942.0	Unit Reference	MD-SCL-0072-3000-1500-3000	Design Head (m)	1.500	Design Flow (l/s)	3.0	Flush-Flo™	Calculated	Objective	Minimise blockage risk	Application	Surface	Sump Available	Yes	Diameter (mm)	72	Invert Level (m)	47.500	Minimum Outlet Pipe Diameter (mm)	100	Suggested Manhole Diameter (mm)	1200	Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)	Design Point (Calculated)	1.500	3.0	Kick-Flo®	0.644	2.0	Flush-Flo™	0.292	2.6	Mean Flow over Head Range	-	2.4	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	0.100	2.1	1.200	2.7	3.000	4.1	7.000	6.1	0.200	2.6	1.400	2.9	3.500	4.4	7.500	6.3	0.300	2.6	1.600	3.1	4.000	4.7	8.000	6.5	0.400	2.6	1.800	3.3	4.500	5.0	8.500	6.7	0.500	2.5	2.000	3.4	5.000	5.2	9.000	6.9	0.600	2.2	2.200	3.6	5.500	5.5	9.500	7.1	0.800	2.3	2.400	3.7	6.000	5.7			1.000	2.5	2.600	3.9	6.500	5.9		
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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Network Pond 3B-1	
Date 22/01/2019 File Swale 3B-1.SRCX	Designed by A May Checked by RHA	
Micro Drainage Source Control 2017.1.2		

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 467450 109700 SU 67450 09700
C (1km)	-0.027
D1 (1km)	0.461
D2 (1km)	0.289
D3 (1km)	0.376
E (1km)	0.304
F (1km)	2.245
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.121

Time (mins)	Area	Time (mins)	Area
From:	To: (ha)	From:	To: (ha)
0	4 0.000	4	8 0.121

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Date 22/01/2019 File Swale 3B-1.SRCX	Designed by A May Checked by RHA	
Micro Drainage		Source Control 2017.1.2

Model Details

Storage is Online Cover Level (m) 45.433

Tank or Pond Structure

Invert Level (m) 44.133

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	0.0	0.400	20.2	0.800	59.3	1.200	97.8
0.100	3.0	0.500	28.6	0.900	69.0	1.300	107.5
0.200	7.3	0.600	38.5	1.000	78.6		
0.300	13.1	0.700	49.7	1.100	88.2		

Orifice Outflow Control

Diameter (m) 0.100 Discharge Coefficient 0.600 Invert Level (m) 44.133

Weir Overflow Control

Discharge Coef 0.544 Width (m) 3.600 Invert Level (m) 45.333

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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Network Pond 3B-2																																															
Date 22/01/2019 File Swale 3B-2.SRCX	Designed by A May Checked by RHA																																															
Micro Drainage		Source Control 2017.1.2																																														
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Date 22/01/2019 File Swale 3B-2.SRCX	Designed by A May Checked by RHA	
Micro Drainage Source Control 2017.1.2		

Model Details

Storage is Online Cover Level (m) 44.714

Tank or Pond Structure

Invert Level (m) 43.414

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	0.0	0.400	20.2	0.800	59.3	1.200	97.8
0.100	3.0	0.500	28.6	0.900	69.0	1.300	107.5
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Orifice Outflow Control

Diameter (m) 0.100 Discharge Coefficient 0.600 Invert Level (m) 43.414

Weir Overflow Control

Discharge Coef 0.544 Width (m) 3.600 Invert Level (m) 44.614

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Date 22/01/2019 File Swale 3B-3.SRCX	Designed by A May Checked by RHA																																															
Micro Drainage		Source Control 2017.1.2																																														
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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Network Pond 8A	
Date 22/01/2019 File Phase 8 Source Control...	Designed by A May Checked by RHA	

Micro Drainage Source Control 2017.1.2

Model Details

Storage is Online Cover Level (m) 54.350

Tank or Pond Structure

Invert Level (m) 52.400

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	129.0	1.000	342.0	1.950	663.0
0.500	228.0	1.500	470.0		

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0093-5000-1900-5000
Design Head (m)	1.900
Design Flow (l/s)	5.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	93
Invert Level (m)	52.400
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.900	5.0	Kick-Flo®	0.830	3.4
Flush-Flo™	0.406	4.3	Mean Flow over Head Range	-	4.0

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	2.9	1.200	4.0	3.000	6.2	7.000	9.2
0.200	3.9	1.400	4.3	3.500	6.7	7.500	9.5
0.300	4.2	1.600	4.6	4.000	7.1	8.000	9.8
0.400	4.3	1.800	4.9	4.500	7.5	8.500	10.1
0.500	4.2	2.000	5.1	5.000	7.9	9.000	10.4
0.600	4.1	2.200	5.4	5.500	8.2	9.500	10.7
0.800	3.6	2.400	5.6	6.000	8.6		
1.000	3.7	2.600	5.8	6.500	8.9		

