

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
S38-1	0.072	1.800	Unknown	5.784	4.050	0.984	488911.710	98114.115
S38-2	0.000	1.350	Unknown	5.414	3.975	1.289	488950.966	98097.806
S278 Headwall	0.000	0.000	Unknown	5.100	3.505	0.995	488958.304	98105.851
S38-3	0.000	2.100	Unknown	5.387	3.502	1.284	488954.432	98096.428
S278 Headwall	0.000	0.000	Unknown	5.059	3.500	0.959	488951.237	98088.661

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)	DS Depth To Soffit (m)
1.000	S38-1	4.050	S38-2	3.975	Circ	0.75mØ	42.508	566.8	0.600	0.984	0.689
1.001	S38-2	3.975	S38-3	3.952	Circ	0.15mØ	3.730	163.6	0.600	1.289	1.284
2.000	S278	3.505	S38-3	3.502	Circ	0.6mØ	10.187	3638.3	0.600	0.995	1.284
1.002	S38-3	3.502	S278	3.500	Circ	0.6mØ	8.399	3817.5	0.600	1.284	0.959

Outfall Details

Outfall Manhole S278 Headwall B : Free Discharge

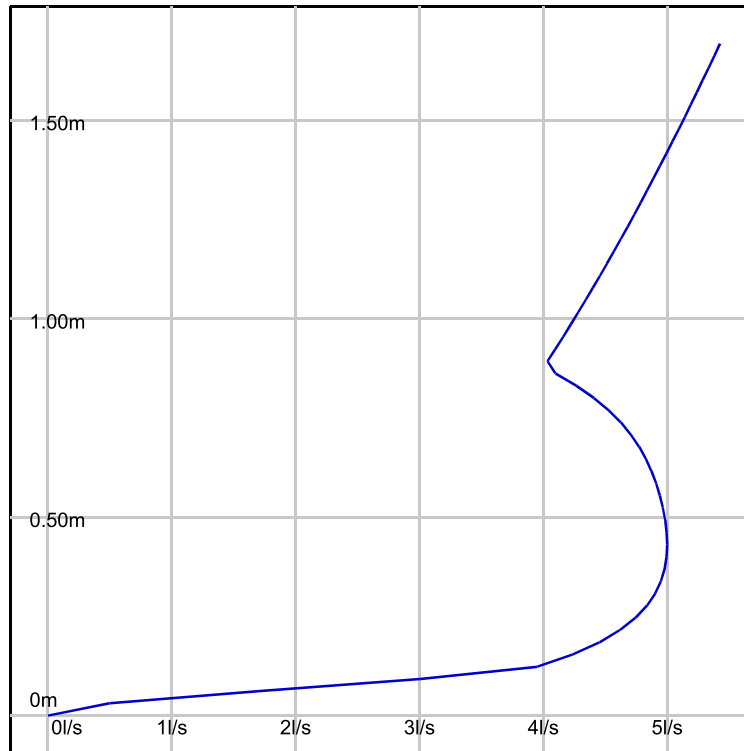
Flow Control Details

Controls within Manhole S38-2

Hydro-Brake® Optimum Control at Manhole S38-2

Model Ref	Design Depth (m)	Design Flow (l/s)	Depth Above Invert (m)	FF Head (m)	FF Flow (l/s)	KF Head (m)	KF Flow (l/s)
SHE-0099-5000-1425-5000	1.425	5.000	0.000	0.431	5.000	0.876	4.000

