

Cole Easdon Consultants				Page 1																																																																																																																																																																																																																			
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York House Edison Park		58 Ferringham Lane			
Dorcan Way		Ferring			
Swindon SN3 3RB		Cellular SA1			
Date September 2018		Designed by NP			
File Cellular Soakaway 1.SRCX		Checked by RB			
Elstree Computing Ltd		Source Control 2016.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	6.588	0.288	0.8	7.7	O K
60 min Winter	6.639	0.339	0.8	9.0	O K
120 min Winter	6.656	0.356	0.9	9.5	O K
180 min Winter	6.649	0.349	0.9	9.3	O K
240 min Winter	6.633	0.333	0.8	8.9	O K
360 min Winter	6.595	0.295	0.8	7.8	O K
480 min Winter	6.557	0.257	0.8	6.8	O K
600 min Winter	6.521	0.221	0.8	5.9	O K
720 min Winter	6.487	0.187	0.8	5.0	O K
960 min Winter	6.430	0.130	0.7	3.4	O K
1440 min Winter	6.356	0.056	0.7	1.5	O K
2160 min Winter	6.339	0.039	0.5	1.0	O K
2880 min Winter	6.331	0.031	0.4	0.8	O K
4320 min Winter	6.323	0.023	0.3	0.6	O K
5760 min Winter	6.318	0.018	0.3	0.5	O K
7200 min Winter	6.315	0.015	0.2	0.4	O K
8640 min Winter	6.313	0.013	0.2	0.3	O K
10080 min Winter	6.312	0.012	0.2	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.789	0.0	32		
60 min Winter	53.779	0.0	60		
120 min Winter	33.337	0.0	110		
180 min Winter	24.832	0.0	138		
240 min Winter	20.006	0.0	178		
360 min Winter	14.706	0.0	252		
480 min Winter	11.818	0.0	324		
600 min Winter	9.966	0.0	392		
720 min Winter	8.665	0.0	456		
960 min Winter	6.943	0.0	578		
1440 min Winter	5.071	0.0	778		
2160 min Winter	3.696	0.0	1104		
2880 min Winter	2.949	0.0	1460		
4320 min Winter	2.142	0.0	2184		
5760 min Winter	1.705	0.0	2936		
7200 min Winter	1.427	0.0	3640		
8640 min Winter	1.235	0.0	4400		
10080 min Winter	1.093	0.0	5136		
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York House Edison Park Dorcan Way Swindon SN3 3RB	58 Ferringham Lane Ferring Cellular SA1	
Date September 2018 File Cellular Soakaway 1.SRCX	Designed by NP Checked by RB	
Elstree Computing Ltd		Source Control 2016.1

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)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.025

Time (mins)	Area
From: To:	(ha)
0	4 0.025

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Model Details

Storage is Online Cover Level (m) 7.650

Cellular Storage Structure

Invert Level (m) 6.300 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.17280 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.17280

