

AEA - Ambiental		Page 1																																																																																																																																																																																														
Science Park Square Brighton East Sussex	3611_SaltEarth_WestSussex Salt Earth Ltd SuDS P.P (0.064ha)																																																																																																																																																																																															
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<u>Summary of Results for 100 year Return Period (+40%)</u> Half Drain Time : 20 minutes. <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>6.196</td><td>0.096</td><td>6.3</td><td>9.8</td><td>O K</td></tr><tr><td>30 min Summer</td><td>6.218</td><td>0.118</td><td>6.3</td><td>12.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>6.227</td><td>0.127</td><td>6.3</td><td>13.0</td><td>O K</td></tr><tr><td>120 min Summer</td><td>6.213</td><td>0.113</td><td>6.3</td><td>11.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>6.193</td><td>0.093</td><td>6.3</td><td>9.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>6.175</td><td>0.075</td><td>6.3</td><td>7.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>6.152</td><td>0.052</td><td>6.3</td><td>5.3</td><td>O K</td></tr><tr><td>480 min Summer</td><td>6.143</td><td>0.043</td><td>5.5</td><td>4.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>6.138</td><td>0.038</td><td>4.8</td><td>3.9</td><td>O K</td></tr><tr><td>720 min Summer</td><td>6.133</td><td>0.033</td><td>4.2</td><td>3.4</td><td>O K</td></tr><tr><td>960 min Summer</td><td>6.127</td><td>0.027</td><td>3.4</td><td>2.8</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>6.121</td><td>0.021</td><td>2.6</td><td>2.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>6.115</td><td>0.015</td><td>1.9</td><td>1.5</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>6.112</td><td>0.012</td><td>1.5</td><td>1.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>6.109</td><td>0.009</td><td>1.1</td><td>0.9</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>6.107</td><td>0.007</td><td>0.9</td><td>0.7</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>6.106</td><td>0.006</td><td>0.8</td><td>0.6</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>6.105</td><td>0.005</td><td>0.7</td><td>0.5</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>124.633</td><td>0.0</td><td>15</td></tr><tr><td>30 min Summer</td><td>83.789</td><td>0.0</td><td>24</td></tr><tr><td>60 min Summer</td><td>53.779</td><td>0.0</td><td>42</td></tr><tr><td>120 min Summer</td><td>33.337</td><td>0.0</td><td>76</td></tr><tr><td>180 min Summer</td><td>24.832</td><td>0.0</td><td>108</td></tr><tr><td>240 min Summer</td><td>20.006</td><td>0.0</td><td>136</td></tr><tr><td>360 min Summer</td><td>14.706</td><td>0.0</td><td>192</td></tr><tr><td>480 min Summer</td><td>11.818</td><td>0.0</td><td>250</td></tr><tr><td>600 min Summer</td><td>9.966</td><td>0.0</td><td>310</td></tr><tr><td>720 min Summer</td><td>8.665</td><td>0.0</td><td>370</td></tr><tr><td>960 min Summer</td><td>6.943</td><td>0.0</td><td>492</td></tr><tr><td>1440 min Summer</td><td>5.071</td><td>0.0</td><td>736</td></tr><tr><td>2160 min Summer</td><td>3.696</td><td>0.0</td><td>1100</td></tr><tr><td>2880 min Summer</td><td>2.949</td><td>0.0</td><td>1460</td></tr><tr><td>4320 min Summer</td><td>2.142</td><td>0.0</td><td>2200</td></tr><tr><td>5760 min Summer</td><td>1.705</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>1.427</td><td>0.0</td><td>3640</td></tr><tr><td>8640 min Summer</td><td>1.235</td><td>0.0</td><td>4360</td></tr></table>			Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	6.196	0.096	6.3	9.8	O K	30 min Summer	6.218	0.118	6.3	12.1	O K	60 min Summer	6.227	0.127	6.3	13.0	O K	120 min Summer	6.213	0.113	6.3	11.7	O K	180 min Summer	6.193	0.093	6.3	9.6	O K	240 min Summer	6.175	0.075	6.3	7.7	O K	360 min Summer	6.152	0.052	6.3	5.3	O K	480 min Summer	6.143	