

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	40	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	17.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.300	Preferred Cover Depth (m)	0.900
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
SNECK1	1.131	5.00	96.500	1350	299085.894	516124.461	2.500
SNECK2			96.500	1800	299085.894	516114.461	2.700
SAR3		5.00	95.130	1350	299061.593	516111.753	1.725
SAR4	0.086	5.00	95.200	1800	299075.086	516095.205	2.180
G1	0.024	5.00	94.660	350	299070.602	516070.128	0.300
SAR5	0.024	5.00	94.640	1800	299061.379	516083.924	1.656
SAR6	0.131	5.00	95.730	1800	299014.515	516139.099	2.891
SAR7			95.660	1500	299007.743	516144.215	2.878
S1	0.065	5.00	91.095	1200	298993.330	516085.657	1.125
S2	0.073	5.00	91.240	1350	299013.436	516102.976	1.501
S3	0.163	5.00	91.750	1350	298969.455	516155.544	2.367
S4	0.190	5.00	91.046	1200	298965.206	516076.629	1.200
S5	0.075	5.00	90.945	1200	298943.492	516101.855	1.235
S6			90.925	1350	298926.853	516121.105	1.786
S7	0.094	5.00	90.510	1350	298915.382	516111.185	1.409
S8			90.122	1800	298900.912	516127.387	1.350
S9	0.426	5.00	88.775	1350	298869.774	516070.153	1.350
S10			89.695	1350	298904.035	516100.778	2.383
S11			89.225	1800	298889.703	516117.694	2.136
EXSMH2			89.090	1350	298887.157	516115.507	2.021

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	SNECK1	SNECK2	10.000	0.600	94.000	93.900	0.100	100.0	450	5.08	50.0
1.001	SNECK2	SAR4	22.082	0.600	93.800	93.619	0.181	122.0	225	5.39	50.0
2.000	SAR3	SAR4	21.352	0.600	93.405	93.320	0.085	251.2	450	5.28	50.0
1.002	SAR4	SAR5	17.752	0.600	93.020	92.984	0.036	493.1	750	5.30	50.0
3.000	G1	SAR5	16.595	0.600	94.360	93.584	0.776	21.4	150	5.13	50.0
1.003	SAR5	SAR6	72.391	0.600	92.984	92.839	0.145	500.0	750	6.27	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	2.033	323.3	214.6	2.050	2.150	1.131	0.0
1.001	1.182	47.0	214.6	2.475	1.356	1.131	0.0
2.000	1.278	203.2	0.0	1.275	1.430	0.000	0.0
1.002	1.253	553.6	230.9	1.430	0.906	1.217	0.0
3.000	2.187	38.6	4.6	0.150	0.906	0.024	0.0
1.003	1.244	549.7	240.0	0.906	2.141	1.265	0.0

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.004	SAR6	SAR7	8.487	0.600	92.839	92.782	0.057	150.0	300	6.38	50.0
1.005	SAR7	S3	39.929	0.600	92.782	89.458	3.324	12.0	300	6.53	50.0
4.000	S1	S2	26.537	0.600	89.970	89.814	0.156	170.0	225	5.44	50.0
4.001	S2	S3	68.540	0.600	89.739	89.458	0.281	244.0	300	6.58	50.0
1.006	S3	S6	54.781	0.600	89.383	89.214	0.169	324.1	375	7.50	50.0
5.000	S4	S5	33.284	0.600	89.846	89.710	0.136	244.7	300	5.55	50.0
5.001	S5	S6	25.444	0.600	89.710	89.289	0.421	60.4	300	5.76	50.0
1.007	S6	S7	15.165	0.600	89.139	89.101	0.038	399.1	450	7.75	50.0
1.008	S7	S8	21.723	0.600	89.101	88.772	0.329	66.0	450	7.89	50.0
1.009	S8	S11	14.819	0.600	88.772	88.101	0.671	22.1	300	7.98	50.0
6.000	S9	S10	45.953	0.600	87.425	87.312	0.113	406.7	450	5.76	50.0
6.001	S10	S11	22.171	0.600	87.312	87.164	0.148	150.0	150	6.22	50.0
1.010	S11	EXSMH2	3.356	0.600	87.089	87.069	0.020	170.0	225	8.03	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.004	1.281	90.6	264.9	2.591	2.578	1.396	0.0
1.005	4.560	322.3	264.9	2.578	1.992	1.396	0.0
4.000	1.000	39.7	12.3	0.900	1.201	0.065	0.0
4.001	1.002	70.8	26.2	1.201	1.992	0.138	0.0
1.006	1.001	110.5	322.0	1.992	1.336	1.697	0.0
5.000	1.000	70.7	36.0	0.900	0.935	0.190	0.0
5.001	2.026	143.2	50.3	0.935	1.336	0.265	0.0
1.007	1.011	160.8	372.3	1.336	0.959	1.962	0.0
1.008	2.505	398.4	390.1	0.959	0.900	2.056	0.0
1.009	3.358	237.4	390.1	1.050	0.824	2.056	0.0
6.000	1.002	159.3	80.8	0.900	1.933	0.426	0.0
6.001	0.818	14.5	80.8	2.233	1.911	0.426	0.0
1.010	1.000	39.7	470.9	1.911	1.796	2.482	0.0