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	28.0	28.0	0.400	28.0	36.5

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Summer</td><td>6.621</td><td>0.321</td><td>0.2</td><td>9.2</td><td>O K</td></tr><tr><td>600 min Summer</td><td>6.617</td><td>0.317</td><td>0.2</td><td>9.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>6.612</td><td>0.312</td><td>0.2</td><td>8.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>6.601</td><td>0.301</td><td>0.2</td><td>8.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>6.575</td><td>0.275</td><td>0.2</td><td>7.8</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>6.538</td><td>0.238</td><td>0.2</td><td>6.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>6.504</td><td>0.204</td><td>0.2</td><td>5.8</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>6.447</td><td>0.147</td><td>0.2</td><td>4.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>6.404</td><td>0.104</td><td>0.2</td><td>3.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>6.374</td><td>0.074</td><td>0.2</td><td>2.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>6.355</td><td>0.055</td><td>0.2</td><td>1.6</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>6.348</td><td>0.048</td><td>0.2</td><td>1.4</td><td>O K</td></tr><tr><td>15 min Winter</td><td>6.470</td><td>0.170</td><td>0.2</td><td>4.8</td><td>O K</td></tr></tbody></table> <table><thead><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr></thead><tbody><tr><td>15 min Summer</td><td>124.633</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>83.789</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>53.779</td><td>0.0</td><td>62</td></tr><tr><td>120 min Summer</td><td>33.337</td><td>0.0</td><td>122</td></tr><tr><td>180 min Summer</td><td>24.832</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>20.006</td><td>0.0</td><td>240</td></tr><tr><td>360 min Summer</td><td>14.706</td><td>0.0</td><td>340</td></tr><tr><td>480 min Summer</td><td>11.818</td><td>0.0</td><td>396</td></tr><tr><td>600 min Summer</td><td>9.966</td><td>0.0</td><td>458</td></tr><tr><td>720 min Summer</td><td>8.665</td><td>0.0</td><td>520</td></tr><tr><td>960 min Summer</td><td>6.943</td><td>0.0</td><td>656</td></tr><tr><td>1440 min Summer</td><td>5.071</td><td>0.0</td><td>936</td></tr><tr><td>2160 min Summer</td><td>3.696</td><td>0.0</td><td>1340</td></tr><tr><td>2880 min Summer</td><td>2.949</td><td>0.0</td><td>1728</td></tr><tr><td>4320 min Summer</td><td>2.142</td><td>0.0</td><td>2464</td></tr><tr><td>5760 min Summer</td><td>1.705</td><td>0.0</td><td>3168</td></tr><tr><td>7200 min Summer</td><td>1.427</td><td>0.0</td><td>3824</td></tr><tr><td>8640 min Summer</td><td>1.235</td><td>0.0</td><td>4496</td></tr><tr><td>10080 min Summer</td><td>1.093</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>124.633</td><td>0.0</td><td>18</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	