APPENDIX B

CALCULATIONS

DESIGN BASIS MEMORANDUM - PEAK RATE OF RUN-OFF CALCULATION

Design Brief

The following peak rate of run-off calculations have been undertaken to determine changes in peak flow resulting from the development of a greenfield or brownfield site. These calculations are for the **Peak Rate of Run-Off** requirements only.

Background Information & References

The site area **is less than** 200ha and the Greenfield (pre-development) calculation has been undertaken in accordance with methodology described by Marshall & Bayliss, Institute of Hydrology, Report No. 124, Flood Estimation for Small Catchments, 1994 (IoH 124).

In addition, the following references have been used in the preparation of these calculations:

- Interim Code of Practice for Sustainable Drainage Systems (SUDS), CIRIA, 2004
- CIRIA, The SUDS Manual, Report C753, 2015
- Designing for Exceedance in Urban Drainage - good practice, CIRIA Report C635, 2006
- Flood Estimation Handbook (FEH)
- Flood Studies Report (FSR), Volume 1, Hydrological Studies, 1993
- Flood Studies Supplementary Report No 2 (FSSR2), The Estimation of Low Return Period Floods
- Flood Studies Supplementary Report No 14 (FSSR14), Review of Regional Growth Curves, 1983
- Planning Practice guidance of the National Planning Policy Framework, Recommended national precautionary sensitivity ranges for peak rainfall intensities, peak river flows, offshore wind speeds and wave heights.

Proposed Land Use Changes

Changes to the existing site are as follows:

Greenfield Site to Brownfield Site

Results Summary

Rate of Run-Off (l/s)			
Event	**Greenfield (adoptable)**	**Greenfield (Private)**	**Total Greenfield Runoff**
Q1	4.7	0.5	5.2
QBAR	5.4	0.6	6.0
Q10	7.5	0.8	7.5
Q30	9.2	1.0	9.2
Q100	11.3	2.1	13.4
Q100 + 40% CC	15.8	2.9	18.7

SITE AREAS (LAND COVER AREAS)

Existing Impermeable & Permeable Land Cover

Total Site Area: **1.2089** ha **12089** m²

Existing Impermeable & Permeable Land Cover

Land Cover	Area		Percentage of total site area
	m²	ha	
Total impermeable area	0.0	0.000	0%
Remaining permeable area	12089.0	0.000	100%

Proposed Land Cover Areas

Land Cover	Area		Percentage of total site area
	m²	ha	
Total housing roof area	3450.0	0.345	29%
Total parking and paved area	1447.0	0.145	12%
Total road area	1688.0	0.169	14%
Garden & landscaped areas	5504.0	0.550	46%

Proposed Impermeable & Permeable Land Cover

Land Cover	Area		Percentage of total site area
	m²	ha	
Total impermeable area	6585.0	0.659	54%
Remaining permeable area	5504.0	0.550	46%

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Shap Road		Whitehaven	Revision	Orig	Initial	OS
KENDAL LA9 6NY	Title	Rate of Run-Off			Checked	OS

ESTIMATION OF QBAR (RURAL) (GREENFIELD RUNOFF RATE) FOR ADOPTABLE SYSTEM

IoH 124 based on research on small catchments < 25 km2

Method is based on regression analysis of response times
using catchments from 0.9 to 22.9 km^2

$QBAR_{rural}$ is mean annual flood on rural catchment
$QBAR_{rural}$ depends on SOIL, SAAR and AREA most significantly

$QBAR_{rural} = 0.00108 \times AREA^{0.89} \times SAAR^{1.17} \times SOIL^{2.17}$

For SOIL refer to FSR Vol 1, Section 4.2.3 and 4.2.6 and IoH 124

Contributing watershed area

Area, A	=	500000	m^2	insert 50 ha for EA
	=	0.500	km^2	small catchment method
	=	50.000	ha	

SAAR = **1186** mm — From UKSuds website (point data)

Soil index based on soil type, SOIL

$$= \frac{(0.1S1+0.3S2+0.37S3+0.47S4+0.53S5)}{(S1+S2+S3+S4+S5)}$$

Where:			
S1	=		%
S2	=		%
S3	=		%
S4	=	**100**	%
S5	=		%
		100	%

UK Suds website provides a value of 4 based on the equivalent Host value. This seems reasonable based on ground investigation.

So, SOIL = **0.47**

Note: for very small catchments it is far better to rely on local site investigation information.

$QBAR_{rural}$	=	0.447	m^3/s
	=	447.3	l/s

Small rural catchments less than 50 ha
The Environment Agency recommends that this method should be used for development sizes from 0 to 50 ha and should linearly interpolate the formula to 50 ha.

So, catchment size	=	**6077**	m^2	Excluding significant open space which would remain disconnected from the positive drainage system during flood events.
	=	0.006	km^2	
	=	0.608	ha	
$QBAR_{rural\ site}$	=	0.00544	m^3/s	
	=	**5.44**	l/s	

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Shap Road		Whitehaven	Revision	Orig	Initial	OS
KENDAL LA9 6NY	Title	Rate of Run-Off			Checked	OS

ESTIMATION OF QBAR (RURAL) (GREENFIELD RUNOFF RATE) FOR PRIVATE SYSTEM

IoH 124 based on research on small catchments < 25 km2

Method is based on regression analysis of response times
using catchments from 0.9 to 22.9 km^2

$QBAR_{rural}$ is mean annual flood on rural catchment
$QBAR_{rural}$ depends on SOIL, SAAR and AREA most significantly

$QBAR_{rural} = 0.00108 \times AREA^{0.89} \times SAAR^{1.17} \times SOIL^{2.17}$

For SOIL refer to FSR Vol 1, Section 4.2.3 and 4.2.6 and IoH 124

Contributing watershed area

Area, A	=	500000	m^2	insert 50 ha for EA
	=	0.500	km^2	small catchment method
	=	50.000	ha	

SAAR = **1186** mm — From UKSuds website (point data)

Soil index based on soil type, SOIL

$$= \frac{(0.1S1+0.3S2+0.37S3+0.47S4+0.53S5)}{(S1+S2+S3+S4+S5)}$$

Where:			
S1	=		%
S2	=		%
S3	=		%
S4	=	**100**	%
S5	=		%
		100	%

UK Suds website provides a value of 4 based on the equivalent Host value. This seems reasonable based on ground investigation.

So, SOIL = **0.47**

Note: for very small catchments it is far better to rely on local site investigation information.

$QBAR_{rural}$	=	0.447	m^3/s
	=	447.3	l/s

Small rural catchments less than 50 ha
The Environment Agency recommends that this method should be used for development sizes from 0 to 50 ha and should linearly interpolate the formula to 50 ha.

So, catchment size	=	**648**	m^2	Excluding significant open space which would remain disconnected from the positive drainage system during flood events.
	=	0.001	km^2	
	=	0.065	ha	
$QBAR_{rural\ site}$	=	0.00058	m^3/s	
	=	**0.6**	l/s	

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GREENFIELD RETURN PERIOD ORDINATES

QBAR can be factored by the UK FSR regional growth curves for return periods <2 years and for all other return periods to obtain peak flow estimates for required return periods.

These regional growth curves are constant throughout a region, whatever the catchment type and size.

See Table 2.39 for region curve ordinates
Use FSSR2 Growth Curves to estimate Qbar

Reference- Pg 173-FSR V.1, ch 2.6.2

Region = **10**

Use Figure A1.1 to determine region

GREENFIELD RETURN PERIOD FLOW RATES

Return Period	Ordinate	Q (l/s)
1	0.87	4.73
2	0.93	5.06
5	1.19	6.47
10	1.38	7.50
25	1.64	8.92
30	1.7	9.24
50	1.85	10.06
100	2.08	11.31
200	2.32	12.61
500	2.73	14.84
1000	3.04	16.53

Ordinate from FSSR2

Interpolation taken from Figure 24.2 (pg 515) SuDS Manual

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DESIGN BASIS MEMORANDUM - SUSTAINABLE DRAINAGE TREATMENT OF SURFACE WATER

Design Brief

The following calculations outline the recommended treatment requirements for a sustaionable drainage system as outlined in the SuDS Manual 2015. The method used is the simple index approach outlined in section 26. The requirement for oil interceptors has been assessed in line with the now withdrawn Pollution Prevention Guidance document PPG3, produced by the Environment Agency. An oil interceptor is not required for the proposed development.

Treatment within SuDS components is affected by the flow rate and volume of water which passes through the component. It is not reasonable or practical to treat the entirety of the runoff for infrequent greater intensity design storms. In any case the majority of the pollutants are removed from surfaces by the more frequent rainfall events and in the first flush resulting from the initial runoff from the larger events.
and to a certain capacity.

The following references have been used in the preparation of these calculations:

- SUDS Manual, CIRIA Report C753, 2015
- Pollution Mitigation Indicies provided by Hydro International

Results Summary

Roof Area:

Treatment component 1 Detention basin

Treatment component 2 None

Indices	Suspended Solids	Metals	Hydrocarbons
Pollution Hazard	0.2	0.2	0.05
Pollution Mitigation	0.5	0.5	0.6
Treatment Suitability	**Adequate**	**Adequate**	**Adequate**

Residential Parking:

Treatment component 1 Detention basin

Treatment component 2 None

Indices	Suspended Solids	Metals	Hydrocarbons
Pollution Hazard	0.5	0.4	0.4
Pollution Mitigation	0.5	0.5	0.6
Treatment Suitability	**Adequate**	**Adequate**	**Adequate**

Residential Roads

Treatment component 1 Detention basin
Treatment component 2 None

Indices	Suspended Solids	Metals	Hydrocarbons
Pollution Hazard	0.5	0.4	0.4
Pollution Mitigation	0.5	0.5	0.6
Treatment Suitability	**Adequate**	**Adequate**	**Adequate**

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POLLUTION HAZARD INDEX

		Pollution Hazard Indices		
Source of Runoff	Pollution Hazard	Suspended Solids	Metals	Hydro-carbons
Residential roofing	Very low	0.2	0.2	0.05

POLLUTION MITIGATION INDEX

The receiving water body shall be: Surface Water

		Pollution Mitigation Indices		
Suds Component		Suspended Solids	Metals	Hydro-carbons
1	Detention basin	0.5	0.5	0.6
2	None	0	0	0
3	None	0	0	0
4	None	0	0	0
Total Pollution Mitigation Index		**0.5**	**0.5**	**0.6**

ASSESSMENT OF TREATMENT PROPOSAL

Indices	Suspended Solids	Metals	Hydro-carbons
Pollution Hazard	0.2	0.2	0.05
Pollution Mitigation	0.5	0.5	0.6
	Adequate	Adequate	Adequate

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POLLUTION HAZARD INDEX

		Pollution Hazard Indices		
Source of Runoff	Pollution Hazard	Suspended Solids	Metals	Hydro-carbons
Residential parking	Low	0.5	0.4	0.4

POLLUTION MITIGATION INDEX

The receiving water body shall be: Surface Water

		Pollution Mitigation Indices		
Suds Component		Suspended Solids	Metals	Hydro-carbons
1	Detention basin	0.5	0.5	0.6
2	None	0	0	0
3	None	0	0	0
4	None	0	0	0
Total Pollution Mitigation Index		**0.5**	**0.5**	**0.6**

ASSESSMENT OF TREATMENT PROPOSAL

Indices	Suspended Solids	Metals	Hydro-carbons
Pollution Hazard	0.5	0.4	0.4
Pollution Mitigation	0.5	0.5	0.6
	Adequate	**Adequate**	**Adequate**

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POLLUTION HAZARD INDEX

		Pollution Hazard Indices		
Source of Runoff	Pollution Hazard	Suspended Solids	Metals	Hydro-carbons
Low traffic roads (e.g. residential roads and general access roads, < 300 traffic movements/day)	Low	0.5	0.4	0.4

POLLUTION MITIGATION INDEX

The receiving water body shall be: Surface Water

		Pollution Mitigation Indices		
Suds Component		Suspended Solids	Metals	Hydro-carbons
1	Detention basin	0.5	0.5	0.6
2	None	0	0	0
3	None	0	0	0
4	None	0	0	0
Total Pollution Mitigation Index		**0.5**	**0.5**	**0.6**

ASSESSMENT OF TREATMENT PROPOSAL

Indices	Suspended Solids	Metals	Hydro-carbons
Pollution Hazard	0.5	0.4	0.4
Pollution Mitigation	0.5	0.5	0.6
	Adequate	Adequate	Adequate

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POLLUTION HAZARD INDEX

		Pollution Hazard Indices		
Source of Runoff	Pollution Hazard	Suspended Solids	Metals	Hydro-carbons
Residential parking	Low	0.5	0.4	0.4

POLLUTION MITIGATION INDEX

The receiving water body shall be: Surface Water

		Pollution Mitigation Indices		
Suds Component		Suspended Solids	Metals	Hydro-carbons
1	Pervious pavement (where the pavement is not designed as an infiltration component)	0.7	0.6	0.7
2	None	0	0	0
3	None	0	0	0
4	None	0	0	0
	Total Pollution Mitigation Index	**0.7**	**0.6**	**0.7**

ASSESSMENT OF TREATMENT PROPOSAL

Indices	Suspended Solids	Metals	Hydro-carbons
Pollution Hazard	0.5	0.4	0.4
Pollution Mitigation	0.7	0.6	0.7
	Adequate	**Adequate**	**Adequate**

Circular Link Type

Shape	Circular	Auto Increment (mm)	75
Barrels	1	Follow Ground	x

Available Diameters (mm)

100 | 150

Culvert Link Type

Shape	Closed Rectangular	Auto Increment (mm)	1
Barrels	1	Follow Ground	x
Height (mm)	1200		

Available Diameters (mm)

1800 | 2100 | 3000

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S01	0.048	5.00	128.857	1050	299224.449	517110.011	1.350
S02	0.057	5.00	127.348	1350	299190.302	517140.958	1.350
S03	0.095	5.00	126.823		299177.962	517145.769	2.678
S04			126.239		299154.931	517120.360	2.208
S05	0.128	5.00	126.115	1800	299153.828	517119.115	2.090
S19	0.039	5.00	125.450	1350	299122.305	517083.405	1.275
S06	0.029	5.00	125.322	1500	299131.800	517094.265	1.408
HW07			125.512		299138.525	517088.044	1.799
S20	0.086	5.00	127.324	2400	299172.260	517083.441	3.401
S24	0.104	5.00	126.274	1500	299147.780	517056.561	2.392
S21	0.018	5.00	126.677	2700	299160.354	517070.601	2.842
S22			125.800	2400	299155.171	517075.655	2.001
HW23			125.986		299147.960	517076.846	2.273
HW08	0.043	5.00	125.436		299136.271	517081.724	1.890
S09			125.153	1350	299132.630	517072.748	1.672
S25	0.068	5.00	124.700	1800	299098.121	517093.830	1.800
S26			125.000	1800	299124.720	517070.149	2.278
S10			125.100	1200	299127.485	517067.688	2.403
S11			122.352	1050	299103.582	517044.145	1.352
S12	0.053	5.00	122.600	1200	299101.861	517025.111	1.727
S13	0.055	5.00	120.350	1200	299062.168	517027.980	2.906
S27	0.066	5.00	120.350	1200	299054.208	517080.906	2.925
BC28	0.050	5.00	118.700	20	299046.654	517065.842	4.125
BC29	0.000		117.250	20	299034.103	517040.812	3.010
S30	0.052	5.00	117.200	1500	299033.209	517039.029	2.970
S14	0.024	5.00	116.950	1500	299031.335	517035.293	2.750
BC15	0.000		116.600	20	299025.491	517037.746	3.822
BC16	0.000		114.600	20	298984.938	517059.460	2.052
S31	0.027	5.00	116.316	1200	299004.567	517106.849	2.378
BC32	0.000		116.100	20	299004.002	517104.665	3.250
BC33	0.014	5.00	114.680	20	298985.585	517068.592	2.100
S17	0.144	5.00	114.500	1800	298981.772	517061.162	1.970
S18	0.000		114.400	1200	298978.260	517062.859	1.896
OUTFALL			114.000	20	298967.903	517067.863	1.573