Simulation Settings

Rainfall Methodology	FSR	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	17.000	Additional Storage (m³/ha)	20.0
Ratio-R	0.300	Check Discharge Rate(s)	✓
Summer CV	0.750	100 year (l/s)	50.0
Winter CV	0.840	Check Discharge Volume	x
Analysis Speed	Normal		

Storm Durations

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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	0	0	0
100	40	0	0
200	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)		Betterment (%)	0
SAAR (mm)		QBar	
Soil Index	1	Q 1 year (l/s)	
SPR	0.10	Q 30 year (l/s)	
Region	1	Q 100 year (l/s)	
Growth Factor 1 year	0.85		

Node SAR6 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	92.839	Product Number	CTL-SHE-0211-2560-1700-2560
Design Depth (m)	1.700	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	25.6	Min Node Diameter (mm)	1800

Node SNECK2 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	93.800	Product Number	CTL-SHE-0189-2110-2000-2110
Design Depth (m)	2.000	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	21.1	Min Node Diameter (mm)	1800

Node S10 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	87.312	Product Number	CTL-SHE-0124-8000-1500-8000
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	8.0	Min Node Diameter (mm)	1200

Node S8 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	88.772	Product Number	CTL-SHE-0257-3790-1350-3790
Design Depth (m)	1.350	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	37.9	Min Node Diameter (mm)	1800

Node SNECK2 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	93.800
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	600.0	0.0	1.000	600.0	0.0	1.001	0.0	0.0

Node SAR4 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	93.350
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.97	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	85.5	0.0	0.500	85.5	0.0	0.501	0.0	0.0

Node S7 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	89.101
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	268

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	255.0	0.0	1.000	255.0	0.0	1.001	0.0	0.0

Node S10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	87.312
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	344

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	180.0	0.0	1.000	180.0	0.0	1.001	0.0	0.0

Approval Settings

Node Size	✓	Minimum Full Bore Velocity (m/s)	
Node Losses	✓	Maximum Full Bore Velocity (m/s)	3.000
Link Size	✓	Proportional Velocity	✓
Minimum Diameter (mm)	150	Return Period (years)	
Link Length	✓	Minimum Proportional Velocity (m/s)	0.750
Maximum Length (m)	100.000	Maximum Proportional Velocity (m/s)	3.000
Coordinates	✓	Surcharged Depth	✓
Accuracy (m)	1.000	Return Period (years)	
Crossings	✓	Maximum Surcharged Depth (m)	0.100
Cover Depth	✓	Flooding	✓
Minimum Cover Depth (m)		Return Period (years)	30
Maximum Cover Depth (m)	3.000	Time to Half Empty	x
Backdrops	✓	Discharge Rates	✓
Minimum Backdrop Height (m)		Discharge Volume	✓
Maximum Backdrop Height (m)	1.500	100 year 360 minute (m ³)	
Full Bore Velocity	✓		