6.451	0.151	0.2	4.3	O K	30 min Summer	6.500	0.200	0.2	5.7	O K	60 min Summer	6.550	0.250	0.2	7.1	O K	120 min Summer	6.595	0.295	0.2	8.4	O K	180 min Summer	6.614	0.314	0.2	9.0	O K	240 min Summer	6.622	0.322	0.2	9.2	O K	360 min Summer	6.624	0.324	0.2	9.2	O K	480 min Summer	6.621	0.321	0.2	9.2	O K	600 min Summer	6.617	0.317	0.2	9.0	O K	720 min Summer	6.612	0.312	0.2	8.9	O K	960 min Summer	6.601	0.301	0.2	8.6	O K	1440 min Summer	6.575	0.275	0.2	7.8	O K	2160 min Summer	6.538	0.238	0.2	6.8	O K	2880 min Summer	6.504	0.204	0.2	5.8	O K	4320 min Summer	6.447	0.147	0.2	4.2	O K	5760 min Summer	6.404	0.104	0.2	3.0	O K	7200 min Summer	6.374	0.074	0.2	2.1	O K	8640 min Summer	6.355	0.055	0.2	1.6	O K	10080 min Summer	6.348	0.048	0.2	1.4	O K	15 min Winter	6.470	0.170	0.2	4.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	124.633	0.0	19	30 min Summer	83.789	0.0	33	60 min Summer	53.779	0.0	62	120 min Summer	33.337	0.0	122	180 min Summer	24.832	0.0	182	240 min Summer	20.006	0.0	240	360 min 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Dorcan Way		Ferring			
Swindon SN3 3RB		Cellular SA2			
Date September 2018		Designed by NP			
File Cellular Soakaway 2.SRCX		Checked by RB			
Elstree Computing Ltd		Source Control 2016.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	6.525	0.225	0.2	6.4	O K
60 min Winter	6.582	0.282	0.2	8.0	O K
120 min Winter	6.634	0.334	0.2	9.5	O K
180 min Winter	6.658	0.358	0.2	10.2	O K
240 min Winter	6.669	0.369	0.2	10.5	O K
360 min Winter	6.675	0.375	0.2	10.7	O K
480 min Winter	6.672	0.372	0.2	10.6	O K
600 min Winter	6.665	0.365	0.2	10.4	O K
720 min Winter	6.659	0.359	0.2	10.2	O K
960 min Winter	6.643	0.343	0.2	9.8	O K
1440 min Winter	6.605	0.305	0.2	8.7	O K
2160 min Winter	6.549	0.249	0.2	7.1	O K
2880 min Winter	6.498	0.198	0.2	5.6	O K
4320 min Winter	6.416	0.116	0.2	3.3	O K
5760 min Winter	6.363	0.063	0.2	1.8	O K
7200 min Winter	6.346	0.046	0.2	1.3	O K
8640 min Winter	6.340	0.040	0.1	1.1	O K
10080 min Winter	6.336	0.036	0.1	1.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.789	0.0	33		
60 min Winter	53.779	0.0	62		
120 min Winter	33.337	0.0	120		
180 min Winter	24.832	0.0	178		
240 min Winter	20.006	0.0	234		
360 min Winter	14.706	0.0	346		
480 min Winter	11.818	0.0	448		
600 min Winter	9.966	0.0	484		
720 min Winter	8.665	0.0	558		
960 min Winter	6.943	0.0	712		
1440 min Winter	5.071	0.0	1012		
2160 min Winter	3.696	0.0	1448		
2880 min Winter	2.949	0.0	1844		
4320 min Winter	2.142	0.0	2556		
5760 min Winter	1.705	0.0	3168		
7200 min Winter	1.427	0.0	3728		
8640 min Winter	1.235	0.0	4464		
10080 min Winter	1.093	0.0	5136		
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York House Edison Park Dorcan Way Swindon SN3 3RB	58 Ferringham Lane Ferring Cellular SA2	
Date September 2018 File Cellular Soakaway 2.SRCX	Designed by NP Checked by RB	
Elstree Computing Ltd Source Control 2016.1		