Links

Name	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	S02	46.084	0.600	127.507	125.998	1.509	30.5	150	5.42	50.0
1.001	S03	13.245	0.600	125.998	125.296	0.702	18.9	150	5.51	50.0
1.002	S04	34.294	0.600	124.145	124.031	0.114	300.0	1800	5.75	50.0
1.003	S05	1.663	0.600	124.031	124.025	0.006	300.0	300	5.78	50.0
1.004	S06	33.208	0.600	124.025	123.914	0.111	300.0	300	6.40	50.0
2.000	S06	14.425	0.600	124.175	124.079	0.096	150.0	150	5.29	50.0
1.005	HW07	9.161	0.600	123.915	123.884	0.031	300.0	300	6.57	50.0
3.000	S21	17.511	0.600	123.923	123.835	0.088	200.0	1500	5.10	50.0
4.000	S21	18.847	0.600	123.882	123.835	0.047	400.0	1500	5.15	50.0
3.001	S22	7.239	0.600	123.835	123.799	0.036	200.0	1500	5.19	50.0
3.002	HW23	7.309	0.600	123.799	123.750	0.049	150.0	225	5.30	50.0
1.006	S09	9.686	0.600	123.546	123.481	0.065	150.0	150	5.20	50.0
1.007	S10	7.216	0.600	123.483	122.697	0.786	9.2	150	5.23	50.0
5.000	S26	35.613	0.600	122.900	122.722	0.178	200.0	1200	5.22	50.0
5.001	S10	3.702	0.600	122.722	122.697	0.025	150.0	150	5.30	50.0
1.008	S11	33.550	0.600	122.697	121.000	1.697	19.8	150	5.55	50.0
1.009	S12	19.112	0.600	121.000	120.873	0.127	150.5	150	5.94	50.0
1.010	S13	39.797	0.600	120.873	117.444	3.429	11.6	150	6.16	50.0
1.011	S14	31.688	0.600	117.444	114.200	3.244	9.8	150	6.32	50.0
6.000	BC28	16.852	0.600	117.425	115.625	1.800	9.4	150	5.08	50.0
6.001	BC29	28.001	0.600	114.575	114.240	0.335	83.6	1800	5.19	50.0
6.002	S30	1.995	0.600	114.240	114.230	0.010	199.5	225	5.22	50.0
6.003	S14	4.180	0.600	114.230	114.200	0.030	139.3	225	5.29	50.0
1.012	BC15	6.338	0.600	114.200	113.753	0.447	14.2	225	6.35	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	1.828	32.3	10.2	1.200	1.200	0.048	0.0
1.001	2.329	41.2	22.3	1.200	1.377	0.105	0.0
1.002	2.410	5205.2	42.5	1.478	1.008	0.200	0.0
1.003	0.902	63.8	42.5	1.908	1.790	0.200	0.0
1.004	0.902	63.8	69.7	1.790	1.108	0.328	0.0
2.000	0.818	14.5	8.3	1.125	1.093	0.039	0.0
1.005	0.902	63.8	84.2	1.107	1.328	0.396	0.0
3.000	3.029	5352.8	18.3	1.901	1.342	0.086	0.0
4.000	2.138	3778.4	22.1	0.892	1.342	0.104	0.0
3.001	3.029	5352.8	44.2	1.342	0.501	0.208	0.0
3.002	1.065	42.3	44.2	1.776	2.011	0.208	0.0
1.006	0.818	14.5	9.1	1.740	1.522	0.043	0.0
1.007	3.345	59.1	9.1	1.520	2.253	0.043	0.0
5.000	2.641	2987.4	14.5	0.600	1.078	0.068	0.0
5.001	0.818	14.5	14.5	2.128	2.253	0.068	0.0
1.008	2.275	40.2	23.6	2.253	1.202	0.111	0.0
1.009	0.817	14.4	23.6	1.202	1.577	0.111	0.0
1.010	2.973	52.5	34.9	1.577	2.756	0.164	0.0
1.011	3.242	57.3	46.5	2.756	2.600	0.219	0.0
6.000	3.312	58.5	14.0	2.775	2.925	0.066	0.0
6.001	4.577	9886.4	24.7	2.925	1.810	0.116	0.0
6.002	0.922	36.7	24.7	2.785	2.745	0.116	0.0
6.003	1.106	44.0	35.7	2.745	2.525	0.168	0.0
1.012	3.493	138.9	87.3	2.525	2.622	0.411	0.0

Links

Name	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)
1.013	BC16	46.000	0.600	112.778	112.548	0.230	200.0	3000	6.59	50.0
1.014	S17	3.594	0.600	112.548	112.530	0.018	199.7	300	6.64	50.0
7.000	BC32	2.256	0.600	113.938	113.825	0.113	20.0	225	5.01	50.0
7.001	BC33	40.502	0.600	112.850	112.580	0.270	150.0	2000	5.21	50.0
7.002	S17	8.351	0.600	112.580	112.530	0.050	167.0	300	5.32	50.0
1.015	S18	3.901	0.600	112.530	112.504	0.026	150.0	225	6.70	50.0
1.016	OUTFALL	11.502	0.600	112.504	112.427	0.077	149.4	225	6.88	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)
1.013	3.287	11832.0	87.3	2.622	0.852	0.411	0.0
1.014	1.109	78.4	87.3	1.752	1.670	0.411	0.0
7.000	2.939	116.8	5.7	2.153	2.050	0.027	0.0
7.001	3.500	8399.3	5.7	2.050	0.900	0.027	0.0
7.002	1.213	85.8	8.7	1.800	1.670	0.041	0.0
1.015	1.065	42.3	126.7	1.745	1.671	0.596	0.0
1.016	1.067	42.4	126.7	1.671	1.348	0.596	0.0

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	46.084	30.5	150	Circular	128.857	127.507	1.200	127.348	125.998	1.200
1.001	13.245	18.9	150	Circular	127.348	125.998	1.200	126.823	125.296	1.377
1.002	34.294	300.0	1800	Culvert	126.823	124.145	1.478	126.239	124.031	1.008
1.003	1.663	300.0	300	Circular	126.239	124.031	1.908	126.115	124.025	1.790
1.004	33.208	300.0	300	Circular	126.115	124.025	1.790	125.322	123.914	1.108
2.000	14.425	150.0	150	Circular	125.450	124.175	1.125	125.322	124.079	1.093
1.005	9.161	300.0	300	Circular	125.322	123.915	1.107	125.512	123.884	1.328
3.000	17.511	200.0	1500	Circular	127.324	123.923	1.901	126.677	123.835	1.342
4.000	18.847	400.0	1500	Circular	126.274	123.882	0.892	126.677	123.835	1.342
3.001	7.239	200.0	1500	Circular	126.677	123.835	1.342	125.800	123.799	0.501
3.002	7.309	150.0	225	Circular	125.800	123.799	1.776	125.986	123.750	2.011
1.006	9.686	150.0	150	Circular	125.436	123.546	1.740	125.153	123.481	1.522
1.007	7.216	9.2	150	Circular	125.153	123.483	1.520	125.100	122.697	2.253

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S01	1050	Manhole	Adoptable	S02	1350	Manhole	Adoptable
1.001	S02	1350	Manhole	Adoptable	S03		Junction	
1.002	S03		Junction		S04		Junction	
1.003	S04		Junction		S05	1800	Manhole	Adoptable
1.004	S05	1800	Manhole	Adoptable	S06	1500	Manhole	Adoptable
2.000	S19	1350	Manhole	Adoptable	S06	1500	Manhole	Adoptable
1.005	S06	1500	Manhole	Adoptable	HW07		Junction	
3.000	S20	2400	Manhole	Adoptable	S21	2700	Manhole	Adoptable
4.000	S24	1500	Manhole	Adoptable	S21	2700	Manhole	Adoptable
3.001	S21	2700	Manhole	Adoptable	S22	2400	Manhole	Adoptable
3.002	S22	2400	Manhole	Adoptable	HW23		Junction	
1.006	HW08		Junction		S09	1350	Manhole	Adoptable
1.007	S09	1350	Manhole	Adoptable	S10	1200	Manhole	Adoptable

Pipeline Schedule

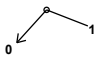
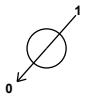
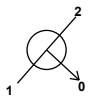
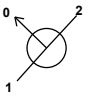
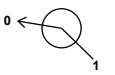
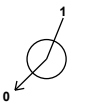
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
5.000	35.613	200.0	1200	Circular	124.700	122.900	0.600	125.000	122.722	1.078
5.001	3.702	150.0	150	Circular	125.000	122.722	2.128	125.100	122.697	2.253
1.008	33.550	19.8	150	Circular	125.100	122.697	2.253	122.352	121.000	1.202
1.009	19.112	150.5	150	Circular	122.352	121.000	1.202	122.600	120.873	1.577
1.010	39.797	11.6	150	Circular	122.600	120.873	1.577	120.350	117.444	2.756
1.011	31.688	9.8	150	Circular	120.350	117.444	2.756	116.950	114.200	2.600
6.000	16.852	9.4	150	Circular	120.350	117.425	2.775	118.700	115.625	2.925
6.001	28.001	83.6	1800	Culvert	118.700	114.575	2.925	117.250	114.240	1.810
6.002	1.995	199.5	225	Circular	117.250	114.240	2.785	117.200	114.230	2.745
6.003	4.180	139.3	225	Circular	117.200	114.230	2.745	116.950	114.200	2.525
1.012	6.338	14.2	225	Circular	116.950	114.200	2.525	116.600	113.753	2.622
1.013	46.000	200.0	3000	Culvert	116.600	112.778	2.622	114.600	112.548	0.852
1.014	3.594	199.7	300	Circular	114.600	112.548	1.752	114.500	112.530	1.670
7.000	2.256	20.0	225	Circular	116.316	113.938	2.153	116.100	113.825	2.050
7.001	40.502	150.0	2000	Culvert	116.100	112.850	2.050	114.680	112.580	0.900
7.002	8.351	167.0	300	Circular	114.680	112.580	1.800	114.500	112.530	1.670
1.015	3.901	150.0	225	Circular	114.500	112.530	1.745	114.400	112.504	1.671
1.016	11.502	149.4	225	Circular	114.400	112.504	1.671	114.000	112.427	1.348

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
5.000	S25	1800	Manhole	Adoptable	S26	1800	Manhole	Adoptable
5.001	S26	1800	Manhole	Adoptable	S10	1200	Manhole	Adoptable
1.008	S10	1200	Manhole	Adoptable	S11	1050	Manhole	Adoptable
1.009	S11	1050	Manhole	Adoptable	S12	1200	Manhole	Adoptable
1.010	S12	1200	Manhole	Adoptable	S13	1200	Manhole	Adoptable
1.011	S13	1200	Manhole	Adoptable	S14	1500	Manhole	Adoptable
6.000	S27	1200	Manhole	Adoptable	BC28	20	Junction	
6.001	BC28	20	Junction		BC29	20	Junction	
6.002	BC29	20	Junction		S30	1500	Manhole	Adoptable
6.003	S30	1500	Manhole	Adoptable	S14	1500	Manhole	Adoptable
1.012	S14	1500	Manhole	Adoptable	BC15	20	Junction	
1.013	BC15	20	Junction		BC16	20	Junction	
1.014	BC16	20	Junction		S17	1800	Manhole	Adoptable
7.000	S31	1200	Manhole	Adoptable	BC32	20	Junction	
7.001	BC32	20	Junction		BC33	20	Junction	
7.002	BC33	20	Junction		S17	1800	Manhole	Adoptable
1.015	S17	1800	Manhole	Adoptable	S18	1200	Manhole	Adoptable
1.016	S18	1200	Manhole	Adoptable	OUTFALL	20	Junction	

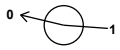
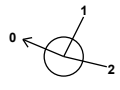
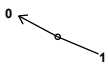
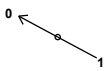
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S01	299224.449	517110.011	128.857	1.350	1050				
						0	1.000	127.507	150
S02	299190.302	517140.958	127.348	1.350	1350	1	1.000	125.998	150
									
						0	1.001	125.998	150

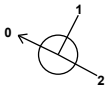
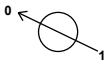
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S03	299177.962	517145.769	126.823	2.678		1	1.001	125.296	150
									
						0	1.002	124.145	1800
S04	299154.931	517120.360	126.239	2.208		1	1.002	124.031	1800
									
						0	1.003	124.031	300
S05	299153.828	517119.115	126.115	2.090	1800	1	1.003	124.025	300
									
						0	1.004	124.025	300
S19	299122.305	517083.405	125.450	1.275	1350				
						0	2.000	124.175	150
S06	299131.800	517094.265	125.322	1.408	1500	1	2.000	124.079	150
						2	1.004	123.914	300
									
						0	1.005	123.915	300
HW07	299138.525	517088.044	125.512	1.799		1	1.005	123.884	300
									
S20	299172.260	517083.441	127.324	3.401	2400				
						0	3.000	123.923	1500
S24	299147.780	517056.561	126.274	2.392	1500				
						0	4.000	123.882	1500
S21	299160.354	517070.601	126.677	2.842	2700	1	4.000	123.835	1500
						2	3.000	123.835	1500
									
						0	3.001	123.835	1500
S22	299155.171	517075.655	125.800	2.001	2400	1	3.001	123.799	1500
									
						0	3.002	123.799	225
HW23	299147.960	517076.846	125.986	2.273		1	3.002	123.750	225
									
HW08	299136.271	517081.724	125.436	1.890					
						0	1.006	123.546	150
S09	299132.630	517072.748	125.153	1.672	1350	1	1.006	123.481	150
									
						0	1.007	123.483	150

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S25	299098.121	517093.830	124.700	1.800	1800		0 5.000	122.900	1200
S26	299124.720	517070.149	125.000	2.278	1800		1 5.000	122.722	1200
							0 5.001	122.722	150
S10	299127.485	517067.688	125.100	2.403	1200		1 5.001	122.697	150
							2 1.007	122.697	150
							0 1.008	122.697	150
S11	299103.582	517044.145	122.352	1.352	1050		1 1.008	121.000	150
							0 1.009	121.000	150
S12	299101.861	517025.111	122.600	1.727	1200		1 1.009	120.873	150
							0 1.010	120.873	150
S13	299062.168	517027.980	120.350	2.906	1200		1 1.010	117.444	150
							0 1.011	117.444	150
S27	299054.208	517080.906	120.350	2.925	1200		0 6.000	117.425	150
BC28	299046.654	517065.842	118.700	4.125	20		1 6.000	115.625	150
							0 6.001	114.575	1800
BC29	299034.103	517040.812	117.250	3.010	20		1 6.001	114.240	1800
							0 6.002	114.240	225
S30	299033.209	517039.029	117.200	2.970	1500		1 6.002	114.230	225
							0 6.003	114.230	225
S14	299031.335	517035.293	116.950	2.750	1500		1 6.003	114.200	225
							2 1.011	114.200	150
							0 1.012	114.200	225
BC15	299025.491	517037.746	116.600	3.822	20		1 1.012	113.753	225
							0 1.013	112.778	3000
BC16	298984.938	517059.460	114.600	2.052	20		1 1.013	112.548	3000
							0 1.014	112.548	300

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S31	299004.567	517106.849	116.316	2.378	1200	 0	7.000	113.938	225
BC32	299004.002	517104.665	116.100	3.250	20	 1	7.000	113.825	225
						0	7.001	112.850	2000
BC33	298985.585	517068.592	114.680	2.100	20	 1	7.001	112.580	2000
						0	7.002	112.580	300
S17	298981.772	517061.162	114.500	1.970	1800	 1	7.002	112.530	300
						2	1.014	112.530	300
						0	1.015	112.530	225
S18	298978.260	517062.859	114.400	1.896	1200	 1	1.015	112.504	225
						0	1.016	112.504	225
OUTFALL	298967.903	517067.863	114.000	1.573	20	 1	1.016	112.427	225

Simulation Settings

Rainfall Methodology	FEH-13	Skip Steady State	x	Check Discharge Volume 100 year 360 minute (m³)	✓
Summer CV	0.750	Drain Down Time (mins)	240		
Winter CV	0.840	Additional Storage (m³/ha)	20.0		
Analysis Speed	Detailed	Check Discharge Rate(s)	✓		

Storm Durations

15	30	60	120	180	240	360	480	600	720	960

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

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	0
Positively Drained Area (ha)		Storm Duration (mins)	360
Soil Index	1	Betterment (%)	0
SPR	0.10	PR	
CWI		Runoff Volume (m^3)	

Node S17 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	112.530	Product Number	CTL-SHE-0146-1100-1400-1100
Design Depth (m)	1.400	Min Outlet Diameter (m)	0.225
Design Flow (l/s)	11.0	Min Node Diameter (mm)	1200

Node S30 Online Hydro-Brake® Control

Flap Valve	✓	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	114.230	Product Number	CTL-SHE-0096-4500-1310-4500
Design Depth (m)	1.310	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	4.5	Min Node Diameter (mm)	1200

Node S09 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	123.483	Product Number	CTL-SHE-0102-5400-1500-5400
Design Depth (m)	1.500	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	5.4	Min Node Diameter (mm)	1200

