

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	0.440	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)	Depth (m)
S1	0.000	5.00	108.000	450	1.500
S2	0.120		108.000	450	1.700

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	S1	S2	200.000	0.600	106.500	106.300	0.200	1000.0	100	19.15	27.5

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	0.236	1.9	0.0	1.400	1.600	0.000	0.0	0	0.000

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	0.440	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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
100	40	0	0

Node S2 Carpark Storage Structure

Base Inf Coefficient (m/hr)	0.02500	Invert Level (m)	106.300	Slope (1:X)	350.0
Side Inf Coefficient (m/hr)	0.02500	Time to half empty (mins)	829	Depth (m)	
Safety Factor	2.0	Width (m)	6.000	Inf Depth (m)	
Porosity	0.30	Length (m)	200.000		

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S1	120	106.701	0.201	1.0	0.0319	0.0000	SURCHARGED
120 minute winter	S2	116	106.700	0.399	23.5	50.9228	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)
30 minute winter	S1	1.000	S2	-1.3	-0.188	-0.699	1.5649
120 minute winter	S2	Infiltration		3.2			