

10-Sep-19

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)
MH1	0.010	5.00	80.850	1200	0.700
MH2	0.008	5.00	80.700	1800	3.700
MH3	0.050	5.00	81.000	1800	4.240
PS1			81.240	1800	4.518
MH4	0.013	5.00	79.500	1800	2.500
MH5	0.029	5.00	80.000	1800	3.155
RE1	0.003	5.00	80.350	300	0.700
IC1	0.004	5.00	80.350	300	0.910
IC2	0.005	5.00	80.350	300	1.274
MH6	0.010	5.00	80.350	450	1.350
MH7	0.010	5.00	80.350	450	1.511
RE2	0.002	5.00	80.350	300	1.050
IC3	0.002	5.00	80.350	300	1.148
IC4	0.003	5.00	80.650	300	0.700
IC5	0.005	5.00	80.650	300	0.846
IC6	0.006	5.00	80.650	300	0.974
IC7	0.003	5.00	80.750	300	0.700
IC8	0.004	5.00	80.750	300	0.787
IC9	0.002	5.00	80.750	300	0.925
RE3	0.002	5.00	80.750	300	0.700
RE4	0.002	5.00	80.450	300	0.700
IC10	0.003	5.00	80.450	300	0.845
IC11	0.002	5.00	80.450	300	1.037
RE5	0.002	5.00	80.450	300	0.700
IC12	0.002	5.00	80.450	300	0.824
RE6	0.006	5.00	80.150	300	0.700
IC13	0.004	5.00	80.150	300	0.842
IC14	0.003	5.00	80.150	300	1.090
RE7	0.006	5.00	79.950	300	0.700
IC15	0.002	5.00	79.950	300	0.842
IC16	0.003	5.00	79.950	300	1.086
RE8	0.002	5.00	79.400	300	1.200
IC17	0.001	5.00	79.400	450	1.447
IC18	0.002	5.00	79.400	600	1.591
IC19	0.006	5.00	79.400	300	0.700
RE9	0.006	5.00	79.650	300	0.700
IC20	0.002	5.00	79.650	300	0.842
IC21	0.002	5.00	79.650	300	1.093
RE10	0.001	5.00	79.650	300	0.700

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Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Depth (m)
RE11	0.006	5.00	79.900	300	0.700
IC22	0.002	5.00	79.900	300	0.842
IC23	0.002	5.00	79.900	300	1.177
RE12	0.001	5.00	79.900	300	0.700
IC24	0.004	5.00	80.250	300	0.700
IC25	0.004	5.00	80.250	300	0.816
IC26	0.003	5.00	80.250	300	1.114
RE13	0.001	5.00	80.250	300	0.700
IC27	0.002	5.00	80.250	300	0.793

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	MH1	MH2	19.497	0.600	80.150	79.955	0.195	100.0	100	5.42	50.0
1.002	MH2	MH3	35.190	0.600	77.000	76.824	0.176	200.0	900	5.95	50.0
1.003	MH3	PS1	7.604	0.600	76.760	76.722	0.038	200.0	900	6.01	50.0
2.000	MH4	MH5	15.500	0.600	77.000	76.845	0.155	100.0	900	5.60	50.0
2.001	MH5	MH3	16.918	0.600	76.845	76.760	0.085	200.0	900	5.73	50.0
3.000	RE1	IC1	12.454	0.600	79.650	79.440	0.210	59.3	100	5.21	50.0
3.001	IC1	IC2	8.639	0.600	79.440	79.076	0.364	23.7	100	5.30	50.0
3.002	IC2	MH6	4.501	0.600	79.076	79.000	0.076	59.2	100	5.37	50.0
3.003	MH6	MH7	9.532	0.600	79.000	78.839	0.161	59.2	100	5.53	50.0
3.004	MH7	MH2	12.304	0.600	78.839	78.632	0.207	59.4	150	5.69	50.0
4.000	RE2	IC3	5.802	0.600	79.300	79.202	0.098	59.2	100	5.10	50.0
4.001	IC3	IC2	7.568	0.600	79.202	79.076	0.126	60.0	100	5.22	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	0.769	6.0	1.9	0.600	0.645	0.010	0.0	39	0.682
1.002	2.212	1407.0	12.9	2.800	3.276	0.068	0.0	59	0.717
1.003	2.212	1407.0	48.0	3.340	3.618	0.253	0.0	111	1.058
2.000	3.133	1993.1	8.7	1.600	2.255	0.046	0.0	42	0.814
2.001	2.212	1407.0	19.5	2.255	3.340	0.103	0.0	73	0.814
3.000	1.002	7.9	0.6	0.600	0.810	0.003	0.0	18	0.580
3.001	1.591	12.5	1.3	0.810	1.174	0.007	0.0	22	1.040
3.002	1.003	7.9	3.0	1.174	1.250	0.016	0.0	43	0.940
3.003	1.003	7.9	4.9	1.250	1.411	0.026	0.0	57	1.059
3.004	1.307	23.1	9.5	1.361	1.918	0.050	0.0	67	1.245
4.000	1.003	7.9	0.4	0.950	1.048	0.002	0.0	15	0.516
4.001	0.996	7.8	0.8	1.048	1.174	0.004	0.0	21	0.636

