



**GREEN LANE,
ASHWELL**

Job No E21-011 (First)

**MICRODRAINAGE SURFACE WATER
DRAINAGE CALCULATIONS**

JULY 2024 – First Issue

21a Bargates, Christchurch, Dorset BH23 1QD

T: 01727 844606 F: 01202 490601 E: sdpsouth@sdpce.co.uk

APPENDIX

MICRODRAINAGE SOAKAWAY CALCULATIONS –

SOAKAWAY No. 01

SOAKAWAY No. 02

SOAKAWAY No. 03

SOAKAWAY No. 04

SOAKAWAY No. 05

SOAKAWAY No. 06

SOAKAWAY No. 07

SOAKAWAY No. 08

SOAKAWAY No. 09

SOAKAWAY No. 10

DRAINED AREAS PLAN

SOAKAWAY No. 01

SDP Consulting Engineers		Page 1
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 01	
Date 15/07/2024 15:21 File SA 01.SRCX	Designed by NJ Checked by	
Innovyze	Source Control 2020.1	

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 3345 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	47.956	0.156	0.0	2.4	O K
30 min Summer	47.999	0.199	0.0	3.0	O K
60 min Summer	48.042	0.242	0.0	3.7	O K
120 min Summer	48.107	0.307	0.0	4.7	O K
180 min Summer	48.145	0.345	0.0	5.2	O K
240 min Summer	48.170	0.370	0.0	5.6	O K
360 min Summer	48.200	0.400	0.0	6.1	O K
480 min Summer	48.215	0.415	0.0	6.3	O K
600 min Summer	48.224	0.424	0.0	6.4	O K
720 min Summer	48.228	0.428	0.0	6.5	O K
960 min Summer	48.230	0.430	0.0	6.5	O K
1440 min Summer	48.222	0.422	0.0	6.4	O K
2160 min Summer	48.200	0.400	0.0	6.1	O K
2880 min Summer	48.177	0.377	0.0	5.7	O K
4320 min Summer	48.150	0.350	0.0	5.3	O K
5760 min Summer	48.133	0.333	0.0	5.1	O K
7200 min Summer	48.123	0.323	0.0	4.9	O K
8640 min Summer	48.116	0.316	0.0	4.8	O K
10080 min Summer	48.112	0.312	0.0	4.7	O K
15 min Winter	47.974	0.174	0.0	2.7	O K
30 min Winter	48.023	0.223	0.0	3.4	O K
60 min Winter	48.072	0.272	0.0	4.1	O K
120 min Winter	48.145	0.345	0.0	5.2	O K
180 min Winter	48.187	0.387	0.0	5.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	141.038	0.0	19
30 min Summer	90.562	0.0	34
60 min Summer	55.333	0.0	64
120 min Summer	35.366	0.0	124
180 min Summer	26.702	0.0	184
240 min Summer	21.648	0.0	244
360 min Summer	15.835	0.0	364
480 min Summer	12.525	0.0	484
600 min Summer	10.380	0.0	602
720 min Summer	8.874	0.0	722
960 min Summer	6.891	0.0	962
1440 min Summer	4.793	0.0	1442
2160 min Summer	3.329	0.0	2160
2880 min Summer	2.581	0.0	2508
4320 min Summer	1.835	0.0	3240
5760 min Summer	1.461	0.0	4032
7200 min Summer	1.242	0.0	4832
8640 min Summer	1.098	0.0	5704
10080 min Summer	0.997	0.0	6464
15 min Winter	141.038	0.0	19
30 min Winter	90.562	0.0	34
60 min Winter	55.333	0.0	64
120 min Winter	35.366	0.0	122
180 min Winter	26.702	0.0	182

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Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
240 min Winter	48.216	0.416	0.0	6.3	O K
360 min Winter	48.250	0.450	0.0	6.8	O K
480 min Winter	48.269	0.469	0.0	7.1	O K
600 min Winter	48.279	0.479	0.0	7.3	O K
720 min Winter	48.285	0.485	0.0	7.4	O K
960 min Winter	48.289	0.489	0.0	7.4	O K
1440 min Winter	48.283	0.483	0.0	7.3	O K
2160 min Winter	48.264	0.464	0.0	7.0	O K
2880 min Winter	48.242	0.442	0.0	6.7	O K
4320 min Winter	48.206	0.406	0.0	6.2	O K
5760 min Winter	48.184	0.384	0.0	5.8	O K
7200 min Winter	48.167	0.367	0.0	5.6	O K
8640 min Winter	48.155	0.355	0.0	5.4	O K
10080 min Winter	48.146	0.346	0.0	5.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
240 min Winter	21.648	0.0	242
360 min Winter	15.835	0.0	360
480 min Winter	12.525	0.0	478
600 min Winter	10.380	0.0	596
720 min Winter	8.874	0.0	714
960 min Winter	6.891	0.0	950
1440 min Winter	4.793	0.0	1412
2160 min Winter	3.329	0.0	2092
2880 min Winter	2.581	0.0	2740
4320 min Winter	1.835	0.0	3456
5760 min Winter	1.461	0.0	4376
7200 min Winter	1.242	0.0	5264
8640 min Winter	1.098	0.0	6216
10080 min Winter	0.997	0.0	7064

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Rainfall Details

Rainfall Model	FEH	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
FEH Rainfall Version	2013	Cv (Winter)	0.840
Site Location	GB 527302 240079 TL 27302 40079	Shortest Storm (mins)	15
Data Type	Point	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.009

Time (mins)		Area
From:	To:	(ha)
0	4	0.009

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Model Details

Storage is Online Cover Level (m) 49.500

Cellular Storage Structure

Invert Level (m) 47.800 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00835 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00835

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	16.0	16.0	0.800	16.0	16.0	0.801	0.0	16.0

SOAKAWAY No. 02

SDP Consulting Engineers				Page 1																																																																																																																																																																																																																			
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Summer</td><td>48.166</td><td>0.366</td><td>0.0</td><td>5.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>48.173</td><td>0.373</td><td>0.0</td><td>5.7</td><td>O K</td></tr><tr><td>720 min Summer</td><td>48.176</td><td>0.376</td><td>0.0</td><td>5.7</td><td>O K</td></tr><tr><td>960 min Summer</td><td>48.177</td><td>0.377</td><td>0.0</td><td>5.7</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>48.167</td><td>0.367</td><td>0.0</td><td>5.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>48.143</td><td>0.343</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>48.124</td><td>0.324</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>48.099</td><td>0.299</td><td>0.0</td><td>4.5</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>48.082</td><td>0.282</td><td>0.0</td><td>4.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>48.071</td><td>0.271</td><td>0.0</td><td>4.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>48.064</td><td>0.264</td><td>0.0</td><td>4.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>48.059</td><td>0.259</td><td>0.0</td><td>3.9</td><td>O K</td></tr><tr><td>15 min Winter</td><td>47.955</td><td>0.155</td><td>0.0</td><td>2.4</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>141.038</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>90.562</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>55.333</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>35.366</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>26.702</td><td>0.0</td><td>184</td></tr><tr><td>240 min Summer</td><td>21.648</td><td>0.0</td><td>244</td></tr><tr><td>360 min Summer</td><td>15.835</td><td>0.0</td><td>364</td></tr><tr><td>480 min Summer</td><td>12.525</td><td>0.0</td><td>482</td></tr><tr><td>600 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7200 min Winter	48.104	0.304	0.0	4.6	O K
8640 min Winter	48.090	0.290	0.0	4.4	O K
10080 min Winter	48.079	0.279	0.0	4.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	90.562	0.0	34		
60 min Winter	55.333	0.0	64		
120 min Winter	35.366	0.0	122		
180 min Winter	26.702	0.0	182		
240 min Winter	21.648	0.0	240		
360 min Winter	15.835	0.0	360		
480 min Winter	12.525	0.0	478		
600 min Winter	10.380	0.0	596		
720 min Winter	8.874	0.0	714		
960 min Winter	6.891	0.0	944		
1440 min Winter	4.793	0.0	1402		
2160 min Winter	3.329	0.0	2076		
2880 min Winter	2.581	0.0	2708		
4320 min Winter	1.835	0.0	3332		
5760 min Winter	1.461	0.0	4264		
7200 min Winter	1.242	0.0	5184		
8640 min Winter	1.098	0.0	6056		
10080 min Winter	0.997	0.0	6960		
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SDP Consulting Engineers		Page 3
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 02	
Date 15/07/2024 15:23 File SA 02.SRCX	Designed by NJ Checked by	
Innovyze Source Control 2020.1		

