

ABMH					Page 1																																																																																																																																					
1 The Grove Felpham West Sussex PO22 7EY			Woodcroft Plots 6-12																																																																																																																																							
Date 06/08/2019 10:51 File FC2789 Woodcroft -plot ...			Designed by MH Checked by																																																																																																																																							
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ABMH		Page 2			
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Date 06/08/2019 10:51 File FC2789 Woodcroft -plot ...	Designed by MH Checked by				
Micro Drainage					
Source Control 2017.1.2					
<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
60 min Winter	62.164	1.164	2.0	44.8	O K
120 min Winter	62.336	1.336	2.2	50.8	O K
180 min Winter	62.376	1.376	2.2	51.9	O K
240 min Winter	62.348	1.348	2.2	51.1	O K
360 min Winter	62.287	1.287	2.1	49.2	O K
480 min Winter	62.225	1.225	2.1	47.0	O K
600 min Winter	62.165	1.165	2.0	44.8	O K
720 min Winter	62.106	1.106	2.0	42.4	O K
960 min Winter	61.995	0.995	1.9	37.7	O K
1440 min Winter	61.795	0.795	1.8	28.6	O K
2160 min Winter	61.453	0.453	1.8	13.3	O K
2880 min Winter	61.225	0.225	1.8	4.7	O K
4320 min Winter	61.087	0.087	1.5	1.0	O K
5760 min Winter	61.067	0.067	1.2	0.6	O K
7200 min Winter	61.057	0.057	1.0	0.5	O K
8640 min Winter	61.051	0.051	0.8	0.4	O K
10080 min Winter	61.047	0.047	0.8	0.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
60 min Winter	55.250	0.0	51.1	62	
120 min Winter	34.341	0.0	63.5	118	
180 min Winter	25.588	0.0	70.9	174	
240 min Winter	20.604	0.0	76.2	224	
360 min Winter	15.208	0.0	84.3	280	
480 min Winter	12.239	0.0	90.5	358	
600 min Winter	10.331	0.0	95.5	436	
720 min Winter	8.991	0.0	99.7	512	
960 min Winter	7.213	0.0	106.6	662	
1440 min Winter	5.277	0.0	117.0	952	
2160 min Winter	3.852	0.0	128.1	1316	
2880 min Winter	3.077	0.0	136.5	1584	
4320 min Winter	2.237	0.0	148.8	2184	
5760 min Winter	1.782	0.0	158.1	2888	
7200 min Winter	1.495	0.0	165.8	3624	
8640 min Winter	1.296	0.0	172.5	4264	
10080 min Winter	1.149	0.0	178.3	4984	
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ABMH		Page 3
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Date 06/08/2019 10:51 File FC2789 Woodcroft -plot ...	Designed by MH Checked by	
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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)	19.500	Shortest Storm (mins)	15
Ratio R	0.340	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.110

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

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ABMH		Page 4
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Date 06/08/2019 10:51 File FC2789 Woodcroft -plot ...	Designed by MH Checked by	
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Model Details

Storage is Online Cover Level (m) 63.050

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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