

Design Settings

Rainfall Methodology	FEH-22	Minimum Velocity (m/s)	1.00
Return Period (years)	30	Connection Type	Level Soffits
Additional Flow (%)	0	Minimum Backdrop Height (m)	0.000
CV	0.750	Preferred Cover Depth (m)	1.200
Time of Entry (mins)	5.00	Include Intermediate Ground	✓
Maximum Time of Concentration (mins)	30.00	Enforce best practice design rules	x
Maximum Rainfall (mm/hr)	50.0		

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S107	0.207	5.00	117.549	1200	442203.203	295619.843	1.859
S108	0.125	5.00	115.826	1200	442249.337	295654.254	2.241
S109	0.168	5.00	115.005	1200	442280.730	295612.432	2.554
S110	0.040	5.00	114.678	1200	442288.302	295611.133	2.314
S111	0.047	5.00	113.997	1350	442303.852	295620.755	1.862
S112	0.076	5.00	112.525	1350	442336.441	295644.646	1.745
S113	0.053	5.00	111.361	1350	442375.475	295673.666	2.476
S114	0.086	5.00	110.861	1350	442393.768	295682.790	3.408
S115	0.044	5.00	109.834	1350	442433.216	295712.363	2.621
S116	0.125	5.00	109.777	1500	442434.835	295719.848	2.578
S122	0.217	5.00	116.911	1350	442199.118	295727.314	1.561
S123	0.074	5.00	116.687	1200	442207.509	295710.933	2.388
S124	0.133	5.00	116.306	1350	442229.417	295681.086	2.391
S125	0.087	5.00	114.727	1350	442269.365	295710.380	1.650
S136	0.133	5.00	114.444	1350	442303.277	295694.930	1.594
S137	0.104	5.00	113.583	1350	442323.155	295709.689	1.886
S126	0.080	5.00	113.440	1350	442304.488	295736.509	3.340
S131	0.133	5.00	113.266	1350	442304.974	295805.597	1.575
S132	0.048	5.00	112.957	1200	442319.271	295804.272	2.062
S133	0.080	5.00	112.621	1200	442330.279	295796.028	2.575
S127	0.120	5.00	111.996	1350	442349.812	295769.774	3.396
S128	0.067	5.00	111.290	1500	442368.102	295745.805	2.840
S129	0.065	5.00	111.059	1500	442378.453	295740.680	2.939
S130	0.042	5.00	110.789	1500	442391.719	295742.187	2.991
S117	0.100	5.00	110.430	1800	442408.858	295754.808	3.310
S118	0.027	5.00	109.512	1800	442441.147	295779.247	2.812
S119	0.068	5.00	109.337	1800	442445.679	295786.692	2.687
S120	0.052	5.00	109.200	1800	442444.060	295793.854	2.600
S121	0.026	5.00	109.494	1800	442420.228	295825.698	2.969
S134	0.106	5.00	111.505	1350	442361.958	295793.659	1.500
S135	0.067	5.00	109.858	1200	442407.323	295827.198	2.100
S81	0.104	5.00	108.646	1800	442415.441	295833.944	2.180
HW9			108.170	1800	442425.963	295842.052	1.720
S53	0.181	5.00	118.789	1200	442071.248	295730.107	2.064
S54	0.125	5.00	118.145	1350	442135.513	295737.283	2.410
S55	0.036	5.00	117.285	1350	442192.341	295749.611	2.255
S56	0.125	5.00	116.760	1350	442216.851	295763.486	1.800
S57	0.086	5.00	114.734	1350	442267.351	295803.800	1.700
FCC	1.310	5.00	112.775	2100	442288.942	295852.089	2.000
S58	0.019	5.00	112.899	1350	442302.339	295842.624	2.343
S59	0.106	5.00	112.186	1350	442316.483	295853.072	1.700
S60	0.074	5.00	110.573	1350	442358.252	295876.365	1.750

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S66	0.090	5.00	112.058	1350	442287.306	295904.467	1.591
S67	0.155	5.00	110.559	1200	442325.478	295934.819	2.299
S64	0.225	5.00	109.374	1200	442314.279	295988.492	1.824
S65	0.163	5.00	109.949	1500	442344.766	295950.216	2.939
S63	0.263	5.00	108.350	1350	442429.828	295933.502	1.452
S61	0.179	5.00	109.320	1800	442386.023	295898.534	2.862
HW8			108.170		442408.291	295875.375	1.770
HW10			108.170		442432.693	295888.649	1.800
S62			108.170	3000	442425.265	295898.682	1.850
HW11			107.670		442441.183	295901.293	1.400