Rainfall Details

Rainfall ModelFEH
Return Period (years)100
FEH Rainfall Version2013
Site Location GB 527302 240079 TL 27302 40079
Data TypePoint
Summer StormsYes
Winter StormsYes
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) 0.008

Time (mins)Area

From: To: (ha)

040.008

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SDP Consulting Engineers		Page 4																		
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 02																			
Date 15/07/2024 15:23 File SA 02.SRCX	Designed by NJ Checked by																			
Innovyze																				
Source Control 2020.1																				
Model Details Storage is Online Cover Level (m) 49.500 Cellular Storage Structure Invert Level (m) 47.800 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00835 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00835 <table><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>16.0</td><td>16.0</td><td>0.801</td><td>0.0</td><td>16.0</td></tr><tr><td>0.800</td><td>16.0</td><td>16.0</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	16.0	16.0	0.801	0.0	16.0	0.800	16.0	16.0			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	16.0	16.0	0.801	0.0	16.0															
0.800	16.0	16.0																		
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SOAKAWAY No. 03

SDP Consulting Engineers				Page 1																																																																																																																																																																																																																			
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 03																																																																																																																																																																																																																					
Date 15/07/2024 15:26 File SA 03.SRCX		Designed by NJ Checked by																																																																																																																																																																																																																					
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 3053 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>47.942</td><td>0.142</td><td>0.0</td><td>2.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>47.982</td><td>0.182</td><td>0.0</td><td>3.0</td><td>O K</td></tr><tr><td>60 min Summer</td><td>48.021</td><td>0.221</td><td>0.0</td><td>3.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>48.080</td><td>0.280</td><td>0.0</td><td>4.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>48.114</td><td>0.314</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>240 min Summer</td><td>48.137</td><td>0.337</td><td>0.0</td><td>5.6</td><td>O K</td></tr><tr><td>360 min Summer</td><td>48.164</td><td>0.364</td><td>0.0</td><td>6.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>48.177</td><td>0.377</td><td>0.0</td><td>6.3</td><td>O K</td></tr><tr><td>600 min Summer</td><td>48.185</td><td>0.385</td><td>0.0</td><td>6.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>48.188</td><td>0.388</td><td>0.0</td><td>6.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>48.189</td><td>0.389</td><td>0.0</td><td>6.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>48.179</td><td>0.379</td><td>0.0</td><td>6.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>48.156</td><td>0.356</td><td>0.0</td><td>5.9</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>48.136</td><td>0.336</td><td>0.0</td><td>5.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>48.110</td><td>0.310</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>48.094</td><td>0.294</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>48.083</td><td>0.283</td><td>0.0</td><td>4.7</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>48.075</td><td>0.275</td><td>0.0</td><td>4.6</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>48.071</td><td>0.271</td><td>0.0</td><td>4.5</td><td>O K</td></tr><tr><td>15 min Winter</td><td>47.959</td><td>0.159</td><td>0.0</td><td>2.6</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>141.038</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>90.562</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>55.333</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>35.366</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>26.702</td><td>0.0</td><td>184</td></tr><tr><td>240 min Summer</td><td>21.648</td><td>0.0</td><td>244</td></tr><tr><td>360 min Summer</td><td>15.835</td><td>0.0</td><td>364</td></tr><tr><td>480 min Summer</td><td>12.525</td><td>0.0</td><td>482</td></tr><tr><td>600 min Summer</td><td>10.380</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>8.874</td><td>0.0</td><td>722</td></tr><tr><td>960 min Summer</td><td>6.891</td><td>0.0</td><td>962</td></tr><tr><td>1440 min Summer</td><td>4.793</td><td>0.0</td><td>1442</td></tr><tr><td>2160 min Summer</td><td>3.329</td><td>0.0</td><td>2140</td></tr><tr><td>2880 min Summer</td><td>2.581</td><td>0.0</td><td>2416</td></tr><tr><td>4320 min Summer</td><td>1.835</td><td>0.0</td><td>3112</td></tr><tr><td>5760 min Summer</td><td>1.461</td><td>0.0</td><td>3920</td></tr><tr><td>7200 min Summer</td><td>1.242</td><td>0.0</td><td>4760</td></tr><tr><td>8640 min Summer</td><td>1.098</td><td>0.0</td><td>5616</td></tr><tr><td>10080 min Summer</td><td>0.997</td><td>0.0</td><td>6448</td></tr><tr><td>15 min Winter</td><td>141.038</td><td>0.0</td><td>19</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	47.942	0.142	0.0	2.4	O K	30 min Summer	47.982	0.182	0.0	3.0	O K	60 min Summer	48.021	0.221	0.0	3.7	O K	120 min Summer	48.080	0.280	0.0	4.7	O K	180 min Summer	48.114	0.314	0.0	5.2	O K	240 min Summer	48.137	0.337	0.0	5.6	O K	360 min Summer	48.164	0.364	0.0	6.0	O K	480 min Summer	48.177	0.377	0.0	6.3	O K	600 min Summer	48.185	0.385	0.0	6.4	O K	720 min Summer	48.188	0.388	0.0	6.5	O K	960 min Summer	48.189	0.389	0.0	6.5	O K	1440 min Summer	48.179	0.379	0.0	6.3	O K	2160 min Summer	48.156	0.356	0.0	5.9	O K	2880 min Summer	48.136	0.336	0.0	5.6	O K	4320 min Summer	48.110	0.310	0.0	5.2	O K	5760 min Summer	48.094	0.294	0.0	4.9	O K	7200 min Summer	48.083	0.283	0.0	4.7	O K	8640 min Summer	48.075	0.275	0.0	4.6	O K	10080 min Summer	48.071	0.271	0.0	4.5	O K	15 min Winter	47.959	0.159	0.0	2.6	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	141.038	0.0	19	30 min Summer	90.562	0.0	34	60 min Summer	55.333	0.0	64	120 min Summer	35.366	0.0	124	180 min Summer	26.702	0.0	184	240 min Summer	21.648	0.0	244	360 min Summer	15.835	0.0	364	480 min Summer	12.525	0.0	482	600 min Summer	10.380	0.0	602	720 min Summer	8.874	0.0	722	960 min Summer	6.891	0.0	962	1440 min Summer	4.793	0.0	1442	2160 min Summer	3.329	0.0	2140	2880 min Summer	2.581	0.0	2416	4320 min Summer	1.835	0.0	3112	5760 min Summer	1.461	0.0	3920	7200 min Summer	1.242	0.0	4760	8640 min Summer	1.098	0.0	5616	10080 min Summer	0.997	0.0	6448	15 min Winter	141.038	0.0	19
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SDP Consulting Engineers				Page 2	
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 03			
Date 15/07/2024 15:26 File SA 03.SRCX		Designed by NJ Checked by			
Innovyze		Source Control 2020.1			
<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	48.004	0.204	0.0	3.4	O K
60 min Winter	48.048	0.248	0.0	4.1	O K
120 min Winter	48.114	0.314	0.0	5.2	O K
180 min Winter	48.153	0.353	0.0	5.9	O K
240 min Winter	48.179	0.379	0.0	6.3	O K
360 min Winter	48.210	0.410	0.0	6.8	O K
480 min Winter	48.226	0.426	0.0	7.1	O K
600 min Winter	48.235	0.435	0.0	7.2	O K
720 min Winter	48.240	0.440	0.0	7.3	O K
960 min Winter	48.242	0.442	0.0	7.4	O K
1440 min Winter	48.235	0.435	0.0	7.2	O K
2160 min Winter	48.215	0.415	0.0	6.9	O K
2880 min Winter	48.192	0.392	0.0	6.5	O K
4320 min Winter	48.159	0.359	0.0	6.0	O K
5760 min Winter	48.136	0.336	0.0	5.6	O K
7200 min Winter	48.118	0.318	0.0	5.3	O K
8640 min Winter	48.105	0.305	0.0	5.1	O K
10080 min Winter	48.094	0.294	0.0	4.9	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	90.562	0.0	34		
60 min Winter	55.333	0.0	64		
120 min Winter	35.366	0.0	122		
180 min Winter	26.702	0.0	182		
240 min Winter	21.648	0.0	240		
360 min Winter	15.835	0.0	360		
480 min Winter	12.525	0.0	478		
600 min Winter	10.380	0.0	596		
720 min Winter	8.874	0.0	714		
960 min Winter	6.891	0.0	944		
1440 min Winter	4.793	0.0	1410		
2160 min Winter	3.329	0.0	2076		
2880 min Winter	2.581	0.0	2712		
4320 min Winter	1.835	0.0	3372		
5760 min Winter	1.461	0.0	4272		
7200 min Winter	1.242	0.0	5192		
8640 min Winter	1.098	0.0	6128		
10080 min Winter	0.997	0.0	6968		
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SDP Consulting Engineers		Page 3
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 03	
Date 15/07/2024 15:26 File SA 03.SRCX	Designed by NJ Checked by	
Innovyze	Source Control 2020.1	
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SDP Consulting Engineers		Page 4																		
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 03																			
Date 15/07/2024 15:26 File SA 03.SRCX	Designed by NJ Checked by																			
Innovyze																				
Source Control 2020.1																				
Model Details Storage is Online Cover Level (m) 49.500 Cellular Storage Structure Invert Level (m) 47.800 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00835 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00835 <table><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><tr><td>0.000</td><td>17.5</td><td>17.5</td><td>0.801</td><td>0.0</td><td>17.5</td></tr><tr><td>0.800</td><td>17.5</td><td>17.5</td><td></td><td></td><td></td></tr></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	17.5	17.5	0.801	0.0	17.5	0.800	17.5	17.5			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	17.5	17.5	0.801	0.0	17.5															
0.800	17.5	17.5																		
©1982-2020 Innovyze																				

