

Reuby & Staggs Ltd

Dewey House

55 High Street

Ringwood BH24 1AE

Date 17/08/2023 09:23

File PLANNING DESIGN.SRCX

Maple Place

Eastleigh

SuDs Design for Planning

Designed by PJ

Checked by MPD

Innovyze

Source Control 2019.1

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Summary of Results for 100 year Return Period (+45%)

Half Drain Time : 117 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	13.860	0.260	0.0	2.5	2.5	24.7	O K
30 min Summer	14.188	0.588	0.0	3.9	3.9	31.9	O K
60 min Summer	14.253	0.653	0.0	4.1	4.1	37.8	O K
120 min Summer	14.292	0.692	0.0	4.3	4.3	41.3	O K
180 min Summer	14.300	0.700	0.0	4.3	4.3	42.0	O K
240 min Summer	14.296	0.696	0.0	4.3	4.3	41.7	O K
360 min Summer	14.280	0.680	0.0	4.2	4.2	40.2	O K
480 min Summer	14.258	0.658	0.0	4.2	4.2	38.2	O K
600 min Summer	14.234	0.634	0.0	4.1	4.1	36.1	O K
720 min Summer	14.213	0.613	0.0	4.0	4.0	34.2	O K
960 min Summer	14.175	0.575	0.0	3.9	3.9	30.8	O K
1440 min Summer	13.896	0.296	0.0	2.7	2.7	28.2	O K
2160 min Summer	13.832	0.232	0.0	2.4	2.4	22.0	O K
2880 min Summer	13.788	0.188	0.0	2.1	2.1	17.9	O K
4320 min Summer	13.734	0.134	0.0	1.7	1.7	12.7	O K
5760 min Summer	13.703	0.103	0.0	1.5	1.5	9.8	O K
7200 min Summer	13.685	0.085	0.0	1.3	1.3	8.0	O K
8640 min Summer	13.673	0.073	0.0	1.1	1.1	6.9	O K
10080 min Summer	13.667	0.067	0.0	1.0	1.0	6.3	O K
15 min Winter	13.894	0.294	0.0	2.7	2.7	27.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	136.560	0.0	25.8	18
30 min Summer	91.729	0.0	35.3	32
60 min Summer	58.739	0.0	45.9	60
120 min Summer	36.254	0.0	57.0	92
180 min Summer	26.900	0.0	63.6	126
240 min Summer	21.623	0.0	68.2	160
360 min Summer	15.914	0.0	75.4	228
480 min Summer	12.782	0.0	80.8	294
600 min Summer	10.774	0.0	85.2	360
720 min Summer	9.365	0.0	88.9	422
960 min Summer	7.499	0.0	94.9	542
1440 min Summer	5.473	0.0	103.7	822
2160 min Summer	3.985	0.0	113.3	1188
2880 min Summer	3.178	0.0	120.1	1556
4320 min Summer	2.306	0.0	130.0	2252
5760 min Summer	1.834	0.0	137.4	2992
7200 min Summer	1.536	0.0	143.3	3680
8640 min Summer	1.330	0.0	148.1	4408
10080 min Summer	1.178	0.0	152.2	5136
15 min Winter	136.560	0.0	29.1	18

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<u>Summary of Results for 100 year Return Period (+45%)</u>							
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Control (l/s)	Max E Outflow (l/s)	Max Volume (m³)	Status
30 min Winter	14.234	0.634	0.0	4.1	4.1	36.1	O K
60 min Winter	14.313	0.713	0.0	4.3	4.3	43.2	Flood Risk
120 min Winter	14.353	0.753	0.0	4.5	4.5	46.8	Flood Risk
180 min Winter	14.357	0.757	0.0	4.5	4.5	47.2	Flood Risk
240 min Winter	14.346	0.746	0.0	4.4	4.4	46.2	Flood Risk
360 min Winter	14.314	0.714	0.0	4.3	4.3	43.3	Flood Risk
480 min Winter	14.278	0.678	0.0	4.2	4.2	40.1	O K
600 min Winter	14.242	0.642	0.0	4.1	4.1	36.8	O K
720 min Winter	14.211	0.611	0.0	4.0	4.0	34.0	O K
960 min Winter	14.163	0.563	0.0	3.8	3.8	29.7	O K
1440 min Winter	13.874	0.274	0.0	2.6	2.6	26.0	O K
2160 min Winter	13.795	0.195	0.0	2.2	2.2	18.6	O K
2880 min Winter	13.748	0.148	0.0	1.8	1.8	14.1	O K
4320 min Winter	13.697	0.097	0.0	1.4	1.4	9.2	O K
5760 min Winter	13.673	0.073	0.0	1.1	1.1	6.9	O K
7200 min Winter	13.664	0.064	0.0	1.0	1.0	6.1	O K
8640 min Winter	13.658	0.058	0.0	0.8	0.8	5.5	O K
10080 min Winter	13.654	0.054	0.0	0.7	0.7	5.1	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)			
30 min Winter	91.729	0.0	39.8	31			
60 min Winter	58.739	0.0	51.6	60			
120 min Winter	36.254	0.0	64.0	98			
180 min Winter	26.900	0.0	71.4	136			
240 min Winter	21.623	0.0	76.6	174			
360 min Winter	15.914	0.0	84.7	246			
480 min Winter	12.782	0.0	90.8	316			
600 min Winter	10.774	0.0	95.7	380			
720 min Winter	9.365	0.0	99.8	442			
960 min Winter	7.499	0.0	106.5	558			
1440 min Winter	5.473	0.0	116.5	854			
2160 min Winter	3.985	0.0	127.2	1228			
2880 min Winter	3.178	0.0	135.0	1584			
4320 min Winter	2.306	0.0	146.2	2288			
5760 min Winter	1.834	0.0	154.6	2952			
7200 min Winter	1.536	0.0	161.2	3648			
8640 min Winter	1.330	0.0	166.8	4360			
10080 min Winter	1.178	0.0	171.5	5056			
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<u>Model Details</u> Storage is Online Cover Level (m) 14.600 <u>Complex Structure</u> <u>Cellular Storage</u> Invert Level (m) 13.600 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00000 <table border="1" style="margin-left: auto; margin-right: auto;"> <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>100.0</td> <td>0.0</td> <td>0.301</td> <td>0.0</td> <td>0.0</td> </tr> <tr> <td>0.300</td> <td>100.0</td> <td>0.0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <u>Porous Car Park</u> Infiltration Coefficient Base (m/hr) 0.00000 Width (m) 15.0 Membrane Percolation (mm/hr) 1000 Length (m) 20.0 Max Percolation (l/s) 83.3 Slope (1:X) 0.0 Safety Factor 2.0 Depression Storage (mm) 5 Porosity 0.30 Evaporation (mm/day) 3 Invert Level (m) 14.150 Cap Volume Depth (m) 0.350 <u>Orifice Outflow Control</u> Diameter (m) 0.050 Discharge Coefficient 0.600 Invert Level (m) 13.600			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	100.0	0.0	0.301	0.0	0.0	0.300	100.0	0.0			
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