

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	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)	20.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
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)
S1	0.038	5.00	85.490	600	387953.190	400670.320	1.120
S2			86.250	600	388002.520	400680.340	2.210
S3	0.030	5.00	86.340	1200	388010.340	400678.420	2.430
S4	0.003	5.00	86.320	1200	388013.310	400664.080	2.480
S5	0.025	5.00	85.700	600	387986.150	400636.570	1.050
S6	0.020	5.00	85.920	600	388002.500	400644.640	1.420
S7	0.050	5.00	86.110	1200	387999.460	400660.370	2.330
S8	0.020	5.00	85.320	600	387968.420	400631.770	1.050
S9	0.003	5.00	85.360	600	387977.710	400636.540	1.330
S10	0.023	5.00	85.550	1350	387969.490	400654.240	2.170
S11	0.004	5.00	85.220	600	387949.370	400656.910	0.780
S12	0.004	5.00	85.500	600	387956.880	400657.880	1.140
S13	0.005	5.00	85.340	1800	387958.460	400651.980	1.970
C01			85.240	1200	387955.290	400651.340	1.960
C02			85.500	1500	387949.140	400650.080	2.258
S14		5.00	85.740	450	388004.170	400615.390	0.730
S15			85.460	450	387988.510	400608.870	0.950
S16			85.510	450	387984.160	400617.970	1.100
EXS01			86.130	1500	387985.081	400623.137	2.250
S17		5.00	86.070	450	388015.930	400621.040	0.910
S18			86.080	450	388011.210	400630.730	1.250
EXS02A			86.430	1200	388008.276	400634.201	2.720
S19		5.00	86.570	600	388024.770	400637.353	1.240
S20			86.820	600	388044.353	400641.430	1.690
S21			86.830	600	388041.797	400654.717	1.910
EXS02C			86.610	1200	388040.308	400657.912	1.711

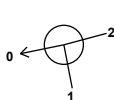
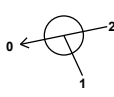
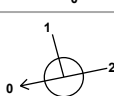
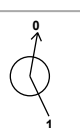
Links (Input)

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	S1	S2	50.337	0.600	84.370	84.040	0.330	152.5	225	5.79	50.0
1.001	S2	S3	8.052	0.600	84.040	83.910	0.130	61.9	225	5.88	50.0
1.002	S3	S4	14.644	0.600	83.910	83.840	0.070	209.2	225	6.15	50.0
1.003	S4	S7	14.338	0.600	83.840	83.780	0.060	239.0	225	6.43	50.0
2.000	S5	S6	18.233	0.600	84.650	84.500	0.150	121.6	150	5.33	50.0
2.001	S6	S7	16.021	0.600	84.500	83.780	0.720	22.3	225	5.43	50.0
1.004	S7	S10	30.590	0.600	83.780	83.380	0.400	76.5	225	6.77	50.0
3.000	S8	S9	10.443	0.600	84.270	84.030	0.240	43.5	150	5.11	50.0
3.001	S9	S10	19.516	0.600	84.030	83.380	0.650	30.0	225	5.25	50.0
1.005	S10	S13	11.259	0.600	83.380	83.370	0.010	1125.9	225	7.26	50.0
4.000	S11	S12	7.572	0.600	84.440	84.360	0.080	94.7	150	5.12	50.0
4.001	S12	S13	6.108	0.600	84.360	84.299	0.061	100.0	150	5.22	50.0
1.006	S13	C01	3.234	0.600	83.370	83.280	0.090	35.9	225	7.29	50.0
1.007	C01	C02	6.278	0.600	83.280	83.242	0.038	165.0	300	7.37	50.0
6.000	S14	S15	16.963	0.600	85.010	84.510	0.500	33.9	150	5.16	50.0
6.001	S15	S16	10.086	0.600	84.510	84.410	0.100	100.9	150	5.33	50.0
6.002	S16	EXS01	5.248	0.600	84.410	83.880	0.530	9.9	225	5.35	50.0
7.000	S17	S18	10.778	0.600	85.160	84.905	0.255	42.3	150	5.12	50.0
7.001	S18	EXS02A	4.545	0.600	84.830	83.710	1.120	4.1	225	5.13	50.0
5.000	S19	S20	20.003	0.600	85.330	85.130	0.200	100.0	150	5.33	50.0
5.001	S20	S21	13.531	0.600	85.130	84.995	0.135	100.0	150	5.56	50.0
5.002	S21	EXS02C	3.525	0.600	84.920	84.899	0.021	165.0	225	5.61	50.0

