

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)	0.75
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	19.600	Minimum Backdrop Height (m)	0.500
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)
101	0.019	5.00	16.666	1200	507606.767	104248.321	1.300
102			16.464	1200	507605.528	104227.661	1.328
103	0.012	5.00	16.387	1200	507606.005	104221.030	1.328
104	0.016	5.00	16.350	1200	507604.061	104210.543	1.300
105	0.005	5.00	16.322	1200	507609.742	104216.243	1.687
106	0.029	5.00	16.220	1200	507623.010	104215.556	1.734
107	0.020	5.00	15.489	1200	507693.530	104215.347	1.300
108	0.007	5.00	15.732	1200	507678.048	104215.329	1.805
109	0.014	5.00	15.825	1200	507668.747	104228.987	1.300
110	0.015	5.00	15.717	1200	507668.711	104217.869	1.934
111	0.012	5.00	15.974	1200	507643.130	104217.883	2.434
112	0.008	5.00	16.008	1200	507643.109	104215.381	2.630
113			15.964		507647.335	104215.341	2.610

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	101	102	20.697	0.600	15.366	15.136	0.230	90.0	100	5.43	50.0
1.001	102	103	6.648	0.600	15.136	15.059	0.077	86.3	100	5.56	50.0
1.002	103	105	6.073	0.600	15.059	14.685	0.374	16.2	100	5.61	50.0
2.000	104	105	8.048	0.600	15.050	14.685	0.365	22.0	100	5.08	50.0
1.003	105	106	13.287	0.600	14.635	14.486	0.149	89.2	150	5.82	50.0
1.004	106	112	20.099	0.600	14.486	14.371	0.115	174.8	150	6.26	50.0
3.000	107	108	15.482	0.600	14.189	13.927	0.262	59.1	100	5.26	50.0
3.001	108	110	9.676	0.600	13.927	13.833	0.094	102.9	100	5.47	50.0
4.000	109	110	11.118	0.600	14.525	13.833	0.692	16.1	100	5.10	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	0.811	6.4	2.6	1.200	1.228	0.019	0.0
1.001	0.828	6.5	2.6	1.228	1.228	0.019	0.0
1.002	1.926	15.1	4.2	1.228	1.537	0.031	0.0
2.000	1.651	13.0	2.2	1.200	1.537	0.016	0.0
1.003	1.065	18.8	7.0	1.537	1.584	0.052	0.0
1.004	0.757	13.4	11.0	1.584	1.487	0.081	0.0
3.000	1.004	7.9	2.7	1.200	1.705	0.020	0.0
3.001	0.757	5.9	3.7	1.705	1.784	0.027	0.0
4.000	1.936	15.2	1.9	1.200	1.784	0.014	0.0

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)
3.002	110	111	25.581	0.600	13.783	13.540	0.243	105.3	150	5.91	50.0
3.003	111	112	2.503	0.600	13.540	13.453	0.087	28.8	150	5.93	50.0
1.005	112	113	4.226	0.600	13.378	13.354	0.024	176.1	225	6.33	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)
3.002	0.979	17.3	7.6	1.784	2.284	0.056	0.0
3.003	1.884	33.3	9.2	2.284	2.405	0.068	0.0
1.005	0.982	39.0	21.3	2.405	2.385	0.157	0.0

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
FSR Region	England and Wales	Skip Steady State	x
M5-60 (mm)	19.500	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

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Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	40	0	0

Results for 1 year +40% CC Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	101	10	15.419	0.053	3.5	0.0760	0.0000	OK
15 minute winter	102	11	15.191	0.055	3.4	0.0622	0.0000	OK
15 minute winter	103	11	15.104	0.045	5.5	0.0590	0.0000	OK
15 minute winter	104	10	15.083	0.033	2.9	0.0460	0.0000	OK
15 minute winter	105	11	14.709	0.074	9.3	0.0883	0.0000	OK
15 minute winter	106	11	14.627	0.141	14.4	0.2062	0.0000	OK
15 minute winter	107	10	14.237	0.048	3.7	0.0688	0.0000	OK
15 minute winter	108	11	14.000	0.073	4.9	0.0881	0.0000	OK
15 minute winter	109	10	14.553	0.028	2.6	0.0376	0.0000	OK
15 minute winter	110	11	13.868	0.085	10.1	0.1091	0.0000	OK
15 minute winter	111	11	13.618	0.078	12.1	0.0959	0.0000	OK
15 minute winter	112	11	13.537	0.159	27.6	0.1896	0.0000	OK
15 minute winter	113	11	13.492	0.138	27.5	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 winter	101	1.000	102	3.4	0.800	0.537	0.0887	
15 minute winter	102	1.001	103	3.4	0.874	0.526	0.0260	
15 minute winter	103	1.002	105	5.5	1.697	0.366	0.0198	
15 minute winter	104	2.000	105	2.9	1.292	0.222	0.0179	
15 minute winter	105	1.003	106	9.3	0.719	0.494	0.1717	
15 minute winter	106	1.004	112	14.0	0.894	1.046	0.3113	
15 minute winter	107	3.000	108	3.6	0.753	0.462	0.0753	
15 minute winter	108	3.001	110	4.8	0.819	0.813	0.0571	
15 minute winter	109	4.000	110	2.6	1.348	0.169	0.0232	
15 minute winter	110	3.002	111	10.0	1.026	0.579	0.2496	
15 minute winter	111	3.003	112	12.2	1.369	0.365	0.0243	
15 minute winter	112	1.005	113	27.5	0.992	0.705	0.1172	13.3