

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	5	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	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	0.300	Preferred Cover Depth (m)	1.000
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
SW5	0.140	5.00	102.270	1200	417854.094	427446.167	1.347
SW6	0.041	5.00	101.614	1200	417867.944	427446.527	0.830
SW7	0.044	5.00	101.410	1200	417869.336	427412.797	1.263
SW8	0.033	5.00	100.882	1200	417871.876	427376.031	1.418
SW9	0.071	5.00	100.375	1200	417883.474	427351.071	1.938
SW10	0.051	5.00	98.292	1200	417918.142	427302.844	1.036
SW11	0.034	5.00	96.614	1200	417941.138	427266.921	1.491
SW12	1.900	5.00	95.378	1800	417968.438	427256.472	2.878
SW13	0.026	5.00	95.444	1500	417961.385	427246.881	3.023
SW14	0.021	5.00	94.566	1500	417975.899	427230.709	2.365
SW15	0.081	5.00	93.798	1500	417992.719	427225.129	1.875
SW16	0.012	5.00	92.276	1500	418053.796	427253.762	1.875
SW17	0.019	5.00	92.192	1500	418063.963	427254.636	1.875
SW18	0.054	5.00	92.052	1500	418078.536	427247.607	1.935
SW19	0.024	5.00	91.591	1500	418098.779	427207.718	1.875
SW20	0.028	5.00	91.385	1500	418106.912	427189.651	1.875
SW21	0.013	5.00	91.129	1500	418120.760	427170.449	1.875
SW22	1.900	5.00	91.101		418107.988	427232.643	1.001
SW23	0.019	5.00	91.129	1800	418130.668	427179.963	1.946
SW24			90.000	1500	418142.339	427183.445	0.939

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	SW5	SW6	13.855	0.600	100.923	100.784	0.139	99.7	450	5.11	50.0
1.001	SW6	SW7	33.759	0.600	100.784	100.147	0.637	53.0	450	5.31	50.0
1.002	SW7	SW8	36.854	0.600	100.147	99.464	0.683	54.0	450	5.54	50.0
1.003	SW8	SW9	27.523	0.600	99.464	98.437	1.027	26.8	450	5.65	50.0
1.004	SW9	SW10	59.395	0.600	98.437	97.256	1.181	50.3	450	6.00	50.0
1.005	SW10	SW11	42.653	0.600	97.256	95.123	2.133	20.0	450	6.15	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	2.036	323.8	19.0	0.897	0.380	0.140	0.0	73	1.135
1.001	2.797	444.9	24.5	0.380	0.813	0.181	0.0	71	1.528
1.002	2.772	440.9	30.5	0.813	0.968	0.225	0.0	80	1.623
1.003	3.939	626.4	35.0	0.968	1.488	0.258	0.0	72	2.170
1.004	2.872	456.7	44.6	1.488	0.586	0.329	0.0	94	1.847
1.005	4.561	725.5	51.5	0.586	1.041	0.380	0.0	80	2.691