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.63%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SNECK1	10	94.220	0.220	122.6	2.3105	0.0000	OK
240 minute winter	SNECK2	164	93.969	0.169	30.1	96.6497	0.0000	OK
15 minute summer	SAR3	1	93.405	0.000	0.0	0.0000	0.0000	OK
240 minute winter	SAR4	156	93.109	0.089	15.7	0.2978	0.0000	OK
15 minute winter	G1	10	94.387	0.027	2.6	0.0453	0.0000	OK
180 minute winter	SAR5	116	93.071	0.087	16.5	0.2470	0.0000	OK
30 minute winter	SAR6	22	93.048	0.209	24.8	0.7216	0.0000	OK
30 minute winter	SAR7	22	92.834	0.052	21.5	0.0922	0.0000	OK
15 minute winter	S1	10	90.034	0.064	7.1	0.1465	0.0000	OK
15 minute winter	S2	11	89.831	0.092	14.6	0.2202	0.0000	OK
15 minute winter	S3	12	89.558	0.175	49.0	0.4919	0.0000	OK
15 minute winter	S4	10	89.958	0.112	20.6	0.4835	0.0000	OK
15 minute winter	S5	11	89.803	0.093	28.2	0.2186	0.0000	OK
15 minute winter	S6	11	89.335	0.196	72.5	0.2809	0.0000	OK
60 minute winter	S7	44	89.220	0.119	56.5	29.2403	0.0000	OK
60 minute winter	S8	47	89.268	0.496	61.7	1.2619	0.0000	SURCHARGED
15 minute winter	S9	8	87.653	0.228	46.2	1.7632	0.0000	OK
120 minute winter	S10	88	87.474	0.162	17.4	27.9953	0.0000	SURCHARGED
120 minute winter	S11	84	87.318	0.229	44.6	0.5820	0.0000	SURCHARGED
120 minute winter	EXSMH2	84	87.246	0.177	44.6	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	SNECK1	1.000	SNECK2	120.7	1.732	0.373	0.6974	
240 minute winter	SNECK2	Hydro-Brake®	SAR4	14.5				
15 minute summer	SAR3	2.000	SAR4	0.0	0.000	0.000	0.0000	
240 minute winter	SAR4	1.002	SAR5	15.7	0.544	0.028	0.5131	
15 minute winter	G1	3.000	SAR5	2.6	1.229	0.066	0.0347	
180 minute winter	SAR5	1.003	SAR6	16.5	0.314	0.030	4.1639	
30 minute winter	SAR6	Hydro-Brake®	SAR7	21.5				
30 minute winter	SAR7	1.005	S3	21.5	2.371	0.067	0.5261	
15 minute winter	S1	4.000	S2	6.8	0.746	0.172	0.2426	
15 minute winter	S2	4.001	S3	14.2	0.767	0.200	1.2919	
15 minute winter	S3	1.006	S6	46.8	1.003	0.423	2.5706	
15 minute winter	S4	5.000	S5	20.1	0.947	0.284	0.7066	
15 minute winter	S5	5.001	S6	28.0	1.551	0.196	0.4601	
15 minute winter	S6	1.007	S7	72.9	1.923	0.454	0.6239	
60 minute winter	S7	1.008	S8	61.7	0.686	0.155	2.0762	
60 minute winter	S8	Hydro-Brake®	S11	37.9				
15 minute winter	S9	6.000	S10	52.0	1.670	0.326	1.8741	
120 minute winter	S10	Hydro-Brake®	S11	6.8				
120 minute winter	S11	1.010	EXSMH2	44.6	1.183	1.122	0.1228	257.7

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.63%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SNECK1	10	94.409	0.409	298.5	4.2841	0.0000	OK
240 minute winter	SNECK2	180	94.213	0.413	68.7	236.5781	0.0000	SURCHARGED
120 minute winter	SAR3	100	93.413	0.008	0.1	0.0111	0.0000	OK
120 minute winter	SAR4	102	93.412	0.392	27.1	6.4893	0.0000	OK
15 minute winter	G1	10	94.402	0.042	6.3	0.0710	0.0000	OK
120 minute winter	SAR5	98	93.412	0.428	29.5	1.2131	0.0000	OK
120 minute winter	SAR6	98	93.413	0.574	33.4	1.9793	0.0000	SURCHARGED
60 minute summer	SAR7	67	92.840	0.058	25.6	0.1022	0.0000	OK
15 minute winter	S1	10	90.075	0.105	17.2	0.2412	0.0000	OK
15 minute winter	S2	11	89.886	0.147	35.9	0.3542	0.0000	OK
15 minute winter	S3	11	89.663	0.280	102.0	0.7859	0.0000	OK
15 minute winter	S4	10	90.035	0.189	50.2	0.8114	0.0000	OK
15 minute winter	S5	10	89.865	0.155	68.9	0.3637	0.0000	OK
120 minute winter	S6	114	89.542	0.403	80.1	0.5760	0.0000	OK
120 minute winter	S7	114	89.539	0.438	104.1	107.3415	0.0000	OK
120 minute winter	S8	114	89.535	0.763	128.4	1.9423	0.0000	SURCHARGED
180 minute winter	S9	140	87.748	0.323	31.4	2.5025	0.0000	OK
180 minute winter	S10	140	87.748	0.436	29.6	75.2039	0.0000	SURCHARGED
600 minute winter	S11	360	87.322	0.233	45.6	0.5921	0.0000	SURCHARGED
600 minute winter	EXSMH2	360	87.247	0.178	45.5	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	SNECK1	1.000	SNECK2	293.3	2.115	0.907	1.3729	
240 minute winter	SNECK2	Hydro-Brake®	SAR4	20.6				
120 minute winter	SAR3	2.000	SAR4	-0.1	-0.014	-0.001	0.2534	
120 minute winter	SAR4	1.002	SAR5	25.0	0.575	0.045	4.3674	
15 minute winter	G1	3.000	SAR5	6.2	1.581	0.161	0.0654	
120 minute winter	SAR5	1.003	SAR6	25.1	0.330	0.046	22.4719	
120 minute winter	SAR6	Hydro-Brake®	SAR7	25.6				
60 minute summer	SAR7	1.005	S3	25.6	2.730	0.079	0.9782	
15 minute winter	S1	4.000	S2	16.7	0.946	0.419	0.4699	
15 minute winter	S2	4.001	S3	35.2	0.863	0.497	2.9352	
15 minute winter	S3	1.006	S6	96.8	1.222	0.876	4.3329	
15 minute winter	S4	5.000	S5	49.1	1.177	0.694	1.3880	
15 minute winter	S5	5.001	S6	68.1	1.934	0.476	0.8967	
120 minute winter	S6	1.007	S7	79.2	1.378	0.492	2.3271	
120 minute winter	S7	1.008	S8	128.4	0.994	0.322	3.4296	
120 minute winter	S8	Hydro-Brake®	S11	37.9				
180 minute winter	S9	6.000	S10	29.6	0.835	0.186	6.4094	
180 minute winter	S10	Hydro-Brake®	S11	8.0				
600 minute winter	S11	1.010	EXSMH2	45.5	1.195	1.144	0.1234	1099.9

