

Calcinotto		Page 1
Jonsen House 43 Commercial Road Poole BH14 0HU	114290-CAL-XX-XX-CA-D-101 Orchard Gate, Dibden Purlieu Tank B Storage - 1:30+20	
Date 11/07/2022 15:48	Designed by GEB	
File 114290 - Storage Estimate B_22-07...	Checked by GEB	
XP Solutions	Source Control 2020.1	

Summary of Results for 30 year Return Period (+20%)

Half Drain Time : 1553 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	37.316	0.116	0.3	18.8	O K
30 min Summer	37.355	0.155	0.3	25.0	O K
60 min Summer	37.395	0.195	0.3	31.4	O K
120 min Summer	37.425	0.225	0.3	36.4	O K
180 min Summer	37.443	0.243	0.3	39.2	O K
240 min Summer	37.455	0.255	0.3	41.2	O K
360 min Summer	37.471	0.271	0.3	43.8	O K
480 min Summer	37.481	0.281	0.3	45.4	O K
600 min Summer	37.488	0.288	0.3	46.5	O K
720 min Summer	37.492	0.292	0.3	47.2	O K
960 min Summer	37.497	0.297	0.3	47.9	O K
1440 min Summer	37.497	0.297	0.3	48.0	O K
2160 min Summer	37.495	0.295	0.3	47.7	O K
2880 min Summer	37.493	0.293	0.3	47.3	O K
4320 min Summer	37.488	0.288	0.3	46.4	O K
5760 min Summer	37.483	0.283	0.3	45.7	O K
7200 min Summer	37.480	0.280	0.3	45.2	O K
8640 min Summer	37.477	0.277	0.3	44.8	O K
10080 min Summer	37.476	0.276	0.3	44.5	O K
15 min Winter	37.331	0.131	0.3	21.1	O K
30 min Winter	37.374	0.174	0.3	28.1	O K
60 min Winter	37.419	0.219	0.3	35.3	O K
120 min Winter	37.453	0.253	0.3	40.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	89.167	0.0	23
30 min Summer	59.579	0.0	37
60 min Summer	37.766	0.0	68
120 min Summer	22.241	0.0	126
180 min Summer	16.259	0.0	186
240 min Summer	13.013	0.0	246
360 min Summer	9.518	0.0	364
480 min Summer	7.625	0.0	484
600 min Summer	6.425	0.0	602
720 min Summer	5.589	0.0	722
960 min Summer	4.496	0.0	960
1440 min Summer	3.323	0.0	1258
2160 min Summer	2.470	0.0	1644
2880 min Summer	2.015	0.0	2048
4320 min Summer	1.532	0.0	2896
5760 min Summer	1.277	0.0	3696
7200 min Summer	1.120	0.0	4544
8640 min Summer	1.012	0.0	5368
10080 min Summer	0.935	0.0	6248
15 min Winter	89.167	0.0	23
30 min Winter	59.579	0.0	37
60 min Winter	37.766	0.0	66
120 min Winter	22.241	0.0	124

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Jonsen House 43 Commercial Road Poole BH14 0HU	114290-CAL-XX-XX-CA-D-101 Orchard Gate, Dibden Purlieu Tank B Storage - 1:30+20	
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File 114290 - Storage Estimate B_22-07...	Checked by GEB	
XP Solutions	Source Control 2020.1	

Summary of Results for 30 year Return Period (+20%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
180 min Winter	37.474	0.274	0.3	44.2	O K
240 min Winter	37.488	0.288	0.3	46.5	O K
360 min Winter	37.507	0.307	0.3	49.6	O K
480 min Winter	37.520	0.320	0.3	51.6	O K
600 min Winter	37.528	0.328	0.3	53.0	O K
720 min Winter	37.534	0.334	0.3	54.0	O K
960 min Winter	37.541	0.341	0.3	55.2	O K
1440 min Winter	37.546	0.346	0.3	55.8	O K
2160 min Winter	37.541	0.341	0.3	55.1	O K
2880 min Winter	37.537	0.337	0.3	54.4	O K
4320 min Winter	37.525	0.325	0.3	52.5	O K
5760 min Winter	37.513	0.313	0.3	50.5	O K
7200 min Winter	37.502	0.302	0.3	48.8	O K
8640 min Winter	37.493	0.293	0.3	47.2	O K
10080 min Winter	37.484	0.284	0.3	45.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
180 min Winter	16.259	0.0	184
240 min Winter	13.013	0.0	242
360 min Winter	9.518	0.0	358
480 min Winter	7.625	0.0	476
600 min Winter	6.425	0.0	590
720 min Winter	5.589	0.0	706
960 min Winter	4.496	0.0	932
1440 min Winter	3.323	0.0	1370
2160 min Winter	2.470	0.0	1752
2880 min Winter	2.015	0.0	2196
4320 min Winter	1.532	0.0	3152
5760 min Winter	1.277	0.0	4040
7200 min Winter	1.120	0.0	4968
8640 min Winter	1.012	0.0	5800
10080 min Winter	0.935	0.0	6664

Rainfall Details

Rainfall Model	FEH	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
FEH Rainfall Version	2013	Cv (Winter)	0.840
Site Location	GB 441283 106591 SU 41283 06591	Shortest Storm (mins)	15
Data Type	Point	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+20