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S1	387953.190	400670.320	85.490	1.120	600		0	1.000	84.370	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S2	388002.520	400680.340	86.250	2.210	600		1	1.000	84.040	225
							0	1.001	84.040	225
S3	388010.340	400678.420	86.340	2.430	1200		1	1.001	83.910	225
							0	1.002	83.910	225
S4	388013.310	400664.080	86.320	2.480	1200		1	1.002	83.840	225
							0	1.003	83.840	225
S5	387986.150	400636.570	85.700	1.050	600					
							0	2.000	84.650	150
S6	388002.500	400644.640	85.920	1.420	600		1	2.000	84.500	150
							0	2.001	84.500	225
S7	387999.460	400660.370	86.110	2.330	1200		1	2.001	83.780	225
							2	1.003	83.780	225
							0	1.004	83.780	225
S8	387968.420	400631.770	85.320	1.050	600					
							0	3.000	84.270	150
S9	387977.710	400636.540	85.360	1.330	600		1	3.000	84.030	150
							0	3.001	84.030	225
S10	387969.490	400654.240	85.550	2.170	1350		1	3.001	83.380	225
							2	1.004	83.380	225
							0	1.005	83.380	225
S11	387949.370	400656.910	85.220	0.780	600					
							0	4.000	84.440	150
S12	387956.880	400657.880	85.500	1.140	600		1	4.000	84.360	150
							0	4.001	84.360	150
S13	387958.460	400651.980	85.340	1.970	1800		1	4.001	84.299	150
							2	1.005	83.370	225
							0	1.006	83.370	225
C01	387955.290	400651.340	85.240	1.960	1200		1	1.006	83.280	225
								0	1.007	83.280
C02	387949.140	400650.080	85.500	2.258	1500		1	1.007	83.242	300
S14	388004.170	400615.390	85.740	0.730	450					
								0	6.000	85.010
S15	387988.510	400608.870	85.460	0.950	450		1	6.000	84.510	150
								0	6.001	84.510
S16	387984.160	400617.970	85.510	1.100	450		1	6.001	84.410	150
								0	6.002	84.410
EXS01	387985.081	400623.137	86.130	2.250	1500		1	6.002	83.880	225
S17	388015.930	400621.040	86.070	0.910	450					
								0	7.000	85.160
S18	388011.210	400630.730	86.080	1.250	450		1	7.000	84.905	150
								0	7.001	84.830

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
EXS02A	388008.276	400634.201	86.430	2.720	1200	1	7.001	83.710	225
S19	388024.770	400637.353	86.570	1.240	600	0	5.000	85.330	150
S20	388044.353	400641.430	86.820	1.690	600	1	5.000	85.130	150
S21	388041.797	400654.717	86.830	1.910	600	0	5.001	85.130	150
EXS02C	388040.308	400657.912	86.610	1.711	1200	1	5.001	84.995	150
						0	5.002	84.920	225
						1	5.002	84.899	225

Simulation Settings

Rainfall Methodology	FSR	Summer CV	0.750	Additional Storage (m³/ha)	20.0
Rainfall Events	Singular	Winter CV	0.840	Starting Level (m)	
FSR Region	England and Wales	Analysis Speed	Normal	Check Discharge Rate(s)	x
M5-60 (mm)	20.000	Skip Steady State	x	Check Discharge Volume	x
Ratio-R	0.400	Drain Down Time (mins)	240		

Storm Durations

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	45	0	0
30	0	0	0				

Node C0 Surcharged Outfall

Overrides Design Area	x	Depression Storage Area (m²)	0	Evapo-transpiration (mm/day)	0
Overrides Design Additional Inflow	x	Depression Storage Depth (mm)	0		
Applies to 30yr, 100yr+45% CC 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440 minute storms					

Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)	Time (mins)	Depth (m)
0	1.225	180	1.225	360	1.225	540	1.225	720	1.225	900	1.225	1080	1.225	1260	1.225
60	1.225	240	1.225	420	1.225	600	1.225	780	1.225	960	1.225	1140	1.225	1320	1.225
120	1.225	300	1.225	480	1.225	660	1.225	840	1.225	1020	1.225	1200	1.225	1380	1.225

Node S13 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	83.370	Product Number	CTL-SHE-0118-5600-0500-5600
Design Depth (m)	0.500	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.6	Min Node Diameter (mm)	1200

Node S13 Online Orifice Control

Flap Valve	x	Invert Level (m)	84.534	Design Flow (l/s)	14.9	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Design Depth (m)	1.750	Diameter (m)	0.073		

Node S4 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	83.840
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	67

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	63.0	0.0	0.800	63.0	0.0	0.801	0.0	0.0

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.77%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	84.426	0.056	5.4	0.0538	0.0000	OK
15 minute winter	S2	11	84.083	0.043	5.2	0.0121	0.0000	OK
15 minute winter	S3	10	83.994	0.084	9.2	0.1161	0.0000	OK
30 minute winter	S4	27	83.933	0.093	12.7	5.6430	0.0000	OK
15 minute winter	S5	10	84.700	0.050	3.5	0.0378	0.0000	OK
15 minute winter	S6	10	84.536	0.036	6.2	0.0203	0.0000	OK
30 minute winter	S7	26	83.932	0.152	12.5	0.2375	0.0000	OK
15 minute winter	S8	10	84.304	0.034	2.8	0.0228	0.0000	OK
15 minute winter	S9	10	84.058	0.028	3.2	0.0092	0.0000	OK
30 minute winter	S10	26	83.932	0.552	17.1	0.9064	0.0000	SURCHARGED
15 minute winter	S11	10	84.458	0.018	0.6	0.0070	0.0000	OK
15 minute winter	S12	10	84.386	0.026	1.2	0.0092	0.0000	OK
30 minute winter	S13	26	83.930	0.560	10.3	1.4535	0.0000	SURCHARGED
30 minute winter	C01	26	83.336	0.056	5.9	0.0637	0.0000	OK
30 minute winter	C02	21	83.295	0.053	5.9	0.0000	0.0000	OK
15 minute summer	S14	1	85.010	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S15	1	84.510	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S16	1	84.410	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS01	1	83.880	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S17	1	85.160	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S18	1	84.830	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS02A	1	83.710	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S19	1	85.330	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S20	1	85.130	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S21	1	84.920	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS02C	1	84.899	0.000	0.0	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	S1	1.000	S2	5.2	0.821	0.124	0.3216	
15 minute winter	S2	1.001	S3	5.2	0.584	0.079	0.0748	
15 minute winter	S3	1.002	S4	9.4	1.227	0.263	0.1296	
30 minute winter	S4	1.003	S7	-6.3	0.491	-0.189	0.3135	
15 minute winter	S5	2.000	S6	3.4	0.828	0.214	0.0762	
15 minute winter	S6	2.001	S7	6.2	0.843	0.056	0.2433	
30 minute winter	S7	1.004	S10	12.1	0.460	0.203	1.0456	
15 minute winter	S8	3.000	S9	2.8	1.051	0.103	0.0277	
15 minute winter	S9	3.001	S10	3.2	0.211	0.033	0.4158	
30 minute winter	S10	1.005	S13	9.0	0.344	0.593	0.4478	
15 minute winter	S11	4.000	S12	0.6	0.351	0.031	0.0123	
15 minute winter	S12	4.001	S13	1.1	0.548	0.062	0.0122	
30 minute winter	S13	Hydro-Brake®	C01	5.9				
30 minute winter	S13	Orifice	C01	0.0				
30 minute winter	C01	1.007	C02	5.9	0.678	0.068	0.0547	18.8
15 minute summer	S14	6.000	S15	0.0	0.000	0.000	0.0000	
15 minute summer	S15	6.001	S16	0.0	0.000	0.000	0.0000	
15 minute summer	S16	6.002	EXS01	0.0	0.000	0.000	0.0000	0.0
15 minute summer	S17	7.000	S18	0.0	0.000	0.000	0.0000	
15 minute summer	S18	7.001	EXS02A	0.0	0.000	0.000	0.0000	0.0
15 minute summer	S19	5.000	S20	0.0	0.000	0.000	0.0000	
15 minute summer	S20	5.001	S21	0.0	0.000	0.000	0.0000	
15 minute summer	S21	5.002	EXS02C	0.0	0.000	0.000	0.0000	0.0