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.63%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	SNECK1	10	94.887	0.887	537.0	9.2927	0.0000	SURCHARGED
240 minute winter	SNECK2	228	94.695	0.895	124.1	512.4312	0.0000	SURCHARGED
240 minute winter	SAR3	180	94.471	1.066	4.5	1.5258	0.0000	SURCHARGED
240 minute winter	SAR4	180	94.471	1.451	30.9	46.3878	0.0000	SURCHARGED
240 minute winter	G1	184	94.471	0.111	2.7	0.1889	0.0000	OK
240 minute winter	SAR5	180	94.471	1.487	29.3	4.2151	0.0000	FLOOD RISK
240 minute winter	SAR6	180	94.471	1.632	33.2	5.6326	0.0000	SURCHARGED
15 minute summer	SAR7	65	92.840	0.058	25.6	0.1022	0.0000	OK
15 minute winter	S1	12	90.147	0.177	30.9	0.4049	0.0000	OK
180 minute winter	S2	172	90.106	0.367	18.7	0.8830	0.0000	SURCHARGED
180 minute winter	S3	172	90.106	0.723	66.1	2.0305	0.0000	SURCHARGED
15 minute winter	S4	10	90.188	0.342	90.2	1.4700	0.0000	SURCHARGED
180 minute winter	S5	172	90.091	0.381	36.0	0.8941	0.0000	SURCHARGED
180 minute winter	S6	172	90.090	0.951	97.5	1.3614	0.0000	SURCHARGED
240 minute winter	S7	220	90.087	0.986	109.1	241.6298	0.0000	SURCHARGED
240 minute winter	S8	220	90.083	1.311	66.7	3.3360	0.0000	FLOOD RISK
240 minute winter	S9	224	88.728	1.303	47.6	10.0910	0.0000	FLOOD RISK
240 minute winter	S10	224	88.728	1.416	45.5	173.1118	0.0000	SURCHARGED
480 minute winter	S11	720	87.322	0.233	45.6	0.5930	0.0000	SURCHARGED
480 minute winter	EXSMH2	720	87.247	0.178	45.6	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	SNECK1	1.000	SNECK2	525.2	3.315	1.624	1.5684	
240 minute winter	SNECK2	Hydro-Brake®	SAR4	21.0				
240 minute winter	SAR3	2.000	SAR4	-4.5	-0.066	-0.022	3.3831	
240 minute winter	SAR4	1.002	SAR5	27.3	0.553	0.049	7.8130	
240 minute winter	G1	3.000	SAR5	2.7	1.247	0.070	0.2624	
240 minute winter	SAR5	1.003	SAR6	26.4	0.293	0.048	31.8608	
240 minute winter	SAR6	Hydro-Brake®	SAR7	25.6				
15 minute summer	SAR7	1.005	S3	25.6	2.730	0.079	1.5905	
15 minute winter	S1	4.000	S2	30.1	1.040	0.756	0.9725	
180 minute winter	S2	4.001	S3	18.7	0.708	0.264	4.8265	
180 minute winter	S3	1.006	S6	63.3	1.034	0.573	6.0422	
15 minute winter	S4	5.000	S5	87.2	1.295	1.233	2.1718	
180 minute winter	S5	5.001	S6	36.0	1.460	0.251	1.7917	
180 minute winter	S6	1.007	S7	95.6	1.303	0.594	2.4028	
240 minute winter	S7	1.008	S8	66.7	0.652	0.167	3.4419	
240 minute winter	S8	Hydro-Brake®	S11	37.9				
240 minute winter	S9	6.000	S10	45.5	0.899	0.285	7.2810	
240 minute winter	S10	Hydro-Brake®	S11	8.0				
480 minute winter	S11	1.010	EXSMH2	45.6	1.197	1.147	0.1234	1597.2