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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)
5.000	IC4	IC5	8.685	0.600	79.950	79.804	0.146	59.5	100	5.14	50.0
5.001	IC5	IC6	7.592	0.600	79.804	79.676	0.128	59.3	100	5.27	50.0
5.002	IC6	MH7	7.775	0.600	79.676	79.545	0.131	59.4	100	5.40	50.0
6.000	IC7	IC8	5.149	0.600	80.050	79.963	0.087	59.2	100	5.09	50.0
6.001	IC8	IC9	8.175	0.600	79.963	79.825	0.138	59.2	100	5.22	50.0
6.002	IC9	MH3	3.321	0.600	79.825	79.769	0.056	59.3	100	5.28	50.0
7.000	RE3	IC9	11.180	0.600	80.050	79.825	0.225	49.7	100	5.17	50.0
8.000	RE4	IC10	8.583	0.600	79.750	79.605	0.145	59.2	100	5.14	50.0
8.001	IC10	IC11	11.423	0.600	79.605	79.413	0.192	59.5	100	5.33	50.0
8.002	IC11	MH3	5.389	0.600	79.413	79.322	0.091	59.2	100	5.42	50.0
9.000	RE5	IC12	7.332	0.600	79.750	79.626	0.124	59.1	100	5.12	50.0
9.001	IC12	MH5	5.062	0.600	79.626	79.540	0.086	58.9	100	5.21	50.0
10.000	RE6	IC13	8.400	0.600	79.450	79.308	0.142	59.2	100	5.14	50.0
10.001	IC13	IC14	14.730	0.600	79.308	79.060	0.248	59.4	100	5.38	50.0
10.002	IC14	MH5	7.156	0.600	79.060	78.939	0.121	59.1	100	5.50	50.0
11.000	RE7	IC15	8.400	0.600	79.250	79.108	0.142	59.2	100	5.14	50.0
11.001	IC15	IC16	14.473	0.600	79.108	78.864	0.244	59.3	100	5.38	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)
5.000	1.000	7.9	0.6	0.600	0.746	0.003	0.0	18	0.580
5.001	1.002	7.9	1.5	0.746	0.874	0.008	0.0	30	0.778
5.002	1.001	7.9	2.7	0.874	0.705	0.014	0.0	40	0.906
6.000	1.003	7.9	0.6	0.600	0.687	0.003	0.0	18	0.581
6.001	1.002	7.9	1.3	0.687	0.825	0.007	0.0	28	0.743
6.002	1.002	7.9	2.1	0.825	1.131	0.011	0.0	36	0.851
7.000	1.096	8.6	0.4	0.600	0.825	0.002	0.0	14	0.546
8.000	1.003	7.9	0.4	0.600	0.745	0.002	0.0	15	0.516
8.001	1.000	7.9	0.9	0.745	0.937	0.005	0.0	24	0.679
8.002	1.003	7.9	1.3	0.937	1.578	0.007	0.0	28	0.744
9.000	1.003	7.9	0.4	0.600	0.724	0.002	0.0	15	0.516
9.001	1.006	7.9	0.8	0.724	0.360	0.004	0.0	21	0.628
10.000	1.003	7.9	1.1	0.600	0.742	0.006	0.0	25	0.707
10.001	1.001	7.9	1.9	0.742	0.990	0.010	0.0	33	0.820
10.002	1.003	7.9	2.5	0.990	0.961	0.013	0.0	39	0.890
11.000	1.003	7.9	1.1	0.600	0.742	0.006	0.0	25	0.707
11.001	1.002	7.9	1.5	0.742	0.986	0.008	0.0	30	0.778