Hydro-Brake® Optimum Control at S38-2



Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_488693_97897_v5_0_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Periods (yrs) + Climate Change: (1, +0%), (10, +40%), (30, +40%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
1Yr 15Min Winter	16.942	0.00	0.00	30Yr+40% 15Min Summer	112.863	0.00	-0.26
1Yr 15Min Summer	16.942	0.00	0.00	30Yr+40% 15Min Winter	112.863	0.00	-0.27
1Yr 30Min Winter	10.755	0.00	0.00	30Yr+40% 30Min Summer	74.071	0.00	0.00
1Yr 30Min Summer	10.755	0.00	0.00	30Yr+40% 30Min Winter	74.071	0.00	0.00
1Yr 60Min Winter	6.786	0.00	0.00	30Yr+40% 60Min Summer	46.547	0.00	0.00
1Yr 60Min Summer	6.786	0.00	0.00	30Yr+40% 60Min Winter	46.547	0.00	0.00
1Yr 120Min Summer	5.246	0.00	0.00	30Yr+40% 120Min Summer	27.731	0.00	0.00
1Yr 120Min Winter	5.246	0.00	0.00	30Yr+40% 120Min Winter	27.731	0.00	0.00
1Yr 180Min Summer	4.383	0.00	0.00	30Yr+40% 180Min Summer	20.307	0.00	0.00
1Yr 180Min Winter	4.383	0.00	0.00	30Yr+40% 180Min Winter	20.307	0.00	0.00
1Yr 240Min Summer	3.631	0.00	0.00	30Yr+40% 240Min Summer	16.265	0.00	0.00
1Yr 240Min Winter	3.631	0.00	0.00	30Yr+40% 240Min Winter	16.265	0.00	0.00
1Yr 360Min Summer	2.818	0.00	0.00	30Yr+40% 360Min Summer	11.803	0.00	0.00
1Yr 360Min Winter	2.818	0.00	0.00	30Yr+40% 360Min Winter	11.803	0.00	0.00
1Yr 480Min Summer	2.343	0.00	0.00	30Yr+40% 480Min Summer	9.367	0.00	0.00
1Yr 480Min Winter	2.343	0.00	0.00	30Yr+40% 480Min Winter	9.367	0.00	0.00
1Yr 600Min Summer	2.004	0.00	0.00	30Yr+40% 600Min Summer	7.810	0.00	0.00
1Yr 600Min Winter	2.004	0.00	0.00	30Yr+40% 600Min Winter	7.810	0.00	0.00
1Yr 720Min Winter	1.752	0.00	0.00	30Yr+40% 720Min Summer	6.721	0.00	0.00
1Yr 720Min Summer	1.752	0.00	0.00	30Yr+40% 720Min Winter	6.721	0.00	0.00
1Yr 960Min Summer	1.420	0.00	0.00	30Yr+40% 960Min Summer	5.302	0.00	0.00
1Yr 960Min Winter	1.420	0.00	0.00	30Yr+40% 960Min Winter	5.302	0.00	0.00
1Yr 1440Min Summer	1.059	0.00	0.00	30Yr+40% 1440Min Summer	3.817	0.00	0.00
1Yr 1440Min Winter	1.059	0.00	0.00	30Yr+40% 1440Min Winter	3.817	0.00	0.00
10Yr+40% 15Min Summer	87.036	0.00	0.00	100Yr+45% 15Min Summer	146.276	0.00	0.00
10Yr+40% 15Min Winter	87.036	0.00	0.00	100Yr+45% 15Min Winter	146.276	0.00	0.00
10Yr+40% 30Min Summer	56.678	0.00	0.00	100Yr+45% 30Min Summer	96.982	0.00	-0.11
10Yr+40% 30Min Winter	56.678	0.00	0.00	100Yr+45% 30Min Winter	96.982	0.00	-0.10
10Yr+40% 60Min Summer	35.401	0.00	0.00	100Yr+45% 60Min Summer	61.530	0.00	0.00
10Yr+40% 60Min Winter	35.401	0.00	0.00	100Yr+45% 60Min Winter	61.530	0.00	0.00
10Yr+40% 120Min Winter	21.745	0.00	0.00	100Yr+45% 120Min Summer	35.946	0.00	0.00
10Yr+40% 120Min Summer	21.745	0.00	0.00	100Yr+45% 120Min Winter	35.946	0.00	0.00
10Yr+40% 180Min Summer	16.178	0.00	0.00	100Yr+45% 180Min Summer	26.053	0.00	0.00
10Yr+40% 180Min Winter	16.178	0.00	0.00	100Yr+45% 180Min Winter	26.053	0.00	0.00
10Yr+40% 240Min Summer	13.001	0.00	0.00	100Yr+45% 240Min Summer	20.923	0.00	0.00
10Yr+40% 240Min Winter	13.001	0.00	0.00	100Yr+45% 240Min Winter	20.923	0.00	0.00
10Yr+40% 360Min Summer	9.488	0.00	0.00	100Yr+45% 360Min Summer	15.176	0.00	0.00
10Yr+40% 360Min Winter	9.488	0.00	0.00	100Yr+45% 360Min Winter	15.176	0.00	0.00
10Yr+40% 480Min Summer	7.563	0.00	0.00	100Yr+45% 480Min Summer	12.028	0.00	0.00
10Yr+40% 480Min Winter	7.563	0.00	0.00	100Yr+45% 480Min Winter	12.028	0.00	0.00
10Yr+40% 600Min Winter	6.323	0.00	0.00	100Yr+45% 600Min Summer	10.033	0.00	0.00
10Yr+40% 600Min Summer	6.323	0.00	0.00	100Yr+45% 600Min Winter	10.033	0.00	0.00
10Yr+40% 720Min Summer	5.451	0.00	0.00	100Yr+45% 720Min Summer	8.641	0.00	0.00
10Yr+40% 720Min Winter	5.451	0.00	0.00	100Yr+45% 720Min Winter	8.641	0.00	0.00
10Yr+40% 960Min Summer	4.313	0.00	0.00	100Yr+45% 960Min Summer	6.827	0.00	0.00
10Yr+40% 960Min Winter	4.313	0.00	0.00	100Yr+45% 960Min Winter	6.827	0.00	0.00
10Yr+40% 1440Min Summer	3.111	0.00	0.00	100Yr+45% 1440Min Winter	4.922	0.00	0.00
10Yr+40% 1440Min Winter	3.111	0.00	0.00	100Yr+45% 1440Min Summer	4.922	0.00	0.00