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)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.019

Time (mins)	Area
From: To:	(ha)
0	4 0.019

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York House Edison Park Dorcan Way Swindon SN3 3RB	58 Ferringham Lane Ferring Cellular SA2													
Date September 2018 File Cellular Soakaway 2.SRCX	Designed by NP Checked by RB													
Elstree Computing Ltd		Source Control 2016.1												
<u>Model Details</u> Storage is Online Cover Level (m) 7.700 <u>Cellular Storage Structure</u> Invert Level (m) 6.300 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.03960 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.03960 <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>30.0</td> <td>30.0</td> <td>0.400</td> <td>30.0</td> <td>38.8</td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	30.0	30.0	0.400	30.0	38.8
Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)									
0.000	30.0	30.0	0.400	30.0	38.8									
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Swindon SN3 3RB			Cellular Soakaway 3			
Date September 2018			Designed by LS			
File Cellular Soakaway 3.SRCX			Checked by NP			
Elstree Computing Ltd			Source Control 2016.1			
Summary of Results for 100 year Return Period (+40%)						
Half Drain Time : 469 minutes.						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	
15 min Summer	6.309	0.159	0.1	3.6	O K	
30 min Summer	6.361	0.211	0.2	4.8	O K	
60 min Summer	6.414	0.264	0.2	6.0	O K	
120 min Summer	6.461	0.311	0.2	7.1	O K	
180 min Summer	6.482	0.332	0.2	7.6	O K	
240 min Summer	6.490	0.340	0.2	7.8	O K	
360 min Summer	6.493	0.343	0.2	7.8	O K	
480 min Summer	6.491	0.341	0.2	7.8	O K	
600 min Summer	6.487	0.337	0.2	7.7	O K	
720 min Summer	6.482	0.332	0.2	7.6	O K	
960 min Summer	6.470	0.320	0.2	7.3	O K	
1440 min Summer	6.444	0.294	0.2	6.7	O K	
2160 min Summer	6.406	0.256	0.2	5.8	O K	
2880 min Summer	6.372	0.222	0.2	5.1	O K	
4320 min Summer	6.312	0.162	0.1	3.7	O K	
5760 min Summer	6.267	0.117	0.1	2.7	O K	
7200 min Summer	6.233	0.083	0.1	1.9	O K	
8640 min Summer	6.212	0.062	0.1	1.4	O K	
10080 min Summer	6.200	0.050	0.1	1.1	O K	
15 min Winter	6.329	0.179	0.2	4.1	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
15 min Summer	124.633	0.0	19			
30 min Summer	83.789	0.0	33			
60 min Summer	53.779	0.0	62			
120 min Summer	33.337	0.0	122			
180 min Summer	24.832	0.0	182			
240 min Summer	20.006	0.0	240			
360 min Summer	14.706	0.0	344			
480 min Summer	11.818	0.0	400			
600 min Summer	9.966	0.0	462			
720 min Summer	8.665	0.0	524			
960 min Summer	6.943	0.0	662			
1440 min Summer	5.071	0.0	938			
2160 min Summer	3.696	0.0	1340			
2880 min Summer	2.949	0.0	1732			
4320 min Summer	2.142	0.0	2468			
5760 min Summer	1.705	0.0	3176			
7200 min Summer	1.427	0.0	3888			
8640 min Summer	1.235	0.0	4504			
10080 min Summer	1.093	0.0	5144			
15 min Winter	124.633	0.0	18			
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Swindon SN3 3RB		Cellular Soakaway 3			
Date September 2018		Designed by LS			
File Cellular Soakaway 3.SRCX		Checked by NP			
Elstree Computing Ltd		Source Control 2016.1			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	6.387	0.237	0.2	5.4	O K
60 min Winter	6.447	0.297	0.2	6.8	O K
120 min Winter	6.503	0.353	0.2	8.0	O K
180 min Winter	6.528	0.378	0.2	8.6	O K
240 min Winter	6.540	0.390	0.2	8.9	O K
360 min Winter	6.547	0.397	0.2	9.1	O K
480 min Winter	6.544	0.394	0.2	9.0	O K
600 min Winter	6.538	0.388	0.2	8.8	O K
720 min Winter	6.532	0.382	0.2	8.7	O K
960 min Winter	6.515	0.365	0.2	8.3	O K
1440 min Winter	6.477	0.327	0.2	7.5	O K
2160 min Winter	6.420	0.270	0.2	6.2	O K
2880 min Winter	6.368	0.218	0.2	5.0	O K
4320 min Winter	6.283	0.133	0.1	3.0	O K
5760 min Winter	6.224	0.074	0.1	1.7	O K
7200 min Winter	6.198	0.048	0.1	1.1	O K
8640 min Winter	6.192	0.042	0.1	1.0	O K
10080 min Winter	6.187	0.037	0.1	0.8	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	83.789	0.0	33		
60 min Winter	53.779	0.0	62		
120 min Winter	33.337	0.0	120		
180 min Winter	24.832	0.0	178		
240 min Winter	20.006	0.0	234		
360 min Winter	14.706	0.0	346		
480 min Winter	11.818	0.0	450		
600 min Winter	9.966	0.0	488		
720 min Winter	8.665	0.0	560		
960 min Winter	6.943	0.0	714		
1440 min Winter	5.071	0.0	1012		
2160 min Winter	3.696	0.0	1448		
2880 min Winter	2.949	0.0	1848		
4320 min Winter	2.142	0.0	2592		
5760 min Winter	1.705	0.0	3232		
7200 min Winter	1.427	0.0	3744		
8640 min Winter	1.235	0.0	4456		
10080 min Winter	1.093	0.0	5144		
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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)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.016

Time (mins)	Area
From: To:	(ha)
0	4 0.016

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Model Details

Storage is Online Cover Level (m) 7.400

Cellular Storage Structure

Invert Level (m) 6.150 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.03960 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.03960

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	24.0	24.0	0.400	24.0	31.8

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