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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)
11.002	IC16	MH4	5.525	0.600	78.864	78.771	0.093	59.4	100	5.47	50.0
12.000	RE8	IC17	14.562	0.600	78.200	77.953	0.247	59.0	100	5.24	50.0
12.001	IC17	IC18	8.515	0.600	77.953	77.809	0.144	59.0	100	5.38	50.0
12.002	IC18	MH4	7.110	0.600	77.809	77.738	0.071	100.0	300	5.46	50.0
13.000	IC19	IC18	14.167	0.600	78.700	77.809	0.891	15.9	100	5.12	50.0
14.000	RE9	IC20	8.417	0.600	78.950	78.808	0.142	59.3	100	5.14	50.0
14.001	IC20	IC21	14.909	0.600	78.808	78.557	0.251	59.4	100	5.39	50.0
14.002	IC21	MH4	7.689	0.600	78.557	78.427	0.130	59.1	100	5.52	50.0
15.000	RE10	IC21	7.668	0.600	78.950	78.821	0.129	59.4	100	5.13	50.0
16.000	RE11	IC22	8.417	0.600	79.200	79.058	0.142	59.3	100	5.14	50.0
16.001	IC22	IC23	19.906	0.600	79.058	78.723	0.335	59.4	100	5.47	50.0
16.002	IC23	MH5	5.501	0.600	78.723	78.630	0.093	59.2	100	5.56	50.0
17.000	RE12	IC23	7.778	0.600	79.200	79.069	0.131	59.4	100	5.13	50.0
18.000	IC24	IC25	6.886	0.600	79.550	79.434	0.116	59.4	100	5.11	50.0
18.001	IC25	IC26	17.698	0.600	79.434	79.136	0.298	59.4	100	5.41	50.0
18.002	IC26	MH3	2.996	0.600	79.136	79.085	0.051	58.7	100	5.46	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)
11.002	1.001	7.9	2.1	0.986	0.629	0.011	0.0	36	0.850
12.000	1.004	7.9	0.4	1.100	1.347	0.002	0.0	15	0.517
12.001	1.004	7.9	0.6	1.347	1.491	0.003	0.0	18	0.582
12.002	1.572	111.1	2.1	1.291	1.462	0.011	0.0	28	0.619
13.000	1.947	15.3	1.1	0.600	1.491	0.006	0.0	18	1.133
14.000	1.002	7.9	1.1	0.600	0.742	0.006	0.0	25	0.706
14.001	1.001	7.9	1.5	0.742	0.993	0.008	0.0	30	0.777
14.002	1.003	7.9	2.1	0.993	0.973	0.011	0.0	35	0.842
15.000	1.001	7.9	0.2	0.600	0.729	0.001	0.0	11	0.404
16.000	1.002	7.9	1.1	0.600	0.742	0.006	0.0	25	0.706
16.001	1.001	7.9	1.5	0.742	1.077	0.008	0.0	30	0.777
16.002	1.003	7.9	2.1	1.077	1.270	0.011	0.0	35	0.842
17.000	1.001	7.9	0.2	0.600	0.731	0.001	0.0	11	0.404
18.000	1.001	7.9	0.8	0.600	0.716	0.004	0.0	21	0.625
18.001	1.001	7.9	1.5	0.716	1.014	0.008	0.0	30	0.777
18.002	1.007	7.9	2.7	1.014	1.815	0.014	0.0	40	0.911

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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)
19.000	RE13	IC27	5.505	0.600	79.550	79.457	0.093	59.2	100	5.09	50.0
19.001	IC27	IC26	16.901	0.600	79.457	79.136	0.321	52.7	100	5.36	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)
19.000	1.003	7.9	0.2	0.600	0.693	0.001	0.0	11	0.405
19.001	1.064	8.4	0.6	0.693	1.014	0.003	0.0	18	0.600

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)
1.000	19.497	100.0	100	Circular	80.850	80.150	0.600	80.700	79.955	0.645
1.002	35.190	200.0	900	Circular	80.700	77.000	2.800	81.000	76.824	3.276
1.003	7.604	200.0	900	Circular	81.000	76.760	3.340	81.240	76.722	3.618
2.000	15.500	100.0	900	Circular	79.500	77.000	1.600	80.000	76.845	2.255
2.001	16.918	200.0	900	Circular	80.000	76.845	2.255	81.000	76.760	3.340
3.000	12.454	59.3	100	Circular	80.350	79.650	0.600	80.350	79.440	0.810
3.001	8.639	23.7	100	Circular	80.350	79.440	0.810	80.350	79.076	1.174
3.002	4.501	59.2	100	Circular	80.350	79.076	1.174	80.350	79.000	1.250
3.003	9.532	59.2	100	Circular	80.350	79.000	1.250	80.350	78.839	1.411
3.004	12.304	59.4	150	Circular	80.350	78.839	1.361	80.700	78.632	1.918
4.000	5.802	59.2	100	Circular	80.350	79.300	0.950	80.350	79.202	1.048
4.001	7.568	60.0	100	Circular	80.350	79.202	1.048	80.350	79.076	1.174
5.000	8.685	59.5	100	Circular	80.650	79.950	0.600	80.650	79.804	0.746
5.001	7.592	59.3	100	Circular	80.650	79.804	0.746	80.650	79.676	0.874