Results for 200 year +40% CC Critical Storm Duration. Lowest mass balance: 99.63%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	SNECK1	176	96.500	2.500	147.6	26.1975	33.0016	FLOOD
180 minute winter	SNECK2	144	96.500	2.700	176.5	577.1559	0.0000	FLOOD RISK
180 minute winter	SAR3	136	94.643	1.238	8.5	1.7713	0.0000	SURCHARGED
180 minute winter	SAR4	132	94.646	1.626	40.1	46.9730	0.0000	SURCHARGED
240 minute winter	G1	156	94.643	0.283	5.6	0.4791	0.0000	FLOOD RISK
240 minute winter	SAR5	156	94.640	1.656	31.5	4.6948	9.3913	FLOOD
180 minute winter	SAR6	124	94.642	1.803	38.8	6.2212	0.0000	SURCHARGED
15 minute summer	SAR7	95	92.840	0.058	25.6	0.1022	0.0000	OK
15 minute winter	S1	12	90.455	0.485	35.7	1.1091	0.0000	SURCHARGED
15 minute winter	S2	12	90.350	0.611	68.4	1.4678	0.0000	SURCHARGED
180 minute winter	S3	120	90.205	0.822	72.8	2.3096	0.0000	SURCHARGED
15 minute winter	S4	11	90.369	0.523	104.2	2.2493	0.0000	SURCHARGED
120 minute winter	S5	84	90.215	0.505	55.4	1.1843	0.0000	SURCHARGED
120 minute winter	S6	84	90.161	1.022	137.4	1.4626	0.0000	SURCHARGED
240 minute winter	S7	152	90.146	1.045	106.9	245.2604	0.0000	SURCHARGED
240 minute winter	S8	152	90.122	1.350	99.1	3.4358	65.5174	FLOOD
240 minute winter	S9	152	88.775	1.350	55.6	10.4517	37.5165	FLOOD
360 minute winter	S10	224	88.818	1.506	39.9	173.2401	0.0000	SURCHARGED
120 minute winter	S11	88	87.323	0.234	45.8	0.5956	0.0000	SURCHARGED
120 minute winter	EXSMH2	88	87.248	0.179	45.8	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)
240 minute winter	SNECK1	1.000	SNECK2	144.9	1.603	0.448	1.5844	
180 minute winter	SNECK2	Hydro-Brake®	SAR4	21.0				
180 minute winter	SAR3	2.000	SAR4	-8.5	-0.071	-0.042	3.3831	
180 minute winter	SAR4	1.002	SAR5	30.3	0.547	0.055	7.8130	
240 minute winter	G1	3.000	SAR5	-3.3	1.299	-0.085	0.2922	
240 minute winter	SAR5	1.003	SAR6	23.7	0.294	0.043	31.8608	
180 minute winter	SAR6	Hydro-Brake®	SAR7	26.3				
15 minute summer	SAR7	1.005	S3	25.6	2.730	0.079	1.5903	
15 minute winter	S1	4.000	S2	30.7	1.069	0.773	1.0554	
15 minute winter	S2	4.001	S3	63.0	0.899	0.890	4.8265	
180 minute winter	S3	1.006	S6	66.9	1.039	0.606	6.0422	
15 minute winter	S4	5.000	S5	97.1	1.380	1.374	2.3438	
120 minute winter	S5	5.001	S6	55.4	1.578	0.387	1.7917	
120 minute winter	S6	1.007	S7	136.1	1.427	0.846	2.4028	
240 minute winter	S7	1.008	S8	99.1	0.721	0.249	3.4419	
240 minute winter	S8	Hydro-Brake®	S11	37.9				
240 minute winter	S9	6.000	S10	53.5	0.938	0.336	7.2810	
360 minute winter	S10	Hydro-Brake®	S11	8.0				
120 minute winter	S11	1.010	EXSMH2	45.8	1.201	1.153	0.1236	870.5