Node S22 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	123.799	Product Number	CTL-SHE-0100-4800-1270-4800
Design Depth (m)	1.270	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	4.8	Min Node Diameter (mm)	1200

Node S05 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	124.025	Product Number	CTL-SHE-0227-2800-1200-2800
Design Depth (m)	1.200	Min Outlet Diameter (m)	0.300
Design Flow (l/s)	28.0	Min Node Diameter (mm)	1800

Node S26 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	122.722	Product Number	CTL-SHE-0031-5000-1200-5000
Design Depth (m)	1.200	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	0.5	Min Node Diameter (mm)	1200

Node HW08 Flow through Pond Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Main Channel Length (m)	25.000
Side Inf Coefficient (m/hr)	0.00000	Invert Level (m)	123.546	Main Channel Slope (1:X)	150.0
Safety Factor	2.0	Time to half empty (mins)		Main Channel n	0.028

Inlets

HW23 | HW07

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	55.5	0.0	0.500	123.0	0.0	1.000	210.0	0.0	1.500	357.7	0.0
0.100	67.2	0.0	0.600	138.6	0.0	1.100	263.8	0.0	1.600	384.3	0.0
0.200	80.0	0.0	0.700	155.1	0.0	1.200	286.2	0.0	1.654	401.1	0.0
0.300	93.5	0.0	0.800	172.4	0.0	1.300	309.1	0.0			
0.400	107.8	0.0	0.900	190.5	0.0	1.400	332.8	0.0			

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	127.575	0.068	13.9	0.1075	0.0000	OK
15 minute winter	S02	10	126.097	0.099	30.1	0.2244	0.0000	OK
360 minute winter	S03	344	124.550	0.405	10.1	0.2871	0.0000	OK
30 minute winter	S04	25	124.551	0.520	34.8	0.0000	0.0000	SURCHARGED
30 minute winter	S05	25	124.550	0.525	30.5	1.9797	0.0000	SURCHARGED
360 minute winter	S19	352	124.496	0.321	2.0	0.6562	0.0000	SURCHARGED
360 minute winter	S06	352	124.496	0.582	14.5	1.2674	0.0000	SURCHARGED
360 minute winter	HW07	344	124.497	0.784	14.4	0.0000	0.0000	OK
360 minute winter	S20	344	124.553	0.630	4.4	3.1665	0.0000	OK
360 minute winter	S24	344	124.552	0.670	5.3	1.7676	0.0000	OK
360 minute winter	S21	344	124.552	0.717	7.4	4.1983	0.0000	OK
360 minute winter	S22	344	124.552	0.753	3.8	3.4084	0.0000	SURCHARGED
360 minute winter	HW23	344	124.496	0.783	3.2	0.0000	0.0000	OK
360 minute winter	HW08	352	124.495	0.949	11.8	0.4316	0.0000	SURCHARGED
360 minute winter	S09	352	124.487	1.006	5.5	1.4399	0.0000	SURCHARGED
600 minute winter	S25	570	123.406	0.506	2.4	1.6694	0.0000	OK
600 minute winter	S26	570	123.406	0.684	1.9	1.7399	0.0000	SURCHARGED
960 minute summer	S10	1170	122.735	0.038	5.7	0.0433	0.0000	OK
960 minute summer	S11	1170	121.071	0.071	5.7	0.0615	0.0000	OK
15 minute winter	S12	10	120.938	0.065	20.6	0.1132	0.0000	OK
15 minute winter	S13	10	117.531	0.087	36.3	0.1311	0.0000	OK
15 minute winter	S27	10	117.485	0.060	19.0	0.0948	0.0000	OK
60 minute winter	BC28	58	114.949	0.374	29.9	0.0905	0.0000	OK
60 minute winter	BC29	59	114.949	0.709	29.4	0.0000	0.0000	SURCHARGED
60 minute winter	S30	59	114.951	0.721	8.9	1.5267	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S01	1.000	S02	13.7	1.362	0.424
15 minute winter	S02	1.001	S03	29.5	2.471	0.717
360 minute winter	S03	1.002	S04	7.7	0.097	0.001
30 minute winter	S04	1.003	S05	24.0	-0.687	0.376
30 minute winter	S05	Hydro-Brake®	S06	27.9		
360 minute winter	S19	2.000	S06	2.0	0.553	0.138
360 minute winter	S06	1.005	HW07	14.4	0.735	0.225
360 minute winter	HW07	Flow through pond	HW08	10.1	0.057	0.000
360 minute winter	S20	3.000	S21	3.0	0.187	0.001
360 minute winter	S24	4.000	S21	4.0	0.203	0.001
360 minute winter	S21	3.001	S22	3.8	0.252	0.001
360 minute winter	S22	Hydro-Brake®	HW23	3.1		
360 minute winter	HW23	Flow through pond	HW08	10.1	0.057	0.000
360 minute winter	HW08	1.006	S09	5.5	0.400	0.382
360 minute winter	S09	Hydro-Brake®	S10	5.4		
600 minute winter	S25	5.000	S26	1.9	0.107	0.001
600 minute winter	S26	Hydro-Brake®	S10	0.4		
960 minute summer	S10	1.008	S11	5.7	0.991	0.142
960 minute summer	S11	1.009	S12	5.7	1.040	0.395
15 minute winter	S12	1.010	S13	20.4	2.281	0.388
15 minute winter	S13	1.011	S14	35.8	3.162	0.625
15 minute winter	S27	6.000	BC28	18.9	2.918	0.322
60 minute winter	BC28	6.001	BC29	29.4	0.214	0.003
60 minute winter	BC29	6.002	S30	6.0	-0.273	0.164
60 minute winter	S30	Hydro-Brake®	S14	4.5		

Results for 30 year Critical Storm Duration. Lowest mass balance: 98.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S14	10	114.297	0.097	47.1	0.1890	0.0000	OK
360 minute winter	BC15	344	113.206	0.427	16.7	0.0000	0.0000	OK
360 minute winter	BC16	352	113.206	0.658	13.7	0.0000	0.0000	SURCHARGED
15 minute winter	S31	10	113.980	0.042	7.8	0.0575	0.0000	OK
360 minute winter	BC32	344	113.205	0.355	3.7	0.0000	0.0000	OK
360 minute winter	BC33	352	113.205	0.625	4.2	0.0831	0.0000	SURCHARGED
360 minute winter	S17	352	113.205	0.675	14.7	2.7061	0.0000	SURCHARGED
60 minute winter	S18	136	112.584	0.080	11.0	0.0904	0.0000	OK
60 minute winter	OUTFALL	122	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S14	1.012	BC15	46.8	3.005	0.337
360 minute winter	BC15	1.013	BC16	13.7	0.081	0.001
360 minute winter	BC16	1.014	S17	9.7	0.272	0.124
15 minute winter	S31	7.000	BC32	7.8	1.588	0.066
360 minute winter	BC32	7.001	BC33	-2.3	0.027	0.000
360 minute winter	BC33	7.002	S17	-3.5	-0.197	-0.041
360 minute winter	S17	Hydro-Brake®	S18	11.0		
60 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259

Results for 100 year Critical Storm Duration. Lowest mass balance: 98.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	127.587	0.080	18.1	0.1257	0.0000	OK
15 minute winter	S02	10	126.122	0.124	39.4	0.2812	0.0000	OK
60 minute winter	S03	45	124.805	0.660	45.7	0.4681	0.0000	OK
60 minute winter	S04	44	124.804	0.773	27.7	0.0000	0.0000	SURCHARGED
60 minute winter	S05	44	124.804	0.778	31.0	2.9349	0.0000	SURCHARGED
360 minute winter	S19	352	124.694	0.519	2.5	1.0608	0.0000	SURCHARGED
360 minute winter	S06	352	124.694	0.780	17.1	1.7002	0.0000	SURCHARGED
360 minute winter	HW07	352	124.695	0.982	16.9	0.0000	0.0000	OK
360 minute winter	S20	344	124.757	0.834	5.6	4.1962	0.0000	OK
360 minute winter	S24	344	124.757	0.875	6.7	2.3076	0.0000	OK
360 minute winter	S21	344	124.757	0.922	9.3	5.3965	0.0000	OK
360 minute winter	S22	344	124.757	0.958	4.6	4.3347	0.0000	SURCHARGED
480 minute winter	HW23	456	124.694	0.981	3.7	0.0000	0.0000	OK
360 minute winter	HW08	352	124.694	1.147	14.2	0.5221	0.0000	SURCHARGED
360 minute winter	S09	352	124.685	1.204	5.5	1.7224	0.0000	SURCHARGED
720 minute winter	S25	675	123.572	0.672	2.6	2.2174	0.0000	OK
720 minute winter	S26	675	123.572	0.850	2.1	2.1634	0.0000	SURCHARGED
15 minute winter	S10	14	122.735	0.038	5.7	0.0432	0.0000	OK
15 minute winter	S11	254	121.071	0.071	5.7	0.0612	0.0000	OK
15 minute winter	S12	10	120.946	0.073	25.5	0.1279	0.0000	OK
15 minute winter	S13	10	117.548	0.104	46.0	0.1563	0.0000	OK
15 minute winter	S27	10	117.495	0.070	24.9	0.1106	0.0000	OK
120 minute winter	BC28	116	115.214	0.639	24.8	0.1547	0.0000	OK
120 minute winter	BC29	114	115.215	0.975	24.9	0.0000	0.0000	SURCHARGED
120 minute winter	S30	114	115.216	0.986	7.3	2.0870	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S01	1.000	S02	17.9	1.415	0.553
15 minute winter	S02	1.001	S03	38.4	2.567	0.934
60 minute winter	S03	1.002	S04	27.7	0.201	0.005
60 minute winter	S04	1.003	S05	21.7	-0.636	0.341
60 minute winter	S05	Hydro-Brake®	S06	27.9		
360 minute winter	S19	2.000	S06	2.3	0.560	0.158
360 minute winter	S06	1.005	HW07	16.9	0.726	0.265
360 minute winter	HW07	Flow through pond	HW08	11.5	0.063	0.000
360 minute winter	S20	3.000	S21	3.7	0.196	0.001
360 minute winter	S24	4.000	S21	4.9	0.208	0.001
360 minute winter	S21	3.001	S22	4.6	0.243	0.001
360 minute winter	S22	Hydro-Brake®	HW23	3.5		
480 minute winter	HW23	Flow through pond	HW08	10.0	0.056	0.000
360 minute winter	HW08	1.006	S09	5.5	0.403	0.382
360 minute winter	S09	Hydro-Brake®	S10	5.4		
720 minute winter	S25	5.000	S26	2.1	0.107	0.001
720 minute winter	S26	Hydro-Brake®	S10	0.4		
15 minute winter	S10	1.008	S11	5.7	1.380	0.142
15 minute winter	S11	1.009	S12	5.7	1.038	0.392
15 minute winter	S12	1.010	S13	25.2	2.337	0.480
15 minute winter	S13	1.011	S14	45.5	3.365	0.794
15 minute winter	S27	6.000	BC28	24.7	3.129	0.423
120 minute winter	BC28	6.001	BC29	24.9	0.135	0.003
120 minute winter	BC29	6.002	S30	4.7	-0.215	0.129
120 minute winter	S30	Hydro-Brake®	S14	4.5		

Results for 100 year Critical Storm Duration. Lowest mass balance: 98.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S14	10	114.312	0.112	59.1	0.2170	0.0000	OK
480 minute winter	BC15	488	113.448	0.670	16.8	0.0000	0.0000	OK
480 minute winter	BC16	480	113.448	0.900	13.2	0.0000	0.0000	SURCHARGED
15 minute winter	S31	10	113.987	0.049	10.2	0.0663	0.0000	OK
480 minute winter	BC32	488	113.448	0.598	3.4	0.0000	0.0000	OK
480 minute winter	BC33	488	113.448	0.867	4.3	0.1154	0.0000	SURCHARGED
480 minute winter	S17	480	113.447	0.917	14.8	3.6752	0.0000	SURCHARGED
30 minute winter	S18	26	112.584	0.080	11.0	0.0904	0.0000	OK
30 minute winter	OUTFALL	69	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S14	1.012	BC15	58.7	3.171	0.423
480 minute winter	BC15	1.013	BC16	13.2	0.081	0.001
480 minute winter	BC16	1.014	S17	9.1	0.264	0.116
15 minute winter	S31	7.000	BC32	10.2	1.706	0.087
480 minute winter	BC32	7.001	BC33	-2.0	0.029	0.000
480 minute winter	BC33	7.002	S17	-3.6	-0.206	-0.042
480 minute winter	S17	Hydro-Brake®	S18	11.0		
30 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	11	127.608	0.101	25.4	0.1594	0.0000	OK
15 minute winter	S02	12	126.537	0.539	55.1	1.2268	0.0000	SURCHARGED
60 minute winter	S03	48	125.686	1.541	64.0	1.0928	0.0000	SURCHARGED
60 minute winter	S04	48	125.686	1.655	39.3	0.0000	0.0000	SURCHARGED
60 minute winter	S05	48	125.685	1.660	41.0	6.2590	0.0000	SURCHARGED
480 minute winter	S19	472	125.017	0.842	2.9	1.7208	0.0000	SURCHARGED
480 minute winter	S06	472	125.017	1.103	20.7	2.4043	0.0000	SURCHARGED
480 minute winter	HW07	472	125.017	1.305	20.5	0.0000	0.0000	OK
360 minute winter	S20	272	125.154	1.231	7.8	6.1910	0.0000	OK
360 minute winter	S24	272	125.154	1.272	9.4	3.3540	0.0000	OK
360 minute winter	S21	272	125.154	1.319	12.6	7.7180	0.0000	OK
360 minute winter	S22	272	125.154	1.355	5.9	6.1294	0.0000	SURCHARGED
480 minute winter	HW23	472	125.017	1.305	4.5	0.0000	0.0000	OK
480 minute winter	HW08	472	125.017	1.471	16.8	0.6691	0.0000	SURCHARGED
480 minute winter	S09	472	125.006	1.525	5.5	2.1817	0.0000	FLOOD RISK
720 minute winter	S25	690	124.100	1.200	3.7	3.9609	0.0000	SURCHARGED
720 minute winter	S26	690	124.100	1.378	2.6	3.5077	0.0000	SURCHARGED
600 minute winter	S10	585	122.736	0.039	6.0	0.0442	0.0000	OK
600 minute winter	S11	600	121.073	0.073	6.0	0.0629	0.0000	OK
15 minute winter	S12	10	120.960	0.087	33.6	0.1513	0.0000	OK
15 minute winter	S13	12	117.819	0.375	62.4	0.5667	0.0000	SURCHARGED
15 minute winter	S27	10	117.511	0.086	34.9	0.1361	0.0000	OK
120 minute winter	BC28	116	115.844	1.269	32.6	0.3071	0.0000	SURCHARGED
120 minute winter	BC29	116	115.844	1.604	30.1	0.0000	0.0000	SURCHARGED
120 minute winter	S30	116	115.844	1.614	10.3	3.4165	0.0000	SURCHARGED

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute winter	S01	1.000	S02	24.9	1.513	0.770
15 minute winter	S02	1.001	S03	48.3	2.745	1.174
60 minute winter	S03	1.002	S04	32.1	0.215	0.006
60 minute winter	S04	1.003	S05	26.4	-0.720	0.413
60 minute winter	S05	Hydro-Brake®	S06	27.9		
480 minute winter	S19	2.000	S06	2.7	0.534	0.184
480 minute winter	S06	1.005	HW07	20.5	0.675	0.321
480 minute winter	HW07	Flow through pond	HW08	13.9	0.061	0.000
360 minute winter	S20	3.000	S21	4.8	0.200	0.001
360 minute winter	S24	4.000	S21	6.6	0.215	0.002
360 minute winter	S21	3.001	S22	5.9	0.205	0.001
360 minute winter	S22	Hydro-Brake®	HW23	4.6		
480 minute winter	HW23	Flow through pond	HW08	13.9	0.061	0.000
480 minute winter	HW08	1.006	S09	5.5	0.408	0.379
480 minute winter	S09	Hydro-Brake®	S10	5.4		
720 minute winter	S25	5.000	S26	2.6	0.114	0.001
720 minute winter	S26	Hydro-Brake®	S10	0.5		
600 minute winter	S10	1.008	S11	6.0	1.000	0.148
600 minute winter	S11	1.009	S12	6.0	1.050	0.413
15 minute winter	S12	1.010	S13	33.3	2.345	0.634
15 minute winter	S13	1.011	S14	55.8	3.498	0.974
15 minute winter	S27	6.000	BC28	34.7	3.391	0.593
120 minute winter	BC28	6.001	BC29	26.6	0.195	0.003
120 minute winter	BC29	6.002	S30	-7.2	-0.223	-0.198
120 minute winter	S30	Hydro-Brake®	S14	4.9		

Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 98.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S14	10	114.330	0.130	74.5	0.2525	0.0000	OK
960 minute winter	BC15	870	113.914	1.136	15.2	0.0000	0.0000	OK
960 minute winter	BC16	870	113.914	1.366	12.4	0.0000	0.0000	SURCHARGED
15 minute winter	S31	10	113.997	0.059	14.3	0.0797	0.0000	OK
960 minute winter	BC32	870	113.914	1.064	2.4	0.0000	0.0000	OK
960 minute winter	BC33	870	113.914	1.334	3.5	0.1774	0.0000	SURCHARGED
960 minute winter	S17	870	113.914	1.384	13.7	5.5443	0.0000	SURCHARGED
30 minute summer	S18	223	112.584	0.080	11.0	0.0904	0.0000	OK
30 minute summer	OUTFALL	223	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap
15 minute summer	S14	1.012	BC15	74.4	3.342	0.535
960 minute winter	BC15	1.013	BC16	12.4	0.065	0.001
960 minute winter	BC16	1.014	S17	10.5	0.236	0.134
15 minute winter	S31	7.000	BC32	14.2	1.863	0.122
960 minute winter	BC32	7.001	BC33	-1.2	0.016	0.000
960 minute winter	BC33	7.002	S17	-3.0	-0.130	-0.035
960 minute winter	S17	Hydro-Brake®	S18	11.0		
30 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259

Results for 30 year 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S01	10	127.573	0.066	13.2	0.1046	0.0000	OK
15 minute summer	S02	10	126.094	0.095	28.7	0.2173	0.0000	OK
15 minute summer	S03	14	124.434	0.289	55.7	0.2046	0.0000	OK
15 minute summer	S04	14	124.444	0.413	54.0	0.0000	0.0000	SURCHARGED
15 minute summer	S05	14	124.443	0.418	35.1	1.5742	0.0000	SURCHARGED
15 minute summer	S19	10	124.275	0.100	10.7	0.2052	0.0000	OK
15 minute summer	S06	37	124.103	0.189	45.2	0.4123	0.0000	OK
15 minute summer	HW07	38	124.103	0.390	45.1	0.0000	0.0000	OK
15 minute summer	S20	16	124.228	0.305	23.6	1.5321	0.0000	OK
15 minute summer	S24	19	124.220	0.338	28.6	0.8903	0.0000	OK
15 minute summer	S21	17	124.226	0.391	47.2	2.2861	0.0000	OK
15 minute summer	S22	18	124.234	0.434	33.9	1.9655	0.0000	SURCHARGED
15 minute summer	HW23	36	124.103	0.390	4.8	0.0000	0.0000	OK
15 minute summer	HW08	37	124.103	0.556	53.2	0.2532	0.0000	SURCHARGED
15 minute summer	S09	38	124.092	0.611	8.1	0.8746	0.0000	SURCHARGED
15 minute summer	S25	21	123.073	0.173	18.7	0.5709	0.0000	OK
15 minute summer	S26	20	123.076	0.354	18.9	0.9009	0.0000	SURCHARGED
15 minute summer	S10	17	122.735	0.038	5.7	0.0431	0.0000	OK
15 minute summer	S11	155	121.071	0.071	5.7	0.0612	0.0000	OK
15 minute summer	S12	10	120.936	0.063	19.7	0.1106	0.0000	OK
15 minute summer	S13	10	117.528	0.084	34.6	0.1272	0.0000	OK
15 minute summer	S27	10	117.483	0.058	18.1	0.0924	0.0000	OK
15 minute summer	BC28	18	114.714	0.139	31.7	0.0336	0.0000	OK
15 minute summer	BC29	15	114.706	0.466	38.3	0.0000	0.0000	SURCHARGED
15 minute summer	S30	15	114.707	0.477	14.3	1.0101	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S01	1.000	S02	13.1	1.348	0.404	0.4456	
15 minute summer	S02	1.001	S03	28.2	2.450	0.685	0.1526	
15 minute summer	S03	1.002	S04	54.0	0.229	0.010	21.6657	
15 minute summer	S04	1.003	S05	27.7	-0.778	0.435	0.1171	
15 minute summer	S05	Hydro-Brake®	S06	27.9				
15 minute summer	S19	2.000	S06	10.4	0.867	0.721	0.1740	
15 minute summer	S06	1.005	HW07	45.1	1.068	0.707	0.4649	
15 minute summer	HW07	Flow through pond	HW08	41.4	0.157	0.001	41.1800	
15 minute summer	S20	3.000	S21	19.3	0.370	0.004	5.4138	
15 minute summer	S24	4.000	S21	21.2	0.396	0.006	6.2005	
15 minute summer	S21	3.001	S22	33.9	0.509	0.006	2.8278	
15 minute summer	S22	Hydro-Brake®	HW23	4.8				
15 minute summer	HW23	Flow through pond	HW08	41.4	0.157	0.001	41.1800	
15 minute summer	HW08	1.006	S09	8.1	0.584	0.558	0.1705	
15 minute summer	S09	Hydro-Brake®	S10	5.4				
15 minute summer	S25	5.000	S26	18.9	0.435	0.006	6.5108	
15 minute summer	S26	Hydro-Brake®	S10	0.3				
15 minute summer	S10	1.008	S11	5.7	1.257	0.141	0.1955	
15 minute summer	S11	1.009	S12	5.6	1.037	0.391	0.1382	
15 minute summer	S12	1.010	S13	19.5	2.268	0.372	0.3433	
15 minute summer	S13	1.011	S14	34.3	3.124	0.598	0.3474	
15 minute summer	S27	6.000	BC28	18.0	2.883	0.308	0.1053	
15 minute summer	BC28	6.001	BC29	31.4	0.293	0.003	15.0185	
15 minute summer	BC29	6.002	S30	-6.9	-0.482	-0.189	0.0793	
15 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S14	10	114.295	0.095	45.2	0.1843	0.0000	OK
15 minute summer	BC15	18	112.838	0.059	44.9	0.0000	0.0000	OK
15 minute summer	BC16	24	112.838	0.289	56.3	0.0000	0.0000	OK
15 minute summer	S31	10	113.979	0.041	7.4	0.0560	0.0000	OK
15 minute summer	BC32	11	112.860	0.010	7.4	0.0000	0.0000	OK
15 minute summer	BC33	25	112.837	0.257	36.7	0.0342	0.0000	OK
15 minute summer	S17	22	112.836	0.306	40.1	1.2275	0.0000	SURCHARGED
15 minute summer	S18	19	112.582	0.078	10.6	0.0885	0.0000	OK
15 minute summer	OUTFALL	19	112.503	0.076	10.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S14	1.012	BC15	44.9	2.980	0.324	0.0956	
15 minute summer	BC15	1.013	BC16	45.0	0.199	0.004	23.9663	
15 minute summer	BC16	1.014	S17	-18.8	-1.062	-0.239	0.2517	
15 minute summer	S31	7.000	BC32	7.4	1.568	0.063	0.0106	
15 minute summer	BC32	7.001	BC33	7.2	0.102	0.001	10.4717	
15 minute summer	BC33	7.002	S17	-27.2	-0.573	-0.317	0.5623	
15 minute summer	S17	Hydro-Brake®	S18	10.6				
15 minute summer	S18	1.016	OUTFALL	10.6	0.879	0.249	0.1381	126.2

Results for 30 year 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	127.575	0.068	13.9	0.1075	0.0000	OK
15 minute winter	S02	10	126.097	0.099	30.1	0.2244	0.0000	OK
15 minute winter	S03	15	124.500	0.355	56.9	0.2517	0.0000	OK
15 minute winter	S04	15	124.479	0.448	52.5	0.0000	0.0000	SURCHARGED
15 minute winter	S05	15	124.476	0.451	36.9	1.7016	0.0000	SURCHARGED
15 minute winter	S19	10	124.279	0.104	11.3	0.2128	0.0000	OK
15 minute winter	S06	38	124.135	0.221	46.0	0.4809	0.0000	OK
15 minute winter	HW07	38	124.134	0.422	46.2	0.0000	0.0000	OK
15 minute winter	S20	17	124.266	0.343	24.8	1.7263	0.0000	OK
15 minute winter	S24	17	124.261	0.379	30.0	0.9994	0.0000	OK
15 minute winter	S21	18	124.264	0.429	56.3	2.5119	0.0000	OK
15 minute winter	S22	17	124.270	0.471	38.9	2.1324	0.0000	SURCHARGED
15 minute winter	HW23	37	124.134	0.422	5.6	0.0000	0.0000	OK
15 minute winter	HW08	39	124.134	0.588	48.3	0.2676	0.0000	SURCHARGED
15 minute winter	S09	39	124.124	0.643	7.0	0.9201	0.0000	SURCHARGED
15 minute winter	S25	20	123.101	0.201	19.6	0.6626	0.0000	OK
15 minute winter	S26	18	123.099	0.377	18.9	0.9591	0.0000	SURCHARGED
15 minute winter	S10	15	122.735	0.038	5.7	0.0431	0.0000	OK
15 minute winter	S11	175	121.071	0.071	5.7	0.0612	0.0000	OK
15 minute winter	S12	10	120.938	0.065	20.6	0.1132	0.0000	OK
15 minute winter	S13	10	117.531	0.087	36.3	0.1311	0.0000	OK
15 minute winter	S27	10	117.485	0.060	19.0	0.0948	0.0000	OK
15 minute winter	BC28	19	114.756	0.181	39.2	0.0439	0.0000	OK
15 minute winter	BC29	17	114.755	0.515	41.2	0.0000	0.0000	SURCHARGED
15 minute winter	S30	17	114.756	0.526	15.0	1.1143	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S01	1.000	S02	13.7	1.362	0.424	0.4620	
15 minute winter	S02	1.001	S03	29.5	2.471	0.717	0.1582	
15 minute winter	S03	1.002	S04	45.5	0.239	0.009	24.7863	
15 minute winter	S04	1.003	S05	26.6	-0.826	0.417	0.1171	
15 minute winter	S05	Hydro-Brake®	S06	27.9				
15 minute winter	S19	2.000	S06	10.9	0.875	0.756	0.1809	
15 minute winter	S06	1.005	HW07	46.2	1.079	0.725	0.5412	
15 minute winter	HW07	Flow through pond	HW08	36.6	0.159	0.001	45.0654	
15 minute winter	S20	3.000	S21	19.7	0.402	0.004	6.2857	
15 minute winter	S24	4.000	S21	29.5	0.414	0.008	7.1588	
15 minute winter	S21	3.001	S22	38.9	0.514	0.007	3.1858	
15 minute winter	S22	Hydro-Brake®	HW23	4.8				
15 minute winter	HW23	Flow through pond	HW08	36.6	0.159	0.001	45.0654	
15 minute winter	HW08	1.006	S09	7.0	0.616	0.485	0.1705	
15 minute winter	S09	Hydro-Brake®	S10	5.4				
15 minute winter	S25	5.000	S26	18.9	0.452	0.006	7.3288	
15 minute winter	S26	Hydro-Brake®	S10	0.3				
15 minute winter	S10	1.008	S11	5.7	1.302	0.141	0.1956	
15 minute winter	S11	1.009	S12	5.7	1.037	0.392	0.1401	
15 minute winter	S12	1.010	S13	20.4	2.281	0.388	0.3554	
15 minute winter	S13	1.011	S14	35.8	3.162	0.625	0.3590	
15 minute winter	S27	6.000	BC28	18.9	2.918	0.322	0.1090	
15 minute winter	BC28	6.001	BC29	41.2	0.306	0.004	17.1533	
15 minute winter	BC29	6.002	S30	-9.8	-0.519	-0.266	0.0793	
15 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S14	10	114.297	0.097	47.1	0.1890	0.0000	OK
15 minute winter	BC15	21	112.860	0.082	46.8	0.0000	0.0000	OK
15 minute winter	BC16	18	112.860	0.312	55.5	0.0000	0.0000	SURCHARGED
15 minute winter	S31	10	113.980	0.042	7.8	0.0575	0.0000	OK
15 minute winter	BC32	19	112.862	0.012	7.8	0.0000	0.0000	OK
15 minute winter	BC33	20	112.861	0.281	38.6	0.0374	0.0000	OK
15 minute winter	S17	20	112.860	0.329	41.6	1.3201	0.0000	SURCHARGED
15 minute winter	S18	20	112.583	0.079	10.7	0.0891	0.0000	OK
15 minute winter	OUTFALL	20	112.503	0.076	10.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S14	1.012	BC15	46.8	3.005	0.337	0.0987	
15 minute winter	BC15	1.013	BC16	46.8	0.207	0.004	27.0734	
15 minute winter	BC16	1.014	S17	-19.6	-1.049	-0.250	0.2531	
15 minute winter	S31	7.000	BC32	7.8	1.588	0.066	0.0110	
15 minute winter	BC32	7.001	BC33	7.5	0.108	0.001	11.6745	
15 minute winter	BC33	7.002	S17	-27.4	-0.583	-0.319	0.5805	
15 minute winter	S17	Hydro-Brake®	S18	10.7				
15 minute winter	S18	1.016	OUTFALL	10.7	0.882	0.252	0.1394	133.5

Results for 30 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 99.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S01	18	127.572	0.065	12.6	0.1026	0.0000	OK
30 minute summer	S02	18	126.092	0.094	27.6	0.2134	0.0000	OK
30 minute summer	S03	23	124.505	0.360	52.6	0.2552	0.0000	OK
30 minute summer	S04	23	124.499	0.468	33.1	0.0000	0.0000	SURCHARGED
30 minute summer	S05	23	124.497	0.472	33.7	1.7810	0.0000	SURCHARGED
30 minute summer	S19	18	124.274	0.099	10.3	0.2023	0.0000	OK
30 minute summer	S06	49	124.204	0.290	45.1	0.6311	0.0000	OK
30 minute summer	HW07	47	124.204	0.491	45.0	0.0000	0.0000	OK
30 minute summer	S20	31	124.310	0.387	22.7	1.9450	0.0000	OK
30 minute summer	S24	33	124.308	0.426	27.4	1.1225	0.0000	OK
30 minute summer	S21	31	124.310	0.474	38.2	2.7766	0.0000	OK
30 minute summer	S22	34	124.309	0.510	29.0	2.3076	0.0000	SURCHARGED
30 minute summer	HW23	50	124.204	0.492	6.2	0.0000	0.0000	OK
30 minute summer	HW08	48	124.203	0.657	39.0	0.2988	0.0000	SURCHARGED
30 minute summer	S09	48	124.193	0.712	6.7	1.0188	0.0000	SURCHARGED
30 minute summer	S25	34	123.145	0.245	17.9	0.8072	0.0000	OK
30 minute summer	S26	36	123.144	0.422	14.8	1.0739	0.0000	SURCHARGED
30 minute summer	S10	21	122.735	0.038	5.7	0.0431	0.0000	OK
30 minute summer	S11	246	121.071	0.071	5.7	0.0612	0.0000	OK
30 minute summer	S12	18	120.937	0.063	19.6	0.1107	0.0000	OK
30 minute summer	S13	18	117.528	0.084	34.1	0.1265	0.0000	OK
30 minute summer	S27	18	117.482	0.057	17.4	0.0906	0.0000	OK
30 minute summer	BC28	31	114.808	0.233	37.4	0.0564	0.0000	OK
30 minute summer	BC29	33	114.806	0.566	40.9	0.0000	0.0000	SURCHARGED
30 minute summer	S30	33	114.808	0.578	13.7	1.2236	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S01	1.000	S02	12.6	1.333	0.390	0.4355	
30 minute summer	S02	1.001	S03	27.6	2.440	0.670	0.1496	
30 minute summer	S03	1.002	S04	28.2	0.206	0.005	25.5629	
30 minute summer	S04	1.003	S05	23.0	-0.643	0.360	0.1171	
30 minute summer	S05	Hydro-Brake®	S06	27.9				
30 minute summer	S19	2.000	S06	10.3	0.863	0.710	0.1716	
30 minute summer	S06	1.005	HW07	45.0	1.068	0.705	0.6412	
30 minute summer	HW07	Flow through pond	HW08	30.1	0.122	0.000	53.9790	
30 minute summer	S20	3.000	S21	13.9	0.323	0.003	7.3233	
30 minute summer	S24	4.000	S21	21.2	0.387	0.006	8.3562	
30 minute summer	S21	3.001	S22	29.0	0.504	0.005	3.6215	
30 minute summer	S22	Hydro-Brake®	HW23	4.7				
30 minute summer	HW23	Flow through pond	HW08	30.1	0.122	0.000	53.9790	
30 minute summer	HW08	1.006	S09	6.7	0.515	0.463	0.1705	
30 minute summer	S09	Hydro-Brake®	S10	5.4				
30 minute summer	S25	5.000	S26	14.8	0.394	0.005	9.0232	
30 minute summer	S26	Hydro-Brake®	S10	0.3				
30 minute summer	S10	1.008	S11	5.7	1.099	0.141	0.1958	
30 minute summer	S11	1.009	S12	5.7	1.038	0.392	0.1401	
30 minute summer	S12	1.010	S13	19.6	2.278	0.373	0.3422	
30 minute summer	S13	1.011	S14	34.1	3.119	0.595	0.3461	
30 minute summer	S27	6.000	BC28	17.4	2.858	0.297	0.1026	
30 minute summer	BC28	6.001	BC29	39.1	0.224	0.004	19.7558	
30 minute summer	BC29	6.002	S30	7.3	-0.406	0.198	0.0793	
30 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 99.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S14	18	114.295	0.095	44.8	0.1841	0.0000	OK
30 minute summer	BC15	36	112.908	0.130	44.8	0.0000	0.0000	OK
30 minute summer	BC16	35	112.910	0.362	44.4	0.0000	0.0000	SURCHARGED
30 minute summer	S31	18	113.978	0.040	7.1	0.0548	0.0000	OK
30 minute summer	BC32	35	112.909	0.058	15.8	0.0000	0.0000	OK
30 minute summer	BC33	37	112.909	0.329	36.9	0.0437	0.0000	SURCHARGED
30 minute summer	S17	35	112.908	0.378	39.8	1.5147	0.0000	SURCHARGED
30 minute summer	S18	35	112.584	0.080	10.9	0.0899	0.0000	OK
30 minute summer	OUTFALL	35	112.504	0.077	10.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S14	1.012	BC15	44.8	2.977	0.323	0.0955	
30 minute summer	BC15	1.013	BC16	44.4	0.173	0.004	33.8594	
30 minute summer	BC16	1.014	S17	-27.0	-0.634	-0.344	0.2531	
30 minute summer	S31	7.000	BC32	7.1	1.552	0.061	0.0103	
30 minute summer	BC32	7.001	BC33	-12.9	0.091	-0.002	15.6099	
30 minute summer	BC33	7.002	S17	-26.2	-0.550	-0.306	0.5881	
30 minute summer	S17	Hydro-Brake®	S18	10.9				
30 minute summer	S18	1.016	OUTFALL	10.9	0.887	0.256	0.1411	152.3