SOAKAWAY No. 04

SDP Consulting Engineers				Page 1																																																																																																																																																																																																																			
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 04																																																																																																																																																																																																																					
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Summer	48.053	0.253	0.0	5.1	O K	60 min Summer	48.108	0.308	0.0	6.2	O K	120 min Summer	48.191	0.391	0.0	7.8	O K	180 min Summer	48.240	0.440	0.0	8.8	O K	240 min Summer	48.273	0.473	0.0	9.4	O K	360 min Summer	48.313	0.513	0.0	10.2	O K	480 min Summer	48.335	0.535	0.0	10.7	O K	600 min Summer	48.347	0.547	0.0	10.9	O K	720 min Summer	48.355	0.555	0.0	11.1	O K	960 min Summer	48.361	0.561	0.0	11.2	O K	1440 min Summer	48.358	0.558	0.0	11.1	O K	2160 min Summer	48.340	0.540	0.0	10.8	O K	2880 min Summer	48.319	0.519	0.0	10.3	O K	4320 min Summer	48.286	0.486	0.0	9.7	O K	5760 min Summer	48.267	0.467	0.0	9.3	O K	7200 min Summer	48.258	0.458	0.0	9.1	O K	8640 min Summer	48.255	0.455	0.0	9.1	O K	10080 min Summer	48.255	0.455	0.0	9.1	O K	15 min Winter	48.022	0.222	0.0	4.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	141.038	0.0	20	30 min Summer	90.562	0.0	35	60 min Summer	55.333	0.0	66	120 min Summer	35.366	0.0	126	180 min Summer	26.702	0.0	186	240 min Summer	21.648	0.0	244	360 min Summer	15.835	0.0	364	480 min Summer	12.525	0.0	484	600 min Summer	10.380	0.0	604	720 min Summer	8.874	0.0	724	960 min Summer	6.891	0.0	964	1440 min Summer	4.793	0.0	1442	2160 min Summer	3.329	0.0	2160	2880 min Summer	2.581	0.0	2880	4320 min Summer	1.835	0.0	3628	5760 min Summer	1.461	0.0	4328	7200 min Summer	1.242	0.0	5120	8640 min Summer	1.098	0.0	5968	10080 min Summer	0.997	0.0	6856	15 min Winter	141.038	0.0	20
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SDP Consulting Engineers				Page 2	
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 04			
Date 15/07/2024 15:29 File SA 04.SRCX		Designed by NJ Checked by			
Innovyze		Source Control 2020.1			
<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	48.084	0.284	0.0	5.7	O K
60 min Winter	48.146	0.346	0.0	6.9	O K
120 min Winter	48.239	0.439	0.0	8.8	O K
180 min Winter	48.295	0.495	0.0	9.9	O K
240 min Winter	48.332	0.532	0.0	10.6	O K
360 min Winter	48.377	0.577	0.0	11.5	O K
480 min Winter	48.403	0.603	0.0	12.0	O K
600 min Winter	48.418	0.618	0.0	12.3	O K
720 min Winter	48.427	0.627	0.0	12.5	O K
960 min Winter	48.436	0.636	0.0	12.7	O K
1440 min Winter	48.436	0.636	0.0	12.7	O K
2160 min Winter	48.422	0.622	0.0	12.4	O K
2880 min Winter	48.404	0.604	0.0	12.0	O K
4320 min Winter	48.371	0.571	0.0	11.4	O K
5760 min Winter	48.345	0.545	0.0	10.9	O K
7200 min Winter	48.333	0.533	0.0	10.6	O K
8640 min Winter	48.326	0.526	0.0	10.5	O K
10080 min Winter	48.322	0.522	0.0	10.4	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	90.562	0.0	35		
60 min Winter	55.333	0.0	66		
120 min Winter	35.366	0.0	124		
180 min Winter	26.702	0.0	184		
240 min Winter	21.648	0.0	242		
360 min Winter	15.835	0.0	360		
480 min Winter	12.525	0.0	480		
600 min Winter	10.380	0.0	598		
720 min Winter	8.874	0.0	716		
960 min Winter	6.891	0.0	952		
1440 min Winter	4.793	0.0	1416		
2160 min Winter	3.329	0.0	2116		
2880 min Winter	2.581	0.0	2792		
4320 min Winter	1.835	0.0	4064		
5760 min Winter	1.461	0.0	4664		
7200 min Winter	1.242	0.0	5552		
8640 min Winter	1.098	0.0	6488		
10080 min Winter	0.997	0.0	7456		
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SDP Consulting Engineers		Page 3
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 04	
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SDP Consulting Engineers		Page 4																		
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Model Details Storage is Online Cover Level (m) 49.500 Cellular Storage Structure Invert Level (m) 47.800 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00821 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00821 <table><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>21.0</td><td>21.0</td><td>1.201</td><td>0.0</td><td>21.0</td></tr><tr><td>1.200</td><td>21.0</td><td>21.0</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	21.0	21.0	1.201	0.0	21.0	1.200	21.0	21.0			
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SOAKAWAY No. 05