Results for 30 year Critical Storm Duration. Lowest mass balance: 99.77%								
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S1	10	84.460	0.090	13.1	0.0860	0.0000	OK
60 minute winter	S2	53	84.266	0.226	6.7	0.0640	0.0000	SURCHARGED
60 minute winter	S3	53	84.266	0.356	12.0	0.4908	0.0000	SURCHARGED
60 minute winter	S4	53	84.266	0.426	28.2	25.9790	0.0000	SURCHARGED
15 minute winter	S5	10	84.732	0.082	8.6	0.0626	0.0000	OK
15 minute winter	S6	10	84.556	0.056	15.4	0.0318	0.0000	OK
60 minute winter	S7	52	84.265	0.485	18.5	0.7571	0.0000	SURCHARGED
15 minute summer	S8	10	84.324	0.054	6.6	0.0360	0.0000	OK
60 minute winter	S9	52	84.262	0.232	4.1	0.0760	0.0000	SURCHARGED
60 minute winter	S10	52	84.262	0.882	16.0	1.4486	0.0000	SURCHARGED
15 minute winter	S11	10	84.468	0.028	1.4	0.0107	0.0000	OK
15 minute winter	S12	10	84.402	0.042	2.8	0.0148	0.0000	OK
60 minute winter	S13	52	84.259	0.889	9.6	2.3065	0.0000	SURCHARGED
60 minute winter	C01	52	83.343	0.063	7.3	0.0711	0.0000	OK
60 minute winter	C02	52	83.301	0.059	7.3	0.0000	0.0000	OK
15 minute summer	S14	1	85.010	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S15	1	84.510	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S16	1	84.410	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS01	1	83.880	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S17	1	85.160	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S18	1	84.830	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS02A	1	83.710	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S19	1	85.330	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S20	1	85.130	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S21	1	84.920	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS02C	1	84.899	0.000	0.0	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	S1	1.000	S2	12.8	1.056	0.306	0.6698	
60 minute winter	S2	1.001	S3	6.7	0.619	0.101	0.3202	
60 minute winter	S3	1.002	S4	10.8	0.876	0.303	0.5824	
60 minute winter	S4	1.003	S7	-17.4	-0.512	-0.520	0.5702	
15 minute winter	S5	2.000	S6	8.5	1.066	0.528	0.1455	
15 minute winter	S6	2.001	S7	15.3	1.034	0.138	0.3807	
60 minute winter	S7	1.004	S10	11.4	0.477	0.192	1.2166	
15 minute summer	S8	3.000	S9	6.6	1.315	0.244	0.0912	
60 minute winter	S9	3.001	S10	4.0	0.209	0.042	0.7762	
60 minute winter	S10	1.005	S13	8.3	0.364	0.549	0.4478	
15 minute winter	S11	4.000	S12	1.4	0.444	0.075	0.0237	
15 minute winter	S12	4.001	S13	2.7	0.703	0.153	0.0236	
60 minute winter	S13	Hydro-Brake®	C01	7.3				
60 minute winter	S13	Orifice	C01	0.0				
60 minute winter	C01	1.007	C02	7.3	0.719	0.085	0.0639	57.7
15 minute summer	S14	6.000	S15	0.0	0.000	0.000	0.0000	
15 minute summer	S15	6.001	S16	0.0	0.000	0.000	0.0000	
15 minute summer	S16	6.002	EXS01	0.0	0.000	0.000	0.0000	0.0
15 minute summer	S17	7.000	S18	0.0	0.000	0.000	0.0000	
15 minute summer	S18	7.001	EXS02A	0.0	0.000	0.000	0.0000	0.0
15 minute summer	S19	5.000	S20	0.0	0.000	0.000	0.0000	
15 minute summer	S20	5.001	S21	0.0	0.000	0.000	0.0000	
15 minute summer	S21	5.002	EXS02C	0.0	0.000	0.000	0.0000	0.0

