

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	20.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Node Type	Diameter (mm)	Depth (m)
✓ RWP		5.00	100.150	Junction		0.835
✓ S1 FCC	0.005	5.00	100.000	Manhole	600	0.695

Links (Input)

US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	Link Type	T of C (mins)	Rain (mm/hr)
? RWP	S1 FCC	1.000	0.600	99.315	99.305	0.010	100.0	100	Circular	5.02	50.0

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	20.000	Drain Down Time (mins)	240
Ratio-R	0.400	Additional Storage (m ³ /ha)	20.0
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0

Node S1 FCC Online Orifice Control

Flap Valve	x	Design Depth (m)	0.400	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Flow (l/s)	1.0		
Invert Level (m)	99.305	Diameter (m)	0.030		

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	109.521	30.991	30 year 15 minute summer	268.706	76.035
1 year 15 minute winter	76.857	30.991	30 year 15 minute winter	188.566	76.035
1 year 30 minute summer	71.439	20.215	30 year 30 minute summer	174.929	49.499
1 year 30 minute winter	50.133	20.215	30 year 30 minute winter	122.757	49.499
1 year 60 minute summer	48.435	12.800	30 year 60 minute summer	116.589	30.811
1 year 60 minute winter	32.179	12.800	30 year 60 minute winter	77.459	30.811
1 year 120 minute summer	30.053	7.942	30 year 120 minute summer	70.438	18.615
1 year 120 minute winter	19.966	7.942	30 year 120 minute winter	46.797	18.615
1 year 180 minute summer	23.233	5.979	30 year 180 minute summer	53.298	13.715
1 year 180 minute winter	15.102	5.979	30 year 180 minute winter	34.645	13.715
1 year 240 minute summer	18.475	4.882	30 year 240 minute summer	41.604	10.995
1 year 240 minute winter	12.274	4.882	30 year 240 minute winter	27.641	10.995
1 year 360 minute summer	14.169	3.646	30 year 360 minute summer	31.221	8.034
1 year 360 minute winter	9.210	3.646	30 year 360 minute winter	20.295	8.034
1 year 480 minute summer	11.185	2.956	30 year 480 minute summer	24.324	6.428
1 year 480 minute winter	7.431	2.956	30 year 480 minute winter	16.160	6.428
1 year 600 minute summer	9.182	2.511	30 year 600 minute summer	19.756	5.404
1 year 600 minute winter	6.274	2.511	30 year 600 minute winter	13.498	5.404
1 year 720 minute summer	8.203	2.199	30 year 720 minute summer	17.490	4.687
1 year 720 minute winter	5.513	2.199	30 year 720 minute winter	11.754	4.687
1 year 960 minute summer	6.768	1.782	30 year 960 minute summer	14.215	3.743
1 year 960 minute winter	4.483	1.782	30 year 960 minute winter	9.416	3.743
1 year 1440 minute summer	4.949	1.326	30 year 1440 minute summer	10.161	2.723
1 year 1440 minute winter	3.326	1.326	30 year 1440 minute winter	6.829	2.723

Results for 1 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	RWP	13	99.375	0.060	0.2	0.0000	0.0000	OK
15 minute winter	S1 FCC	13	99.375	0.070	0.7	0.0298	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	RWP	1.000	S1 FCC	-0.2	-0.175	-0.034	0.0054	
15 minute winter	S1 FCC	Orifice		0.4				0.3

Results for 30 year Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m ³)	Flood (m ³)	Status
15 minute winter	RWP	14	99.503	0.188	0.5	0.0000	0.0000	SURCHARGED
15 minute winter	S1 FCC	14	99.503	0.198	1.7	0.0846	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m ³)	Discharge Vol (m ³)
15 minute winter	RWP	1.000	S1 FCC	-0.5	-0.210	-0.088	0.0078	
15 minute winter	S1 FCC	Orifice		0.8				0.8