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Summer</td><td>48.335</td><td>0.535</td><td>0.0</td><td>10.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>48.347</td><td>0.547</td><td>0.0</td><td>10.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>48.355</td><td>0.555</td><td>0.0</td><td>11.1</td><td>O K</td></tr><tr><td>960 min Summer</td><td>48.361</td><td>0.561</td><td>0.0</td><td>11.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>48.358</td><td>0.558</td><td>0.0</td><td>11.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>48.340</td><td>0.540</td><td>0.0</td><td>10.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>48.319</td><td>0.519</td><td>0.0</td><td>10.3</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>48.286</td><td>0.486</td><td>0.0</td><td>9.7</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>48.267</td><td>0.467</td><td>0.0</td><td>9.3</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>48.258</td><td>0.458</td><td>0.0</td><td>9.1</td><td>O K</td></tr><tr><td>8640 min 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Summer	48.053	0.253	0.0	5.1	O K	60 min Summer	48.108	0.308	0.0	6.2	O K	120 min Summer	48.191	0.391	0.0	7.8	O K	180 min Summer	48.240	0.440	0.0	8.8	O K	240 min Summer	48.273	0.473	0.0	9.4	O K	360 min Summer	48.313	0.513	0.0	10.2	O K	480 min Summer	48.335	0.535	0.0	10.7	O K	600 min Summer	48.347	0.547	0.0	10.9	O K	720 min Summer	48.355	0.555	0.0	11.1	O K	960 min Summer	48.361	0.561	0.0	11.2	O K	1440 min Summer	48.358	0.558	0.0	11.1	O K	2160 min Summer	48.340	0.540	0.0	10.8	O K	2880 min Summer	48.319	0.519	0.0	10.3	O K	4320 min Summer	48.286	0.486	0.0	9.7	O K	5760 min Summer	48.267	0.467	0.0	9.3	O K	7200 min Summer	48.258	0.458	0.0	9.1	O K	8640 min Summer	48.255	0.455	0.0	9.1	O K	10080 min Summer	48.255	0.455	0.0	9.1	O K	15 min Winter	48.022	0.222	0.0	4.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	141.038	0.0	20	30 min Summer	90.562	0.0	35	60 min Summer	55.333	0.0	66	120 min Summer	35.366	0.0	126	180 min Summer	26.702	0.0	186	240 min Summer	21.648	0.0	244	360 min Summer	15.835	0.0	364	480 min Summer	12.525	0.0	484	600 min Summer	10.380	0.0	604	720 min Summer	8.874	0.0	724	960 min Summer	6.891	0.0	964	1440 min Summer	4.793	0.0	1442	2160 min Summer	3.329	0.0	2160	2880 min Summer	2.581	0.0	2880	4320 min Summer	1.835	0.0	3628	5760 min Summer	1.461	0.0	4328	7200 min Summer	1.242	0.0	5120	8640 min Summer	1.098	0.0	5968	10080 min Summer	0.997	0.0	6856	15 min Winter	141.038	0.0	20
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SDP Consulting Engineers					Page 2	
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT			GREEN LANE ASHWELL SOAKAWAY No. 05			
Date 15/07/2024 15:31 File SA 05.SRCX			Designed by NJ Checked by			
Innovyze			Source Control 2020.1			
Summary of Results for 100 year Return Period (+40%)						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	
30 min Winter	48.084	0.284	0.0	5.7	O K	
60 min Winter	48.146	0.346	0.0	6.9	O K	
120 min Winter	48.239	0.439	0.0	8.8	O K	
180 min Winter	48.295	0.495	0.0	9.9	O K	
240 min Winter	48.332	0.532	0.0	10.6	O K	
360 min Winter	48.377	0.577	0.0	11.5	O K	
480 min Winter	48.403	0.603	0.0	12.0	O K	
600 min Winter	48.418	0.618	0.0	12.3	O K	
720 min Winter	48.427	0.627	0.0	12.5	O K	
960 min Winter	48.436	0.636	0.0	12.7	O K	
1440 min Winter	48.436	0.636	0.0	12.7	O K	
2160 min Winter	48.422	0.622	0.0	12.4	O K	
2880 min Winter	48.404	0.604	0.0	12.0	O K	
4320 min Winter	48.371	0.571	0.0	11.4	O K	
5760 min Winter	48.345	0.545	0.0	10.9	O K	
7200 min Winter	48.333	0.533	0.0	10.6	O K	
8640 min Winter	48.326	0.526	0.0	10.5	O K	
10080 min Winter	48.322	0.522	0.0	10.4	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	90.562	0.0	35			
60 min Winter	55.333	0.0	66			
120 min Winter	35.366	0.0	124			
180 min Winter	26.702	0.0	184			
240 min Winter	21.648	0.0	242			
360 min Winter	15.835	0.0	360			
480 min Winter	12.525	0.0	480			
600 min Winter	10.380	0.0	598			
720 min Winter	8.874	0.0	716			
960 min Winter	6.891	0.0	952			
1440 min Winter	4.793	0.0	1416			
2160 min Winter	3.329	0.0	2116			
2880 min Winter	2.581	0.0	2792			
4320 min Winter	1.835	0.0	4064			
5760 min Winter	1.461	0.0	4664			
7200 min Winter	1.242	0.0	5552			
8640 min Winter	1.098	0.0	6488			
10080 min Winter	0.997	0.0	7456			
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GREEN LANE
ASHWELL
SOAKAWAY No. 05

Designed by NJ
Checked by



Source Control 2020.1

Rainfall Model	FEH
Return Period (years)	100
FEH Rainfall Version	2013
Site Location	GB 527302 240079 TL 27302 40079
Data Type	Point
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

0 5 0.015

SDP Consulting Engineers		Page 4																		
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 05																			
Date 15/07/2024 15:31 File SA 05.SRCX	Designed by NJ Checked by																			
Innovyze																				
Source Control 2020.1																				
Model Details Storage is Online Cover Level (m) 49.500 Cellular Storage Structure Invert Level (m) 47.800 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00821 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00821 <table><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>21.0</td><td>21.0</td><td>1.201</td><td>0.0</td><td>21.0</td></tr><tr><td>1.200</td><td>21.0</td><td>21.0</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	21.0	21.0	1.201	0.0	21.0	1.200	21.0	21.0			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	21.0	21.0	1.201	0.0	21.0															
1.200	21.0	21.0																		
©1982-2020 Innovyze																				