Results for 100 year +45% CC Critical Storm Duration. Lowest mass balance: 99.77%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S1	48	85.227	0.857	12.8	0.8236	0.0000	FLOOD RISK
60 minute winter	S2	48	85.225	1.185	12.8	0.3355	0.0000	SURCHARGED
60 minute winter	S3	48	85.225	1.315	19.8	1.8119	0.0000	SURCHARGED
60 minute winter	S4	48	85.223	1.383	53.8	49.5069	0.0000	SURCHARGED
60 minute winter	S5	48	85.224	0.574	8.4	0.4354	0.0000	SURCHARGED
60 minute winter	S6	48	85.221	0.721	15.1	0.4066	0.0000	SURCHARGED
60 minute winter	S7	48	85.220	1.440	36.8	2.2465	0.0000	SURCHARGED
60 minute winter	S8	48	85.195	0.925	6.7	0.6143	0.0000	FLOOD RISK
60 minute winter	S9	48	85.194	1.164	7.4	0.3819	0.0000	FLOOD RISK
60 minute winter	S10	48	85.194	1.814	24.0	2.9803	0.0000	SURCHARGED
60 minute winter	S11	48	85.175	0.735	2.3	0.2828	0.0000	FLOOD RISK
60 minute winter	S12	48	85.175	0.815	3.8	0.2876	0.0000	SURCHARGED
60 minute winter	S13	48	85.175	1.805	22.4	4.6837	0.0000	FLOOD RISK
60 minute winter	C01	48	83.384	0.104	18.8	0.1179	0.0000	OK
60 minute winter	C02	48	83.336	0.094	18.8	0.0000	0.0000	OK
15 minute summer	S14	1	85.010	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S15	1	84.510	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S16	1	84.410	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS01	1	83.880	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S17	1	85.160	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S18	1	84.830	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS02A	1	83.710	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S19	1	85.330	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S20	1	85.130	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S21	1	84.920	0.000	0.0	0.0000	0.0000	OK
15 minute summer	EXS02C	1	84.899	0.000	0.0	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)
60 minute winter	S1	1.000	S2	12.8	0.973	0.305	2.0020	
60 minute winter	S2	1.001	S3	9.7	0.622	0.147	0.3202	
60 minute winter	S3	1.002	S4	18.6	1.015	0.520	0.5824	
60 minute winter	S4	1.003	S7	-34.6	-0.871	-1.036	0.5702	
60 minute winter	S5	2.000	S6	8.4	1.066	0.522	0.3210	
60 minute winter	S6	2.001	S7	15.1	0.664	0.136	0.6372	
60 minute winter	S7	1.004	S10	19.4	0.552	0.325	1.2166	
60 minute winter	S8	3.000	S9	6.4	1.182	0.235	0.1838	
60 minute winter	S9	3.001	S10	6.5	0.220	0.069	0.7762	
60 minute winter	S10	1.005	S13	21.3	0.535	1.403	0.4478	
60 minute winter	S11	4.000	S12	-1.5	0.455	-0.080	0.1333	
60 minute winter	S12	4.001	S13	-3.0	0.688	-0.169	0.1075	
60 minute winter	S13	Hydro-Brake®	C01	10.2				
60 minute winter	S13	Orifice	C01	8.6				
60 minute winter	C01	1.007	C02	18.8	0.927	0.218	0.1276	110.5
15 minute summer	S14	6.000	S15	0.0	0.000	0.000	0.0000	
15 minute summer	S15	6.001	S16	0.0	0.000	0.000	0.0000	
15 minute summer	S16	6.002	EXS01	0.0	0.000	0.000	0.0000	0.0
15 minute summer	S17	7.000	S18	0.0	0.000	0.000	0.0000	
15 minute summer	S18	7.001	EXS02A	0.0	0.000	0.000	0.0000	0.0
15 minute summer	S19	5.000	S20	0.0	0.000	0.000	0.0000	
15 minute summer	S20	5.001	S21	0.0	0.000	0.000	0.0000	
15 minute summer	S21	5.002	EXS02C	0.0	0.000	0.000	0.0000	0.0