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	MH1	1200	Manhole	Adoptable	MH2	1800	Manhole	Adoptable
1.002	MH2	1800	Manhole	Adoptable	MH3	1800	Manhole	Adoptable
1.003	MH3	1800	Manhole	Adoptable	PS1	1800	Manhole	Adoptable
2.000	MH4	1800	Manhole	Adoptable	MH5	1800	Manhole	Adoptable
2.001	MH5	1800	Manhole	Adoptable	MH3	1800	Manhole	Adoptable
3.000	RE1	300	Manhole	Adoptable	IC1	300	Manhole	Adoptable
3.001	IC1	300	Manhole	Adoptable	IC2	300	Manhole	Adoptable
3.002	IC2	300	Manhole	Adoptable	MH6	450	Manhole	Adoptable
3.003	MH6	450	Manhole	Adoptable	MH7	450	Manhole	Adoptable
3.004	MH7	450	Manhole	Adoptable	MH2	1800	Manhole	Adoptable
4.000	RE2	300	Manhole	Adoptable	IC3	300	Manhole	Adoptable
4.001	IC3	300	Manhole	Adoptable	IC2	300	Manhole	Adoptable
5.000	IC4	300	Manhole	Adoptable	IC5	300	Manhole	Adoptable
5.001	IC5	300	Manhole	Adoptable	IC6	300	Manhole	Adoptable

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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)
5.002	7.775	59.4	100	Circular	80.650	79.676	0.874	80.350	79.545	0.705
6.000	5.149	59.2	100	Circular	80.750	80.050	0.600	80.750	79.963	0.687
6.001	8.175	59.2	100	Circular	80.750	79.963	0.687	80.750	79.825	0.825
6.002	3.321	59.3	100	Circular	80.750	79.825	0.825	81.000	79.769	1.131
7.000	11.180	49.7	100	Circular	80.750	80.050	0.600	80.750	79.825	0.825
8.000	8.583	59.2	100	Circular	80.450	79.750	0.600	80.450	79.605	0.745
8.001	11.423	59.5	100	Circular	80.450	79.605	0.745	80.450	79.413	0.937
8.002	5.389	59.2	100	Circular	80.450	79.413	0.937	81.000	79.322	1.578
9.000	7.332	59.1	100	Circular	80.450	79.750	0.600	80.450	79.626	0.724
9.001	5.062	58.9	100	Circular	80.450	79.626	0.724	80.000	79.540	0.360
10.000	8.400	59.2	100	Circular	80.150	79.450	0.600	80.150	79.308	0.742
10.001	14.730	59.4	100	Circular	80.150	79.308	0.742	80.150	79.060	0.990
10.002	7.156	59.1	100	Circular	80.150	79.060	0.990	80.000	78.939	0.961
11.000	8.400	59.2	100	Circular	79.950	79.250	0.600	79.950	79.108	0.742
11.001	14.473	59.3	100	Circular	79.950	79.108	0.742	79.950	78.864	0.986
11.002	5.525	59.4	100	Circular	79.950	78.864	0.986	79.500	78.771	0.629
12.000	14.562	59.0	100	Circular	79.400	78.200	1.100	79.400	77.953	1.347
12.001	8.515	59.0	100	Circular	79.400	77.953	1.347	79.400	77.809	1.491

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
5.002	IC6	300	Manhole	Adoptable	MH7	450	Manhole	Adoptable
6.000	IC7	300	Manhole	Adoptable	IC8	300	Manhole	Adoptable
6.001	IC8	300	Manhole	Adoptable	IC9	300	Manhole	Adoptable
6.002	IC9	300	Manhole	Adoptable	MH3	1800	Manhole	Adoptable
7.000	RE3	300	Manhole	Adoptable	IC9	300	Manhole	Adoptable
8.000	RE4	300	Manhole	Adoptable	IC10	300	Manhole	Adoptable
8.001	IC10	300	Manhole	Adoptable	IC11	300	Manhole	Adoptable
8.002	IC11	300	Manhole	Adoptable	MH3	1800	Manhole	Adoptable
9.000	RE5	300	Manhole	Adoptable	IC12	300	Manhole	Adoptable
9.001	IC12	300	Manhole	Adoptable	MH5	1800	Manhole	Adoptable
10.000	RE6	300	Manhole	Adoptable	IC13	300	Manhole	Adoptable
10.001	IC13	300	Manhole	Adoptable	IC14	300	Manhole	Adoptable
10.002	IC14	300	Manhole	Adoptable	MH5	1800	Manhole	Adoptable
11.000	RE7	300	Manhole	Adoptable	IC15	300	Manhole	Adoptable
11.001	IC15	300	Manhole	Adoptable	IC16	300	Manhole	Adoptable
11.002	IC16	300	Manhole	Adoptable	MH4	1800	Manhole	Adoptable
12.000	RE8	300	Manhole	Adoptable	IC17	450	Manhole	Adoptable
12.001	IC17	450	Manhole	Adoptable	IC18	600	Manhole	Adoptable