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	S107	S108	57.554	0.600	115.690	113.585	2.105	27.3	300	5.32	50.0
1.001	S108	S109	52.293	0.600	113.585	112.451	1.134	46.1	300	5.69	50.0
1.002	S109	S110	7.683	0.600	112.451	112.364	0.087	88.3	300	5.77	50.0
1.003	S110	S111	18.286	0.600	112.364	112.285	0.079	231.5	300	6.07	50.0
1.004	S111	S112	40.409	0.600	112.135	110.780	1.355	29.8	450	6.25	50.0
1.005	S112	S113	48.640	0.600	110.780	109.035	1.745	27.9	450	6.46	50.0
1.006	S113	S114	20.442	0.600	108.885	107.603	1.282	15.9	600	6.51	50.0
1.007	S114	S115	49.302	0.600	107.453	107.213	0.240	205.4	750	6.93	50.0
1.008	S115	S116	7.659	0.600	107.213	107.199	0.014	547.1	750	7.04	50.0
1.009	S116	S117	43.554	0.600	107.199	107.120	0.079	551.3	750	7.65	50.0
2.000	S122	S123	18.405	0.600	115.350	114.374	0.976	18.9	225	5.10	50.0
2.001	S123	S124	37.025	0.600	114.299	114.065	0.234	158.2	300	5.60	50.0
2.002	S124	S125	49.537	0.600	113.915	113.077	0.838	59.1	450	5.91	50.0
2.003	S125	S126	43.776	0.600	113.077	110.100	2.977	14.7	450	6.05	50.0
3.000	S136	S137	24.758	0.600	112.850	111.847	1.003	24.7	300	5.13	50.0
3.001	S137	S126	32.677	0.600	111.697	110.100	1.597	20.5	450	5.25	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	3.018	213.3	28.1	1.559	1.941	0.207	0.0	73	2.111
1.001	2.321	164.1	45.0	1.941	2.254	0.332	0.0	107	1.988
1.002	1.674	118.3	67.8	2.254	2.014	0.500	0.0	163	1.729
1.003	1.029	72.7	73.2	2.014	1.412	0.540	0.0	249	1.166
1.004	3.733	593.7	79.6	1.412	1.295	0.587	0.0	110	2.634
1.005	3.862	614.2	89.9	1.295	1.876	0.663	0.0	116	2.796
1.006	6.117	1729.6	97.0	1.876	2.658	0.716	0.0	95	3.384
1.007	1.948	860.8	108.7	2.658	1.871	0.802	0.0	178	1.354
1.008	1.189	525.3	114.7	1.871	1.828	0.846	0.0	236	0.960
1.009	1.184	523.3	131.6	1.828	2.560	0.971	0.0	255	0.995
2.000	3.027	120.3	29.4	1.336	2.088	0.217	0.0	75	2.506
2.001	1.247	88.2	39.4	2.088	1.941	0.291	0.0	140	1.213
2.002	2.648	421.1	57.5	1.941	1.200	0.424	0.0	111	1.875
2.003	5.322	846.4	69.3	1.200	2.890	0.511	0.0	86	3.258
3.000	3.177	224.6	18.0	1.294	1.436	0.133	0.0	57	1.932
3.001	4.510	717.2	32.1	1.436	2.890	0.237	0.0	64	2.318

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)
2.004	S126	S127	56.221	0.600	110.100	108.750	1.350	41.6	450	6.34	50.0
4.000	S131	S132	14.359	0.600	111.691	110.895	0.796	18.0	300	5.06	50.0
4.001	S132	S133	13.753	0.600	110.895	110.196	0.699	19.7	300	5.13	50.0
4.002	S133	S127	32.723	0.600	110.046	108.750	1.296	25.2	450	5.26	50.0
2.005	S127	S128	30.150	0.600	108.600	108.450	0.150	201.0	600	6.64	50.0
2.006	S128	S129	11.550	0.600	108.450	108.120	0.330	35.0	600	6.68	50.0
2.007	S129	S130	13.351	0.600	108.120	107.798	0.322	41.5	600	6.74	50.0
2.008	S130	S117	21.284	0.600	107.798	107.270	0.528	40.3	600	6.83	50.0
1.010	S117	S118	40.495	0.600	107.120	106.700	0.420	96.4	750	7.89	50.0
1.011	S118	S119	8.716	0.600	106.700	106.650	0.050	174.3	750	7.96	50.0
1.012	S119	S120	7.343	0.600	106.650	106.600	0.050	146.9	750	8.01	50.0
1.013	S120	S121	39.775	0.600	106.600	106.525	0.075	530.3	750	8.56	50.0
1.014	S121	S81	9.535	0.600	106.525	106.466	0.059	161.6	750	8.63	50.0
5.000	S134	S135	56.416	0.600	110.005	107.758	2.247	25.1	300	5.30	50.0
5.001	S135	S81	10.556	0.600	107.758	106.916	0.842	12.5	300	5.34	50.0
1.015	S81	HW9	13.284	0.600	106.466	106.450	0.016	830.3	750	8.86	50.0
1.016	HW9	HW10	47.080	0.600	106.450	106.370	0.080	588.5	750	9.55	50.0
6.000	S53	S54	64.664	0.600	116.725	115.885	0.840	77.0	300	5.60	50.0
6.001	S54	S55	58.150	0.600	115.735	115.030	0.705	82.5	450	6.03	50.0
6.002	S55	S56	28.165	0.600	115.030	114.960	0.070	402.4	450	6.50	50.0
6.003	S56	S57	64.618	0.600	114.960	113.034	1.926	33.6	450	6.81	50.0
6.004	S57	S58	52.263	0.600	113.034	110.556	2.478	21.1	450	7.00	50.0
7.000	FCC	S58	16.403	0.600	110.775	110.707	0.068	241.2	300	5.27	50.0
6.005	S58	S59	17.584	0.600	110.556	110.486	0.070	251.2	450	7.23	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)
2.004	3.157	502.1	112.2	2.890	2.796	0.828	0.0	144	2.564
4.000	3.719	262.9	18.0	1.275	1.762	0.133	0.0	52	2.151
4.001	3.560	251.6	24.5	1.762	2.125	0.181	0.0	63	2.292
4.002	4.058	645.4	35.4	2.125	2.796	0.261	0.0	71	2.220
2.005	1.714	484.5	163.8	2.796	2.240	1.209	0.0	240	1.555
2.006	4.125	1166.2	172.9	2.240	2.339	1.276	0.0	154	2.997
2.007	3.789	1071.2	181.7	2.339	2.391	1.341	0.0	166	2.857
2.008	3.843	1086.5	187.4	2.391	2.560	1.383	0.0	167	2.914
1.010	2.850	1259.1	332.6	2.560	2.062	2.454	0.0	262	2.426
1.011	2.116	934.9	336.2	2.062	1.937	2.481	0.0	310	1.952
1.012	2.307	1019.1	345.5	1.937	1.850	2.549	0.0	300	2.095
1.013	1.208	533.6	352.5	1.850	2.219	2.601	0.0	446	1.286
1.014	2.198	971.2	356.0	2.219	1.430	2.627	0.0	313	2.036
5.000	3.150	222.7	14.4	1.200	1.800	0.106	0.0	51	1.797
5.001	4.463	315.5	23.4	1.800	1.430	0.173	0.0	55	2.650
1.015	0.963	425.4	393.6	1.430	0.970	2.904	0.0	574	1.085
1.016	1.146	506.3	393.6	0.970	1.050	2.904	0.0	499	1.260
6.000	1.793	126.8	24.5	1.764	1.960	0.181	0.0	89	1.395
6.001	2.240	356.2	41.5	1.960	1.805	0.306	0.0	102	1.515
6.002	1.007	160.2	46.3	1.805	1.350	0.342	0.0	165	0.875
6.003	3.519	559.6	63.3	1.350	1.250	0.467	0.0	102	2.371
6.004	4.442	706.4	74.9	1.250	1.893	0.553	0.0	98	2.935
7.000	1.008	71.2	177.5	1.700	1.892	1.310	0.0	300	1.021
6.005	1.278	203.2	255.1	1.893	1.250	1.882	0.0	450	1.294