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)
1.006	SW11	SW13	28.488	0.600	95.123	92.796	2.327	12.2	450	6.23	50.0
2.000	SW12	SW13	11.905	0.600	92.500	92.421	0.079	150.7	675	5.09	50.0
1.007	SW13	SW14	21.730	0.600	92.421	92.276	0.145	149.9	675	6.40	50.0
1.008	SW14	SW15	17.722	0.600	92.201	91.923	0.278	63.7	675	6.49	50.0
1.009	SW15	SW16	67.454	0.600	91.923	90.401	1.522	44.3	675	6.78	50.0
1.010	SW16	SW17	10.205	0.600	90.401	90.317	0.084	121.5	675	6.85	50.0
1.011	SW17	SW18	16.180	0.600	90.317	90.117	0.200	80.9	675	6.94	50.0
1.012	SW18	SW19	44.731	0.600	90.117	89.716	0.401	111.5	675	7.24	50.0
1.013	SW19	SW20	19.814	0.600	89.716	89.510	0.206	96.2	675	7.37	50.0
1.014	SW20	SW21	23.675	0.600	89.510	89.254	0.256	92.5	675	7.51	50.0
1.015	SW21	SW23	13.737	0.600	89.254	89.183	0.071	193.5	675	7.63	50.0
3.000	SW22	SW23	57.355	0.600	90.100	89.183	0.917	62.5	600	5.31	50.0
1.016	SW23	SW24	12.179	0.600	89.183	89.061	0.122	100.0	300	7.76	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)
1.006	5.834	927.8	56.1	1.041	2.198	0.414	0.0	74	3.287
2.000	2.132	763.1	257.5	2.203	2.348	1.900	0.0	269	1.934
1.007	2.138	765.2	317.1	2.348	1.615	2.340	0.0	302	2.042
1.008	3.286	1175.7	320.0	1.690	1.200	2.361	0.0	240	2.819
1.009	3.943	1411.0	331.0	1.200	1.200	2.442	0.0	221	3.252
1.010	2.376	850.4	332.6	1.200	1.200	2.454	0.0	292	2.237
1.011	2.915	1043.1	335.2	1.200	1.260	2.473	0.0	262	2.610
1.012	2.481	887.7	342.5	1.260	1.200	2.527	0.0	290	2.328
1.013	2.672	956.3	345.7	1.200	1.200	2.551	0.0	280	2.467
1.014	2.726	975.3	349.5	1.200	1.200	2.579	0.0	279	2.511
1.015	1.880	672.9	351.3	1.200	1.271	2.592	0.0	346	1.900
3.000	3.082	871.5	257.5	0.401	1.346	1.900	0.0	222	2.699
1.016	1.572	111.1	611.4	1.646	0.639	4.511	0.0	300	1.592

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	13.855	99.7	450	1	102.270	100.923	0.897	101.614	100.784	0.380
1.001	33.759	53.0	450	1	101.614	100.784	0.380	101.410	100.147	0.813
1.002	36.854	54.0	450	1	101.410	100.147	0.813	100.882	99.464	0.968
1.003	27.523	26.8	450	1	100.882	99.464	0.968	100.375	98.437	1.488
1.004	59.395	50.3	450	1	100.375	98.437	1.488	98.292	97.256	0.586
1.005	42.653	20.0	450	1	98.292	97.256	0.586	96.614	95.123	1.041
1.006	28.488	12.2	450	1	96.614	95.123	1.041	95.444	92.796	2.198

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	SW5	1200	Manhole	1	SW6	1200	Manhole	1
1.001	SW6	1200	Manhole	1	SW7	1200	Manhole	1
1.002	SW7	1200	Manhole	1	SW8	1200	Manhole	1
1.003	SW8	1200	Manhole	1	SW9	1200	Manhole	1
1.004	SW9	1200	Manhole	1	SW10	1200	Manhole	1
1.005	SW10	1200	Manhole	1	SW11	1200	Manhole	1
1.006	SW11	1200	Manhole	1	SW13	1500	Manhole	1

Pipeline Schedule

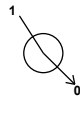
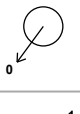
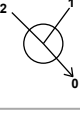
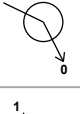
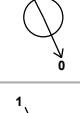
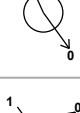
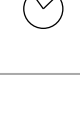
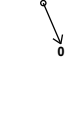
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
2.000	11.905	150.7	675	1	95.378	92.500	2.203	95.444	92.421	2.348
1.007	21.730	149.9	675	1	95.444	92.421	2.348	94.566	92.276	1.615
1.008	17.722	63.7	675	1	94.566	92.201	1.690	93.798	91.923	1.200
1.009	67.454	44.3	675	1	93.798	91.923	1.200	92.276	90.401	1.200
1.010	10.205	121.5	675	1	92.276	90.401	1.200	92.192	90.317	1.200
1.011	16.180	80.9	675	1	92.192	90.317	1.200	92.052	90.117	1.260
1.012	44.731	111.5	675	1	92.052	90.117	1.260	91.591	89.716	1.200
1.013	19.814	96.2	675	1	91.591	89.716	1.200	91.385	89.510	1.200
1.014	23.675	92.5	675	1	91.385	89.510	1.200	91.129	89.254	1.200
1.015	13.737	193.5	675	1	91.129	89.254	1.200	91.129	89.183	1.271
3.000	57.355	62.5	600	1	91.101	90.100	0.401	91.129	89.183	1.346
1.016	12.179	100.0	300	1	91.129	89.183	1.646	90.000	89.061	0.639