Results for 30 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S01	18	127.569	0.062	11.4	0.0970	0.0000	OK
30 minute winter	S02	18	126.086	0.088	25.0	0.1997	0.0000	OK
30 minute winter	S03	24	124.549	0.404	47.6	0.2867	0.0000	OK
30 minute winter	S04	25	124.551	0.520	34.8	0.0000	0.0000	SURCHARGED
30 minute winter	S05	25	124.550	0.525	30.5	1.9797	0.0000	SURCHARGED
30 minute winter	S19	18	124.267	0.092	9.3	0.1883	0.0000	OK
30 minute winter	S06	50	124.246	0.332	43.7	0.7226	0.0000	SURCHARGED
30 minute winter	HW07	54	124.246	0.533	43.6	0.0000	0.0000	OK
30 minute winter	S20	32	124.363	0.440	20.5	2.2114	0.0000	OK
30 minute winter	S24	32	124.360	0.478	24.8	1.2615	0.0000	OK
30 minute winter	S21	31	124.360	0.525	35.1	3.0731	0.0000	OK
30 minute winter	S22	33	124.366	0.567	34.6	2.5649	0.0000	SURCHARGED
30 minute winter	HW23	54	124.246	0.533	4.7	0.0000	0.0000	OK
30 minute winter	HW08	50	124.245	0.699	37.6	0.3179	0.0000	SURCHARGED
30 minute winter	S09	50	124.235	0.754	6.6	1.0793	0.0000	SURCHARGED
30 minute winter	S25	35	123.175	0.275	16.2	0.9067	0.0000	OK
30 minute winter	S26	32	123.175	0.453	15.2	1.1531	0.0000	SURCHARGED
30 minute winter	S10	20	122.735	0.038	5.7	0.0431	0.0000	OK
30 minute winter	S11	270	121.071	0.071	5.7	0.0612	0.0000	OK
30 minute winter	S12	18	120.934	0.061	18.2	0.1064	0.0000	OK
30 minute winter	S13	18	117.523	0.079	31.3	0.1197	0.0000	OK
30 minute winter	S27	18	117.479	0.054	15.7	0.0856	0.0000	OK
30 minute winter	BC28	32	114.868	0.292	34.8	0.0708	0.0000	OK
30 minute winter	BC29	31	114.864	0.624	39.2	0.0000	0.0000	SURCHARGED
30 minute winter	S30	31	114.866	0.636	12.4	1.3464	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S01	1.000	S02	11.4	1.303	0.353	0.4033	
30 minute winter	S02	1.001	S03	25.0	2.390	0.607	0.1384	
30 minute winter	S03	1.002	S04	34.8	0.201	0.007	28.4723	
30 minute winter	S04	1.003	S05	24.0	-0.687	0.376	0.1171	
30 minute winter	S05	Hydro-Brake®	S06	27.9				
30 minute winter	S19	2.000	S06	9.3	0.846	0.642	0.1861	
30 minute winter	S06	1.005	HW07	43.6	1.058	0.684	0.6451	
30 minute winter	HW07	Flow through pond	HW08	31.0	0.129	0.000	59.7117	
30 minute winter	S20	3.000	S21	12.8	0.342	0.002	8.5550	
30 minute winter	S24	4.000	S21	18.9	0.355	0.005	9.7235	
30 minute winter	S21	3.001	S22	34.6	0.508	0.006	4.1830	
30 minute winter	S22	Hydro-Brake®	HW23	4.7				
30 minute winter	HW23	Flow through pond	HW08	31.0	0.129	0.000	59.7117	
30 minute winter	HW08	1.006	S09	6.6	0.536	0.458	0.1705	
30 minute winter	S09	Hydro-Brake®	S10	5.4				
30 minute winter	S25	5.000	S26	15.2	0.408	0.005	10.1919	
30 minute winter	S26	Hydro-Brake®	S10	0.3				
30 minute winter	S10	1.008	S11	5.7	1.148	0.141	0.1958	
30 minute winter	S11	1.009	S12	5.7	1.038	0.392	0.1371	
30 minute winter	S12	1.010	S13	18.2	2.256	0.347	0.3215	
30 minute winter	S13	1.011	S14	31.3	3.045	0.546	0.3257	
30 minute winter	S27	6.000	BC28	15.7	2.780	0.268	0.0952	
30 minute winter	BC28	6.001	BC29	39.2	0.249	0.004	22.7417	
30 minute winter	BC29	6.002	S30	-7.7	-0.416	-0.209	0.0793	
30 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.72%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S14	18	114.291	0.091	41.5	0.1759	0.0000	OK
30 minute winter	BC15	36	112.934	0.156	50.3	0.0000	0.0000	OK
30 minute winter	BC16	34	112.935	0.387	43.6	0.0000	0.0000	SURCHARGED
30 minute winter	S31	18	113.976	0.038	6.4	0.0519	0.0000	OK
30 minute winter	BC32	34	112.935	0.085	12.0	0.0000	0.0000	OK
30 minute winter	BC33	36	112.935	0.355	31.8	0.0472	0.0000	SURCHARGED
30 minute winter	S17	35	112.934	0.404	35.5	1.6176	0.0000	SURCHARGED
30 minute winter	S18	35	112.584	0.080	10.9	0.0902	0.0000	OK
30 minute winter	OUTFALL	35	112.504	0.077	10.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S14	1.012	BC15	41.5	2.921	0.299	0.0901	
30 minute winter	BC15	1.013	BC16	41.0	0.183	0.003	37.4484	
30 minute winter	BC16	1.014	S17	-17.3	-0.697	-0.221	0.2531	
30 minute winter	S31	7.000	BC32	6.4	1.509	0.055	0.0096	
30 minute winter	BC32	7.001	BC33	-7.9	0.099	-0.001	17.7032	
30 minute winter	BC33	7.002	S17	-22.4	-0.507	-0.261	0.5881	
30 minute winter	S17	Hydro-Brake®	S18	10.9				
30 minute winter	S18	1.016	OUTFALL	10.9	0.888	0.258	0.1416	159.6

Results for 30 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.59%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S01	33	127.565	0.058	10.1	0.0908	0.0000	OK
60 minute summer	S02	33	126.079	0.081	22.1	0.1845	0.0000	OK
60 minute summer	S03	40	124.502	0.357	42.1	0.2530	0.0000	OK
60 minute summer	S04	40	124.505	0.474	27.2	0.0000	0.0000	SURCHARGED
60 minute summer	S05	40	124.504	0.479	30.3	1.8044	0.0000	SURCHARGED
60 minute summer	S19	69	124.308	0.133	8.2	0.2724	0.0000	OK
60 minute summer	S06	71	124.308	0.394	41.7	0.8587	0.0000	SURCHARGED
60 minute summer	HW07	70	124.309	0.596	41.6	0.0000	0.0000	OK
60 minute summer	S20	62	124.385	0.462	18.1	2.3227	0.0000	OK
60 minute summer	S24	62	124.384	0.502	21.9	1.3237	0.0000	OK
60 minute summer	S21	62	124.385	0.549	30.0	3.2154	0.0000	OK
60 minute summer	S22	60	124.384	0.585	16.7	2.6473	0.0000	SURCHARGED
60 minute summer	HW23	70	124.308	0.595	4.5	0.0000	0.0000	OK
60 minute summer	HW08	70	124.307	0.761	31.4	0.3464	0.0000	SURCHARGED
60 minute summer	S09	70	124.299	0.818	6.1	1.1701	0.0000	SURCHARGED
60 minute summer	S25	63	123.215	0.315	14.3	1.0409	0.0000	OK
60 minute summer	S26	66	123.214	0.492	11.8	1.2532	0.0000	SURCHARGED
60 minute summer	S10	33	122.735	0.038	5.7	0.0431	0.0000	OK
60 minute summer	S11	300	121.070	0.070	5.7	0.0610	0.0000	OK
60 minute summer	S12	33	120.931	0.058	16.8	0.1017	0.0000	OK
60 minute summer	S13	33	117.519	0.075	28.4	0.1126	0.0000	OK
60 minute summer	S27	33	117.476	0.051	13.9	0.0802	0.0000	OK
60 minute summer	BC28	50	114.873	0.298	34.0	0.0720	0.0000	OK
60 minute summer	BC29	54	114.873	0.633	32.4	0.0000	0.0000	SURCHARGED
60 minute summer	S30	54	114.875	0.645	10.9	1.3653	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	S01	1.000	S02	10.1	1.269	0.313	0.3672	
60 minute summer	S02	1.001	S03	22.1	2.324	0.536	0.1258	
60 minute summer	S03	1.002	S04	27.2	0.184	0.005	25.6467	
60 minute summer	S04	1.003	S05	20.1	-0.559	0.315	0.1171	
60 minute summer	S05	Hydro-Brake®	S06	27.8				
60 minute summer	S19	2.000	S06	8.2	0.824	0.567	0.2463	
60 minute summer	S06	1.005	HW07	41.6	1.041	0.652	0.6451	
60 minute summer	HW07	Flow through pond	HW08	23.5	0.107	0.000	68.9024	
60 minute summer	S20	3.000	S21	11.8	0.301	0.002	9.1393	
60 minute summer	S24	4.000	S21	14.3	0.302	0.004	10.3678	
60 minute summer	S21	3.001	S22	16.7	0.439	0.003	4.4128	
60 minute summer	S22	Hydro-Brake®	HW23	4.5				
60 minute summer	HW23	Flow through pond	HW08	23.5	0.107	0.000	68.9024	
60 minute summer	HW08	1.006	S09	6.1	0.468	0.424	0.1705	
60 minute summer	S09	Hydro-Brake®	S10	5.4				
60 minute summer	S25	5.000	S26	11.8	0.350	0.004	11.8487	
60 minute summer	S26	Hydro-Brake®	S10	0.3				
60 minute summer	S10	1.008	S11	5.7	1.022	0.141	0.1949	
60 minute summer	S11	1.009	S12	5.7	1.036	0.392	0.1340	
60 minute summer	S12	1.010	S13	16.8	2.228	0.319	0.2997	
60 minute summer	S13	1.011	S14	28.4	2.959	0.495	0.3037	
60 minute summer	S27	6.000	BC28	13.9	2.689	0.237	0.0871	
60 minute summer	BC28	6.001	BC29	32.4	0.227	0.003	23.1382	
60 minute summer	BC29	6.002	S30	-6.7	-0.273	-0.182	0.0793	
60 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.59%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S14	33	114.286	0.086	37.9	0.1668	0.0000	OK
60 minute summer	BC15	65	112.990	0.211	39.7	0.0000	0.0000	OK
60 minute summer	BC16	63	112.989	0.441	31.8	0.0000	0.0000	SURCHARGED
60 minute summer	S31	33	113.974	0.036	5.7	0.0489	0.0000	OK
60 minute summer	BC32	65	112.989	0.139	13.2	0.0000	0.0000	OK
60 minute summer	BC33	63	112.989	0.409	22.3	0.0544	0.0000	SURCHARGED
60 minute summer	S17	63	112.989	0.459	31.3	1.8392	0.0000	SURCHARGED
60 minute summer	S18	63	112.584	0.080	11.0	0.0904	0.0000	OK
60 minute summer	OUTFALL	66	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	S14	1.012	BC15	37.8	2.855	0.273	0.0841	
60 minute summer	BC15	1.013	BC16	30.8	0.166	0.003	44.9199	
60 minute summer	BC16	1.014	S17	-18.1	-0.507	-0.231	0.2531	
60 minute summer	S31	7.000	BC32	5.7	1.464	0.049	0.0088	
60 minute summer	BC32	7.001	BC33	-9.0	0.081	-0.001	22.1098	
60 minute summer	BC33	7.002	S17	-19.8	-0.318	-0.231	0.5881	
60 minute summer	S17	Hydro-Brake®	S18	11.0				
60 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	179.9

