


Paul Basham Associates		Page 1
Lancaster Court 8 Barnes Wallis Road Fareham PO15 5TU	DOWNEND ROAD PROCHESTER INFILTRATION BASIN 3 1-30 YEAR STORM FOS 1.5	
Date 21.06.2021 File basin 3-30.SRCX	Designed by RW Checked by	

XP Solutions Source Control 2014.1

Summary of Results for 30 year Return Period (+40%)

Half Drain Time : 1404 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	23.466	0.216	0.6	65.9	O K
30 min Summer	23.479	0.229	0.7	70.5	O K
60 min Summer	23.496	0.246	0.7	76.6	O K
120 min Summer	23.516	0.266	0.7	83.6	O K
180 min Summer	23.529	0.279	0.7	88.3	O K
240 min Summer	23.539	0.289	0.7	91.9	O K
360 min Summer	23.554	0.304	0.7	97.8	O K
480 min Summer	23.567	0.317	0.8	102.7	O K
600 min Summer	23.579	0.329	0.8	107.0	O K
720 min Summer	23.588	0.338	0.8	110.4	O K
960 min Summer	23.589	0.339	0.8	110.9	O K
1440 min Summer	23.577	0.327	0.8	106.2	O K
2160 min Summer	23.547	0.297	0.7	95.2	O K
2880 min Summer	23.517	0.267	0.7	84.0	O K
4320 min Summer	23.457	0.207	0.6	63.0	O K
5760 min Summer	23.451	0.201	0.6	61.0	O K
7200 min Summer	23.449	0.199	0.6	60.4	O K
8640 min Summer	23.448	0.198	0.6	60.0	O K
10080 min Summer	23.447	0.197	0.6	59.7	O K
15 min Winter	23.470	0.220	0.6	67.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	96.371	0.0	687
30 min Summer	64.160	0.0	687
60 min Summer	40.933	0.0	686
120 min Summer	25.357	0.0	686
180 min Summer	18.948	0.0	672
240 min Summer	15.333	0.0	672
360 min Summer	11.348	0.0	672
480 min Summer	9.161	0.0	670
600 min Summer	7.755	0.0	670
720 min Summer	6.765	0.0	722
960 min Summer	5.449	0.0	754
1440 min Summer	4.013	0.0	940
2160 min Summer	2.951	0.0	1360
2880 min Summer	2.370	0.0	1760
4320 min Summer	1.739	0.0	2552
5760 min Summer	1.394	0.0	704
7200 min Summer	1.175	0.0	704
8640 min Summer	1.021	0.0	704
10080 min Summer	0.908	0.0	696
15 min Winter	96.371	0.0	687

Lancaster Court
 8 Barnes Wallis Road
 Fareham PO15 5TU

DOWNEND ROAD PROCHESTER
 INFILTRATION BASIN 3
 1-30 YEAR STORM FOS 1.5



Date 21.06.2021

Designed by RW

File basin 3-30.SRCX

Checked by


XP Solutions

Source Control 2014.1

Summary of Results for 30 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
30 min Winter	23.486	0.236	0.7	73.0	O K
60 min Winter	23.505	0.255	0.7	79.8	O K
120 min Winter	23.527	0.277	0.7	87.6	O K
180 min Winter	23.541	0.291	0.7	92.8	O K
240 min Winter	23.552	0.302	0.7	96.7	O K
360 min Winter	23.569	0.319	0.8	103.1	O K
480 min Winter	23.583	0.333	0.8	108.5	O K
600 min Winter	23.595	0.345	0.8	113.1	O K
720 min Winter	23.604	0.354	0.8	116.9	O K
960 min Winter	23.605	0.355	0.8	117.3	O K
1440 min Winter	23.591	0.341	0.8	111.9	O K
2160 min Winter	23.561	0.311	0.7	100.1	O K
2880 min Winter	23.529	0.279	0.7	88.2	O K
4320 min Winter	23.466	0.216	0.6	66.1	O K
5760 min Winter	23.452	0.202	0.6	61.4	O K
7200 min Winter	23.450	0.200	0.6	60.5	O K
8640 min Winter	23.448	0.198	0.6	59.9	O K
10080 min Winter	23.447	0.197	0.6	59.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
30 min Winter	64.160	0.0	687
60 min Winter	40.933	0.0	686
120 min Winter	25.357	0.0	672
180 min Winter	18.948	0.0	672
240 min Winter	15.333	0.0	672
360 min Winter	11.348	0.0	670
480 min Winter	9.161	0.0	670
600 min Winter	7.755	0.0	670
720 min Winter	6.765	0.0	706
960 min Winter	5.449	0.0	780
1440 min Winter	4.013	0.0	1026
2160 min Winter	2.951	0.0	1468
2880 min Winter	2.370	0.0	1900
4320 min Winter	1.739	0.0	2684
5760 min Winter	1.394	0.0	720
7200 min Winter	1.175	0.0	704
8640 min Winter	1.021	0.0	704
10080 min Winter	0.908	0.0	704

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	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) 0.100

Time (mins)	Area
From:	To: (ha)
0	4 0.100

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Model Details

Storage is Online Cover Level (m) 24.768

Infiltration Basin Structure

Invert Level (m) 23.250 Safety Factor 1.5
 Infiltration Coefficient Base (m/hr) 0.00830 Porosity 1.00
 Infiltration Coefficient Side (m/hr) 0.00830

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	269.6	0.501	444.6	1.001	633.8	1.501	837.0
0.101	303.5	0.601	481.3	1.101	673.3	1.518	844.3
0.201	337.9	0.701	518.6	1.201	713.4		
0.301	372.9	0.801	556.4	1.301	754.0		
0.401	408.5	0.901	594.8	1.401	795.2		