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
2.000	SW12	1800	Manhole	1	SW13	1500	Manhole	1
1.007	SW13	1500	Manhole	1	SW14	1500	Manhole	1
1.008	SW14	1500	Manhole	1	SW15	1500	Manhole	1
1.009	SW15	1500	Manhole	1	SW16	1500	Manhole	1
1.010	SW16	1500	Manhole	1	SW17	1500	Manhole	1
1.011	SW17	1500	Manhole	1	SW18	1500	Manhole	1
1.012	SW18	1500	Manhole	1	SW19	1500	Manhole	1
1.013	SW19	1500	Manhole	1	SW20	1500	Manhole	1
1.014	SW20	1500	Manhole	1	SW21	1500	Manhole	1
1.015	SW21	1500	Manhole	1	SW23	1800	Manhole	1
3.000	SW22		Junction		SW23	1800	Manhole	1
1.016	SW23	1800	Manhole	1	SW24	1500	Manhole	1

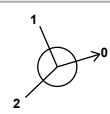
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SW5	417854.094	427446.167	102.270	1.347	1200		0	1.000	100.923	450
SW6	417867.944	427446.527	101.614	0.830	1200		1	1.000	100.784	450
						0	1.001	100.784	450	
SW7	417869.336	427412.797	101.410	1.263	1200		1	1.001	100.147	450
						0	1.002	100.147	450	
SW8	417871.876	427376.031	100.882	1.418	1200		1	1.002	99.464	450
						0	1.003	99.464	450	
SW9	417883.474	427351.071	100.375	1.938	1200		1	1.003	98.437	450
						0	1.004	98.437	450	

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
SW10	417918.142	427302.844	98.292	1.036	1200		1 1.004	97.256	450
							0 1.005	97.256	450
SW11	417941.138	427266.921	96.614	1.491	1200		1 1.005	95.123	450
							0 1.006	95.123	450
SW12	417968.438	427256.472	95.378	2.878	1800		0 2.000	92.500	675
SW13	417961.385	427246.881	95.444	3.023	1500		1 2.000	92.421	675
							2 1.006	92.796	450
							0 1.007	92.421	675
SW14	417975.899	427230.709	94.566	2.365	1500		1 1.007	92.276	675
							0 1.008	92.201	675
SW15	417992.719	427225.129	93.798	1.875	1500		1 1.008	91.923	675
							0 1.009	91.923	675
SW16	418053.796	427253.762	92.276	1.875	1500		1 1.009	90.401	675
							0 1.010	90.401	675
SW17	418063.963	427254.636	92.192	1.875	1500		1 1.010	90.317	675
							0 1.011	90.317	675
SW18	418078.536	427247.607	92.052	1.935	1500		1 1.011	90.117	675
							0 1.012	90.117	675
SW19	418098.779	427207.718	91.591	1.875	1500		1 1.012	89.716	675
							0 1.013	89.716	675
SW20	418106.912	427189.651	91.385	1.875	1500		1 1.013	89.510	675
							0 1.014	89.510	675
SW21	418120.760	427170.449	91.129	1.875	1500		1 1.014	89.254	675
							0 1.015	89.254	675
SW22	418107.988	427232.643	91.101	1.001			0 3.000	90.100	600

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
SW23	418130.668	427179.963	91.129	1.946	1800		1	3.000	89.183	600
							2	1.015	89.183	675
							0	1.016	89.183	300
SW24	418142.339	427183.445	90.000	0.939	1500		1	1.016	89.061	300

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	0.300	Additional Storage (m³/ha)	0.0
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
30	0	0	0
100	40	0	0