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)
6.006	S59	S60	47.825	0.600	110.486	108.823	1.663	28.8	450	7.44	50.0
6.007	S60	S61	35.534	0.600	108.823	106.758	2.065	17.2	450	7.56	50.0
8.000	S66	S67	48.768	0.600	110.467	108.260	2.207	22.1	300	5.24	50.0
8.001	S67	S65	24.680	0.600	108.260	107.310	0.950	26.0	300	5.37	50.0
9.000	S64	S65	48.934	0.600	107.550	107.310	0.240	203.9	300	5.74	50.0
8.002	S65	S61	66.130	0.600	107.010	106.608	0.402	164.5	600	6.32	50.0
10.000	S63	S61	56.050	0.600	106.898	106.758	0.140	400.4	450	5.93	50.0
6.008	S61	HW8	32.128	0.600	106.458	106.400	0.058	553.9	750	8.01	50.0
6.009	HW8	HW10	27.778	0.600	106.400	106.370	0.030	925.9	1650	8.33	50.0
1.017	HW10	S62	10.713	0.600	106.370	106.320	0.050	214.3	750	9.64	50.0
1.018	S62	HW11	5.908	0.600	106.320	106.270	0.050	118.2	300	9.71	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)
6.006	3.802	604.6	269.4	1.250	1.300	1.988	0.0	210	3.699
6.007	4.919	782.3	279.5	1.300	2.112	2.062	0.0	185	4.520
8.000	3.359	237.4	12.2	1.291	1.999	0.090	0.0	46	1.795
8.001	3.096	218.9	33.2	1.999	2.339	0.245	0.0	78	2.251
9.000	1.097	77.6	30.5	1.524	2.339	0.225	0.0	130	1.033
8.002	1.896	536.0	85.8	2.339	2.112	0.633	0.0	161	1.406
10.000	1.010	160.6	35.6	1.002	2.112	0.263	0.0	144	0.819
6.008	1.182	522.0	425.1	2.112	1.020	3.137	0.0	517	1.309
6.009	1.485	3176.3	425.1	0.120	0.150	3.137	0.0	402	1.054
1.017	1.908	842.7	818.7	1.050	1.100	6.041	0.0	602	2.155
1.018	1.445	102.1	818.7	1.550	1.100	6.041	0.0	300	1.464

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	57.554	27.3	300	Circular	117.549	115.690	1.559	115.826	113.585	1.941
1.001	52.293	46.1	300	Circular	115.826	113.585	1.941	115.005	112.451	2.254
1.002	7.683	88.3	300	Circular	115.005	112.451	2.254	114.678	112.364	2.014
1.003	18.286	231.5	300	Circular	114.678	112.364	2.014	113.997	112.285	1.412
1.004	40.409	29.8	450	Circular	113.997	112.135	1.412	112.525	110.780	1.295
1.005	48.640	27.9	450	Circular	112.525	110.780	1.295	111.361	109.035	1.876
1.006	20.442	15.9	600	Circular	111.361	108.885	1.876	110.861	107.603	2.658
1.007	49.302	205.4	750	Circular	110.861	107.453	2.658	109.834	107.213	1.871
1.008	7.659	547.1	750	Circular	109.834	107.213	1.871	109.777	107.199	1.828

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S107	1200	Manhole	Adoptable	S108	1200	Manhole	Adoptable
1.001	S108	1200	Manhole	Adoptable	S109	1200	Manhole	Adoptable
1.002	S109	1200	Manhole	Adoptable	S110	1200	Manhole	Adoptable
1.003	S110	1200	Manhole	Adoptable	S111	1350	Manhole	Adoptable
1.004	S111	1350	Manhole	Adoptable	S112	1350	Manhole	Adoptable
1.005	S112	1350	Manhole	Adoptable	S113	1350	Manhole	Adoptable
1.006	S113	1350	Manhole	Adoptable	S114	1350	Manhole	Adoptable
1.007	S114	1350	Manhole	Adoptable	S115	1350	Manhole	Adoptable
1.008	S115	1350	Manhole	Adoptable	S116	1500	Manhole	Adoptable