Results for 30 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.47%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S01	33	127.559	0.052	8.2	0.0813	0.0000	OK
60 minute winter	S02	33	126.069	0.071	17.9	0.1624	0.0000	OK
60 minute winter	S03	43	124.524	0.379	34.1	0.2686	0.0000	OK
60 minute winter	S04	43	124.522	0.491	22.9	0.0000	0.0000	SURCHARGED
60 minute winter	S05	43	124.521	0.496	28.6	1.8690	0.0000	SURCHARGED
60 minute winter	S19	73	124.363	0.188	6.6	0.3838	0.0000	SURCHARGED
60 minute winter	S06	72	124.363	0.449	38.9	0.9776	0.0000	SURCHARGED
60 minute winter	HW07	71	124.363	0.650	38.1	0.0000	0.0000	OK
60 minute winter	S20	62	124.449	0.526	14.6	2.6451	0.0000	OK
60 minute winter	S24	61	124.449	0.567	17.7	1.4961	0.0000	OK
60 minute winter	S21	61	124.449	0.614	29.6	3.5947	0.0000	OK
60 minute winter	S22	60	124.450	0.650	19.2	2.9428	0.0000	SURCHARGED
60 minute winter	HW23	71	124.363	0.650	4.5	0.0000	0.0000	OK
60 minute winter	HW08	72	124.362	0.816	29.8	0.3712	0.0000	SURCHARGED
60 minute winter	S09	72	124.354	0.873	6.0	1.2495	0.0000	SURCHARGED
60 minute winter	S25	62	123.256	0.356	11.6	1.1748	0.0000	OK
60 minute winter	S26	66	123.255	0.533	11.7	1.3561	0.0000	SURCHARGED
60 minute winter	S10	31	122.735	0.038	5.7	0.0431	0.0000	OK
60 minute winter	S11	300	121.070	0.070	5.7	0.0605	0.0000	OK
60 minute winter	S12	33	120.927	0.054	14.7	0.0946	0.0000	OK
60 minute winter	S13	33	117.512	0.068	24.1	0.1024	0.0000	OK
60 minute winter	S27	33	117.470	0.045	11.2	0.0716	0.0000	OK
60 minute winter	BC28	58	114.949	0.374	29.9	0.0905	0.0000	OK
60 minute winter	BC29	59	114.949	0.709	29.4	0.0000	0.0000	SURCHARGED
60 minute winter	S30	59	114.951	0.721	8.9	1.5267	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S01	1.000	S02	8.2	1.208	0.254	0.3136	
60 minute winter	S02	1.001	S03	17.9	2.210	0.435	0.1072	
60 minute winter	S03	1.002	S04	22.9	0.180	0.004	26.8611	
60 minute winter	S04	1.003	S05	19.0	-0.584	0.299	0.1171	
60 minute winter	S05	Hydro-Brake®	S06	27.6				
60 minute winter	S19	2.000	S06	6.6	0.783	0.456	0.2539	
60 minute winter	S06	1.005	HW07	38.1	1.012	0.598	0.6451	
60 minute winter	HW07	Flow through pond	HW08	22.7	0.113	0.000	77.5037	
60 minute winter	S20	3.000	S21	10.3	0.303	0.002	10.7517	
60 minute winter	S24	4.000	S21	12.7	0.314	0.003	12.1406	
60 minute winter	S21	3.001	S22	19.2	0.456	0.004	5.1030	
60 minute winter	S22	Hydro-Brake®	HW23	4.5				
60 minute winter	HW23	Flow through pond	HW08	22.7	0.113	0.000	77.5037	
60 minute winter	HW08	1.006	S09	6.0	0.493	0.418	0.1705	
60 minute winter	S09	Hydro-Brake®	S10	5.4				
60 minute winter	S25	5.000	S26	11.7	0.355	0.004	13.4655	
60 minute winter	S26	Hydro-Brake®	S10	0.3				
60 minute winter	S10	1.008	S11	5.7	1.032	0.141	0.1930	
60 minute winter	S11	1.009	S12	5.7	1.032	0.392	0.1288	
60 minute winter	S12	1.010	S13	14.7	2.180	0.279	0.2680	
60 minute winter	S13	1.011	S14	24.1	2.809	0.420	0.2714	
60 minute winter	S27	6.000	BC28	11.2	2.534	0.191	0.0745	
60 minute winter	BC28	6.001	BC29	29.4	0.214	0.003	27.0909	
60 minute winter	BC29	6.002	S30	6.0	-0.273	0.164	0.0793	
60 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.47%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S14	33	114.279	0.079	32.6	0.1534	0.0000	OK
60 minute winter	BC15	64	113.025	0.247	32.6	0.0000	0.0000	OK
60 minute winter	BC16	62	113.025	0.477	29.7	0.0000	0.0000	SURCHARGED
60 minute winter	S31	33	113.970	0.032	4.6	0.0438	0.0000	OK
60 minute winter	BC32	64	113.024	0.173	16.1	0.0000	0.0000	OK
60 minute winter	BC33	62	113.024	0.444	19.2	0.0590	0.0000	SURCHARGED
60 minute winter	S17	62	113.024	0.494	28.0	1.9812	0.0000	SURCHARGED
60 minute winter	S18	136	112.584	0.080	11.0	0.0904	0.0000	OK
60 minute winter	OUTFALL	122	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S14	1.012	BC15	32.6	2.749	0.235	0.0753	
60 minute winter	BC15	1.013	BC16	29.0	0.171	0.002	49.6064	
60 minute winter	BC16	1.014	S17	-11.7	-0.566	-0.149	0.2531	
60 minute winter	S31	7.000	BC32	4.6	1.378	0.039	0.0075	
60 minute winter	BC32	7.001	BC33	-11.7	0.086	-0.001	24.8554	
60 minute winter	BC33	7.002	S17	-16.9	-0.348	-0.197	0.5881	
60 minute winter	S17	Hydro-Brake®	S18	11.0				
60 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	183.0

Results for 30 year 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	S01	64	127.553	0.046	6.7	0.0732	0.0000	OK
120 minute summer	S02	64	126.061	0.063	14.6	0.1443	0.0000	OK
120 minute summer	S03	120	124.436	0.291	27.8	0.2066	0.0000	OK
120 minute summer	S04	78	124.437	0.406	19.7	0.0000	0.0000	SURCHARGED
120 minute summer	S05	120	124.437	0.411	25.8	1.5513	0.0000	SURCHARGED
120 minute summer	S19	126	124.371	0.196	5.4	0.4010	0.0000	SURCHARGED
120 minute summer	S06	126	124.372	0.458	33.8	0.9971	0.0000	SURCHARGED
120 minute summer	HW07	126	124.371	0.659	32.8	0.0000	0.0000	OK
120 minute summer	S20	122	124.432	0.509	11.9	2.5602	0.0000	OK
120 minute summer	S24	122	124.432	0.550	14.4	1.4513	0.0000	OK
120 minute summer	S21	122	124.432	0.597	18.4	3.4949	0.0000	OK
120 minute summer	S22	122	124.432	0.633	7.1	2.8647	0.0000	SURCHARGED
120 minute summer	HW23	126	124.371	0.658	4.3	0.0000	0.0000	OK
120 minute summer	HW08	126	124.371	0.825	25.0	0.3752	0.0000	SURCHARGED
120 minute summer	S09	126	124.363	0.882	5.8	1.2621	0.0000	SURCHARGED
120 minute summer	S25	122	123.267	0.367	9.4	1.2096	0.0000	OK
120 minute summer	S26	126	123.266	0.544	7.2	1.3835	0.0000	SURCHARGED
120 minute summer	S10	54	122.735	0.038	5.7	0.0431	0.0000	OK
120 minute summer	S11	360	121.070	0.070	5.7	0.0605	0.0000	OK
120 minute summer	S12	64	120.924	0.051	12.9	0.0885	0.0000	OK
120 minute summer	S13	64	117.506	0.062	20.5	0.0937	0.0000	OK
120 minute summer	S27	64	117.466	0.041	9.1	0.0642	0.0000	OK
120 minute summer	BC28	84	114.870	0.295	21.3	0.0713	0.0000	OK
120 minute summer	BC29	88	114.870	0.630	21.6	0.0000	0.0000	SURCHARGED
120 minute summer	S30	88	114.872	0.642	7.2	1.3582	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	S01	1.000	S02	6.7	1.148	0.207	0.2698	
120 minute summer	S02	1.001	S03	14.6	2.099	0.355	0.0921	
120 minute summer	S03	1.002	S04	19.7	0.163	0.004	21.5186	
120 minute summer	S04	1.003	S05	12.0	-0.444	0.187	0.1171	
120 minute summer	S05	Hydro-Brake®	S06	24.6				
120 minute summer	S19	2.000	S06	5.4	0.745	0.374	0.2539	
120 minute summer	S06	1.005	HW07	32.8	0.913	0.514	0.6451	
120 minute summer	HW07	Flow through pond	HW08	19.0	0.092	0.000	78.8722	
120 minute summer	S20	3.000	S21	6.7	0.241	0.001	10.3274	
120 minute summer	S24	4.000	S21	10.3	0.261	0.003	11.6728	
120 minute summer	S21	3.001	S22	7.1	0.408	0.001	4.9218	
120 minute summer	S22	Hydro-Brake®	HW23	4.0				
120 minute summer	HW23	Flow through pond	HW08	19.0	0.092	0.000	78.8722	
120 minute summer	HW08	1.006	S09	5.8	0.431	0.401	0.1705	
120 minute summer	S09	Hydro-Brake®	S10	5.4				
120 minute summer	S25	5.000	S26	7.2	0.299	0.002	13.9820	
120 minute summer	S26	Hydro-Brake®	S10	0.4				
120 minute summer	S10	1.008	S11	5.7	1.012	0.141	0.1930	
120 minute summer	S11	1.009	S12	5.7	1.032	0.393	0.1242	
120 minute summer	S12	1.010	S13	12.9	2.138	0.246	0.2411	
120 minute summer	S13	1.011	S14	20.5	2.669	0.358	0.2437	
120 minute summer	S27	6.000	BC28	9.1	2.391	0.155	0.0641	
120 minute summer	BC28	6.001	BC29	21.6	0.161	0.002	23.1059	
120 minute summer	BC29	6.002	S30	5.2	-0.187	0.142	0.0793	
120 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 99.51%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	S14	64	114.273	0.073	28.3	0.1418	0.0000	OK
120 minute summer	BC15	126	113.055	0.277	28.3	0.0000	0.0000	OK
120 minute summer	BC16	124	113.056	0.508	20.0	0.0000	0.0000	SURCHARGED
120 minute summer	S31	64	113.967	0.029	3.7	0.0392	0.0000	OK
120 minute summer	BC32	126	113.054	0.204	9.8	0.0000	0.0000	OK
120 minute summer	BC33	124	113.055	0.475	15.4	0.0631	0.0000	SURCHARGED
120 minute summer	S17	124	113.055	0.525	25.2	2.1049	0.0000	SURCHARGED
120 minute summer	S18	220	112.584	0.080	11.0	0.0904	0.0000	OK
120 minute summer	OUTFALL	78	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	S14	1.012	BC15	28.3	2.650	0.204	0.0677	
120 minute summer	BC15	1.013	BC16	19.5	0.149	0.002	54.0578	
120 minute summer	BC16	1.014	S17	10.8	-0.279	0.138	0.2531	
120 minute summer	S31	7.000	BC32	3.7	1.296	0.032	0.0064	
120 minute summer	BC32	7.001	BC33	-6.4	0.057	-0.001	27.4615	
120 minute summer	BC33	7.002	S17	-13.5	-0.250	-0.158	0.5881	
120 minute summer	S17	Hydro-Brake®	S18	11.0				
120 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	212.7

Results for 30 year 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 99.40%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S01	64	127.547	0.040	5.1	0.0636	0.0000	OK
120 minute winter	S02	64	126.053	0.055	11.2	0.1245	0.0000	OK
120 minute winter	S03	118	124.510	0.365	21.4	0.2587	0.0000	OK
120 minute winter	S04	118	124.510	0.479	15.6	0.0000	0.0000	SURCHARGED
120 minute winter	S05	118	124.510	0.485	21.0	1.8280	0.0000	SURCHARGED
120 minute winter	S19	126	124.440	0.265	4.2	0.5410	0.0000	SURCHARGED
120 minute winter	S06	126	124.440	0.525	27.3	1.1451	0.0000	SURCHARGED
120 minute winter	HW07	124	124.440	0.727	26.5	0.0000	0.0000	OK
120 minute winter	S20	120	124.503	0.580	9.2	2.9184	0.0000	OK
120 minute winter	S24	120	124.504	0.622	11.1	1.6391	0.0000	OK
120 minute winter	S21	120	124.503	0.668	14.4	3.9115	0.0000	OK
120 minute winter	S22	120	124.503	0.704	6.3	3.1868	0.0000	SURCHARGED
120 minute winter	HW23	124	124.440	0.727	5.2	0.0000	0.0000	OK
120 minute winter	HW08	126	124.439	0.893	20.6	0.4061	0.0000	SURCHARGED
120 minute winter	S09	126	124.432	0.950	5.7	1.3602	0.0000	SURCHARGED
120 minute winter	S25	124	123.314	0.414	7.3	1.3673	0.0000	OK
120 minute winter	S26	120	123.316	0.594	6.7	1.5117	0.0000	SURCHARGED
120 minute winter	S10	48	122.735	0.038	5.7	0.0431	0.0000	OK
120 minute winter	S11	46	121.069	0.069	5.7	0.0600	0.0000	OK
120 minute winter	S12	62	120.920	0.047	11.3	0.0825	0.0000	OK
120 minute winter	S13	64	117.500	0.056	17.2	0.0851	0.0000	OK
120 minute winter	S27	64	117.461	0.036	7.1	0.0566	0.0000	OK
120 minute winter	BC28	94	114.933	0.358	17.0	0.0867	0.0000	OK
120 minute winter	BC29	96	114.937	0.697	18.6	0.0000	0.0000	SURCHARGED
120 minute winter	S30	96	114.938	0.708	5.9	1.4983	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S01	1.000	S02	5.1	1.065	0.158	0.2216	
120 minute winter	S02	1.001	S03	11.2	1.958	0.272	0.0758	
120 minute winter	S03	1.002	S04	15.6	0.149	0.003	26.0530	
120 minute winter	S04	1.003	S05	8.9	-0.426	0.140	0.1171	
120 minute winter	S05	Hydro-Brake®	S06	20.4				
120 minute winter	S19	2.000	S06	4.2	0.696	0.292	0.2539	
120 minute winter	S06	1.005	HW07	26.5	0.896	0.416	0.6451	
120 minute winter	HW07	Flow through pond	HW08	16.3	0.094	0.000	90.3608	
120 minute winter	S20	3.000	S21	5.6	0.240	0.001	12.1451	
120 minute winter	S24	4.000	S21	8.1	0.256	0.002	13.6431	
120 minute winter	S21	3.001	S22	6.3	0.361	0.001	5.6853	
120 minute winter	S22	Hydro-Brake®	HW23	4.1				
120 minute winter	HW23	Flow through pond	HW08	16.3	0.094	0.000	90.3608	
120 minute winter	HW08	1.006	S09	5.7	0.446	0.397	0.1705	
120 minute winter	S09	Hydro-Brake®	S10	5.4				
120 minute winter	S25	5.000	S26	6.7	0.303	0.002	16.0341	
120 minute winter	S26	Hydro-Brake®	S10	0.4				
120 minute winter	S10	1.008	S11	5.7	1.006	0.141	0.1923	
120 minute winter	S11	1.009	S12	5.7	1.023	0.393	0.1197	
120 minute winter	S12	1.010	S13	11.3	2.094	0.215	0.2146	
120 minute winter	S13	1.011	S14	17.2	2.517	0.300	0.2164	
120 minute winter	S27	6.000	BC28	7.1	2.229	0.121	0.0537	
120 minute winter	BC28	6.001	BC29	18.6	0.133	0.002	26.5809	
120 minute winter	BC29	6.002	S30	5.2	-0.180	0.142	0.0793	
120 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 99.40%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S14	64	114.267	0.067	24.3	0.1302	0.0000	OK
120 minute winter	BC15	122	113.097	0.319	24.3	0.0000	0.0000	OK
120 minute winter	BC16	124	113.096	0.548	19.3	0.0000	0.0000	SURCHARGED
120 minute winter	S31	64	113.964	0.026	2.9	0.0348	0.0000	OK
120 minute winter	BC32	122	113.096	0.246	7.4	0.0000	0.0000	OK
120 minute winter	BC33	122	113.095	0.515	10.9	0.0685	0.0000	SURCHARGED
120 minute winter	S17	124	113.096	0.566	20.9	2.2663	0.0000	SURCHARGED
120 minute winter	S18	74	112.584	0.080	11.0	0.0904	0.0000	OK
120 minute winter	OUTFALL	258	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute winter	S14	1.012	BC15	24.3	2.545	0.175	0.0604	
120 minute winter	BC15	1.013	BC16	19.3	0.149	0.002	59.7702	
120 minute winter	BC16	1.014	S17	10.3	-0.303	0.132	0.2531	
120 minute winter	S31	7.000	BC32	2.9	1.210	0.025	0.0054	
120 minute winter	BC32	7.001	BC33	-4.6	0.062	-0.001	30.8279	
120 minute winter	BC33	7.002	S17	-9.4	-0.266	-0.109	0.5881	
120 minute winter	S17	Hydro-Brake®	S18	11.0				
120 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	215.0