SOAKAWAY No. 06

SDP Consulting Engineers				Page 1																																																																																																																																																																																																																			
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 4098 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>47.985</td><td>0.185</td><td>0.0</td><td>2.6</td><td>O K</td></tr><tr><td>30 min Summer</td><td>48.036</td><td>0.236</td><td>0.0</td><td>3.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>48.088</td><td>0.288</td><td>0.0</td><td>4.1</td><td>O K</td></tr><tr><td>120 min Summer</td><td>48.165</td><td>0.365</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>180 min Summer</td><td>48.210</td><td>0.410</td><td>0.0</td><td>5.8</td><td>O K</td></tr><tr><td>240 min Summer</td><td>48.241</td><td>0.441</td><td>0.0</td><td>6.3</td><td>O K</td></tr><tr><td>360 min Summer</td><td>48.278</td><td>0.478</td><td>0.0</td><td>6.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>48.297</td><td>0.497</td><td>0.0</td><td>7.1</td><td>O K</td></tr><tr><td>600 min Summer</td><td>48.309</td><td>0.509</td><td>0.0</td><td>7.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>48.315</td><td>0.515</td><td>0.0</td><td>7.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>48.320</td><td>0.520</td><td>0.0</td><td>7.4</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>48.315</td><td>0.515</td><td>0.0</td><td>7.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>48.296</td><td>0.496</td><td>0.0</td><td>7.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>48.274</td><td>0.474</td><td>0.0</td><td>6.8</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>48.243</td><td>0.443</td><td>0.0</td><td>6.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>48.225</td><td>0.425</td><td>0.0</td><td>6.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>48.216</td><td>0.416</td><td>0.0</td><td>5.9</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>48.211</td><td>0.411</td><td>0.0</td><td>5.9</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>48.210</td><td>0.410</td><td>0.0</td><td>5.8</td><td>O K</td></tr><tr><td>15 min Winter</td><td>48.007</td><td>0.207</td><td>0.0</td><td>2.9</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>141.038</td><td>0.0</td><td>20</td></tr><tr><td>30 min Summer</td><td>90.562</td><td>0.0</td><td>35</td></tr><tr><td>60 min Summer</td><td>55.333</td><td>0.0</td><td>66</td></tr><tr><td>120 min Summer</td><td>35.366</td><td>0.0</td><td>126</td></tr><tr><td>180 min Summer</td><td>26.702</td><td>0.0</td><td>186</td></tr><tr><td>240 min Summer</td><td>21.648</td><td>0.0</td><td>244</td></tr><tr><td>360 min Summer</td><td>15.835</td><td>0.0</td><td>364</td></tr><tr><td>480 min Summer</td><td>12.525</td><td>0.0</td><td>484</td></tr><tr><td>600 min Summer</td><td>10.380</td><td>0.0</td><td>604</td></tr><tr><td>720 min Summer</td><td>8.874</td><td>0.0</td><td>724</td></tr><tr><td>960 min Summer</td><td>6.891</td><td>0.0</td><td>964</td></tr><tr><td>1440 min Summer</td><td>4.793</td><td>0.0</td><td>1442</td></tr><tr><td>2160 min Summer</td><td>3.329</td><td>0.0</td><td>2160</td></tr><tr><td>2880 min Summer</td><td>2.581</td><td>0.0</td><td>2880</td></tr><tr><td>4320 min Summer</td><td>1.835</td><td>0.0</td><td>3500</td></tr><tr><td>5760 min Summer</td><td>1.461</td><td>0.0</td><td>4216</td></tr><tr><td>7200 min Summer</td><td>1.242</td><td>0.0</td><td>5040</td></tr><tr><td>8640 min Summer</td><td>1.098</td><td>0.0</td><td>5880</td></tr><tr><td>10080 min Summer</td><td>0.997</td><td>0.0</td><td>6752</td></tr><tr><td>15 min Winter</td><td>141.038</td><td>0.0</td><td>20</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	47.985	0.185	0.0	2.6	O K	30 min Summer	48.036	0.236	0.0	3.4	O K	60 min Summer	48.088	0.288	0.0	4.1	O K	120 min Summer	48.165	0.365	0.0	5.2	O K	180 min Summer	48.210	0.410	0.0	5.8	O K	240 min Summer	48.241	0.441	0.0	6.3	O K	360 min Summer	48.278	0.478	0.0	6.8	O K	480 min Summer	48.297	0.497	0.0	7.1	O K	600 min Summer	48.309	0.509	0.0	7.2	O K	720 min Summer	48.315	0.515	0.0	7.3	O K	960 min Summer	48.320	0.520	0.0	7.4	O K	1440 min Summer	48.315	0.515	0.0	7.3	O K	2160 min Summer	48.296	0.496	0.0	7.1	O K	2880 min Summer	48.274	0.474	0.0	6.8	O K	4320 min Summer	48.243	0.443	0.0	6.3	O K	5760 min Summer	48.225	0.425	0.0	6.1	O K	7200 min Summer	48.216	0.416	0.0	5.9	O K	8640 min Summer	48.211	0.411	0.0	5.9	O K	10080 min Summer	48.210	0.410	0.0	5.8	O K	15 min Winter	48.007	0.207	0.0	2.9	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	141.038	0.0	20	30 min Summer	90.562	0.0	35	60 min Summer	55.333	0.0	66	120 min Summer	35.366	0.0	126	180 min Summer	26.702	0.0	186	240 min Summer	21.648	0.0	244	360 min Summer	15.835	0.0	364	480 min Summer	12.525	0.0	484	600 min Summer	10.380	0.0	604	720 min Summer	8.874	0.0	724	960 min Summer	6.891	0.0	964	1440 min Summer	4.793	0.0	1442	2160 min Summer	3.329	0.0	2160	2880 min Summer	2.581	0.0	2880	4320 min Summer	1.835	0.0	3500	5760 min Summer	1.461	0.0	4216	7200 min Summer	1.242	0.0	5040	8640 min Summer	1.098	0.0	5880	10080 min Summer	0.997	0.0	6752	15 min Winter	141.038	0.0	20
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SDP Consulting Engineers					Page 2	
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT			GREEN LANE ASHWELL SOAKAWAY No. 06			
Date 15/07/2024 15:35 File SA 06.SRCX			Designed by NJ Checked by			
Innovyze			Source Control 2020.1			
Summary of Results for 100 year Return Period (+40%)						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	
30 min Winter	48.065	0.265	0.0	3.8	O K	
60 min Winter	48.122	0.322	0.0	4.6	O K	
120 min Winter	48.210	0.410	0.0	5.8	O K	
180 min Winter	48.261	0.461	0.0	6.6	O K	
240 min Winter	48.296	0.496	0.0	7.1	O K	
360 min Winter	48.338	0.538	0.0	7.7	O K	
480 min Winter	48.361	0.561	0.0	8.0	O K	
600 min Winter	48.374	0.574	0.0	8.2	O K	
720 min Winter	48.383	0.583	0.0	8.3	O K	
960 min Winter	48.390	0.590	0.0	8.4	O K	
1440 min Winter	48.388	0.588	0.0	8.4	O K	
2160 min Winter	48.373	0.573	0.0	8.2	O K	
2880 min Winter	48.354	0.554	0.0	7.9	O K	
4320 min Winter	48.319	0.519	0.0	7.4	O K	
5760 min Winter	48.295	0.495	0.0	7.1	O K	
7200 min Winter	48.281	0.481	0.0	6.9	O K	
8640 min Winter	48.272	0.472	0.0	6.7	O K	
10080 min Winter	48.267	0.467	0.0	6.7	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	90.562	0.0	35			
60 min Winter	55.333	0.0	66			
120 min Winter	35.366	0.0	124			
180 min Winter	26.702	0.0	182			
240 min Winter	21.648	0.0	242			
360 min Winter	15.835	0.0	360			
480 min Winter	12.525	0.0	480			
600 min Winter	10.380	0.0	598			
720 min Winter	8.874	0.0	716			
960 min Winter	6.891	0.0	952			
1440 min Winter	4.793	0.0	1414			
2160 min Winter	3.329	0.0	2100			
2880 min Winter	2.581	0.0	2768			
4320 min Winter	1.835	0.0	4020			
5760 min Winter	1.461	0.0	4552			
7200 min Winter	1.242	0.0	5472			
8640 min Winter	1.098	0.0	6400			
10080 min Winter	0.997	0.0	7360			
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SDP Consulting Engineers		Page 4																		
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 06																			
Date 15/07/2024 15:35 File SA 06.SRCX	Designed by NJ Checked by																			
Innovyze																				
Source Control 2020.1																				
Model Details Storage is Online Cover Level (m) 49.500 Cellular Storage Structure Invert Level (m) 47.800 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00821 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00821 <table><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>15.0</td><td>15.0</td><td>1.201</td><td>0.0</td><td>15.0</td></tr><tr><td>1.200</td><td>15.0</td><td>15.0</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	15.0	15.0	1.201	0.0	15.0	1.200	15.0	15.0			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	15.0	15.0	1.201	0.0	15.0															
1.200	15.0	15.0																		
©1982-2020 Innovyze																				