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)
1.009	43.554	551.3	750	Circular	109.777	107.199	1.828	110.430	107.120	2.560
2.000	18.405	18.9	225	Circular	116.911	115.350	1.336	116.687	114.374	2.088
2.001	37.025	158.2	300	Circular	116.687	114.299	2.088	116.306	114.065	1.941
2.002	49.537	59.1	450	Circular	116.306	113.915	1.941	114.727	113.077	1.200
2.003	43.776	14.7	450	Circular	114.727	113.077	1.200	113.440	110.100	2.890
3.000	24.758	24.7	300	Circular	114.444	112.850	1.294	113.583	111.847	1.436
3.001	32.677	20.5	450	Circular	113.583	111.697	1.436	113.440	110.100	2.890
2.004	56.221	41.6	450	Circular	113.440	110.100	2.890	111.996	108.750	2.796
4.000	14.359	18.0	300	Circular	113.266	111.691	1.275	112.957	110.895	1.762
4.001	13.753	19.7	300	Circular	112.957	110.895	1.762	112.621	110.196	2.125
4.002	32.723	25.2	450	Circular	112.621	110.046	2.125	111.996	108.750	2.796
2.005	30.150	201.0	600	Circular	111.996	108.600	2.796	111.290	108.450	2.240
2.006	11.550	35.0	600	Circular	111.290	108.450	2.240	111.059	108.120	2.339
2.007	13.351	41.5	600	Circular	111.059	108.120	2.339	110.789	107.798	2.391
2.008	21.284	40.3	600	Circular	110.789	107.798	2.391	110.430	107.270	2.560
1.010	40.495	96.4	750	Circular	110.430	107.120	2.560	109.512	106.700	2.062
1.011	8.716	174.3	750	Circular	109.512	106.700	2.062	109.337	106.650	1.937
1.012	7.343	146.9	750	Circular	109.337	106.650	1.937	109.200	106.600	1.850
1.013	39.775	530.3	750	Circular	109.200	106.600	1.850	109.494	106.525	2.219
1.014	9.535	161.6	750	Circular	109.494	106.525	2.219	108.646	106.466	1.430
5.000	56.416	25.1	300	Circular	111.505	110.005	1.200	109.858	107.758	1.800
5.001	10.556	12.5	300	Circular	109.858	107.758	1.800	108.646	106.916	1.430
1.015	13.284	830.3	750	Circular	108.646	106.466	1.430	108.170	106.450	0.970
1.016	47.080	588.5	750	Circular	108.170	106.450	0.970	108.170	106.370	1.050
6.000	64.664	77.0	300	Circular	118.789	116.725	1.764	118.145	115.885	1.960

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.009	S116	1500	Manhole	Adoptable	S117	1800	Manhole	Adoptable
2.000	S122	1350	Manhole	Adoptable	S123	1200	Manhole	Adoptable
2.001	S123	1200	Manhole	Adoptable	S124	1350	Manhole	Adoptable
2.002	S124	1350	Manhole	Adoptable	S125	1350	Manhole	Adoptable
2.003	S125	1350	Manhole	Adoptable	S126	1350	Manhole	Adoptable
3.000	S136	1350	Manhole	Adoptable	S137	1350	Manhole	Adoptable
3.001	S137	1350	Manhole	Adoptable	S126	1350	Manhole	Adoptable
2.004	S126	1350	Manhole	Adoptable	S127	1350	Manhole	Adoptable
4.000	S131	1350	Manhole	Adoptable	S132	1200	Manhole	Adoptable
4.001	S132	1200	Manhole	Adoptable	S133	1200	Manhole	Adoptable
4.002	S133	1200	Manhole	Adoptable	S127	1350	Manhole	Adoptable
2.005	S127	1350	Manhole	Adoptable	S128	1500	Manhole	Adoptable
2.006	S128	1500	Manhole	Adoptable	S129	1500	Manhole	Adoptable
2.007	S129	1500	Manhole	Adoptable	S130	1500	Manhole	Adoptable
2.008	S130	1500	Manhole	Adoptable	S117	1800	Manhole	Adoptable
1.010	S117	1800	Manhole	Adoptable	S118	1800	Manhole	Adoptable
1.011	S118	1800	Manhole	Adoptable	S119	1800	Manhole	Adoptable
1.012	S119	1800	Manhole	Adoptable	S120	1800	Manhole	Adoptable
1.013	S120	1800	Manhole	Adoptable	S121	1800	Manhole	Adoptable
1.014	S121	1800	Manhole	Adoptable	S81	1800	Manhole	Adoptable
5.000	S134	1350	Manhole	Adoptable	S135	1200	Manhole	Adoptable
5.001	S135	1200	Manhole	Adoptable	S81	1800	Manhole	Adoptable
1.015	S81	1800	Manhole	Adoptable	HW9	1800	Manhole	Adoptable
1.016	HW9	1800	Manhole	Adoptable	HW10		Junction	
6.000	S53	1200	Manhole	Adoptable	S54	1350	Manhole	Adoptable

