



Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	40	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Inverts
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.390	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	4.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
01	0.007	4.00	105.090	225	447716.113	303907.625	1.501
02	0.142	4.00	103.858	225	447736.067	303926.085	1.599
03	0.000		102.878	225	447738.335	303927.426	0.999
04	0.092		104.020	225	447769.066	303909.938	2.571

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	01	02	30.600	0.600	103.589	102.259	1.330	23.0	100	4.32	50.0
2	02	03	3.400	0.600	102.259	101.879	0.380	8.9	150	4.33	50.0
3	03	04	33.620	0.600	101.879	101.449	0.430	78.2	225	4.71	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	1.616	12.7	1.3	1.401	1.499	0.007	0.0	21	1.034
2	3.388	59.9	28.3	1.449	0.849	0.149	0.0	72	3.338
3	1.480	58.8	28.3	0.774	2.346	0.149	0.0	110	1.468

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1	30.600	23.0	100	Circular	105.090	103.589	1.401	103.858	102.259	1.499
2	3.400	8.9	150	Circular	103.858	102.259	1.449	102.878	101.879	0.849
3	33.620	78.2	225	Circular	102.878	101.879	0.774	104.020	101.449	2.346

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1	01	225	Manhole	Adoptable	02	225	Manhole	Adoptable
2	02	225	Manhole	Adoptable	03	225	Manhole	Adoptable
3	03	225	Manhole	Adoptable	04	225	Manhole	Adoptable



Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
01	447716.113	303907.625	105.090	1.501	225					
						0	1	103.589	100	
02	447736.067	303926.085	103.858	1.599	225		1	1	102.259	100
						0	2	102.259	150	
03	447738.335	303927.426	102.878	0.999	225		1	2	101.879	150
						0	3	101.879	225	
04	447769.066	303909.938	104.020	2.571	225		1	3	101.449	225

Simulation Settings

Rainfall Methodology	FEH-99	Analysis Speed	Normal
C (1km)	0.234	Skip Steady State	✓
D1 (1km)		Drain Down Time (mins)	240
D2 (1km)		Additional Storage (m³/ha)	20.0
D3 (1km)		Check Discharge Rate(s)	✓
E (1km)		100 year (l/s)	0.0
F (1km)		Check Discharge Volume	✓
Summer CV	0.750	100 year +40% 360 minute (m³)	-22
Winter CV	0.840		

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	0	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	SPR	0.10
Greenfield Method	IH124	Region	1
Positively Drained Area (ha)	0.234	Betterment (%)	0
SAAR (mm)		QBar	
Soil Index	1		

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	40
Positively Drained Area (ha)	0.234	Storm Duration (mins)	360
Soil Index	1	Betterment (%)	0
SPR	0.10	PR	-0.111
CWI	15.000	Runoff Volume (m³)	-22