

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)	19.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.380	Preferred Cover Depth (m)	1.200
CV	1.000	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Add Inflow (l/s)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
EXC01	0.005	5.00		51.450	450	445968.071	404340.237	0.500
EXC02			3.8	51.520	450	445977.887	404340.525	1.300
EXC03	0.005	5.00		51.340	450	445978.323	404325.679	1.370
Main MH				51.200	1200	445978.966	404316.439	1.322

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	EXC01	EXC02	9.820	0.600	50.950	50.270	0.680	14.4	100	5.08	50.0
1.001	EXC02	EXC03	14.852	0.600	50.220	49.970	0.250	59.4	150	5.27	49.6
1.002	EXC03	Main MH	9.262	0.600	49.970	49.878	0.092	100.7	150	5.42	48.9

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	2.043	16.0	0.9	0.400	1.150	0.005	0.0	16	1.092
1.001	1.307	23.1	4.7	1.150	1.220	0.005	3.8	46	1.030
1.002	1.001	17.7	5.6	1.220	1.172	0.010	3.8	58	0.888

Simulation Settings

Rainfall Methodology	FSR	Summer CV	1.000	Drain Down Time (mins)	240
FSR Region	England and Wales	Winter CV	1.000	Additional Storage (m³/ha)	20.0
M5-60 (mm)	19.000	Analysis Speed	Normal	Check Discharge Rate(s)	x
Ratio-R	0.380	Skip Steady State	x	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 %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	40	0	0
30	0	0	0				

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 (m³)	Flood (m³)	Status
15 minute summer	EXC01	11	50.965	0.015	0.8	0.0056	0.0000	OK
15 minute summer	EXC02	11	50.265	0.045	4.6	0.0072	0.0000	OK
15 minute summer	EXC03	11	50.030	0.060	5.4	0.0139	0.0000	OK
15 minute summer	Main MH	11	49.935	0.057	5.4	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Discharge Vol (m³)
15 minute summer	EXC01	1.000	EXC02	0.8	1.054	0.050	
15 minute summer	EXC02	1.001	EXC03	4.6	0.929	0.199	
15 minute summer	EXC03	1.002	Main MH	5.4	0.853	0.305	58.7

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 (m³)	Flood (m³)	Status
15 minute summer	EXC01	10	50.974	0.024	2.0	0.0088	0.0000	OK
15 minute summer	EXC02	10	50.271	0.051	5.8	0.0081	0.0000	OK
15 minute summer	EXC03	10	50.044	0.074	7.8	0.0172	0.0000	OK
15 minute summer	Main MH	10	49.947	0.069	7.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Discharge Vol (m³)
15 minute summer	EXC01	1.000	EXC02	2.0	1.367	0.123	
15 minute summer	EXC02	1.001	EXC03	5.8	0.928	0.250	
15 minute summer	EXC03	1.002	Main MH	7.7	0.931	0.436	59.7

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	EXC01	10	50.984	0.034	3.7	0.0121	0.0000	OK
15 minute summer	EXC02	10	50.278	0.058	7.5	0.0093	0.0000	OK
15 minute summer	EXC03	10	50.063	0.093	11.1	0.0216	0.0000	OK
15 minute summer	Main MH	10	49.963	0.085	11.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Discharge Vol (m³)
15 minute summer	EXC01	1.000	EXC02	3.7	1.618	0.229	
15 minute summer	EXC02	1.001	EXC03	7.4	0.928	0.322	
15 minute summer	EXC03	1.002	Main MH	11.0	1.010	0.623	61.2