Pipeline Schedule

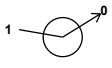
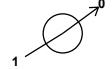
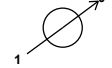
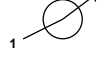
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
6.001	58.150	82.5	450	Circular	118.145	115.735	1.960	117.285	115.030	1.805
6.002	28.165	402.4	450	Circular	117.285	115.030	1.805	116.760	114.960	1.350
6.003	64.618	33.6	450	Circular	116.760	114.960	1.350	114.734	113.034	1.250
6.004	52.263	21.1	450	Circular	114.734	113.034	1.250	112.899	110.556	1.893
7.000	16.403	241.2	300	Circular	112.775	110.775	1.700	112.899	110.707	1.892
6.005	17.584	251.2	450	Circular	112.899	110.556	1.893	112.186	110.486	1.250
6.006	47.825	28.8	450	Circular	112.186	110.486	1.250	110.573	108.823	1.300
6.007	35.534	17.2	450	Circular	110.573	108.823	1.300	109.320	106.758	2.112
8.000	48.768	22.1	300	Circular	112.058	110.467	1.291	110.559	108.260	1.999
8.001	24.680	26.0	300	Circular	110.559	108.260	1.999	109.949	107.310	2.339
9.000	48.934	203.9	300	Circular	109.374	107.550	1.524	109.949	107.310	2.339
8.002	66.130	164.5	600	Circular	109.949	107.010	2.339	109.320	106.608	2.112
10.000	56.050	400.4	450	Circular	108.350	106.898	1.002	109.320	106.758	2.112
6.008	32.128	553.9	750	Circular	109.320	106.458	2.112	108.170	106.400	1.020
6.009	27.778	925.9	1650	Circular	108.170	106.400	0.120	108.170	106.370	0.150
1.017	10.713	214.3	750	Circular	108.170	106.370	1.050	108.170	106.320	1.100
1.018	5.908	118.2	300	Circular	108.170	106.320	1.550	107.670	106.270	1.100

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
6.001	S54	1350	Manhole	Adoptable	S55	1350	Manhole	Adoptable
6.002	S55	1350	Manhole	Adoptable	S56	1350	Manhole	Adoptable
6.003	S56	1350	Manhole	Adoptable	S57	1350	Manhole	Adoptable
6.004	S57	1350	Manhole	Adoptable	S58	1350	Manhole	Adoptable
7.000	FCC	2100	Manhole	Adoptable	S58	1350	Manhole	Adoptable
6.005	S58	1350	Manhole	Adoptable	S59	1350	Manhole	Adoptable
6.006	S59	1350	Manhole	Adoptable	S60	1350	Manhole	Adoptable
6.007	S60	1350	Manhole	Adoptable	S61	1800	Manhole	Adoptable
8.000	S66	1350	Manhole	Adoptable	S67	1200	Manhole	Adoptable
8.001	S67	1200	Manhole	Adoptable	S65	1500	Manhole	Adoptable
9.000	S64	1200	Manhole	Adoptable	S65	1500	Manhole	Adoptable
8.002	S65	1500	Manhole	Adoptable	S61	1800	Manhole	Adoptable
10.000	S63	1350	Manhole	Adoptable	S61	1800	Manhole	Adoptable
6.008	S61	1800	Manhole	Adoptable	HW8		Junction	
6.009	HW8		Junction		HW10		Junction	
1.017	HW10		Junction		S62	3000	Manhole	Adoptable
1.018	S62	3000	Manhole	Adoptable	HW11		Junction	

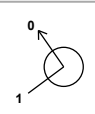
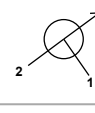
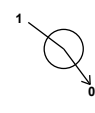
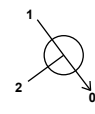
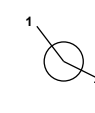
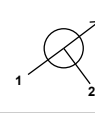
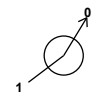
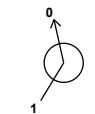
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S107	442203.203	295619.843	117.549	1.859	1200				
						0	1.000	115.690	300
S108	442249.337	295654.254	115.826	2.241	1200				
						1	1.000	113.585	300
						0	1.001	113.585	300

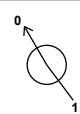
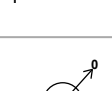
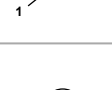
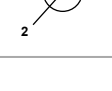
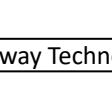
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S109	442280.730	295612.432	115.005	2.554	1200	 1	1.001	112.451	300
						0	1.002	112.451	300
S110	442288.302	295611.133	114.678	2.314	1200	 1	1.002	112.364	300
						0	1.003	112.364	300
S111	442303.852	295620.755	113.997	1.862	1350	 1	1.003	112.285	300
						0	1.004	112.135	450
S112	442336.441	295644.646	112.525	1.745	1350	 1	1.004	110.780	450
						0	1.005	110.780	450
S113	442375.475	295673.666	111.361	2.476	1350	 1	1.005	109.035	450
						0	1.006	108.885	600
S114	442393.768	295682.790	110.861	3.408	1350	 1	1.006	107.603	600
						0	1.007	107.453	750
S115	442433.216	295712.363	109.834	2.621	1350	 1	1.007	107.213	750
						0	1.008	107.213	750
S116	442434.835	295719.848	109.777	2.578	1500	 0	1.008	107.199	750
						1	1.009	107.199	750
S122	442199.118	295727.314	116.911	1.561	1350	 0	2.000	115.350	225
S123	442207.509	295710.933	116.687	2.388	1200	 1	1.000	114.374	225
						0	2.001	114.299	300
S124	442229.417	295681.086	116.306	2.391	1350	 1	2.001	114.065	300
						0	2.002	113.915	450
S125	442269.365	295710.380	114.727	1.650	1350	 1	2.002	113.077	450
						0	2.003	113.077	450
S136	442303.277	295694.930	114.444	1.594	1350	 0	3.000	112.850	300