Node SW23 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	89.183	Product Number	CTL-SHE-0204-2400-1800-2400
Design Depth (m)	1.800	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	24.0	Min Node Diameter (mm)	1800

Node SW16 Offline Depth/Flow Control

Flap Valve	x	Invert Level (m)	91.000	Design Flow (l/s)	1000.0
Loop to Node	SW22	Design Depth (m)	1.500		

Depth (m)	Flow (l/s)
1.500	1000.000

Node SW22 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	90.100
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	



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LS9 8EE

File: 065646-CUR-00-ZZ-DC-C-5
Network: S104 SW South
Owen Townsend
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Interchange 26
S104 South

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	3560.0	0.0	1.000	3560.0	0.0

Results for 2 year Critical Storm Duration. Lowest mass balance: 99.47%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW5	10	101.002	0.079	19.7	0.0897	0.0000	OK
15 minute winter	SW6	10	100.856	0.072	25.3	0.0816	0.0000	OK
15 minute winter	SW7	10	100.229	0.082	31.2	0.0925	0.0000	OK
15 minute winter	SW8	11	99.536	0.072	35.3	0.0812	0.0000	OK
15 minute winter	SW9	11	98.534	0.097	44.9	0.1101	0.0000	OK
15 minute winter	SW10	11	97.338	0.082	52.0	0.0927	0.0000	OK
15 minute winter	SW11	11	95.200	0.077	56.6	0.0874	0.0000	OK
15 minute winter	SW12	10	92.850	0.350	266.7	0.8903	0.0000	OK
15 minute winter	SW13	10	92.759	0.338	321.2	0.5966	0.0000	OK
15 minute winter	SW14	10	92.466	0.265	319.1	0.4685	0.0000	OK
15 minute winter	SW15	11	92.140	0.217	330.0	0.3842	0.0000	OK
15 minute winter	SW16	12	90.767	0.366	334.0	0.6465	0.0000	OK
15 minute winter	SW17	12	90.695	0.378	326.9	0.6680	0.0000	OK
15 minute winter	SW18	12	90.689	0.572	333.5	1.0100	0.0000	OK
15 minute winter	SW19	12	90.626	0.910	330.0	1.6078	0.0000	SURCHARGED
15 minute winter	SW20	12	90.598	1.087	329.0	1.9216	0.0000	SURCHARGED
15 minute winter	SW21	12	90.545	1.291	332.4	2.2818	0.0000	SURCHARGED
480 minute winter	SW22	376	90.254	0.154	71.2	549.3796	0.0000	OK
15 minute winter	SW23	12	90.488	1.305	335.4	3.3209	0.0000	SURCHARGED
15 minute summer	SW24	1	89.061	0.000	24.0	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	SW5	1.000	SW6	19.6	1.114	0.060	0.2432	
15 minute winter	SW6	1.001	SW7	25.0	1.393	0.056	0.6070	
15 minute winter	SW7	1.002	SW8	30.8	1.728	0.070	0.6585	
15 minute winter	SW8	1.003	SW9	35.5	1.725	0.057	0.5702	
15 minute winter	SW9	1.004	SW10	45.3	2.024	0.099	1.3322	
15 minute winter	SW10	1.005	SW11	52.1	2.763	0.072	0.8048	
15 minute winter	SW11	1.006	SW13	56.5	3.213	0.061	0.5008	
15 minute winter	SW12	2.000	SW13	265.1	1.452	0.347	2.1734	
15 minute winter	SW13	1.007	SW14	316.2	1.945	0.413	3.5578	
15 minute winter	SW14	1.008	SW15	319.3	2.803	0.272	2.0219	
15 minute winter	SW15	1.009	SW16	332.4	2.399	0.236	9.7808	
15 minute winter	SW16	1.010	SW17	324.4	1.916	0.382	2.0568	
15 minute winter	SW16	Depth/Flow	SW22	0.0				0.0
15 minute winter	SW17	1.011	SW18	326.4	2.067	0.313	4.2709	
15 minute winter	SW18	1.012	SW19	327.0	2.071	0.368	15.1923	
15 minute winter	SW19	1.013	SW20	326.7	1.835	0.342	7.0732	
15 minute winter	SW20	1.014	SW21	331.4	1.220	0.340	8.4515	
15 minute winter	SW21	1.015	SW23	333.9	1.045	0.496	4.9038	
480 minute winter	SW22	3.000	SW23	-31.7	-0.173	-0.036	9.7190	
15 minute winter	SW23	Hydro-Brake®	SW24	24.0				189.3