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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)
12.002	7.110	100.0	300	Circular	79.400	77.809	1.291	79.500	77.738	1.462
13.000	14.167	15.9	100	Circular	79.400	78.700	0.600	79.400	77.809	1.491
14.000	8.417	59.3	100	Circular	79.650	78.950	0.600	79.650	78.808	0.742
14.001	14.909	59.4	100	Circular	79.650	78.808	0.742	79.650	78.557	0.993
14.002	7.689	59.1	100	Circular	79.650	78.557	0.993	79.500	78.427	0.973
15.000	7.668	59.4	100	Circular	79.650	78.950	0.600	79.650	78.821	0.729
16.000	8.417	59.3	100	Circular	79.900	79.200	0.600	79.900	79.058	0.742
16.001	19.906	59.4	100	Circular	79.900	79.058	0.742	79.900	78.723	1.077
16.002	5.501	59.2	100	Circular	79.900	78.723	1.077	80.000	78.630	1.270
17.000	7.778	59.4	100	Circular	79.900	79.200	0.600	79.900	79.069	0.731
18.000	6.886	59.4	100	Circular	80.250	79.550	0.600	80.250	79.434	0.716
18.001	17.698	59.4	100	Circular	80.250	79.434	0.716	80.250	79.136	1.014
18.002	2.996	58.7	100	Circular	80.250	79.136	1.014	81.000	79.085	1.815
19.000	5.505	59.2	100	Circular	80.250	79.550	0.600	80.250	79.457	0.693
19.001	16.901	52.7	100	Circular	80.250	79.457	0.693	80.250	79.136	1.014

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
12.002	IC18	600	Manhole	Adoptable	MH4	1800	Manhole	Adoptable
13.000	IC19	300	Manhole	Adoptable	IC18	600	Manhole	Adoptable
14.000	RE9	300	Manhole	Adoptable	IC20	300	Manhole	Adoptable
14.001	IC20	300	Manhole	Adoptable	IC21	300	Manhole	Adoptable
14.002	IC21	300	Manhole	Adoptable	MH4	1800	Manhole	Adoptable
15.000	RE10	300	Manhole	Adoptable	IC21	300	Manhole	Adoptable
16.000	RE11	300	Manhole	Adoptable	IC22	300	Manhole	Adoptable
16.001	IC22	300	Manhole	Adoptable	IC23	300	Manhole	Adoptable
16.002	IC23	300	Manhole	Adoptable	MH5	1800	Manhole	Adoptable
17.000	RE12	300	Manhole	Adoptable	IC23	300	Manhole	Adoptable
18.000	IC24	300	Manhole	Adoptable	IC25	300	Manhole	Adoptable
18.001	IC25	300	Manhole	Adoptable	IC26	300	Manhole	Adoptable
18.002	IC26	300	Manhole	Adoptable	MH3	1800	Manhole	Adoptable
19.000	RE13	300	Manhole	Adoptable	IC27	300	Manhole	Adoptable
19.001	IC27	300	Manhole	Adoptable	IC26	300	Manhole	Adoptable

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Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
MH1	80.850	0.700	1200		0	1.000	80.150 100
MH2	80.700	3.700	1800		1	3.004	78.632 150
					2	1.000	79.955 100
					0	1.002	77.000 900
MH3	81.000	4.240	1800		1	18.002	79.085 100
					2	8.002	79.322 100
					3	6.002	79.769 100
					4	2.001	76.760 900
					5	1.002	76.824 900
					0	1.003	76.760 900
PS1	81.240	4.518	1800		1	1.003	76.722 900
MH4	79.500	2.500	1800		1	14.002	78.427 100
					2	12.002	77.738 300
					3	11.002	78.771 100
					0	2.000	77.000 900
MH5	80.000	3.155	1800		1	16.002	78.630 100
					2	10.002	78.939 100
					3	9.001	79.540 100
					4	2.000	76.845 900
					0	2.001	76.845 900
RE1	80.350	0.700	300		0	3.000	79.650 100
IC1	80.350	0.910	300		1	3.000	79.440 100
					0	3.001	79.440 100
IC2	80.350	1.274	300		1	4.001	79.076 100
					2	3.001	79.076 100
					0	3.002	79.076 100
MH6	80.350	1.350	450		1	3.002	79.000 100
					0	3.003	79.000 100
MH7	80.350	1.511	450		1	5.002	79.545 100
					2	3.003	78.839 100
					0	3.004	78.839 150
RE2	80.350	1.050	300		0	4.000	79.300 100