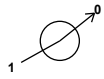
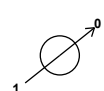
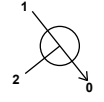
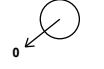
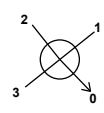
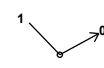
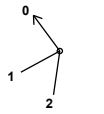
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S137	442323.155	295709.689	113.583	1.886	1350		1	3.000	111.847	300
							0	3.001	111.697	450
S126	442304.488	295736.509	113.440	3.340	1350		1	3.001	110.100	450
							2	2.003	110.100	450
							0	2.004	110.100	450
S131	442304.974	295805.597	113.266	1.575	1350		0	4.000	111.691	300
S132	442319.271	295804.272	112.957	2.062	1200		1	4.000	110.895	300
							0	4.001	110.895	300
S133	442330.279	295796.028	112.621	2.575	1200		1	4.001	110.196	300
							0	4.002	110.046	450
S127	442349.812	295769.774	111.996	3.396	1350		1	4.002	108.750	450
							2	2.004	108.750	450
							0	2.005	108.600	600
S128	442368.102	295745.805	111.290	2.840	1500		1	2.005	108.450	600
							0	2.006	108.450	600
S129	442378.453	295740.680	111.059	2.939	1500		1	2.006	108.120	600
							0	2.007	108.120	600
S130	442391.719	295742.187	110.789	2.991	1500		1	2.007	107.798	600
							0	2.008	107.798	600
S117	442408.858	295754.808	110.430	3.310	1800		1	2.008	107.270	600
							2	1.009	107.120	750
							0	1.010	107.120	750
S118	442441.147	295779.247	109.512	2.812	1800		1	1.010	106.700	750
							0	1.011	106.700	750
S119	442445.679	295786.692	109.337	2.687	1800		1	1.011	106.650	750
							0	1.012	106.650	750
S120	442444.060	295793.854	109.200	2.600	1800		1	1.012	106.600	750
							0	1.013	106.600	750

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S121	442420.228	295825.698	109.494	2.969	1800	 0 1	1.013	106.525	750
S134	442361.958	295793.659	111.505	1.500	1350	 0	1.014	106.525	750
S135	442407.323	295827.198	109.858	2.100	1200	 1 0	5.000	110.005	300
S81	442415.441	295833.944	108.646	2.180	1800	 1 1	5.000	107.758	300
HW9	442425.963	295842.052	108.170	1.720	1800	 1 2	5.001	106.916	300
S53	442071.248	295730.107	118.789	2.064	1200	 0	1.014	106.466	750
S54	442135.513	295737.283	118.145	2.410	1350	 0 1	1.015	106.466	750
S55	442192.341	295749.611	117.285	2.255	1350	 1 0	1.015	106.450	750
S56	442216.851	295763.486	116.760	1.800	1350	 0 1	1.016	106.450	750
S57	442267.351	295803.800	114.734	1.700	1350	 1 0	6.000	116.725	300
FCC	442288.942	295852.089	112.775	2.000	2100	 1 0	6.000	115.885	300
S58	442302.339	295842.624	112.899	2.343	1350	 0 1	6.001	115.735	450
S59	442316.483	295853.072	112.186	1.700	1350	 1 2	6.001	115.030	450
						 0	6.002	115.030	450
						 1 1	6.002	114.960	450
						 0 1	6.003	114.960	450
						1 0	6.003	113.034	450
						0	6.004	113.034	450
						1 0	7.000	110.775	300
						0 1	7.000	110.707	300
						1 2	6.004	110.556	450
						0	6.005	110.556	450
						1 1	6.005	110.486	450
						0	6.006	110.486	450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S60	442358.252	295876.365	110.573	1.750	1350		1 6.006	108.823	450
							0 6.007	108.823	450
S66	442287.306	295904.467	112.058	1.591	1350		0 8.000	110.467	300
S67	442325.478	295934.819	110.559	2.299	1200		1 8.000	108.260	300
							0 8.001	108.260	300
S64	442314.279	295988.492	109.374	1.824	1200		0 9.000	107.550	300
S65	442344.766	295950.216	109.949	2.939	1500		1 9.000	107.310	300
							2 8.001	107.310	300
							0 8.002	107.010	600
S63	442429.828	295933.502	108.350	1.452	1350		0 10.000	106.898	450
S61	442386.023	295898.534	109.320	2.862	1800		1 10.000	106.758	450
							2 8.002	106.608	600
							3 6.007	106.758	450
							0 6.008	106.458	750
HW8	442408.291	295875.375	108.170	1.770			1 6.008	106.400	750
							0 6.009	106.400	1650
HW10	442432.693	295888.649	108.170	1.800			1 6.009	106.370	1650
							2 1.016	106.370	750
							0 1.017	106.370	750
S62	442425.265	295898.682	108.170	1.850	3000		1 1.017	106.320	750
							0 1.018	106.320	300
HW11	442441.183	295901.293	107.670	1.400			1 1.018	106.270	300

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)	
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	x
Summer CV	0.750	Drain Down Time (mins)	1440	Check Discharge Volume	x
Winter CV	0.840	Additional Storage (m³/ha)	0.0		