Time Area Diagram

Total Area (ha) 0.114

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.060	4	8	0.054

Model Details

Storage is Online Cover Level (m) 39.300

Cellular Storage Structure

Invert Level (m) 37.200 Safety Factor 3.0
Infiltration Coefficient Base (m/hr) 0.01764 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01764

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	170.0	170.0	0.800	170.0	211.7	0.801	0.0	211.7

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Jonsen House 43 Commercial Road Poole BH14 0HU	114290-CAL-XX-XX-CA-D-101 Orchard Gate, Dibden Purlieu Tank B Storage - 1:100+40	
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XP Solutions	Source Control 2020.1	

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

Half Drain Time : 2311 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	37.371	0.171	0.3	27.5	O K
30 min Summer	37.428	0.228	0.3	36.9	O K
60 min Summer	37.491	0.291	0.3	47.0	O K
120 min Summer	37.531	0.331	0.3	53.5	O K
180 min Summer	37.556	0.356	0.3	57.5	O K
240 min Summer	37.574	0.374	0.3	60.4	O K
360 min Summer	37.598	0.398	0.3	64.3	O K
480 min Summer	37.615	0.415	0.3	67.0	O K
600 min Summer	37.627	0.427	0.3	68.9	O K
720 min Summer	37.636	0.436	0.3	70.4	O K
960 min Summer	37.648	0.448	0.3	72.3	O K
1440 min Summer	37.657	0.457	0.3	73.8	O K
2160 min Summer	37.654	0.454	0.3	73.3	O K
2880 min Summer	37.651	0.451	0.3	72.8	O K
4320 min Summer	37.644	0.444	0.3	71.8	O K
5760 min Summer	37.640	0.440	0.3	71.1	O K
7200 min Summer	37.640	0.440	0.3	71.0	O K
8640 min Summer	37.641	0.441	0.3	71.2	O K
10080 min Summer	37.644	0.444	0.3	71.7	O K
15 min Winter	37.391	0.191	0.3	30.9	O K
30 min Winter	37.456	0.256	0.3	41.3	O K
60 min Winter	37.527	0.327	0.3	52.7	O K
120 min Winter	37.573	0.373	0.3	60.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	130.140	0.0	23
30 min Summer	87.360	0.0	38
60 min Summer	56.055	0.0	68
120 min Summer	32.360	0.0	126
180 min Summer	23.471	0.0	186
240 min Summer	18.702	0.0	246
360 min Summer	13.604	0.0	366
480 min Summer	10.865	0.0	484
600 min Summer	9.135	0.0	604
720 min Summer	7.935	0.0	724
960 min Summer	6.367	0.0	962
1440 min Summer	4.682	0.0	1440
2160 min Summer	3.453	0.0	1884
2880 min Summer	2.795	0.0	2276
4320 min Summer	2.098	0.0	3068
5760 min Summer	1.730	0.0	3920
7200 min Summer	1.507	0.0	4752
8640 min Summer	1.356	0.0	5616
10080 min Summer	1.248	0.0	6456
15 min Winter	130.140	0.0	23
30 min Winter	87.360	0.0	37
60 min Winter	56.055	0.0	66
120 min Winter	32.360	0.0	126

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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 (m³)	Status
180 min Winter	37.601	0.401	0.3	64.7	O K
240 min Winter	37.621	0.421	0.3	68.0	O K
360 min Winter	37.650	0.450	0.3	72.7	O K
480 min Winter	37.670	0.470	0.3	75.9	O K
600 min Winter	37.684	0.484	0.3	78.2	O K
720 min Winter	37.696	0.496	0.3	80.1	O K
960 min Winter	37.712	0.512	0.3	82.7	O K
1440 min Winter	37.728	0.528	0.3	85.2	O K
2160 min Winter	37.731	0.531	0.3	85.7	O K
2880 min Winter	37.724	0.524	0.3	84.6	O K
4320 min Winter	37.714	0.514	0.3	83.0	O K
5760 min Winter	37.704	0.504	0.3	81.4	O K
7200 min Winter	37.697	0.497	0.3	80.3	O K
8640 min Winter	37.692	0.492	0.3	79.4	O K
10080 min Winter	37.688	0.488	0.3	78.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
180 min Winter	23.471	0.0	184
240 min Winter	18.702	0.0	242
360 min Winter	13.604	0.0	360
480 min Winter	10.865	0.0	478
600 min Winter	9.135	0.0	594
720 min Winter	7.935	0.0	712
960 min Winter	6.367	0.0	942
1440 min Winter	4.682	0.0	1398
2160 min Winter	3.453	0.0	2056
2880 min Winter	2.795	0.0	2624
4320 min Winter	2.098	0.0	3288
5760 min Winter	1.730	0.0	4256
7200 min Winter	1.507	0.0	5184
8640 min Winter	1.356	0.0	6056
10080 min Winter	1.248	0.0	6968

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 441283 106591 SU 41283 06591	Shortest Storm (mins)	15
Data Type	Point	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.114

Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)
0	4	0.060	4	8	0.054

Model Details

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Invert Level (m) 37.200 Safety Factor 3.0
Infiltration Coefficient Base (m/hr) 0.01764 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.01764

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	170.0	170.0	0.800	170.0	211.7	0.801	0.0	211.7