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Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
IC3	80.350	1.148	300	1	4.000	79.202	100
					0	4.001	79.202
IC4	80.650	0.700	300	0	5.000	79.950	100
					1	5.000	79.804
IC5	80.650	0.846	300	0	5.001	79.804	100
					1	5.001	79.676
IC6	80.650	0.974	300	0	5.002	79.676	100
					0	6.000	80.050
IC7	80.750	0.700	300	0	6.000	79.963	100
					1	6.000	79.825
IC8	80.750	0.787	300	0	6.001	79.825	100
					2	6.001	79.825
IC9	80.750	0.925	300	0	6.002	79.825	100
					0	7.000	80.050
RE3	80.750	0.700	300	0	7.000	80.050	100
					0	8.000	79.750
RE4	80.450	0.700	300	0	8.000	79.605	100
					1	8.000	79.605
IC10	80.450	0.845	300	0	8.001	79.605	100
					1	8.001	79.413
IC11	80.450	1.037	300	0	8.002	79.413	100
					0	9.000	79.750
RE5	80.450	0.700	300	0	9.000	79.626	100
					1	9.000	79.626
IC12	80.450	0.824	300	0	9.001	79.626	100
					0	9.001	79.626

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Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
RE6	80.150	0.700	300					
				0	10.000	79.450	100	
IC13	80.150	0.842	300		1	10.000	79.308	100
				0	10.001	79.308	100	
IC14	80.150	1.090	300		1	10.001	79.060	100
				0	10.002	79.060	100	
RE7	79.950	0.700	300					
				0	11.000	79.250	100	
IC15	79.950	0.842	300		1	11.000	79.108	100
				0	11.001	79.108	100	
IC16	79.950	1.086	300		1	11.001	78.864	100
				0	11.002	78.864	100	
RE8	79.400	1.200	300					
				0	12.000	78.200	100	
IC17	79.400	1.447	450		1	12.000	77.953	100
				0	12.001	77.953	100	
IC18	79.400	1.591	600		1	13.000	77.809	100
				2	12.001	77.809	100	
				0	12.002	77.809	300	
IC19	79.400	0.700	300					
				0	13.000	78.700	100	
RE9	79.650	0.700	300					
				0	14.000	78.950	100	
IC20	79.650	0.842	300		1	14.000	78.808	100
				0	14.001	78.808	100	
IC21	79.650	1.093	300		1	15.000	78.821	100
				2	14.001	78.557	100	
				0	14.002	78.557	100	

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Manhole Schedule

Node	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
RE10	79.650	0.700	300					
				0	15.000	78.950	100	
RE11	79.900	0.700	300					
				0	16.000	79.200	100	
IC22	79.900	0.842	300		1	16.000	79.058	100
				0	16.001	79.058	100	
IC23	79.900	1.177	300		1	17.000	79.069	100
				2	16.001	78.723	100	
				0	16.002	78.723	100	
RE12	79.900	0.700	300					
				0	17.000	79.200	100	
IC24	80.250	0.700	300					
				0	18.000	79.550	100	
IC25	80.250	0.816	300		1	18.000	79.434	100
				0	18.001	79.434	100	
IC26	80.250	1.114	300		1	19.001	79.136	100
				2	18.001	79.136	100	
				0	18.002	79.136	100	
RE13	80.250	0.700	300					
				0	19.000	79.550	100	
IC27	80.250	0.793	300		1	19.000	79.457	100
				0	19.001	79.457	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	0.400	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

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

Node PS1 Online Pump Control

Flap Valve	x	Design Depth (m)	1.740	Switch off depth (m)	0.001
Replaces Downstream Link	✓	Design Flow (l/s)	5.4		
Invert Level (m)	76.722	Switch on depth (m)	0.002		

Depth (m)	Flow (l/s)
1.740	5.400

Node MH4 Online Orifice Control

Flap Valve	✓	Invert Level (m)	77.000	Discharge Coefficient	0.600
Replaces Downstream Link	x	Diameter (m)	0.900		