Storm Durations

15 | 30 | 60 | 120 | 180 | 240 | 360 | 480 | 600 | 720 | 960 | 1440

Return Period
(years)

100

Climate Change
(CC %)

40

Additional Area
(A %)

0

Additional Flow
(Q %)

0

Node FCC Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	x	Sump Available	✓
Invert Level (m)	110.775	Product Number	CTL-SHE-0122-8700-2000-8700
Design Depth (m)	2.000	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	8.7	Min Node Diameter (mm)	1500

Node S62 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	106.320	Product Number	CTL-SHE-0245-3480-1550-3480
Design Depth (m)	1.550	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	34.8	Min Node Diameter (mm)	1800

Node HW10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	106.370
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	696

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	1305.1	0.0	0.500	1689.3	0.0	1.000	2089.1	0.0	1.500	2502.7	0.0
0.100	1379.6	0.0	0.600	1768.2	0.0	1.100	2170.7	0.0	1.600	2587.1	0.0
0.200	1456.2	0.0	0.700	1847.6	0.0	1.200	2252.9	0.0	1.700	2672.1	0.0
0.300	1533.4	0.0	0.800	1927.5	0.0	1.300	2335.6	0.0	1.800	2758.6	0.0
0.400	1611.1	0.0	0.900	2008.0	0.0	1.400	2418.9	0.0			