Simulation Results

Return Period Yrs: 1.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	15 min Summer	12	4.117	0.067	2.133		OK
S38-2	15 min Summer	11	4.117	0.142	1.773		OK
S278 Headwall A	15 min Summer	13	3.551	0.046	0.000		OK
S38-3	30 min Summer	21	3.551	0.048	2.995		OK
S278 Headwall B	30 min Summer	21	3.532	0.032	3.024		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	19	S38-1	S38-2	0.103	0.260	5.888	0.011	OK
1.001	15 min Summer	11	S38-2	S38-3	0.048	0.637	3.082	0.223	OK
2.000	30 min Summer	37	S278	S38-3	0.047	0.007	0.039	0.000	OK
1.002	30 min Summer	21	S38-3	S278	0.040	0.368	3.024	0.028	OK

Return Period Yrs: 10.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	60 min Summer	42	4.482	0.432	5.068		OK
S38-2	60 min Summer	42	4.482	0.507	5.134		Surcharged
S278 Headwall A	30 min Winter	19	3.562	0.057	0.026		OK
S38-3	15 min Winter	14	3.562	0.060	5.013		OK
S278 Headwall B	15 min Winter	13	3.543	0.043	5.018		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	60 min Summer	42	S38-1	S38-2	0.470	0.357	14.206	0.028	OK
1.001	30 min Summer	29	S38-2	S38-3	0.062	0.727	5.000	0.362	OK
2.000	30 min Summer	25	S278	S38-3	0.058	0.007	0.064	0.001	OK
1.002	15 min Winter	13	S38-3	S278	0.051	0.429	5.018	0.046	OK

Return Period Yrs: 30.0

Climate Change %: 40

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	60 min Winter	48	4.705	0.655	4.852		OK
S38-2	60 min Winter	48	4.704	0.729	4.482		Surcharged
S278 Headwall A	15 min Winter	11	3.563	0.058	0.000		OK
S38-3	120 min Summer	116	3.562	0.060	5.013		OK
S278 Headwall B	120 min Summer	116	3.543	0.043	5.005		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	60 min Winter	48	S38-1	S38-2	0.692	0.353	13.670	0.027	OK
1.001	180 min Winter	112	S38-2	S38-3	0.062	0.727	5.000	0.362	OK
2.000	15 min Winter	11	S278	S38-3	0.058	0.024	0.328	0.003	OK
1.002	120 min Summer	116	S38-3	S278	0.051	0.429	5.005	0.046	OK

Return Period Yrs: 100.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
S38-1	60 min Winter	52	5.299	1.249	4.870		Surcharged
S38-2	60 min Winter	53	5.299	1.324	3.834		Flood Risk
S278 Headwall A	30 min Summer	16	3.562	0.057	0.000		OK
S38-3	15 min Winter	10	3.562	0.060	4.962		OK
S278 Headwall B	15 min Winter	10	3.543	0.043	5.041		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	30 min Summer	19	S38-1	S38-2	0.750	0.444	28.059	0.054	Surcharged
1.001	30 min Summer	82	S38-2	S38-3	0.062	0.727	5.000	0.362	OK
2.000	30 min Summer	16	S278	S38-3	0.058	0.010	0.091	0.001	OK
1.002	15 min Winter	10	S38-3	S278	0.051	0.429	5.041	0.047	OK