Approval Settings

Node Size	✓	Maximum Full Bore Velocity (m/s)	3.000
Node Losses	✓	Proportional Velocity	✓
Link Size	✓	Return Period (years)	
Minimum Diameter (mm)	150	Minimum Proportional Velocity (m/s)	0.750
Link Length	✓	Maximum Proportional Velocity (m/s)	3.000
Maximum Length (m)	100.000	Surcharged Depth	✓
Coordinates	✓	Return Period (years)	
Accuracy (m)	1.000	Maximum Surcharged Depth (m)	0.100
Crossings	✓	Flooding	✓
Cover Depth	✓	Return Period (years)	30
Minimum Cover Depth (m)		Time to Half Empty	x
Maximum Cover Depth (m)	3.000	Discharge Rates	✓
Backdrops	✓	1 year (l/s)	
Minimum Backdrop Height (m)		30 year (l/s)	
Maximum Backdrop Height (m)	1.500	100 year (l/s)	
Full Bore Velocity	✓	Discharge Volume	✓
Minimum Full Bore Velocity (m/s)		100 year 360 minute (m³)	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 89.01%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	MH1	11	80.237	0.087	6.3	0.1237	0.0000	OK
120 minute winter	MH2	92	79.929	2.929	61.9	7.5793	0.0000	SURCHARGED
240 minute summer	MH3	260	80.076	3.316	560.5	9.2221	0.0000	SURCHARGED
360 minute winter	PS1	272	79.999	3.277	444.7	8.3391	0.0000	OK
480 minute winter	MH4	320	79.400	2.400	8.9	6.3579	0.0000	FLOOD RISK
360 minute winter	MH5	264	79.967	3.122	185.4	8.5187	0.0000	FLOOD RISK
120 minute winter	RE1	92	79.914	0.264	0.6	0.0413	0.0000	SURCHARGED
120 minute winter	IC1	92	79.921	0.481	2.0	0.0765	0.0000	SURCHARGED
120 minute winter	IC2	92	79.922	0.846	3.3	0.1261	0.0000	SURCHARGED
120 minute winter	MH6	92	79.923	0.923	5.2	0.2834	0.0000	SURCHARGED
120 minute winter	MH7	92	79.920	1.081	10.0	0.3146	0.0000	SURCHARGED
120 minute winter	RE2	92	79.914	0.614	1.6	0.0670	0.0000	SURCHARGED
120 minute winter	IC3	92	79.918	0.716	2.5	0.0759	0.0000	SURCHARGED
15 minute winter	IC4	10	79.983	0.033	1.9	0.0052	0.0000	OK
180 minute winter	IC5	128	79.921	0.117	1.4	0.0222	0.0000	SURCHARGED
180 minute winter	IC6	128	79.915	0.239	2.8	0.0464	0.0000	SURCHARGED
15 minute winter	IC7	10	80.084	0.034	1.9	0.0053	0.0000	OK
120 minute winter	IC8	102	80.040	0.077	1.4	0.0132	0.0000	OK
360 minute winter	IC9	264	80.154	0.329	4.0	0.0375	0.0000	SURCHARGED
15 minute winter	RE3	10	80.076	0.026	1.3	0.0033	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	MH1	1.000	MH2	6.0	0.865	0.999	0.1357	130.4
120 minute winter	MH2	1.002	MH3	-52.1	0.479	-0.037	22.3025	
240 minute summer	MH3	1.003	PS1	801.2	1.264	0.569	4.8192	
360 minute winter	PS1	Pump		5.4				
480 minute winter	MH4	2.000	MH5	152.2	0.240	0.076	9.8235	
360 minute winter	MH5	2.001	MH3	83.9	0.165	0.060	10.7222	
120 minute winter	RE1	3.000	IC1	0.7	0.527	0.091	0.0974	130.4
120 minute winter	IC1	3.001	IC2	1.4	0.561	0.112	0.0676	
120 minute winter	IC2	3.002	MH6	3.2	0.724	0.407	0.0352	
120 minute winter	MH6	3.003	MH7	5.2	0.921	0.660	0.0746	
120 minute winter	MH7	3.004	MH2	10.0	1.218	0.433	0.2166	
120 minute winter	RE2	4.000	IC3	-1.3	0.402	-0.163	0.0454	
120 minute winter	IC3	4.001	IC2	-2.2	0.342	-0.275	0.0592	130.4
15 minute winter	IC4	5.000	IC5	1.9	0.543	0.239	0.0316	
180 minute winter	IC5	5.001	IC6	2.4	0.556	0.305	0.0594	
180 minute winter	IC6	5.002	MH7	2.6	0.816	0.334	0.0608	
15 minute winter	IC7	6.000	IC8	1.9	0.560	0.238	0.0173	
120 minute winter	IC8	6.001	IC9	4.6	0.681	0.580	0.0583	
360 minute winter	IC9	6.002	MH3	10.3	1.312	1.305	0.0260	130.4
15 minute winter	RE3	7.000	IC9	1.3	0.294	0.148	0.0482	