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 95.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S107	11	116.579	0.889	122.5	1.0055	0.0000	SURCHARGED
15 minute winter	S108	11	115.826	2.241	188.6	2.5346	2.2886	FLOOD
15 minute winter	S109	11	114.707	2.256	244.0	2.5520	0.0000	FLOOD RISK
15 minute winter	S110	11	114.010	1.646	267.2	1.8619	0.0000	SURCHARGED
15 minute winter	S111	11	112.371	0.236	293.9	0.3371	0.0000	OK
15 minute summer	S112	11	111.026	0.246	323.4	0.3517	0.0000	OK
15 minute winter	S113	12	109.783	0.898	385.3	1.2850	0.0000	SURCHARGED
15 minute winter	S114	12	109.701	2.248	379.4	3.2167	0.0000	SURCHARGED
15 minute winter	S115	12	109.641	2.428	433.0	3.4751	0.0000	FLOOD RISK
15 minute winter	S116	12	109.614	2.415	473.3	4.2676	0.0000	FLOOD RISK
15 minute winter	S122	11	116.624	1.274	128.4	1.8233	0.0000	FLOOD RISK
15 minute winter	S123	11	115.301	1.001	164.3	1.1327	0.0000	SURCHARGED
15 minute winter	S124	11	114.183	0.268	239.4	0.3833	0.0000	OK
15 minute winter	S125	11	113.256	0.179	288.8	0.2555	0.0000	OK
15 minute winter	S136	10	112.980	0.130	78.8	0.1859	0.0000	OK
15 minute winter	S137	10	111.829	0.132	139.7	0.1895	0.0000	OK
15 minute winter	S126	12	111.532	1.432	471.8	2.0488	0.0000	SURCHARGED
15 minute winter	S131	10	111.808	0.117	78.8	0.1675	0.0000	OK
15 minute winter	S132	10	111.049	0.154	106.9	0.1745	0.0000	OK
15 minute winter	S133	12	110.655	0.609	153.6	0.6883	0.0000	SURCHARGED
15 minute winter	S127	12	110.578	1.978	646.2	2.8302	0.0000	SURCHARGED
15 minute winter	S128	12	110.264	1.814	596.0	3.2057	0.0000	SURCHARGED
15 minute winter	S129	12	110.066	1.946	626.4	3.4390	0.0000	SURCHARGED
15 minute winter	S130	12	109.840	2.042	639.0	3.6085	0.0000	SURCHARGED
15 minute winter	S117	12	109.540	2.420	1109.4	6.1587	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)
15 minute winter	S107	1.000	S108	119.0	2.037	0.558	4.0529	
15 minute winter	S108	1.001	S109	158.3	2.248	0.965	3.6824	
15 minute winter	S109	1.002	S110	244.9	3.478	2.070	0.5410	
15 minute winter	S110	1.003	S111	267.7	3.803	3.681	1.2747	
15 minute winter	S111	1.004	S112	293.3	3.446	0.494	3.4397	
15 minute summer	S112	1.005	S113	320.1	3.802	0.521	5.7731	
15 minute winter	S113	1.006	S114	338.5	4.013	0.196	5.7580	
15 minute winter	S114	1.007	S115	406.9	1.135	0.473	21.6988	
15 minute winter	S115	1.008	S116	399.3	0.907	0.760	3.3709	
15 minute winter	S116	1.009	S117	449.5	1.272	0.859	19.1690	
15 minute winter	S122	2.000	S123	123.1	3.095	1.023	0.7320	
15 minute winter	S123	2.001	S124	165.1	2.345	1.873	2.5809	
15 minute winter	S124	2.002	S125	240.3	3.065	0.571	3.8858	
15 minute winter	S125	2.003	S126	289.8	2.862	0.342	4.7493	
15 minute winter	S136	3.000	S137	78.1	2.799	0.348	0.6912	
15 minute winter	S137	3.001	S126	139.2	1.628	0.194	3.2038	
15 minute winter	S126	2.004	S127	422.1	2.869	0.841	8.9078	
15 minute winter	S131	4.000	S132	78.6	2.540	0.299	0.4446	
15 minute winter	S132	4.001	S133	106.2	3.164	0.422	0.6808	
15 minute winter	S133	4.002	S127	153.0	2.117	0.237	5.1847	
15 minute winter	S127	2.005	S128	560.4	2.173	1.157	8.4926	
15 minute winter	S128	2.006	S129	590.2	2.692	0.506	3.2534	
15 minute winter	S129	2.007	S130	615.6	2.803	0.575	3.7607	
15 minute winter	S130	2.008	S117	618.8	3.054	0.570	5.9952	
15 minute winter	S117	1.010	S118	1104.3	2.509	0.877	17.8227	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 95.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S118	12	109.061	2.361	1116.8	6.0095	0.0000	SURCHARGED
15 minute winter	S119	12	108.829	2.179	1144.2	5.5453	0.0000	SURCHARGED
15 minute winter	S120	12	108.596	1.996	1164.6	5.0809	0.0000	SURCHARGED
15 minute winter	S121	13	108.079	1.554	1173.1	3.9553	0.0000	SURCHARGED
15 minute winter	S134	10	110.113	0.108	62.8	0.1540	0.0000	OK
15 minute winter	S135	11	107.920	0.162	102.0	0.1836	0.0000	OK
480 minute winter	S81	480	107.882	1.416	187.3	3.6026	0.0000	SURCHARGED
600 minute winter	HW9	585	107.852	1.402	164.3	3.5685	0.0000	SURCHARGED
15 minute winter	S53	10	116.941	0.216	107.1	0.2444	0.0000	OK
15 minute winter	S54	10	115.961	0.226	177.7	0.3240	0.0000	OK
15 minute winter	S55	11	115.390	0.360	196.9	0.5153	0.0000	OK
15 minute winter	S56	11	115.190	0.230	268.4	0.3297	0.0000	OK
15 minute winter	S57	11	113.242	0.208	317.7	0.2978	0.0000	OK
360 minute winter	FCC	32	112.775	2.000	110.4	6.9280	758.9522	FLOOD
15 minute winter	S58	11	111.126	0.570	334.5	0.8154	0.0000	SURCHARGED
15 minute winter	S59	11	110.777	0.291	395.0	0.4169	0.0000	OK
15 minute winter	S60	11	109.060	0.237	436.3	0.3390	0.0000	OK
15 minute winter	S66	10	110.563	0.096	53.3	0.1367	0.0000	OK
15 minute winter	S67	10	108.455	0.195	144.6	0.2204	0.0000	OK
15 minute winter	S64	10	108.307	0.757	133.2	0.8565	0.0000	SURCHARGED
480 minute winter	S65	472	107.834	0.824	42.2	1.4567	0.0000	SURCHARGED
480 minute winter	S63	472	107.835	0.937	17.5	1.3406	0.0000	SURCHARGED
480 minute winter	S61	472	107.835	1.377	125.9	3.5038	0.0000	SURCHARGED
480 minute winter	HW8	472	107.835	1.435	123.9	0.0000	0.0000	OK
480 minute winter	HW10	472	107.835	1.465	307.5	2751.6620	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)
15 minute winter	S118	1.011	S119	1112.7	2.528	1.190	3.8361	
15 minute winter	S119	1.012	S120	1140.5	2.592	1.119	3.2318	
15 minute winter	S120	1.013	S121	1161.2	2.639	2.176	17.5058	
15 minute winter	S121	1.014	S81	1170.4	2.659	1.205	4.1966	
15 minute winter	S134	5.000	S135	62.3	2.517	0.280	1.7172	
15 minute winter	S135	5.001	S81	94.8	3.125	0.301	0.5769	
480 minute winter	S81	1.015	HW9	186.8	0.671	0.439	5.8466	
600 minute winter	HW9	1.016	HW10	174.1	1.137	0.344	20.7209	
15 minute winter	S53	6.000	S54	103.9	1.988	0.819	3.4007	
15 minute winter	S54	6.001	S55	175.8	1.621	0.493	6.2297	
15 minute winter	S55	6.002	S56	198.8	1.804	1.241	3.0649	
15 minute winter	S56	6.003	S57	269.8	3.520	0.482	4.9534	
15 minute winter	S57	6.004	S58	318.2	2.395	0.450	6.0126	
360 minute winter	FCC	7.000	S58	8.6	0.675	0.120	0.2080	
15 minute winter	S58	6.005	S59	335.9	2.287	1.653	2.3474	
15 minute winter	S59	6.006	S60	395.1	4.088	0.653	4.6182	
15 minute winter	S60	6.007	S61	435.5	3.793	0.557	4.3178	
15 minute winter	S66	8.000	S67	52.9	1.566	0.223	1.6515	
15 minute winter	S67	8.001	S65	142.5	3.132	0.651	1.1225	
15 minute winter	S64	9.000	S65	128.8	1.831	1.661	3.3582	
480 minute winter	S65	8.002	S61	40.6	0.895	0.076	18.6273	
480 minute winter	S63	10.000	S61	16.4	0.623	0.102	8.8808	
480 minute winter	S61	6.008	HW8	123.9	0.762	0.237	14.1402	
480 minute winter	HW8	6.009	HW10	121.0	1.237	0.038	55.0985	
480 minute winter	HW10	1.017	S62	105.7	0.401	0.125	4.7150	

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 95.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S62	472	107.835	1.515	105.7	10.7070	0.0000	SURCHARGED
15 minute summer	HW11	1	106.270	0.000	34.8	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)
480 minute winter	S62	Hydro-Brake®	HW11	34.8				3570.8