

C D Gray & Associates Ltd					Page 1																																																																																																																																																																																																																			
5-6 Deryn Court Wharfedale Road Pentwyn CF23 7HB			9922 RHOS P2																																																																																																																																																																																																																					
Date 21/12/2022 File 9922-Calcs-SW-SAWay-P2....			Designed by LKJ Checked by																																																																																																																																																																																																																					
Innovyze			Source Control 2020.1.3																																																																																																																																																																																																																					
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 1055 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>8.381</td><td>0.381</td><td>1.0</td><td>39.8</td><td>O K</td></tr><tr><td>30 min Summer</td><td>8.545</td><td>0.545</td><td>1.0</td><td>57.0</td><td>O K</td></tr><tr><td>60 min Summer</td><td>8.741</td><td>0.741</td><td>1.1</td><td>77.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>8.881</td><td>0.881</td><td>1.1</td><td>92.1</td><td>O K</td></tr><tr><td>180 min Summer</td><td>8.972</td><td>0.972</td><td>1.2</td><td>101.5</td><td>O K</td></tr><tr><td>240 min Summer</td><td>9.037</td><td>1.037</td><td>1.2</td><td>108.4</td><td>O K</td></tr><tr><td>360 min Summer</td><td>9.124</td><td>1.124</td><td>1.2</td><td>117.5</td><td>O K</td></tr><tr><td>480 min Summer</td><td>9.176</td><td>1.176</td><td>1.2</td><td>122.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>9.207</td><td>1.207</td><td>1.2</td><td>126.2</td><td>O K</td></tr><tr><td>720 min Summer</td><td>9.225</td><td>1.225</td><td>1.3</td><td>128.0</td><td>O K</td></tr><tr><td>960 min Summer</td><td>9.239</td><td>1.239</td><td>1.3</td><td>129.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>9.246</td><td>1.246</td><td>1.3</td><td>130.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>9.234</td><td>1.234</td><td>1.3</td><td>129.0</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>9.219</td><td>1.219</td><td>1.2</td><td>127.4</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>9.187</td><td>1.187</td><td>1.2</td><td>124.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>9.158</td><td>1.158</td><td>1.2</td><td>121.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>9.141</td><td>1.141</td><td>1.2</td><td>119.2</td><td>O K</td></tr><tr><td>8640 min 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(l/s)	Max Volume (m³)	Status	15 min Summer	8.381	0.381	1.0	39.8	O K	30 min Summer	8.545	0.545	1.0	57.0	O K	60 min Summer	8.741	0.741	1.1	77.5	O K	120 min Summer	8.881	0.881	1.1	92.1	O K	180 min Summer	8.972	0.972	1.2	101.5	O K	240 min Summer	9.037	1.037	1.2	108.4	O K	360 min Summer	9.124	1.124	1.2	117.5	O K	480 min Summer	9.176	1.176	1.2	122.9	O K	600 min Summer	9.207	1.207	1.2	126.2	O K	720 min Summer	9.225	1.225	1.3	128.0	O K	960 min Summer	9.239	1.239	1.3	129.5	O K	1440 min Summer	9.246	1.246	1.3	130.2	O K	2160 min Summer	9.234	1.234	1.3	129.0	O K	2880 min Summer	9.219	1.219	1.2	127.4	O K	4320 min Summer	9.187	1.187	1.2	124.0	O K	5760 min Summer	9.158	1.158	1.2	121.0	O K	7200 min Summer	9.141	1.141	1.2	119.2	O K	8640 min Summer	9.129	1.129	1.2	118.0	O K	10080 min Summer	9.123	1.123	1.2	117.3	O K	15 min Winter	8.428	0.428	1.0	44.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	112.015	0.0	26	30 min Summer	80.515	0.0	41	60 min Summer	55.425	0.0	70	120 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Date 21/12/2022 File 9922-Calcs-SW-SAWay-P2....		Designed by LKJ Checked by				
Innovyze		Source Control 2020.1.3				
<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	8.613	0.613	1.1	64.0	O K	
60 min Winter	8.834	0.834	1.1	87.2	O K	
120 min Winter	8.995	0.995	1.2	104.0	O K	
180 min Winter	9.100	1.100	1.2	115.0	O K	
240 min Winter	9.178	1.178	1.2	123.1	O K	
360 min Winter	9.284	1.284	1.3	134.1	O K	
480 min Winter	9.350	1.350	1.3	141.1	O K	
600 min Winter	9.393	1.393	1.3	145.6	O K	
720 min Winter	9.421	1.421	1.3	148.5	O K	
960 min Winter	9.448	1.448	1.3	151.3	O K	
1440 min Winter	9.451	1.451	1.3	151.7	O K	
2160 min Winter	9.428	1.428	1.3	149.3	O K	
2880 min Winter	9.393	1.393	1.3	145.6	O K	
4320 min Winter	9.317	1.317	1.3	137.7	O K	
5760 min Winter	9.246	1.246	1.3	130.2	O K	
7200 min Winter	9.190	1.190	1.2	124.4	O K	
8640 min Winter	9.145	1.145	1.2	119.6	O K	
10080 min Winter	9.108	1.108	1.2	115.7	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	80.515	0.0	40			
60 min Winter	55.425	0.0	70			
120 min Winter	33.878	0.0	126			
180 min Winter	25.545	0.0	184			
240 min Winter	20.943	0.0	242			
360 min Winter	15.836	0.0	358			
480 min Winter	12.973	0.0	472			
600 min Winter	11.108	0.0	586			
720 min Winter	9.782	0.0	698			
960 min Winter	7.998	0.0	912			
1440 min Winter	6.029	0.0	1156			
2160 min Winter	4.554	0.0	1624			
2880 min Winter	3.747	0.0	2084			
4320 min Winter	2.875	0.0	2988			
5760 min Winter	2.410	0.0	3864			
7200 min Winter	2.127	0.0	4752			
8640 min Winter	1.935	0.0	5544			
10080 min Winter	1.798	0.0	6368			
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Innovyze Source Control 2020.1.3		

Model Details

Storage is Online Cover Level (m) 10.000

Cellular Storage Structure

Invert Level (m) 8.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.05580 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.05580

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	110.0	110.0	1.501	0.0	173.0
1.500	110.0	173.0			

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