Results for 30 year 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 99.53%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S01	96	127.547	0.040	5.0	0.0630	0.0000	OK
180 minute summer	S02	96	126.052	0.054	11.0	0.1233	0.0000	OK
180 minute summer	S03	180	124.455	0.310	21.0	0.2199	0.0000	OK
180 minute summer	S04	180	124.455	0.424	13.5	0.0000	0.0000	SURCHARGED
180 minute summer	S05	180	124.455	0.430	19.9	1.6216	0.0000	SURCHARGED
180 minute summer	S19	184	124.397	0.222	4.1	0.4528	0.0000	SURCHARGED
180 minute summer	S06	184	124.397	0.483	26.4	1.0518	0.0000	SURCHARGED
180 minute summer	HW07	184	124.397	0.684	25.5	0.0000	0.0000	OK
180 minute summer	S20	184	124.455	0.532	9.0	2.6737	0.0000	OK
180 minute summer	S24	180	124.455	0.573	10.9	1.5108	0.0000	OK
180 minute summer	S21	180	124.455	0.620	14.3	3.6266	0.0000	OK
180 minute summer	S22	180	124.455	0.656	5.7	2.9665	0.0000	SURCHARGED
180 minute summer	HW23	188	124.397	0.684	3.6	0.0000	0.0000	OK
180 minute summer	HW08	184	124.396	0.850	19.9	0.3868	0.0000	SURCHARGED
180 minute summer	S09	184	124.389	0.908	5.7	1.2994	0.0000	SURCHARGED
180 minute summer	S25	180	123.292	0.392	7.1	1.2935	0.0000	OK
180 minute summer	S26	184	123.294	0.572	5.5	1.4557	0.0000	SURCHARGED
180 minute summer	S10	80	122.735	0.038	5.7	0.0431	0.0000	OK
180 minute summer	S11	76	121.070	0.070	5.7	0.0603	0.0000	OK
180 minute summer	S12	96	120.920	0.047	11.2	0.0821	0.0000	OK
180 minute summer	S13	96	117.500	0.056	17.0	0.0845	0.0000	OK
180 minute summer	S27	96	117.460	0.035	6.9	0.0558	0.0000	OK
180 minute summer	BC28	128	114.842	0.267	13.8	0.0646	0.0000	OK
180 minute summer	BC29	120	114.842	0.602	15.1	0.0000	0.0000	SURCHARGED
180 minute summer	S30	120	114.843	0.613	5.6	1.2968	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S01	1.000	S02	5.0	1.059	0.155	0.2186	
180 minute summer	S02	1.001	S03	11.0	1.949	0.267	0.0748	
180 minute summer	S03	1.002	S04	13.5	0.146	0.003	22.6726	
180 minute summer	S04	1.003	S05	8.4	-0.383	0.131	0.1171	
180 minute summer	S05	Hydro-Brake®	S06	19.2				
180 minute summer	S19	2.000	S06	4.2	0.689	0.291	0.2539	
180 minute summer	S06	1.005	HW07	25.5	0.849	0.399	0.6451	
180 minute summer	HW07	Flow through pond	HW08	15.4	0.086	0.000	83.0591	
180 minute summer	S20	3.000	S21	4.9	0.216	0.001	10.8978	
180 minute summer	S24	4.000	S21	8.2	0.243	0.002	12.2927	
180 minute summer	S21	3.001	S22	5.7	0.396	0.001	5.1622	
180 minute summer	S22	Hydro-Brake®	HW23	3.6				
180 minute summer	HW23	Flow through pond	HW08	15.4	0.086	0.000	83.0591	
180 minute summer	HW08	1.006	S09	5.7	0.417	0.393	0.1705	
180 minute summer	S09	Hydro-Brake®	S10	5.4				
180 minute summer	S25	5.000	S26	5.5	0.280	0.002	15.1237	
180 minute summer	S26	Hydro-Brake®	S10	0.4				
180 minute summer	S10	1.008	S11	5.7	1.006	0.141	0.1930	
180 minute summer	S11	1.009	S12	5.7	1.030	0.393	0.1197	
180 minute summer	S12	1.010	S13	11.2	2.094	0.213	0.2131	
180 minute summer	S13	1.011	S14	17.0	2.509	0.296	0.2146	
180 minute summer	S27	6.000	BC28	6.9	2.210	0.118	0.0526	
180 minute summer	BC28	6.001	BC29	15.1	0.156	0.002	21.8675	
180 minute summer	BC29	6.002	S30	5.0	0.175	0.135	0.0793	
180 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 99.53%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S14	96	114.267	0.067	24.0	0.1294	0.0000	OK
180 minute summer	BC15	184	113.091	0.313	24.0	0.0000	0.0000	OK
180 minute summer	BC16	184	113.091	0.543	17.0	0.0000	0.0000	SURCHARGED
180 minute summer	S31	96	113.963	0.025	2.8	0.0342	0.0000	OK
180 minute summer	BC32	184	113.090	0.240	6.7	0.0000	0.0000	OK
180 minute summer	BC33	184	113.090	0.510	9.7	0.0679	0.0000	SURCHARGED
180 minute summer	S17	180	113.090	0.560	19.5	2.2457	0.0000	SURCHARGED
180 minute summer	S18	288	112.584	0.080	11.0	0.0904	0.0000	OK
180 minute summer	OUTFALL	288	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute summer	S14	1.012	BC15	24.0	2.538	0.173	0.0599	
180 minute summer	BC15	1.013	BC16	17.0	0.111	0.001	59.0763	
180 minute summer	BC16	1.014	S17	10.4	0.261	0.132	0.2531	
180 minute summer	S31	7.000	BC32	2.8	1.199	0.024	0.0053	
180 minute summer	BC32	7.001	BC33	4.1	0.037	0.000	30.4132	
180 minute summer	BC33	7.002	S17	-8.2	-0.222	-0.096	0.5881	
180 minute summer	S17	Hydro-Brake®	S18	11.0				
180 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	244.1

Results for 30 year 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 99.42%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S01	96	127.542	0.035	3.9	0.0556	0.0000	OK
180 minute winter	S02	96	126.045	0.047	8.5	0.1074	0.0000	OK
180 minute winter	S03	176	124.537	0.391	16.2	0.2775	0.0000	OK
180 minute winter	S04	176	124.537	0.505	10.9	0.0000	0.0000	SURCHARGED
180 minute winter	S05	176	124.536	0.511	16.0	1.9281	0.0000	SURCHARGED
180 minute winter	S19	184	124.473	0.298	3.1	0.6092	0.0000	SURCHARGED
180 minute winter	S06	184	124.473	0.559	20.5	1.2189	0.0000	SURCHARGED
180 minute winter	HW07	184	124.473	0.761	19.9	0.0000	0.0000	OK
180 minute winter	S20	176	124.534	0.611	6.9	3.0716	0.0000	OK
180 minute winter	S24	176	124.534	0.652	8.4	1.7195	0.0000	OK
180 minute winter	S21	176	124.534	0.699	11.3	4.0897	0.0000	OK
180 minute winter	S22	176	124.534	0.735	4.9	3.3245	0.0000	SURCHARGED
180 minute winter	HW23	184	124.473	0.760	3.8	0.0000	0.0000	OK
180 minute winter	HW08	184	124.473	0.927	16.3	0.4216	0.0000	SURCHARGED
180 minute winter	S09	184	124.465	0.984	5.6	1.4085	0.0000	SURCHARGED
180 minute winter	S25	180	123.350	0.450	5.5	1.4858	0.0000	OK
180 minute winter	S26	180	123.348	0.626	5.2	1.5932	0.0000	SURCHARGED
180 minute winter	S10	72	122.735	0.038	5.7	0.0431	0.0000	OK
180 minute winter	S11	68	121.070	0.070	5.7	0.0603	0.0000	OK
180 minute winter	S12	92	120.917	0.044	9.9	0.0769	0.0000	OK
180 minute winter	S13	92	117.495	0.051	14.3	0.0770	0.0000	OK
180 minute winter	S27	96	117.456	0.031	5.3	0.0488	0.0000	OK
180 minute winter	BC28	136	114.901	0.326	12.4	0.0788	0.0000	OK
180 minute winter	BC29	132	114.902	0.662	13.3	0.0000	0.0000	SURCHARGED
180 minute winter	S30	132	114.902	0.672	5.5	1.4230	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S01	1.000	S02	3.9	0.993	0.121	0.1818	
180 minute winter	S02	1.001	S03	8.5	1.817	0.206	0.0620	
180 minute winter	S03	1.002	S04	10.9	0.109	0.002	27.6929	
180 minute winter	S04	1.003	S05	7.9	-0.249	0.125	0.1171	
180 minute winter	S05	Hydro-Brake®	S06	15.6				
180 minute winter	S19	2.000	S06	3.1	0.636	0.214	0.2539	
180 minute winter	S06	1.005	HW07	19.9	0.826	0.312	0.6451	
180 minute winter	HW07	Flow through pond	HW08	12.8	0.080	0.000	96.3458	
180 minute winter	S20	3.000	S21	4.6	0.223	0.001	12.9320	
180 minute winter	S24	4.000	S21	6.0	0.227	0.002	14.4951	
180 minute winter	S21	3.001	S22	4.9	0.241	0.001	6.0139	
180 minute winter	S22	Hydro-Brake®	HW23	3.8				
180 minute winter	HW23	Flow through pond	HW08	12.8	0.080	0.000	96.3458	
180 minute winter	HW08	1.006	S09	5.6	0.421	0.389	0.1705	
180 minute winter	S09	Hydro-Brake®	S10	5.4				
180 minute winter	S25	5.000	S26	5.2	0.239	0.002	17.4618	
180 minute winter	S26	Hydro-Brake®	S10	0.4				
180 minute winter	S10	1.008	S11	5.7	1.000	0.141	0.1933	
180 minute winter	S11	1.009	S12	5.7	1.017	0.393	0.1157	
180 minute winter	S12	1.010	S13	9.9	2.058	0.188	0.1907	
180 minute winter	S13	1.011	S14	14.2	2.364	0.249	0.1912	
180 minute winter	S27	6.000	BC28	5.3	2.049	0.091	0.0436	
180 minute winter	BC28	6.001	BC29	13.3	0.093	0.001	24.7917	
180 minute winter	BC29	6.002	S30	4.7	0.177	0.130	0.0793	
180 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 99.42%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S14	92	114.262	0.061	20.6	0.1193	0.0000	OK
180 minute winter	BC15	180	113.141	0.362	20.6	0.0000	0.0000	OK
180 minute winter	BC16	180	113.140	0.592	16.0	0.0000	0.0000	SURCHARGED
180 minute winter	S31	96	113.960	0.022	2.2	0.0303	0.0000	OK
180 minute winter	BC32	180	113.140	0.290	5.9	0.0000	0.0000	OK
180 minute winter	BC33	180	113.140	0.559	6.3	0.0744	0.0000	SURCHARGED
180 minute winter	S17	180	113.139	0.609	16.7	2.4412	0.0000	SURCHARGED
180 minute winter	S18	104	112.584	0.080	11.0	0.0904	0.0000	OK
180 minute winter	OUTFALL	104	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
180 minute winter	S14	1.012	BC15	20.6	2.437	0.149	0.0537	
180 minute winter	BC15	1.013	BC16	16.0	0.098	0.001	65.8565	
180 minute winter	BC16	1.014	S17	10.3	0.264	0.132	0.2531	
180 minute winter	S31	7.000	BC32	2.2	1.118	0.019	0.0044	
180 minute winter	BC32	7.001	BC33	-3.7	0.043	0.000	34.3963	
180 minute winter	BC33	7.002	S17	-5.2	-0.240	-0.061	0.5881	
180 minute winter	S17	Hydro-Brake®	S18	11.0				
180 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	246.4

Results for 30 year 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 99.56%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	S01	124	127.544	0.037	4.3	0.0582	0.0000	OK
240 minute summer	S02	124	126.048	0.050	9.4	0.1129	0.0000	OK
240 minute summer	S03	240	124.462	0.317	17.8	0.2250	0.0000	OK
240 minute summer	S04	240	124.462	0.431	12.1	0.0000	0.0000	SURCHARGED
240 minute summer	S05	240	124.462	0.437	16.9	1.6486	0.0000	SURCHARGED
240 minute summer	S19	244	124.408	0.233	3.5	0.4751	0.0000	SURCHARGED
240 minute summer	S06	244	124.408	0.494	22.0	1.0756	0.0000	SURCHARGED
240 minute summer	HW07	240	124.407	0.694	21.3	0.0000	0.0000	OK
240 minute summer	S20	240	124.464	0.540	7.7	2.7185	0.0000	OK
240 minute summer	S24	240	124.463	0.581	9.3	1.5329	0.0000	OK
240 minute summer	S21	240	124.463	0.628	12.5	3.6773	0.0000	OK
240 minute summer	S22	240	124.463	0.664	5.0	3.0057	0.0000	SURCHARGED
240 minute summer	HW23	244	124.408	0.695	4.5	0.0000	0.0000	OK
240 minute summer	HW08	244	124.407	0.861	17.2	0.3917	0.0000	SURCHARGED
240 minute summer	S09	244	124.400	0.919	5.6	1.3150	0.0000	SURCHARGED
240 minute summer	S25	240	123.311	0.411	6.1	1.3548	0.0000	OK
240 minute summer	S26	244	123.311	0.589	4.0	1.4981	0.0000	SURCHARGED
240 minute summer	S10	104	122.735	0.038	5.7	0.0431	0.0000	OK
240 minute summer	S11	100	121.070	0.070	5.7	0.0604	0.0000	OK
240 minute summer	S12	124	120.918	0.045	10.4	0.0789	0.0000	OK
240 minute summer	S13	124	117.497	0.053	15.3	0.0798	0.0000	OK
240 minute summer	S27	124	117.458	0.033	5.9	0.0515	0.0000	OK
240 minute summer	BC28	152	114.819	0.244	12.7	0.0591	0.0000	OK
240 minute summer	BC29	156	114.823	0.582	13.2	0.0000	0.0000	SURCHARGED
240 minute summer	S30	156	114.823	0.593	5.4	1.2552	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	S01	1.000	S02	4.3	1.018	0.132	0.1944	
240 minute summer	S02	1.001	S03	9.3	1.862	0.226	0.0663	
240 minute summer	S03	1.002	S04	12.1	0.130	0.002	23.1132	
240 minute summer	S04	1.003	S05	7.7	-0.347	0.121	0.1171	
240 minute summer	S05	Hydro-Brake®	S06	16.2				
240 minute summer	S19	2.000	S06	3.5	0.656	0.240	0.2539	
240 minute summer	S06	1.005	HW07	21.3	0.809	0.334	0.6451	
240 minute summer	HW07	Flow through pond	HW08	13.6	0.078	0.000	84.9099	
240 minute summer	S20	3.000	S21	5.2	0.220	0.001	11.1225	
240 minute summer	S24	4.000	S21	6.1	0.227	0.002	12.5279	
240 minute summer	S21	3.001	S22	5.0	0.381	0.001	5.2550	
240 minute summer	S22	Hydro-Brake®	HW23	3.5				
240 minute summer	HW23	Flow through pond	HW08	13.6	0.078	0.000	84.9099	
240 minute summer	HW08	1.006	S09	5.6	0.405	0.389	0.1705	
240 minute summer	S09	Hydro-Brake®	S10	5.4				
240 minute summer	S25	5.000	S26	4.0	0.257	0.001	15.8457	
240 minute summer	S26	Hydro-Brake®	S10	0.4				
240 minute summer	S10	1.008	S11	5.7	1.002	0.141	0.1933	
240 minute summer	S11	1.009	S12	5.7	1.029	0.393	0.1173	
240 minute summer	S12	1.010	S13	10.4	2.074	0.197	0.1992	
240 minute summer	S13	1.011	S14	15.2	2.417	0.266	0.2000	
240 minute summer	S27	6.000	BC28	5.9	2.112	0.101	0.0469	
240 minute summer	BC28	6.001	BC29	13.2	0.066	0.001	20.7918	
240 minute summer	BC29	6.002	S30	4.6	0.176	0.125	0.0793	
240 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 99.56%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	S14	124	114.264	0.063	21.9	0.1232	0.0000	OK
240 minute summer	BC15	244	113.113	0.334	21.9	0.0000	0.0000	OK
240 minute summer	BC16	240	113.112	0.564	15.4	0.0000	0.0000	SURCHARGED
240 minute summer	S31	124	113.961	0.023	2.4	0.0316	0.0000	OK
240 minute summer	BC32	244	113.112	0.262	6.5	0.0000	0.0000	OK
240 minute summer	BC33	240	113.111	0.531	7.7	0.0707	0.0000	SURCHARGED
240 minute summer	S17	240	113.112	0.582	17.7	2.3308	0.0000	SURCHARGED
240 minute summer	S18	344	112.584	0.080	11.0	0.0904	0.0000	OK
240 minute summer	OUTFALL	344	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	S14	1.012	BC15	21.9	2.476	0.158	0.0561	
240 minute summer	BC15	1.013	BC16	15.4	0.116	0.001	61.9254	
240 minute summer	BC16	1.014	S17	10.2	0.269	0.131	0.2531	
240 minute summer	S31	7.000	BC32	2.4	1.145	0.021	0.0047	
240 minute summer	BC32	7.001	BC33	-4.5	0.032	-0.001	32.0901	
240 minute summer	BC33	7.002	S17	-6.7	-0.214	-0.078	0.5881	
240 minute summer	S17	Hydro-Brake®	S18	11.0				
240 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	276.0

