

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 Soffits
M5-60 (mm)	17.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	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)
S2	0.031	5.00	155.425	1350	400912.791	340408.975	1.425
S45			156.351	1200	400926.314	340399.912	2.536
S46			158.227	1200	400933.429	340412.822	4.552
S47			156.334	1200	400903.841	340426.947	2.784
S4	0.031	5.00	154.478	1350	400897.489	340411.454	1.259
S5	0.018	5.00	153.951	1350	400890.488	340405.728	1.183
S6			153.278	1350	400884.708	340393.871	1.172
8			154.055	1050	400893.752	340389.398	3.007
INFILTRATION BASIN 2			154.055	1200	400898.752	340389.398	3.107

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)
10.000	S2	S45	16.279	0.600	154.000	153.815	0.185	88.0	225	5.19	50.0
10.001	S45	S46	14.741	0.600	153.815	153.675	0.140	105.3	225	5.39	50.0
10.002	S46	S47	32.787	0.600	153.675	153.550	0.125	262.3	225	5.77	50.0
10.003	S47	S4	16.745	0.600	153.550	153.219	0.331	50.6	225	5.86	50.0
10.004	S4	S5	9.045	0.600	153.219	152.768	0.451	20.1	225	5.89	50.0
10.005	S5	S6	13.190	0.600	152.768	152.106	0.662	19.9	225	5.93	50.0
10.006	S6	8	10.089	0.600	152.106	152.048	0.058	173.9	225	6.03	50.0
10.007	8	INFILTRATION BASIN 2	5.000	0.600	151.048	150.948	0.100	50.0	225	6.05	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)
10.000	1.394	55.4	5.9	1.200	2.311	0.031	0.0
10.001	1.274	50.6	5.9	2.311	4.327	0.031	0.0
10.002	1.419	375.1	5.9	4.327	2.559	0.031	0.0
10.003	3.247	858.4	5.9	2.559	1.034	0.031	0.0
10.004	5.165	1365.4	11.8	1.034	0.958	0.062	0.0
10.005	5.182	1369.9	15.2	0.958	0.947	0.080	0.0
10.006	1.745	461.4	15.2	0.947	1.782	0.080	0.0
10.007	3.266	863.5	15.2	2.782	2.882	0.080	0.0

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)
10.000	16.279	88.0	225	1 STANDARD	155.425	154.000	1.200	156.351	153.815	2.311
10.001	14.741	105.3	225	1 STANDARD	156.351	153.815	2.311	158.227	153.675	4.327
10.002	32.787	262.3	225	SWALE	158.227	153.675	4.327	156.334	153.550	2.559
10.003	16.745	50.6	225	SWALE	156.334	153.550	2.559	154.478	153.219	1.034
10.004	9.045	20.1	225	SWALE	154.478	153.219	1.034	153.951	152.768	0.958
10.005	13.190	19.9	225	SWALE	153.951	152.768	0.958	153.278	152.106	0.947
10.006	10.089	173.9	225	SWALE	153.278	152.106	0.947	154.055	152.048	1.782
10.007	5.000	50.0	225	SWALE	154.055	151.048	2.782	154.055	150.948	2.882

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
10.000	S2	1350	Manhole	1 STANDARD	S45	1200	Manhole	1 STANDARD
10.001	S45	1200	Manhole	1 STANDARD	S46	1200	Manhole	1 STANDARD
10.002	S46	1200	Manhole	1 STANDARD	S47	1200	Manhole	1 STANDARD
10.003	S47	1200	Manhole	1 STANDARD	S4	1350	Manhole	1 STANDARD
10.004	S4	1350	Manhole	1 STANDARD	S5	1350	Manhole	1 STANDARD
10.005	S5	1350	Manhole	1 STANDARD	S6	1350	Manhole	1 STANDARD
10.006	S6	1350	Manhole	1 STANDARD	8	1050	Manhole	1 STANDARD
10.007	8	1050	Manhole	1 STANDARD	INFILTRATION BASIN 2	1200	Manhole	1 STANDARD

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S2	400912.791	340408.975	155.425	1.425	1350		0	10.000	154.000	225
S45	400926.314	340399.912	156.351	2.536	1200		1	10.000	153.815	225
S46	400933.429	340412.822	158.227	4.552	1200		0	10.001	153.815	225
S47	400903.841	340426.947	156.334	2.784	1200		1	10.001	153.675	225
S4	400897.489	340411.454	154.478	1.259	1350		0	10.002	153.675	225
S5	400890.488	340405.728	153.951	1.183	1350		1	10.002	153.550	225
S6	400884.708	340393.871	153.278	1.172	1350		0	10.003	153.550	225
							0	10.003	153.219	225
							0	10.004	153.219	225
							0	10.004	152.768	225
							0	10.005	152.768	225
							0	10.005	152.106	225
							0	10.006	152.106	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
8	400893.752	340389.398	154.055	3.007	1050	1 	10.006	152.048	225
						0	10.007	151.048	225
INFILTRATION BASIN 2	400898.752	340389.398	154.055	3.107	1200	1 	10.007	150.948	225

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	17.000	Drain Down Time (mins)	240
Ratio-R	0.400	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 %)
1	0	0	0
30	0	0	0
100	40	0	0

Node 8 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.07164	Safety Factor	10.0	Invert Level (m)	151.048
Side Inf Coefficient (m/hr)	0.07164	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	10.0	0.0	1.000	71.9	0.0

Node INFILTRATION BASIN 2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	10.0	Invert Level (m)	151.048
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	9.2	0.0	0.801	55.3	0.0	1.601	138.1	0.0	2.401	256.9	0.0
0.101	12.9	0.0	0.901	63.8	0.0	1.701	151.0	0.0	2.501	274.3	0.0
0.201	17.2	0.0	1.001	72.8	0.0	1.801	164.4	0.0	2.601	292.2	0.0
0.301	22.1	0.0	1.101	82.3	0.0	1.901	178.4	0.0	2.701	310.7	0.0
0.401	27.6	0.0	1.201	92.3	0.0	2.001	193.0	0.0	2.801	329.8	0.0
0.501	33.6	0.0	1.301	102.9	0.0	2.101	208.2	0.0	2.901	349.4	0.0
0.601	40.3	0.0	1.401	114.1	0.0	2.201	223.9	0.0	3.001	369.6	0.0
0.701	47.5	0.0	1.501	125.8	0.0	2.301	240.1	0.0	3.007	370.9	0.0