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.47%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW5	10	101.034	0.111	37.0	0.1252	0.0000	OK
15 minute winter	SW6	10	100.884	0.100	47.6	0.1127	0.0000	OK
15 minute winter	SW7	10	100.259	0.112	58.6	0.1269	0.0000	OK
15 minute winter	SW8	11	99.562	0.098	66.7	0.1104	0.0000	OK
15 minute winter	SW9	11	98.571	0.134	84.7	0.1512	0.0000	OK
15 minute winter	SW10	11	97.369	0.113	97.7	0.1282	0.0000	OK
15 minute winter	SW11	12	95.227	0.104	106.6	0.1171	0.0000	OK
15 minute winter	SW12	10	93.052	0.552	501.5	1.4046	0.0000	OK
15 minute winter	SW13	10	92.933	0.512	608.0	0.9046	0.0000	OK
15 minute winter	SW14	10	92.591	0.390	603.4	0.6897	0.0000	OK
15 minute winter	SW15	11	92.229	0.306	622.6	0.5408	0.0000	OK
15 minute winter	SW16	11	91.300	0.899	628.7	1.5881	0.0000	SURCHARGED
15 minute winter	SW17	11	91.254	0.937	494.3	1.6564	0.0000	SURCHARGED
15 minute winter	SW18	11	91.182	1.065	501.0	1.8818	0.0000	SURCHARGED
15 minute winter	SW19	11	91.055	1.339	459.4	2.3662	0.0000	SURCHARGED
15 minute winter	SW20	11	90.997	1.487	463.8	2.6276	0.0000	SURCHARGED
15 minute winter	SW21	11	90.883	1.629	465.9	2.8782	0.0000	FLOOD RISK
600 minute winter	SW22	570	90.473	0.373	121.3	1326.6570	0.0000	OK
15 minute winter	SW23	11	90.758	1.575	470.8	4.0091	0.0000	SURCHARGED
15 minute summer	SW24	1	89.061	0.000	24.0	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	SW5	1.000	SW6	36.8	1.308	0.114	0.3897	
15 minute winter	SW6	1.001	SW7	47.0	1.656	0.106	0.9597	
15 minute winter	SW7	1.002	SW8	58.0	2.074	0.131	1.0319	
15 minute winter	SW8	1.003	SW9	66.5	2.068	0.106	0.8896	
15 minute winter	SW9	1.004	SW10	85.0	2.412	0.186	2.0976	
15 minute winter	SW10	1.005	SW11	98.2	3.389	0.135	1.2375	
15 minute winter	SW11	1.006	SW13	106.8	3.768	0.115	0.9505	
15 minute winter	SW12	2.000	SW13	498.9	1.654	0.654	3.5886	
15 minute winter	SW13	1.007	SW14	597.9	2.253	0.781	5.7822	
15 minute winter	SW14	1.008	SW15	602.2	3.265	0.512	3.2748	
15 minute winter	SW15	1.009	SW16	625.7	2.665	0.443	17.3421	
15 minute winter	SW16	1.010	SW17	489.6	1.960	0.576	3.6430	
15 minute winter	SW16	Depth/Flow	SW22	199.9				36.9
15 minute winter	SW17	1.011	SW18	487.6	2.110	0.467	5.7759	
15 minute winter	SW18	1.012	SW19	453.1	2.152	0.510	15.9680	
15 minute winter	SW19	1.013	SW20	456.4	1.963	0.477	7.0732	
15 minute winter	SW20	1.014	SW21	462.7	1.296	0.474	8.4515	
15 minute winter	SW21	1.015	SW23	466.2	1.306	0.693	4.9038	
600 minute winter	SW22	3.000	SW23	-61.1	-0.289	-0.070	13.3516	
15 minute winter	SW23	Hydro-Brake®	SW24	23.9				326.7