SOAKAWAY No. 07

SDP Consulting Engineers				Page 1	
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 07			
Date 15/07/2024 15:37 File SA 07.SRCX		Designed by NJ Checked by			
Innovyze		Source Control 2020.1			
<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time exceeds 7 days. Outflow is too low. Design is unsatisfactory.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	48.303	0.253	0.0	6.6	O K
30 min Summer	48.392	0.342	0.0	8.9	O K
60 min Summer	48.480	0.430	0.0	11.2	O K
120 min Summer	48.614	0.564	0.0	14.7	O K
180 min Summer	48.695	0.645	0.0	16.9	O K
240 min Summer	48.750	0.700	0.0	18.3	O K
360 min Summer	48.819	0.769	0.0	20.1	O K
480 min Summer	48.899	0.849	0.0	21.2	O K
600 min Summer	48.945	0.895	0.0	21.9	O K
720 min Summer	48.966	0.916	0.0	22.3	O K
960 min Summer	48.988	0.938	0.0	22.9	O K
1440 min Summer	49.005	0.955	0.0	23.5	O K
2160 min Summer	49.013	0.963	0.0	23.7	O K
2880 min Summer	49.016	0.966	0.0	23.8	O K
4320 min Summer	49.022	0.972	0.0	24.1	O K
5760 min Summer	49.028	0.978	0.0	24.3	O K
7200 min Summer	49.038	0.988	0.0	24.6	O K
8640 min Summer	49.048	0.998	0.0	25.1	O K
10080 min Summer	49.061	1.011	0.0	25.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer	141.038	0.0	25		
30 min Summer	90.562	0.0	40		
60 min Summer	55.333	0.0	70		
120 min Summer	35.366	0.0	130		
180 min Summer	26.702	0.0	190		
240 min Summer	21.648	0.0	250		
360 min Summer	15.835	0.0	370		
480 min Summer	12.525	0.0	490		
600 min Summer	10.380	0.0	610		
720 min Summer	8.874	0.0	730		
960 min Summer	6.891	0.0	970		
1440 min Summer	4.793	0.0	1450		
2160 min Summer	3.329	0.0	2168		
2880 min Summer	2.581	0.0	2888		
4320 min Summer	1.835	0.0	4328		
5760 min Summer	1.461	0.0	5760		
7200 min Summer	1.242	0.0	7200		
8640 min Summer	1.098	0.0	8640		
10080 min Summer	0.997	0.0	9576		
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Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 07				
Date 15/07/2024 15:37 File SA 07.SRCX		Designed by NJ Checked by				
Innovyze		Source Control 2020.1				
<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	
15 min Winter	48.341	0.291	0.0	7.6	O K	
30 min Winter	48.440	0.390	0.0	10.2	O K	
60 min Winter	48.539	0.489	0.0	12.8	O K	
120 min Winter	48.690	0.640	0.0	16.7	O K	
180 min Winter	48.780	0.730	0.0	19.1	O K	
240 min Winter	48.842	0.792	0.0	20.7	O K	
360 min Winter	48.982	0.932	0.0	22.7	O K	
480 min Winter	49.019	0.969	0.0	24.0	O K	
600 min Winter	49.040	0.990	0.0	24.7	O K	
720 min Winter	49.053	1.003	0.0	25.3	O K	
960 min Winter	49.069	1.019	0.0	26.0	O K	
1440 min Winter	49.083	1.033	0.0	26.7	O K	
2160 min Winter	49.091	1.041	0.0	27.1	O K	
2880 min Winter	49.095	1.045	0.0	27.3	O K	
4320 min Winter	49.104	1.054	0.0	27.7	O K	
5760 min Winter	49.112	1.062	0.0	28.2	O K	
7200 min Winter	49.123	1.073	0.0	28.8	O K	
8640 min Winter	49.135	1.085	0.0	29.5	O K	
10080 min Winter	49.148	1.098	0.0	30.3	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
15 min Winter	141.038	0.0	25			
30 min Winter	90.562	0.0	40			
60 min Winter	55.333	0.0	70			
120 min Winter	35.366	0.0	130			
180 min Winter	26.702	0.0	188			
240 min Winter	21.648	0.0	248			
360 min Winter	15.835	0.0	368			
480 min Winter	12.525	0.0	486			
600 min Winter	10.380	0.0	604			
720 min Winter	8.874	0.0	724			
960 min Winter	6.891	0.0	960			
1440 min Winter	4.793	0.0	1434			
2160 min Winter	3.329	0.0	2144			
2880 min Winter	2.581	0.0	2856			
4320 min Winter	1.835	0.0	4240			
5760 min Winter	1.461	0.0	5608			
7200 min Winter	1.242	0.0	6992			
8640 min Winter	1.098	0.0	8304			
10080 min Winter	0.997	0.0	9680			
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Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 07	
Date 15/07/2024 15:37 File SA 07.SRCX	Designed by NJ Checked by	
Innovyze Source Control 2020.1		
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SDP Consulting Engineers		Page 4																																										
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 07																																											
Date 15/07/2024 15:37 File SA 07.SRCX	Designed by NJ Checked by																																											
Innovyze																																												
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<u>Model Details</u> Storage is Online Cover Level (m) 49.300 <u>Complex Structure</u> <u>Cellular Storage</u> Invert Level (m) 48.050 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00303 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00303 <table><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><tr><td>0.000</td><td>27.5</td><td>27.5</td><td>0.801</td><td>0.0</td><td>27.5</td></tr><tr><td>0.800</td><td>27.5</td><td>27.5</td><td></td><td></td><td></td></tr></table> <u>Porous Car Park</u> <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.00000</td><td>Width (m)</td><td>11.8</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>26.5</td></tr><tr><td>Max Percolation (l/s)</td><td>86.9</td><td>Slope (1:X)</td><td>60.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>48.850</td><td>Membrane Depth (m)</td><td>80</td></tr></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	27.5	27.5	0.801	0.0	27.5	0.800	27.5	27.5				Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	11.8	Membrane Percolation (mm/hr)	1000	Length (m)	26.5	Max Percolation (l/s)	86.9	Slope (1:X)	60.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	48.850	Membrane Depth (m)	80
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SOAKAWAY No. 08

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Date 15/07/2024 15:44 File SA 08.SRCX		Designed by NJ Checked by			
Innovyze		Source Control 2020.1			
<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	48.443	0.393	0.0	3.7	O K
60 min Winter	48.565	0.515	0.0	4.9	O K
120 min Winter	48.751	0.701	0.0	6.7	O K
180 min Winter	48.882	0.832	0.0	7.7	O K
240 min Winter	48.938	0.888	0.0	8.4	O K
360 min Winter	48.977	0.927	0.0	9.3	O K
480 min Winter	48.995	0.945	0.0	9.8	O K
600 min Winter	49.005	0.955	0.0	10.2	O K
720 min Winter	49.011	0.961	0.0	10.4	O K
960 min Winter	49.018	0.968	0.0	10.6	O K
1440 min Winter	49.023	0.973	0.0	10.8	O K
2160 min Winter	49.023	0.973	0.0	10.8	O K
2880 min Winter	49.020	0.970	0.0	10.7	O K
4320 min Winter	49.016	0.966	0.0	10.5	O K
5760 min Winter	49.012	0.962	0.0	10.4	O K
7200 min Winter	49.010	0.960	0.0	10.3	O K
8640 min Winter	49.010	0.960	0.0	10.3	O K
10080 min Winter	49.013	0.963	0.0	10.4	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	90.562	0.0	40		
60 min Winter	55.333	0.0	70		
120 min Winter	35.366	0.0	130		
180 min Winter	26.702	0.0	188		
240 min Winter	21.648	0.0	248		
360 min Winter	15.835	0.0	366		
480 min Winter	12.525	0.0	486		
600 min Winter	10.380	0.0	604		
720 min Winter	8.874	0.0	722		
960 min Winter	6.891	0.0	958		
1440 min Winter	4.793	0.0	1432		
2160 min Winter	3.329	0.0	2128		
2880 min Winter	2.581	0.0	2828		
4320 min Winter	1.835	0.0	4196		
5760 min Winter	1.461	0.0	5528		
7200 min Winter	1.242	0.0	6776		
8640 min Winter	1.098	0.0	7960		
10080 min Winter	0.997	0.0	8176		
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SOAKAWAY No. 09