Weir Overflow Control

Discharge Coef 0.544 Width (m) 0.900 Invert Level (m) 54.250

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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Network Pond 8B																																															
Date 22/01/2019	Designed by A May																																															
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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Network Pond 8B	
Date 22/01/2019	Designed by A May	
File Phase 8 Source Control...	Checked by RHA	
Micro Drainage		Source Control 2017.1.2

Model Details

Storage is Online Cover Level (m) 53.050

Tank or Pond Structure

Invert Level (m) 51.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	64.3	1.000	263.6	2.050	640.0
0.500	151.0	1.500	393.1		

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0092-5000-2000-5000
Design Head (m)	2.000
Design Flow (l/s)	5.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	92
Invert Level (m)	51.000
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	2.000	5.0	Kick-Flo®	0.816	3.3
Flush-Flo™	0.398	4.1	Mean Flow over Head Range	-	3.9

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	2.9	1.200	3.9	3.000	6.0	7.000	9.0
0.200	3.8	1.400	4.2	3.500	6.5	7.500	9.3
0.300	4.1	1.600	4.5	4.000	6.9	8.000	9.6
0.400	4.1	1.800	4.8	4.500	7.3	8.500	9.9
0.500	4.1	2.000	5.0	5.000	7.7	9.000	10.2
0.600	4.0	2.200	5.2	5.500	8.0	9.500	10.4
0.800	3.4	2.400	5.4	6.000	8.4		
1.000	3.6	2.600	5.6	6.500	8.7		

Weir Overflow Control

Discharge Coef 0.544 Width (m) 0.900 Invert Level (m) 52.900

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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Nertwork Pond 8C																																															
Date 22/01/2019	Designed by A May																																															
File Phase 8 Source Control...	Checked by RHA																																															
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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Nertwork Pond 8C	
Date 22/01/2019	Designed by A May	
File Phase 8 Source Control...	Checked by RHA	
Micro Drainage		Source Control 2017.1.2

Model Details

Storage is Online Cover Level (m) 52.050

Tank or Pond Structure

Invert Level (m) 50.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	384.0	1.000	677.1	2.050	1156.0
0.500	523.4	1.500	844.9		

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0092-5000-2000-5000
Design Head (m)	2.000
Design Flow (l/s)	5.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	92
Invert Level (m)	49.500
Minimum Outlet Pipe Diameter (mm)	150
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	2.000	5.0	Kick-Flo®	0.816	3.3
Flush-Flo™	0.398	4.1	Mean Flow over Head Range	-	3.9

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	2.9	1.200	3.9	3.000	6.0	7.000	9.0
0.200	3.8	1.400	4.2	3.500	6.5	7.500	9.3
0.300	4.1	1.600	4.5	4.000	6.9	8.000	9.6
0.400	4.1	1.800	4.8	4.500	7.3	8.500	9.9
0.500	4.1	2.000	5.0	5.000	7.7	9.000	10.2
0.600	4.0	2.200	5.2	5.500	8.0	9.500	10.4
0.800	3.4	2.400	5.4	6.000	8.4		
1.000	3.6	2.600	5.6	6.500	8.7		

Weir Overflow Control

Discharge Coef 0.544 Width (m) 0.900 Invert Level (m) 51.950

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Lion House Oriental Road Woking GU22 8AP	Berewood Development Western Network Pond 8D	
Date 22/01/2019 File Phase 8 Source Control...	Designed by A May Checked by RHA	
Micro Drainage		Source Control 2017.1.2

Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	1999
Site Location	GB 467450 109700 SU 67450 09700
C (1km)	-0.027
D1 (1km)	0.461
D2 (1km)	0.289
D3 (1km)	0.376
E (1km)	0.304
F (1km)	2.245
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.697

Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)
0	4 0.000	4	8 0.697

Time Area Diagram

Total Area (ha) 0.000

Time (mins)	Area
From: To:	(ha)
0	4 0.000

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Micro Drainage		Source Control 2017.1.2

Model Details

Storage is Online Cover Level (m) 51.000

Tank or Pond Structure

Invert Level (m) 49.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	73.2	1.000	261.2	2.000	859.6
0.500	156.9	1.500	384.8		

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0092-5000-2000-5000
Design Head (m)	2.000
Design Flow (l/s)	5.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
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Sump Available	Yes
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Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
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0.500	4.1	2.000	5.0	5.000	7.7	9.000	10.2
0.600	4.0	2.200	5.2	5.500	8.0	9.500	10.4
0.800	3.4	2.400	5.4	6.000	8.4		
1.000	3.6	2.600	5.6	6.500	8.7		

Weir Overflow Control

Discharge Coef 0.544 Width (m) 0.900 Invert Level (m) 50.900

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