

Such Salinger Peters Ltd		Page 1
Fourth Floor Dean Park House 8-10 Dean Park Crescent Bournemouth Dorset BH1 1HL	Post-Development Volume Runoff Emsworth (66007)	
Date 27/07/2017 12:25 File POST VOLUME RUNOFF.SRCX	Designed by D. Lindley Checked by K. Dye	
Micro Drainage	Source Control 2015.1	

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

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 Control (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	2.531	0.131	0.0	0.0	0.0	56.2	O K
30 min Summer	2.577	0.177	0.0	0.0	0.0	75.5	O K
60 min Summer	2.627	0.227	0.0	0.0	0.0	96.9	O K
120 min Summer	2.680	0.280	0.0	0.0	0.0	119.9	O K
180 min Summer	2.713	0.313	0.0	0.0	0.0	133.7	O K
240 min Summer	2.736	0.336	0.0	0.0	0.0	143.5	O K
360 min Summer	2.770	0.370	0.0	0.0	0.0	158.3	O K
480 min Summer	2.797	0.397	0.0	0.0	0.0	169.6	O K
600 min Summer	2.818	0.418	0.0	0.0	0.0	178.7	O K
720 min Summer	2.836	0.436	0.0	0.0	0.0	186.5	O K
960 min Summer	2.866	0.466	0.0	0.0	0.0	199.2	O K
1440 min Summer	2.910	0.510	0.0	0.0	0.0	218.1	O K
2160 min Summer	2.958	0.558	0.0	0.0	0.0	238.4	O K
2880 min Summer	2.993	0.593	0.0	0.0	0.0	253.6	O K
4320 min Summer	3.046	0.646	0.0	0.0	0.0	276.1	O K
5760 min Summer	3.085	0.685	0.0	0.0	0.0	292.9	O K
7200 min Summer	3.117	0.717	0.0	0.0	0.0	306.5	O K
8640 min Summer	3.145	0.745	0.0	0.0	0.0	318.5	O K
10080 min Summer	3.169	0.769	0.0	0.0	0.0	328.9	O K
15 min Winter	2.547	0.147	0.0	0.0	0.0	62.9	O K
30 min Winter	2.598	0.198	0.0	0.0	0.0	84.6	O K
60 min Winter	2.654	0.254	0.0	0.0	0.0	108.5	O K
120 min Winter	2.714	0.314	0.0	0.0	0.0	134.3	O K
180 min Winter	2.750	0.350	0.0	0.0	0.0	149.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	127.517	0.0	0.0	19
30 min Summer	85.701	0.0	0.0	34
60 min Summer	54.957	0.0	0.0	64
120 min Summer	34.010	0.0	0.0	124
180 min Summer	25.295	0.0	0.0	184
240 min Summer	20.351	0.0	0.0	244
360 min Summer	14.971	0.0	0.0	364
480 min Summer	12.028	0.0	0.0	484
600 min Summer	10.141	0.0	0.0	604
720 min Summer	8.817	0.0	0.0	724
960 min Summer	7.063	0.0	0.0	964
1440 min Summer	5.157	0.0	0.0	1444
2160 min Summer	3.757	0.0	0.0	2164
2880 min Summer	2.997	0.0	0.0	2884
4320 min Summer	2.176	0.0	0.0	4324
5760 min Summer	1.731	0.0	0.0	5768
7200 min Summer	1.449	0.0	0.0	7208
8640 min Summer	1.255	0.0	0.0	8648
10080 min Summer	1.111	0.0	0.0	10088
15 min Winter	127.517	0.0	0.0	19
30 min Winter	85.701	0.0	0.0	34
60 min Winter	54.957	0.0	0.0	64
120 min Winter	34.010	0.0	0.0	124
180 min Winter	25.295	0.0	0.0	184

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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
240 min Winter	2.776	0.376	0.0	0.0	0.0	160.7	O K
360 min Winter	2.815	0.415	0.0	0.0	0.0	177.3	O K
480 min Winter	2.844	0.444	0.0	0.0	0.0	189.9	O K
600 min Winter	2.868	0.468	0.0	0.0	0.0	200.2	O K
720 min Winter	2.889	0.489	0.0	0.0	0.0	208.9	O K
960 min Winter	2.922	0.522	0.0	0.0	0.0	223.1	O K
1440 min Winter	2.972	0.572	0.0	0.0	0.0	244.3	O K
2160 min Winter	3.025	0.625	0.0	0.0	0.0	267.0	O K
2880 min Winter	3.064	0.664	0.0	0.0	0.0	284.0	O K
4320 min Winter	3.123	0.723	0.0	0.0	0.0	309.2	O K
5760 min Winter	3.167	0.767	0.0	0.0	0.0	328.1	O K
7200 min Winter	3.203	0.803	0.0	0.0	0.0	343.3	O K
8640 min Winter	3.234	0.834	0.0	0.0	0.0	356.7	O K
10080 min Winter	3.262	0.862	0.0	0.0	0.0	368.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
240 min Winter	20.351	0.0	0.0	244
360 min Winter	14.971	0.0	0.0	364
480 min Winter	12.028	0.0	0.0	484
600 min Winter	10.141	0.0	0.0	604
720 min Winter	8.817	0.0	0.0	724
960 min Winter	7.063	0.0	0.0	964
1440 min Winter	5.157	0.0	0.0	1444
2160 min Winter	3.757	0.0	0.0	2164
2880 min Winter	2.997	0.0	0.0	2884
4320 min Winter	2.176	0.0	0.0	4324
5760 min Winter	1.731	0.0	0.0	5768
7200 min Winter	1.449	0.0	0.0	7208
8640 min Winter	1.255	0.0	0.0	8648
10080 min Winter	1.111	0.0	0.0	10088

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

Time Area Diagram

Total Area (ha) 0.235

Time (mins) Area

From: To: (ha)

0 4 0.235

Model Details

Storage is Online Cover Level (m) 10.000

Cellular Storage Structure

Invert Level (m) 2.400 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	450.0	450.0	1.200	450.0	558.0	1.201	0.0	558.0

Weir Outflow Control

Discharge Coef 0.544 Width (m) 15.000 Invert Level (m) 10.000