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Design is unsatisfactory. <table><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><tr><td>15 min Summer</td><td>48.318</td><td>0.268</td><td>0.0</td><td>3.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>48.431</td><td>0.381</td><td>0.0</td><td>4.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>48.543</td><td>0.493</td><td>0.0</td><td>5.9</td><td>O K</td></tr><tr><td>120 min Summer</td><td>48.714</td><td>0.664</td><td>0.0</td><td>7.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>48.816</td><td>0.766</td><td>0.0</td><td>9.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>48.912</td><td>0.862</td><td>0.0</td><td>9.9</td><td>O K</td></tr><tr><td>360 min Summer</td><td>48.967</td><td>0.917</td><td>0.0</td><td>11.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>48.989</td><td>0.939</td><td>0.0</td><td>11.5</td><td>O K</td></tr><tr><td>600 min 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Summer	49.001	0.951	0.0	11.9	O K	720 min Summer	49.009	0.959	0.0	12.2	O K	960 min Summer	49.018	0.968	0.0	12.5	O K	1440 min Summer	49.024	0.974	0.0	12.7	O K	2160 min Summer	49.025	0.975	0.0	12.7	O K	2880 min Summer	49.023	0.973	0.0	12.7	O K	4320 min Summer	49.019	0.969	0.0	12.6	O K	5760 min Summer	49.016	0.966	0.0	12.4	O K	7200 min Summer	49.016	0.966	0.0	12.4	O K	8640 min Summer	49.019	0.969	0.0	12.5	O K	10080 min Summer	49.025	0.975	0.0	12.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	141.038	0.0	25	30 min Summer	90.562	0.0	40	60 min Summer	55.333	0.0	70	120 min Summer	35.366	0.0	130	180 min Summer	26.702	0.0	190	240 min Summer	21.648	0.0	250	360 min Summer	15.835	0.0	370	480 min Summer	12.525	0.0	490	600 min Summer	10.380	0.0	610	720 min Summer	8.874	0.0	730	960 min Summer	6.891	0.0	970	1440 min Summer	4.793	0.0	1450	2160 min Summer	3.329	0.0	2168	2880 min Summer	2.581	0.0	2888	4320 min Summer	1.835	0.0	4328	5760 min Summer	1.461	0.0	5760	7200 min Summer	1.242	0.0	6848	8640 min Summer	1.098	0.0	7448	10080 min Summer	0.997	0.0	8280
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SDP Consulting Engineers				Page 2	
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 09			
Date 15/07/2024 15:47 File SA 09.SRCX		Designed by NJ Checked by			
Innovyze		Source Control 2020.1			
<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
15 min Winter	48.366	0.316	0.0	3.8	O K
30 min Winter	48.493	0.443	0.0	5.3	O K
60 min Winter	48.618	0.568	0.0	6.7	O K
120 min Winter	48.810	0.760	0.0	9.0	O K
180 min Winter	48.941	0.891	0.0	10.4	O K
240 min Winter	48.981	0.931	0.0	11.3	O K
360 min Winter	49.018	0.968	0.0	12.5	O K
480 min Winter	49.036	0.986	0.0	13.2	O K
600 min Winter	49.047	0.997	0.0	13.6	O K
720 min Winter	49.054	1.004	0.0	13.9	O K
960 min Winter	49.062	1.012	0.0	14.3	O K
1440 min Winter	49.069	1.019	0.0	14.6	O K
2160 min Winter	49.071	1.021	0.0	14.7	O K
2880 min Winter	49.071	1.021	0.0	14.7	O K
4320 min Winter	49.071	1.021	0.0	14.7	O K
5760 min Winter	49.072	1.022	0.0	14.8	O K
7200 min Winter	49.075	1.025	0.0	14.9	O K
8640 min Winter	49.079	1.029	0.0	15.1	O K
10080 min Winter	49.085	1.035	0.0	15.4	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Winter	141.038	0.0	25		
30 min Winter	90.562	0.0	40		
60 min Winter	55.333	0.0	70		
120 min Winter	35.366	0.0	130		
180 min Winter	26.702	0.0	188		
240 min Winter	21.648	0.0	248		
360 min Winter	15.835	0.0	368		
480 min Winter	12.525	0.0	486		
600 min Winter	10.380	0.0	604		
720 min Winter	8.874	0.0	722		
960 min Winter	6.891	0.0	960		
1440 min Winter	4.793	0.0	1434		
2160 min Winter	3.329	0.0	2144		
2880 min Winter	2.581	0.0	2832		
4320 min Winter	1.835	0.0	4204		
5760 min Winter	1.461	0.0	5584		
7200 min Winter	1.242	0.0	6912		
8640 min Winter	1.098	0.0	8216		
10080 min Winter	0.997	0.0	9480		
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SDP Consulting Engineers		Page 3
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 09	
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SDP Consulting Engineers		Page 4																		
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 09																			
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Model Details Storage is Online Cover Level (m) 49.300 Complex Structure Cellular Storage Invert Level (m) 48.050 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00303 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00303 <table><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>12.5</td><td>12.5</td><td>0.801</td><td>0.0</td><td>12.5</td></tr><tr><td>0.800</td><td>12.5</td><td>12.5</td><td></td><td></td><td></td></tr></tbody></table> Porous Car Park Infiltration Coefficient Base (m/hr) 0.00000 Width (m) 11.8 Membrane Percolation (mm/hr) 1000 Length (m) 26.5 Max Percolation (l/s) 86.9 Slope (1:X) 60.0 Safety Factor 2.0 Depression Storage (mm) 5 Porosity 0.30 Evaporation (mm/day) 3 Invert Level (m) 48.850 Membrane Depth (m) 80			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	12.5	12.5	0.801	0.0	12.5	0.800	12.5	12.5			
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0.000	12.5	12.5	0.801	0.0	12.5															
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SOAKAWAY No. 10

