

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	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)	9.000
Ratio-R	0.350	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)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
3 North	0.091	5.00	73.000	1200	420359.204	420235.084	1.230
4 East	0.087	5.00	72.900	1200	420386.579	420239.093	1.040
2 Mid	0.004	5.00	71.000	1200	420368.902	420209.679	0.630
1 Oufall	0.000		70.200		420375.722	420199.282	0.809

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	3 North	2 Mid	27.193	0.600	71.770	70.370	1.400	19.4	100	5.26	50.0
2.00	4 East	2 Mid	34.317	0.600	71.860	70.370	1.490	23.0	100	5.35	50.0
1.001	2 Mid	1 Oufall	12.434	0.600	70.370	69.391	0.979	12.7	100	5.45	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	1.760	13.8	12.3	1.130	0.530	0.091	0.0
2.00	1.615	12.7	11.8	0.940	0.530	0.087	0.0
1.001	2.180	17.1	24.7	0.530	0.709	0.182	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 96.03%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	3 North	12	71.955	0.185	13.8	0.4823	0.0000	SURCHARGED
15 minute summer	4 East	12	72.051	0.191	13.2	0.5346	0.0000	SURCHARGED
15 minute summer	2 Mid	12	71.000	0.630	24.6	0.7925	0.1375	FLOOD
15 minute summer	1 Oufall	9	69.492	0.101	19.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	3 North	1.000	2 Mid	12.3	1.632	0.892	0.2128	
15 minute summer	4 East	2.00	2 Mid	11.7	1.535	0.920	0.2685	
15 minute summer	2 Mid	1.001	1 Oufall	19.7	2.515	1.149	0.0973	12.2

Results for 30 year Critical Storm Duration. Lowest mass balance: 96.03%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	3 North	17	73.000	1.230	35.6	3.2115	4.2469	FLOOD
30 minute summer	4 East	17	72.900	1.040	34.0	2.9162	4.4418	FLOOD
60 minute winter	2 Mid	27	71.000	0.630	29.5	0.7925	8.9250	FLOOD
180 minute winter	1 Oufall	100	69.492	0.101	17.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	3 North	1.000	2 Mid	15.4	1.964	1.112	0.2128	
30 minute summer	4 East	2.00	2 Mid	13.4	1.713	1.056	0.2685	
60 minute winter	2 Mid	1.001	1 Oufall	19.7	2.515	1.149	0.0973	47.6

Results for 100 year Critical Storm Duration. Lowest mass balance: 96.03%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	3 North	16	73.000	1.230	47.5	3.2115	9.0905	FLOOD
30 minute summer	4 East	16	72.900	1.040	45.4	2.9162	9.2284	FLOOD
60 minute winter	2 Mid	25	71.000	0.630	29.9	0.7925	12.5129	FLOOD
240 minute winter	1 Oufall	120	69.492	0.101	18.1	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	3 North	1.000	2 Mid	15.4	1.964	1.112	0.2128	
30 minute summer	4 East	2.00	2 Mid	13.4	1.713	1.056	0.2685	
60 minute winter	2 Mid	1.001	1 Oufall	19.7	2.515	1.149	0.0973	53.9

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 96.03%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	3 North	15	73.000	1.230	66.4	3.2115	17.6109	FLOOD
30 minute summer	4 East	15	72.900	1.040	63.5	2.9162	17.6210	FLOOD
120 minute winter	2 Mid	48	71.000	0.630	29.8	0.7925	20.4575	FLOOD
480 minute summer	1 Oufall	224	69.492	0.101	19.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	3 North	1.000	2 Mid	15.4	1.964	1.112	0.2128	
30 minute summer	4 East	2.00	2 Mid	13.4	1.713	1.056	0.2685	
120 minute winter	2 Mid	1.001	1 Oufall	19.7	2.515	1.149	0.0972	95.0