0.043	5.5	4.4	O K	600 min Summer	6.138	0.038	4.8	3.9	O K	720 min Summer	6.133	0.033	4.2	3.4	O K	960 min Summer	6.127	0.027	3.4	2.8	O K	1440 min Summer	6.121	0.021	2.6	2.1	O K	2160 min Summer	6.115	0.015	1.9	1.5	O K	2880 min Summer	6.112	0.012	1.5	1.2	O K	4320 min Summer	6.109	0.009	1.1	0.9	O K	5760 min Summer	6.107	0.007	0.9	0.7	O K	7200 min Summer	6.106	0.006	0.8	0.6	O K	8640 min Summer	6.105	0.005	0.7	0.5	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	124.633	0.0	15	30 min Summer	83.789	0.0	24	60 min Summer	53.779	0.0	42	120 min Summer	33.337	0.0	76	180 min Summer	24.832	0.0	108	240 min Summer	20.006	0.0	136	360 min Summer	14.706	0.0	192	480 min Summer	11.818	0.0	250	600 min Summer	9.966	0.0	310	720 min Summer	8.665	0.0	370	960 min Summer	6.943	0.0	492	1440 min Summer	5.071	0.0	736	2160 min Summer	3.696	0.0	1100	2880 min Summer	2.949	0.0	1460	4320 min Summer	2.142	0.0	2200	5760 min Summer	1.705	0.0	2936	7200 min Summer	1.427	0.0	3640	8640 min Summer	1.235	0.0	4360
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XP Solutions		Source Control 2017.1.2				
<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
	10080 min Summer	6.105	0.005	0.6	0.5	O K
	15 min Winter	6.211	0.111	6.3	11.4	O K
	30 min Winter	6.235	0.135	6.3	13.8	O K
	60 min Winter	6.241	0.141	6.3	14.4	O K
	120 min Winter	6.215	0.115	6.3	11.8	O K
	180 min Winter	6.184	0.084	6.3	8.6	O K
	240 min Winter	6.159	0.059	6.3	6.0	O K
	360 min Winter	6.142	0.042	5.3	4.3	O K
	480 min Winter	6.134	0.034	4.3	3.5	O K
	600 min Winter	6.129	0.029	3.7	3.0	O K
	720 min Winter	6.125	0.025	3.2	2.6	O K
	960 min Winter	6.121	0.021	2.6	2.1	O K
	1440 min Winter	6.115	0.015	1.9	1.5	O K
	2160 min Winter	6.111	0.011	1.4	1.1	O K
	2880 min Winter	6.109	0.009	1.1	0.9	O K
	4320 min Winter	6.106	0.006	0.8	0.7	O K
	5760 min Winter	6.105	0.005	0.7	0.5	O K
	7200 min Winter	6.104	0.004	0.5	0.4	O K
	8640 min Winter	6.104	0.004	0.5	0.4	O K
	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
	10080 min Summer	1.093	0.0	5136		
	15 min Winter	124.633	0.0	16		
	30 min Winter	83.789	0.0	26		
	60 min Winter	53.779	0.0	46		
	120 min Winter	33.337	0.0	80		
	180 min Winter	24.832	0.0	112		
	240 min Winter	20.006	0.0	138		
	360 min Winter	14.706	0.0	194		
	480 min Winter	11.818	0.0	252		
	600 min Winter	9.966	0.0	312		
	720 min Winter	8.665	0.0	376		
	960 min Winter	6.943	0.0	496		
	1440 min Winter	5.071	0.0	736		
	2160 min Winter	3.696	0.0	1100		
	2880 min Winter	2.949	0.0	1440		
	4320 min Winter	2.142	0.0	2208		
	5760 min Winter	1.705	0.0	3000		
	7200 min Winter	1.427	0.0	3656		
	8640 min Winter	1.235	0.0	4280		
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XP Solutions		Source Control 2017.1.2			
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (1/s)	Max Volume (m³)	Status
10080 min Winter	6.103	0.003	0.4	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
10080 min Winter	1.093	0.0	5128		
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XP Solutions Source Control 2017.1.2		

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) 0.064

Time (mins)	Area
From: To:	(ha)
0	4 0.064

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<u>Model Details</u> Storage is Online Cover Level (m) 6.600 <u>Porous Car Park Structure</u> <table style="width: 100%; border: none;"> <tr> <td style="width: 30%;">Infiltration Coefficient Base (m/hr)</td> <td style="width: 20%;">0.13300</td> <td style="width: 30%;">Width (m)</td> <td style="width: 20%;">18.5</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> <td>Length (m)</td> <td>18.5</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>95.1</td> <td>Slope (1:X)</td> <td>0.0</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>6.100</td> <td>Membrane Depth (m)</td> <td>150</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.13300	Width (m)	18.5	Membrane Percolation (mm/hr)	1000	Length (m)	18.5	Max Percolation (l/s)	95.1	Slope (1:X)	0.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	6.100	Membrane Depth (m)	150
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