SDP Consulting Engineers				Page 1																																																																																																																																																																																																																			
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Summer</td><td>48.949</td><td>0.899</td><td>0.0</td><td>5.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>48.957</td><td>0.907</td><td>0.0</td><td>5.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>48.962</td><td>0.912</td><td>0.0</td><td>5.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>48.966</td><td>0.916</td><td>0.0</td><td>6.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>48.966</td><td>0.916</td><td>0.0</td><td>6.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>48.959</td><td>0.909</td><td>0.0</td><td>5.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>48.949</td><td>0.899</td><td>0.0</td><td>5.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>48.926</td><td>0.876</td><td>0.0</td><td>5.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>48.904</td><td>0.854</td><td>0.0</td><td>4.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>48.893</td><td>0.843</td><td>0.0</td><td>4.8</td><td>O K</td></tr><tr><td>8640 min 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min Summer</td><td>10.380</td><td>0.0</td><td>610</td></tr><tr><td>720 min Summer</td><td>8.874</td><td>0.0</td><td>730</td></tr><tr><td>960 min Summer</td><td>6.891</td><td>0.0</td><td>970</td></tr><tr><td>1440 min Summer</td><td>4.793</td><td>0.0</td><td>1448</td></tr><tr><td>2160 min Summer</td><td>3.329</td><td>0.0</td><td>2168</td></tr><tr><td>2880 min Summer</td><td>2.581</td><td>0.0</td><td>2888</td></tr><tr><td>4320 min Summer</td><td>1.835</td><td>0.0</td><td>4032</td></tr><tr><td>5760 min Summer</td><td>1.461</td><td>0.0</td><td>4720</td></tr><tr><td>7200 min Summer</td><td>1.242</td><td>0.0</td><td>5472</td></tr><tr><td>8640 min Summer</td><td>1.098</td><td>0.0</td><td>6232</td></tr><tr><td>10080 min Summer</td><td>0.997</td><td>0.0</td><td>7072</td></tr><tr><td>15 min Winter</td><td>141.038</td><td>0.0</td><td>25</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	48.237	0.187	0.0	1.1	O K	30 min Summer	48.367	0.317	0.0	1.8	O K	60 min Summer	48.496	0.446	0.0	2.5	O K	120 min Summer	48.691	0.641	0.0	3.7	O K	180 min Summer	48.806	0.756	0.0	4.3	O K	240 min Summer	48.892	0.842	0.0	4.8	O K	360 min Summer	48.933	0.883	0.0	5.3	O K	480 min Summer	48.949	0.899	0.0	5.6	O K	600 min Summer	48.957	0.907	0.0	5.8	O K	720 min Summer	48.962	0.912	0.0	5.9	O K	960 min Summer	48.966	0.916	0.0	6.0	O K	1440 min Summer	48.966	0.916	0.0	6.0	O K	2160 min Summer	48.959	0.909	0.0	5.8	O K	2880 min Summer	48.949	0.899	0.0	5.6	O K	4320 min Summer	48.926	0.876	0.0	5.2	O K	5760 min Summer	48.904	0.854	0.0	4.9	O K	7200 min Summer	48.893	0.843	0.0	4.8	O K	8640 min Summer	48.892	0.842	0.0	4.7	O K	10080 min Summer	48.897	0.847	0.0	4.8	O K	15 min Winter	48.293	0.243	0.0	1.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	141.038	0.0	25	30 min Summer	90.562	0.0	40	60 min Summer	55.333	0.0	70	120 min Summer	35.366	0.0	130	180 min Summer	26.702	0.0	190	240 min Summer	21.648	0.0	250	360 min Summer	15.835	0.0	370	480 min Summer	12.525	0.0	490	600 min Summer	10.380	0.0	610	720 min Summer	8.874	0.0	730	960 min Summer	6.891	0.0	970	1440 min Summer	4.793	0.0	1448	2160 min Summer	3.329	0.0	2168	2880 min Summer	2.581	0.0	2888	4320 min Summer	1.835	0.0	4032	5760 min Summer	1.461	0.0	4720	7200 min Summer	1.242	0.0	5472	8640 min Summer	1.098	0.0	6232	10080 min Summer	0.997	0.0	7072	15 min Winter	141.038	0.0	25
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180 min Summer	48.806	0.756	0.0	4.3	O K																																																																																																																																																																																																																		
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SDP Consulting Engineers				Page 2	
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT		GREEN LANE ASHWELL SOAKAWAY No. 10			
Date 15/07/2024 15:48 File SA 10.SRCX		Designed by NJ Checked by			
Innovyze		Source Control 2020.1			
<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	48.439	0.389	0.0	2.2	O K
60 min Winter	48.583	0.533	0.0	3.0	O K
120 min Winter	48.802	0.752	0.0	4.3	O K
180 min Winter	48.916	0.866	0.0	5.0	O K
240 min Winter	48.946	0.896	0.0	5.5	O K
360 min Winter	48.972	0.922	0.0	6.1	O K
480 min Winter	48.985	0.935	0.0	6.5	O K
600 min Winter	48.992	0.942	0.0	6.7	O K
720 min Winter	48.997	0.947	0.0	6.8	O K
960 min Winter	49.001	0.951	0.0	7.0	O K
1440 min Winter	49.003	0.953	0.0	7.0	O K
2160 min Winter	48.999	0.949	0.0	6.9	O K
2880 min Winter	48.993	0.943	0.0	6.7	O K
4320 min Winter	48.983	0.933	0.0	6.4	O K
5760 min Winter	48.972	0.922	0.0	6.1	O K
7200 min Winter	48.964	0.914	0.0	6.0	O K
8640 min Winter	48.961	0.911	0.0	5.9	O K
10080 min Winter	48.962	0.912	0.0	5.9	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	90.562	0.0	40		
60 min Winter	55.333	0.0	70		
120 min Winter	35.366	0.0	130		
180 min Winter	26.702	0.0	188		
240 min Winter	21.648	0.0	248		
360 min Winter	15.835	0.0	366		
480 min Winter	12.525	0.0	486		
600 min Winter	10.380	0.0	604		
720 min Winter	8.874	0.0	722		
960 min Winter	6.891	0.0	958		
1440 min Winter	4.793	0.0	1430		
2160 min Winter	3.329	0.0	2124		
2880 min Winter	2.581	0.0	2804		
4320 min Winter	1.835	0.0	4152		
5760 min Winter	1.461	0.0	5408		
7200 min Winter	1.242	0.0	5848		
8640 min Winter	1.098	0.0	6744		
10080 min Winter	0.997	0.0	7672		
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SDP Consulting Engineers		Page 3
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 10	
Date 15/07/2024 15:48 File SA 10.SRCX	Designed by NJ Checked by	
Innovyze Source Control 2020.1		

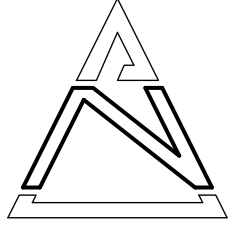
SDP Consulting Engineers		Page 4																		
Suite 3, Salar House 61 Campfield Road St Albans AL1 5HT	GREEN LANE ASHWELL SOAKAWAY No. 10																			
Date 15/07/2024 15:48 File SA 10.SRCX	Designed by NJ Checked by																			
Innovyze	Source Control 2020.1																			
Model Details Storage is Online Cover Level (m) 49.300 Complex Structure Cellular Storage Invert Level (m) 48.050 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00303 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00303 <table><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>6.0</td><td>6.0</td><td>0.801</td><td>0.0</td><td>6.0</td></tr><tr><td>0.800</td><td>6.0</td><td>6.0</td><td></td><td></td><td></td></tr></tbody></table> Porous Car Park Infiltration Coefficient Base (m/hr) 0.00000 Width (m) 11.8 Membrane Percolation (mm/hr) 1000 Length (m) 26.5 Max Percolation (l/s) 86.9 Slope (1:X) 60.0 Safety Factor 2.0 Depression Storage (mm) 5 Porosity 0.30 Evaporation (mm/day) 3 Invert Level (m) 48.850 Membrane Depth (m) 80			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	6.0	6.0	0.801	0.0	6.0	0.800	6.0	6.0			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	6.0	6.0	0.801	0.0	6.0															
0.800	6.0	6.0																		
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DRAINED AREAS PLAN



NOTES

SDP NO. E21-011



INDICATIVE ONLY

THIS DRAWING HAS BEEN PRODUCED FOR PLANNING PURPOSES ONLY. IT WILL BE NECESSARY TO MAKE AMENDMENTS DURING DETAILED DESIGN.

P1	12.07.24	ISSUED FOR PLANNING.	NJ	-
REV	DATE	DESCRIPTION	BY	CHK
STATUS				
PLANNING				
This drawing is the property and copyright of the Consulting Engineer and shall not without written consent be communicated to a third party.				
CLIENT				
OSPREY HOMES LTD				
SITE				
GREEN LANE ASHWELL				
TITLE				
Drained Areas Plan				
SDP CONSULTING ENGINEERS Head Office, Suite 3, Salar House, Campfield Road, St Albans, Hertfordshire, AL1 5HT Tel. 01727 844606 Email. mail@sdpce.co.uk Southern Office, 21a Bargates, Christchurch, Dorset. BH23 1QD. Tel. 01727 844606 Email. sdpsouth@sdpce.co.uk				
SCALE AT A1		DRAWN	DATE	
1:200		NJ	JUL 24	
DRAWING NO.		CHECKED	PASSED	
E21-011-1001				
		REV.		
			P1	