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 89.01%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	RE4	92	79.913	0.163	0.5	0.0208	0.0000	SURCHARGED
360 minute winter	IC10	256	79.914	0.309	1.0	0.0439	0.0000	SURCHARGED
120 minute winter	IC11	92	79.925	0.512	13.3	0.0558	0.0000	SURCHARGED
120 minute winter	RE5	92	79.928	0.178	2.0	0.0228	0.0000	SURCHARGED
120 minute winter	IC12	92	79.923	0.297	3.5	0.0354	0.0000	SURCHARGED
180 minute winter	RE6	128	79.924	0.474	1.5	0.1146	0.0000	FLOOD RISK
180 minute winter	IC13	128	79.915	0.607	2.0	0.1008	0.0000	FLOOD RISK
120 minute winter	IC14	92	79.912	0.852	4.0	0.1073	0.0000	FLOOD RISK
480 minute winter	RE7	320	79.402	0.152	0.4	0.0368	0.0000	SURCHARGED
480 minute winter	IC15	320	79.402	0.294	0.6	0.0347	0.0000	SURCHARGED
480 minute winter	IC16	320	79.401	0.537	3.7	0.0677	0.0000	SURCHARGED
480 minute winter	RE8	320	79.400	1.200	0.7	0.1248	0.1849	FLOOD
480 minute winter	IC17	320	79.400	1.447	2.5	0.2503	0.0831	FLOOD
480 minute winter	IC18	320	79.400	1.591	13.5	0.4900	2.4169	FLOOD
480 minute winter	IC19	320	79.400	0.700	1.1	0.1694	0.3384	FLOOD
480 minute winter	RE9	320	79.403	0.453	0.4	0.1095	0.0000	FLOOD RISK
480 minute winter	IC20	320	79.402	0.594	1.5	0.0701	0.0000	FLOOD RISK
480 minute winter	IC21	320	79.402	0.845	3.0	0.0904	0.0000	FLOOD RISK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	RE4	8.000	IC10	1.6	0.380	0.208	0.0672	
360 minute winter	IC10	8.001	IC11	1.8	0.485	0.232	0.0894	
120 minute winter	IC11	8.002	MH3	-13.3	-2.217	-1.692	0.0422	
120 minute winter	RE5	9.000	IC12	-1.9	0.393	-0.245	0.0574	
120 minute winter	IC12	9.001	MH5	-2.9	0.681	-0.368	0.0396	
180 minute winter	RE6	10.000	IC13	1.7	0.550	0.214	0.0657	
180 minute winter	IC13	10.001	IC14	2.6	0.688	0.335	0.1153	
120 minute winter	IC14	10.002	MH5	2.6	0.873	0.331	0.0560	
480 minute winter	RE7	11.000	IC15	0.4	0.485	0.055	0.0657	
480 minute winter	IC15	11.001	IC16	2.9	0.485	0.374	0.1132	
480 minute winter	IC16	11.002	MH4	-3.1	0.608	-0.397	0.0432	
480 minute winter	RE8	12.000	IC17	2.5	0.370	0.311	0.1139	
480 minute winter	IC17	12.001	IC18	3.5	0.447	0.443	0.0666	
480 minute winter	IC18	12.002	MH4	-10.1	0.659	-0.090	0.5007	
480 minute winter	IC19	13.000	IC18	2.2	0.582	0.144	0.1108	
480 minute winter	RE9	14.000	IC20	1.5	0.485	0.196	0.0659	
480 minute winter	IC20	14.001	IC21	2.0	0.489	0.258	0.1167	
480 minute winter	IC21	14.002	MH4	3.2	0.612	0.400	0.0602	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 89.01%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	RE10	320	79.402	0.452	0.6	0.0448	0.0000	FLOOD RISK
240 minute winter	RE11	164	79.900	0.700	1.1	0.1694	0.3705	FLOOD
180 minute winter	IC22	128	79.900	0.842	2.3	0.0994	0.0654	FLOOD
120 minute winter	IC23	90	79.900	1.177	4.3	0.1236	0.2895	FLOOD
120 minute winter	RE12	90	79.900	0.700	2.6	0.0693	0.1805	FLOOD
120 minute winter	IC24	92	79.921	0.371	0.8	0.0686	0.0000	SURCHARGED
120 minute winter	IC25	92	79.913	0.479	1.6	0.0810	0.0000	SURCHARGED
120 minute winter	IC26	92	79.923	0.787	16.2	0.0984	0.0000	SURCHARGED
120 minute winter	RE13	92	79.915	0.365	1.0	0.0362	0.0000	SURCHARGED
120 minute winter	IC27	92	79.914	0.457	1.7	0.0553	0.0000	SURCHARGED
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	RE10	15.000	IC21	1.3	0.344	0.161	0.0600	
240 minute winter	RE11	16.000	IC22	-0.8	0.567	-0.107	0.0659	
180 minute winter	IC22	16.001	IC23	2.2	0.648	0.277	0.1558	
120 minute winter	IC23	16.002	MH5	-4.2	0.830	-0.533	0.0430	
120 minute winter	RE12	17.000	IC23	-2.6	0.424	-0.328	0.0609	
120 minute winter	IC24	18.000	IC25	1.4	0.493	0.174	0.0539	
120 minute winter	IC25	18.001	IC26	1.9	0.585	0.237	0.1385	
120 minute winter	IC26	18.002	MH3	-14.9	-2.054	-1.881	0.0234	
120 minute winter	RE13	19.000	IC27	1.6	0.306	0.204	0.0431	
120 minute winter	IC27	19.001	IC26	1.9	0.294	0.223	0.1322	