

ABMH					Page 1	
1 The Grove Felpham West Sussex PO22 7EY			Woodcroft Plots 6-12			
Date 06/08/2019 10:48 File FC2789 Woodcroft -plot ...			Designed by MH Checked by			
Micro Drainage			Source Control 2017.1.2			
<u>Summary of Results for 30 year Return Period</u>						
	Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
	15 min Summer	61.442	0.442	1.8	12.9	O K
	30 min Summer	61.525	0.525	1.8	16.4	O K
	60 min Summer	61.590	0.590	1.8	19.3	O K
	120 min Summer	61.612	0.612	1.8	20.3	O K
	180 min Summer	61.602	0.602	1.8	19.8	O K
	240 min Summer	61.587	0.587	1.8	19.1	O K
	360 min Summer	61.552	0.552	1.8	17.6	O K
	480 min Summer	61.514	0.514	1.8	16.0	O K
	600 min Summer	61.477	0.477	1.8	14.3	O K
	720 min Summer	61.440	0.440	1.8	12.8	O K
	960 min Summer	61.370	0.370	1.8	10.0	O K
	1440 min Summer	61.256	0.256	1.8	5.8	O K
	2160 min Summer	61.151	0.151	1.7	2.5	O K
	2880 min Summer	61.099	0.099	1.5	1.3	O K
	4320 min Summer	61.068	0.068	1.2	0.7	O K
	5760 min Summer	61.056	0.056	0.9	0.5	O K
	7200 min Summer	61.049	0.049	0.8	0.4	O K
	8640 min Summer	61.045	0.045	0.7	0.3	O K
	10080 min Summer	61.042	0.042	0.6	0.3	O K
	15 min Winter	61.483	0.483	1.8	14.6	O K
	30 min Winter	61.579	0.579	1.8	18.8	O K
	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
	15 min Summer	70.068	0.0	14.5	18	
	30 min Summer	46.859	0.0	19.3	32	
	60 min Summer	30.026	0.0	24.8	62	
	120 min Summer	18.667	0.0	30.8	114	
	180 min Summer	13.968	0.0	34.6	144	
	240 min Summer	11.308	0.0	37.3	176	
	360 min Summer	8.400	0.0	41.6	242	
	480 min Summer	6.793	0.0	44.8	308	
	600 min Summer	5.758	0.0	47.5	374	
	720 min Summer	5.028	0.0	49.8	436	
	960 min Summer	4.057	0.0	53.6	560	
	1440 min Summer	2.994	0.0	59.3	794	
	2160 min Summer	2.206	0.0	65.5	1128	
	2880 min Summer	1.775	0.0	70.3	1472	
	4320 min Summer	1.305	0.0	77.5	2196	
	5760 min Summer	1.048	0.0	83.0	2936	
	7200 min Summer	0.884	0.0	87.6	3672	
	8640 min Summer	0.770	0.0	91.5	4384	
	10080 min Summer	0.685	0.0	95.0	5120	
	15 min Winter	70.068	0.0	16.2	18	
	30 min Winter	46.859	0.0	21.6	32	
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<u>Summary of Results for 30 year Return Period</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
60 min Winter	61.657	0.657	1.8	22.3	O K
120 min Winter	61.691	0.691	1.8	23.9	O K
180 min Winter	61.677	0.677	1.8	23.2	O K
240 min Winter	61.657	0.657	1.8	22.3	O K
360 min Winter	61.611	0.611	1.8	20.2	O K
480 min Winter	61.549	0.549	1.8	17.5	O K
600 min Winter	61.486	0.486	1.8	14.7	O K
720 min Winter	61.426	0.426	1.8	12.2	O K
960 min Winter	61.319	0.319	1.8	8.0	O K
1440 min Winter	61.169	0.169	1.7	3.0	O K
2160 min Winter	61.085	0.085	1.4	1.0	O K
2880 min Winter	61.067	0.067	1.2	0.6	O K
4320 min Winter	61.051	0.051	0.8	0.4	O K
5760 min Winter	61.044	0.044	0.7	0.3	O K
7200 min Winter	61.040	0.040	0.6	0.2	O K
8640 min Winter	61.037	0.037	0.5	0.2	O K
10080 min Winter	61.034	0.034	0.4	0.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
60 min Winter	30.026	0.0	27.7	60	
120 min Winter	18.667	0.0	34.5	116	
180 min Winter	13.968	0.0	38.7	162	
240 min Winter	11.308	0.0	41.8	188	
360 min Winter	8.400	0.0	46.6	266	
480 min Winter	6.793	0.0	50.2	338	
600 min Winter	5.758	0.0	53.2	404	
720 min Winter	5.028	0.0	55.8	468	
960 min Winter	4.057	0.0	60.0	586	
1440 min Winter	2.994	0.0	66.4	794	
2160 min Winter	2.206	0.0	73.4	1100	
2880 min Winter	1.775	0.0	78.7	1468	
4320 min Winter	1.305	0.0	86.8	2180	
5760 min Winter	1.048	0.0	92.9	2840	
7200 min Winter	0.884	0.0	98.1	3672	
8640 min Winter	0.770	0.0	102.5	4384	
10080 min Winter	0.685	0.0	106.4	5096	
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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)	19.500	Shortest Storm (mins)	15
Ratio R	0.340	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.110

Time (mins)	Area
From:	To: (ha)
0	4 0.110

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Model Details

Storage is Online Cover Level (m) 62.650

Pipe Structure

Diameter (m) 1.500 Length (m) 30.000
Slope (1:X) 1000.000 Invert Level (m) 61.000

Hydro-Brake® Optimum Outflow Control

Unit Reference MD-SHE-0065-2300-1530-2300
Design Head (m) 1.530
Design Flow (l/s) 2.3
Flush-Flo™ Calculated
Objective Minimise upstream storage
Application Surface
Sump Available Yes
Diameter (mm) 65
Invert Level (m) 61.000
Minimum Outlet Pipe Diameter (mm) 100
Suggested Manhole Diameter (mm) 1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.530	2.3
Flush-Flo™	0.288	1.8
Kick-Flo®	0.583	1.5
Mean Flow over Head Range	-	1.8

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.5	1.200	2.1	3.000	3.1	7.000	4.7
0.200	1.8	1.400	2.2	3.500	3.4	7.500	4.8
0.300	1.8	1.600	2.3	4.000	3.6	8.000	5.0
0.400	1.8	1.800	2.5	4.500	3.8	8.500	5.1
0.500	1.7	2.000	2.6	5.000	4.0	9.000	5.2
0.600	1.5	2.200	2.7	5.500	4.2	9.500	5.4
0.800	1.7	2.400	2.8	6.000	4.3		
1.000	1.9	2.600	2.9	6.500	4.5		

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