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.47%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SW5	10	101.076	0.153	66.4	0.1733	0.0000	OK
15 minute winter	SW6	10	100.921	0.137	85.6	0.1547	0.0000	OK
15 minute winter	SW7	10	100.299	0.152	105.6	0.1723	0.0000	OK
15 minute winter	SW8	10	99.595	0.131	120.3	0.1485	0.0000	OK
15 minute winter	SW9	10	98.620	0.183	153.1	0.2067	0.0000	OK
15 minute winter	SW10	11	97.410	0.154	175.9	0.1741	0.0000	OK
15 minute winter	SW11	11	95.260	0.137	192.2	0.1550	0.0000	OK
15 minute winter	SW12	11	94.082	1.582	900.5	4.0263	0.0000	SURCHARGED
15 minute winter	SW13	11	93.835	1.414	1072.2	2.4979	0.0000	SURCHARGED
15 minute winter	SW14	11	93.323	1.122	1075.3	1.9818	0.0000	SURCHARGED
15 minute winter	SW15	11	92.944	1.021	1113.2	1.8036	0.0000	SURCHARGED
15 minute winter	SW16	11	91.848	1.447	1120.6	2.5564	0.0000	SURCHARGED
15 minute winter	SW17	11	91.772	1.455	563.8	2.5712	0.0000	SURCHARGED
15 minute winter	SW18	11	91.651	1.534	588.3	2.7106	0.0000	SURCHARGED
15 minute winter	SW19	11	91.432	1.716	599.3	3.0322	0.0000	FLOOD RISK
15 minute winter	SW20	11	91.329	1.819	612.4	3.2145	0.0000	FLOOD RISK
15 minute winter	SW21	10	91.129	1.875	617.5	3.3131	5.8660	FLOOD
960 minute winter	SW22	930	90.919	0.819	160.4	2915.6110	0.0000	FLOOD RISK
15 minute summer	SW23	10	90.963	1.780	582.4	4.5301	0.0000	FLOOD RISK
15 minute summer	SW24	1	89.061	0.000	23.9	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	SW5	1.000	SW6	66.2	1.500	0.204	0.6115	
15 minute winter	SW6	1.001	SW7	84.7	1.929	0.190	1.4837	
15 minute winter	SW7	1.002	SW8	104.6	2.449	0.237	1.5783	
15 minute winter	SW8	1.003	SW9	119.5	2.432	0.191	1.3599	
15 minute winter	SW9	1.004	SW10	153.1	2.835	0.335	3.2121	
15 minute winter	SW10	1.005	SW11	177.0	3.997	0.244	1.8906	
15 minute winter	SW11	1.006	SW13	192.7	3.838	0.208	2.8376	
15 minute winter	SW12	2.000	SW13	873.3	2.447	1.144	4.2498	
15 minute winter	SW13	1.007	SW14	1065.9	2.986	1.393	7.7571	
15 minute winter	SW14	1.008	SW15	1077.1	3.322	0.916	6.3264	
15 minute winter	SW15	1.009	SW16	1115.3	3.124	0.790	24.0796	
15 minute winter	SW16	1.010	SW17	555.3	2.046	0.653	3.6430	
15 minute winter	SW16	Depth/Flow	SW22	564.8				175.6
15 minute winter	SW17	1.011	SW18	564.2	2.190	0.541	5.7759	
15 minute winter	SW18	1.012	SW19	588.6	2.093	0.663	15.9680	
15 minute winter	SW19	1.013	SW20	599.9	1.986	0.627	7.0732	
15 minute winter	SW20	1.014	SW21	611.7	1.714	0.627	8.4515	
15 minute winter	SW21	1.015	SW23	581.2	1.628	0.864	4.9038	
960 minute winter	SW22	3.000	SW23	-83.1	-0.319	-0.095	16.1556	
15 minute summer	SW23	Hydro-Brake®	SW24	23.9				307.8