

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	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	0.350	Preferred Cover Depth (m)	0.350
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)
CP	0.004	5.00	10.000	450	100.000	100.000	0.600
SA			10.000	100	100.000	104.000	0.668

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	CP	SA	4.000	0.600	9.400	9.332	0.068	58.8	100	5.07	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)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.006	7.9	0.5	0.500	0.568	0.004	0.0	18	0.567

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
CP	100.000	100.000	10.000	0.600	450				
							0	1.000	9.400 100
SA	100.000	104.000	10.000	0.668	100		1	1.000	9.332 100

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	0.350	Additional Storage (m³/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
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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
30	0	0	0
100	40	0	0

Node SA Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	9.100	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.08604	Time to half empty (mins)	552	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	1.000	Number Required	1
Porosity	0.95	Pit Length (m)	5.000		

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.65%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	CP	10	9.429	0.029	1.3	0.0084	0.0000	OK
960 minute winter	SA	645	9.388	0.056	0.1	1.3666	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
15 minute winter	CP	1.000	SA	1.3	0.712	0.161	0.0071
960 minute winter	SA	Infiltration		0.0			

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.65%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	CP	440	9.853	0.453	0.3	0.1323	0.0000	FLOOD RISK
480 minute winter	SA	440	9.853	0.521	0.4	1.9065	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
480 minute winter	CP	1.000	SA	0.4	0.473	0.054	0.0313
480 minute winter	SA	Infiltration		0.1			