Results for 30 year 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 99.44%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S01	124	127.539	0.032	3.2	0.0503	0.0000	OK
240 minute winter	S02	124	126.041	0.043	7.0	0.0970	0.0000	OK
240 minute winter	S03	232	124.547	0.402	13.3	0.2853	0.0000	OK
240 minute winter	S04	232	124.547	0.516	9.3	0.0000	0.0000	SURCHARGED
240 minute winter	S05	232	124.547	0.522	14.0	1.9692	0.0000	SURCHARGED
240 minute winter	S19	240	124.488	0.313	2.6	0.6395	0.0000	SURCHARGED
240 minute winter	S06	240	124.488	0.574	17.2	1.2513	0.0000	SURCHARGED
240 minute winter	HW07	236	124.488	0.775	17.0	0.0000	0.0000	OK
240 minute winter	S20	232	124.547	0.624	5.7	3.1370	0.0000	OK
240 minute winter	S24	236	124.547	0.665	6.9	1.7527	0.0000	OK
240 minute winter	S21	236	124.547	0.712	9.4	4.1645	0.0000	OK
240 minute winter	S22	236	124.547	0.748	4.4	3.3824	0.0000	SURCHARGED
240 minute winter	HW23	236	124.487	0.774	4.5	0.0000	0.0000	OK
240 minute winter	HW08	240	124.487	0.941	14.3	0.4284	0.0000	SURCHARGED
240 minute winter	S09	240	124.480	0.999	5.6	1.4296	0.0000	SURCHARGED
240 minute winter	S25	240	123.370	0.470	4.5	1.5504	0.0000	OK
240 minute winter	S26	236	123.370	0.648	4.1	1.6501	0.0000	SURCHARGED
240 minute winter	S10	92	122.735	0.038	5.7	0.0431	0.0000	OK
240 minute winter	S11	88	121.070	0.070	5.7	0.0605	0.0000	OK
240 minute winter	S12	120	120.915	0.042	9.1	0.0736	0.0000	OK
240 minute winter	S13	124	117.492	0.048	12.7	0.0726	0.0000	OK
240 minute winter	S27	124	117.453	0.028	4.4	0.0445	0.0000	OK
240 minute winter	BC28	168	114.854	0.279	9.9	0.0675	0.0000	OK
240 minute winter	BC29	172	114.854	0.614	12.3	0.0000	0.0000	SURCHARGED
240 minute winter	S30	172	114.854	0.624	5.3	1.3219	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S01	1.000	S02	3.2	0.940	0.099	0.1578	
240 minute winter	S02	1.001	S03	7.0	1.722	0.170	0.0538	
240 minute winter	S03	1.002	S04	9.3	0.110	0.002	28.3652	
240 minute winter	S04	1.003	S05	7.8	-0.309	0.122	0.1171	
240 minute winter	S05	Hydro-Brake®	S06	13.8				
240 minute winter	S19	2.000	S06	2.6	0.606	0.180	0.2539	
240 minute winter	S06	1.005	HW07	17.0	0.782	0.266	0.6451	
240 minute winter	HW07	Flow through pond	HW08	11.5	0.076	0.000	99.1026	
240 minute winter	S20	3.000	S21	4.0	0.204	0.001	13.2664	
240 minute winter	S24	4.000	S21	5.3	0.208	0.001	14.8511	
240 minute winter	S21	3.001	S22	4.4	0.271	0.001	6.1524	
240 minute winter	S22	Hydro-Brake®	HW23	3.4				
240 minute winter	HW23	Flow through pond	HW08	11.5	0.076	0.000	99.1026	
240 minute winter	HW08	1.006	S09	5.6	0.413	0.386	0.1705	
240 minute winter	S09	Hydro-Brake®	S10	5.4				
240 minute winter	S25	5.000	S26	4.1	0.220	0.001	18.3291	
240 minute winter	S26	Hydro-Brake®	S10	0.4				
240 minute winter	S10	1.008	S11	5.7	0.997	0.141	0.1937	
240 minute winter	S11	1.009	S12	5.7	1.015	0.393	0.1137	
240 minute winter	S12	1.010	S13	9.1	2.037	0.172	0.1773	
240 minute winter	S13	1.011	S14	12.7	2.270	0.222	0.1778	
240 minute winter	S27	6.000	BC28	4.4	1.940	0.075	0.0382	
240 minute winter	BC28	6.001	BC29	12.3	0.097	0.001	22.3996	
240 minute winter	BC29	6.002	S30	4.7	0.177	0.128	0.0793	
240 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 99.44%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S14	124	114.259	0.059	18.8	0.1136	0.0000	OK
240 minute winter	BC15	244	113.173	0.395	18.8	0.0000	0.0000	OK
240 minute winter	BC16	240	113.174	0.626	15.6	0.0000	0.0000	SURCHARGED
240 minute winter	S31	124	113.958	0.020	1.8	0.0275	0.0000	OK
240 minute winter	BC32	244	113.172	0.322	4.9	0.0000	0.0000	OK
240 minute winter	BC33	240	113.173	0.593	5.8	0.0788	0.0000	SURCHARGED
240 minute winter	S17	240	113.173	0.643	16.1	2.5761	0.0000	SURCHARGED
240 minute winter	S18	132	112.584	0.080	11.0	0.0904	0.0000	OK
240 minute winter	OUTFALL	132	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute winter	S14	1.012	BC15	18.8	2.377	0.135	0.0502	
240 minute winter	BC15	1.013	BC16	15.6	0.104	0.001	70.3707	
240 minute winter	BC16	1.014	S17	10.3	0.265	0.132	0.2531	
240 minute winter	S31	7.000	BC32	1.8	1.058	0.015	0.0038	
240 minute winter	BC32	7.001	BC33	3.2	0.038	0.000	37.0374	
240 minute winter	BC33	7.002	S17	-4.9	-0.223	-0.057	0.5881	
240 minute winter	S17	Hydro-Brake®	S18	11.0				
240 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	278.9

Results for 30 year 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	S01	184	127.539	0.032	3.3	0.0510	0.0000	OK
360 minute summer	S02	184	126.041	0.043	7.3	0.0987	0.0000	OK
360 minute summer	S03	304	124.461	0.316	13.8	0.2242	0.0000	OK
360 minute summer	S04	304	124.461	0.430	9.0	0.0000	0.0000	SURCHARGED
360 minute summer	S05	304	124.461	0.436	13.8	1.6443	0.0000	SURCHARGED
360 minute summer	S19	336	124.408	0.233	2.7	0.4768	0.0000	SURCHARGED
360 minute summer	S06	336	124.408	0.494	17.3	1.0771	0.0000	SURCHARGED
360 minute summer	HW07	336	124.408	0.695	16.8	0.0000	0.0000	OK
360 minute summer	S20	336	124.462	0.539	6.0	2.7110	0.0000	OK
360 minute summer	S24	336	124.462	0.580	7.2	1.5293	0.0000	OK
360 minute summer	S21	336	124.462	0.627	9.6	3.6689	0.0000	OK
360 minute summer	S22	336	124.462	0.663	4.2	2.9992	0.0000	SURCHARGED
360 minute summer	HW23	336	124.407	0.695	3.3	0.0000	0.0000	OK
360 minute summer	HW08	336	124.407	0.861	14.2	0.3920	0.0000	SURCHARGED
360 minute summer	S09	336	124.401	0.920	5.6	1.3158	0.0000	SURCHARGED
360 minute summer	S25	344	123.324	0.424	4.7	1.3997	0.0000	OK
360 minute summer	S26	360	123.324	0.602	3.1	1.5331	0.0000	SURCHARGED
360 minute summer	S10	160	122.735	0.038	5.7	0.0431	0.0000	OK
360 minute summer	S11	152	121.070	0.070	5.7	0.0605	0.0000	OK
360 minute summer	S12	184	120.916	0.043	9.3	0.0745	0.0000	OK
360 minute summer	S13	184	117.493	0.049	13.1	0.0736	0.0000	OK
360 minute summer	S27	184	117.454	0.029	4.6	0.0455	0.0000	OK
360 minute summer	BC28	224	114.763	0.188	8.6	0.0456	0.0000	OK
360 minute summer	BC29	224	114.768	0.528	10.8	0.0000	0.0000	SURCHARGED
360 minute summer	S30	224	114.769	0.539	5.1	1.1401	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute summer	S01	1.000	S02	3.3	0.942	0.102	0.1613	
360 minute summer	S02	1.001	S03	7.2	1.738	0.176	0.0552	
360 minute summer	S03	1.002	S04	9.0	0.071	0.002	23.0443	
360 minute summer	S04	1.003	S05	7.5	0.240	0.117	0.1171	
360 minute summer	S05	Hydro-Brake®	S06	13.7				
360 minute summer	S19	2.000	S06	2.7	0.590	0.189	0.2539	
360 minute summer	S06	1.005	HW07	16.8	0.763	0.264	0.6451	
360 minute summer	HW07	Flow through pond	HW08	11.2	0.068	0.000	85.0137	
360 minute summer	S20	3.000	S21	3.7	0.189	0.001	11.0850	
360 minute summer	S24	4.000	S21	4.7	0.200	0.001	12.4890	
360 minute summer	S21	3.001	S22	4.2	0.172	0.001	5.2395	
360 minute summer	S22	Hydro-Brake®	HW23	3.3				
360 minute summer	HW23	Flow through pond	HW08	11.2	0.068	0.000	85.0137	
360 minute summer	HW08	1.006	S09	5.6	0.394	0.385	0.1705	
360 minute summer	S09	Hydro-Brake®	S10	5.4				
360 minute summer	S25	5.000	S26	3.1	0.136	0.001	16.4199	
360 minute summer	S26	Hydro-Brake®	S10	0.4				
360 minute summer	S10	1.008	S11	5.7	0.997	0.141	0.1936	
360 minute summer	S11	1.009	S12	5.7	1.029	0.392	0.1144	
360 minute summer	S12	1.010	S13	9.3	2.044	0.176	0.1806	
360 minute summer	S13	1.011	S14	13.0	2.290	0.228	0.1807	
360 minute summer	S27	6.000	BC28	4.6	1.964	0.078	0.0394	
360 minute summer	BC28	6.001	BC29	10.8	0.060	0.001	18.0664	
360 minute summer	BC29	6.002	S30	4.2	0.178	0.115	0.0793	
360 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 99.64%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	S14	184	114.259	0.059	19.2	0.1149	0.0000	OK
360 minute summer	BC15	328	113.129	0.351	19.2	0.0000	0.0000	OK
360 minute summer	BC16	328	113.127	0.579	15.3	0.0000	0.0000	SURCHARGED
360 minute summer	S31	184	113.959	0.021	1.9	0.0282	0.0000	OK
360 minute summer	BC32	328	113.128	0.278	4.9	0.0000	0.0000	OK
360 minute summer	BC33	328	113.127	0.547	5.9	0.0727	0.0000	SURCHARGED
360 minute summer	S17	328	113.126	0.596	16.2	2.3899	0.0000	SURCHARGED
360 minute summer	S18	440	112.584	0.080	11.0	0.0904	0.0000	OK
360 minute summer	OUTFALL	440	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute summer	S14	1.012	BC15	19.2	2.390	0.138	0.0509	
360 minute summer	BC15	1.013	BC16	15.3	0.075	0.001	64.1450	
360 minute summer	BC16	1.014	S17	9.8	0.262	0.125	0.2531	
360 minute summer	S31	7.000	BC32	1.9	1.072	0.016	0.0040	
360 minute summer	BC32	7.001	BC33	3.2	0.031	0.000	33.3957	
360 minute summer	BC33	7.002	S17	-4.9	-0.159	-0.058	0.5881	
360 minute summer	S17	Hydro-Brake®	S18	11.0				
360 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	337.2

Results for 30 year 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 99.52%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S01	184	127.535	0.028	2.4	0.0437	0.0000	OK
360 minute winter	S02	184	126.035	0.037	5.3	0.0840	0.0000	OK
360 minute winter	S03	344	124.550	0.405	10.1	0.2871	0.0000	OK
360 minute winter	S04	344	124.550	0.519	7.7	0.0000	0.0000	SURCHARGED
360 minute winter	S05	344	124.550	0.525	12.0	1.9790	0.0000	SURCHARGED
360 minute winter	S19	352	124.496	0.321	2.0	0.6562	0.0000	SURCHARGED
360 minute winter	S06	352	124.496	0.582	14.5	1.2674	0.0000	SURCHARGED
360 minute winter	HW07	344	124.497	0.784	14.4	0.0000	0.0000	OK
360 minute winter	S20	344	124.553	0.630	4.4	3.1665	0.0000	OK
360 minute winter	S24	344	124.552	0.670	5.3	1.7676	0.0000	OK
360 minute winter	S21	344	124.552	0.717	7.4	4.1983	0.0000	OK
360 minute winter	S22	344	124.552	0.753	3.8	3.4084	0.0000	SURCHARGED
360 minute winter	HW23	344	124.496	0.783	3.2	0.0000	0.0000	OK
360 minute winter	HW08	352	124.495	0.949	11.8	0.4316	0.0000	SURCHARGED
360 minute winter	S09	352	124.487	1.006	5.5	1.4399	0.0000	SURCHARGED
360 minute winter	S25	352	123.391	0.491	3.4	1.6202	0.0000	OK
360 minute winter	S26	344	123.390	0.668	3.0	1.7010	0.0000	SURCHARGED
360 minute winter	S10	136	122.735	0.038	5.7	0.0431	0.0000	OK
360 minute winter	S11	136	121.070	0.070	5.7	0.0606	0.0000	OK
360 minute winter	S12	184	120.913	0.040	8.2	0.0700	0.0000	OK
360 minute winter	S13	184	117.489	0.045	11.0	0.0673	0.0000	OK
360 minute winter	S27	184	117.449	0.024	3.3	0.0387	0.0000	OK
360 minute winter	BC28	232	114.759	0.184	5.8	0.0445	0.0000	OK
360 minute winter	BC29	240	114.761	0.521	8.9	0.0000	0.0000	SURCHARGED
360 minute winter	S30	240	114.761	0.531	5.0	1.1239	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	S01	1.000	S02	2.4	0.869	0.074	0.1289	
360 minute winter	S02	1.001	S03	5.3	1.591	0.129	0.0441	
360 minute winter	S03	1.002	S04	7.7	0.097	0.001	28.5257	
360 minute winter	S04	1.003	S05	7.0	0.247	0.110	0.1171	
360 minute winter	S05	Hydro-Brake®	S06	11.9				
360 minute winter	S19	2.000	S06	2.0	0.553	0.138	0.2539	
360 minute winter	S06	1.005	HW07	14.4	0.735	0.225	0.6451	
360 minute winter	HW07	Flow through pond	HW08	10.1	0.057	0.000	100.4426	
360 minute winter	S20	3.000	S21	3.0	0.187	0.001	13.4179	
360 minute winter	S24	4.000	S21	4.0	0.203	0.001	15.0114	
360 minute winter	S21	3.001	S22	3.8	0.252	0.001	6.2149	
360 minute winter	S22	Hydro-Brake®	HW23	3.1				
360 minute winter	HW23	Flow through pond	HW08	10.1	0.057	0.000	100.4426	
360 minute winter	HW08	1.006	S09	5.5	0.400	0.382	0.1705	
360 minute winter	S09	Hydro-Brake®	S10	5.4				
360 minute winter	S25	5.000	S26	3.0	0.189	0.001	19.2010	
360 minute winter	S26	Hydro-Brake®	S10	0.4				
360 minute winter	S10	1.008	S11	5.7	0.994	0.141	0.1940	
360 minute winter	S11	1.009	S12	5.7	1.014	0.392	0.1116	
360 minute winter	S12	1.010	S13	8.2	2.019	0.156	0.1624	
360 minute winter	S13	1.011	S14	11.0	2.157	0.192	0.1620	
360 minute winter	S27	6.000	BC28	3.3	1.783	0.056	0.0312	
360 minute winter	BC28	6.001	BC29	8.9	0.083	0.001	17.7588	
360 minute winter	BC29	6.002	S30	4.3	0.176	0.118	0.0793	
360 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 99.52%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S14	184	114.255	0.055	16.7	0.1067	0.0000	OK
360 minute winter	BC15	344	113.206	0.427	16.7	0.0000	0.0000	OK
360 minute winter	BC16	352	113.206	0.658	13.7	0.0000	0.0000	SURCHARGED
360 minute winter	S31	184	113.956	0.018	1.4	0.0243	0.0000	OK
360 minute winter	BC32	344	113.205	0.355	3.7	0.0000	0.0000	OK
360 minute winter	BC33	352	113.205	0.625	4.2	0.0831	0.0000	SURCHARGED
360 minute winter	S17	352	113.205	0.675	14.7	2.7061	0.0000	SURCHARGED
360 minute winter	S18	496	112.584	0.080	11.0	0.0904	0.0000	OK
360 minute winter	OUTFALL	496	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
360 minute winter	S14	1.012	BC15	16.7	2.302	0.120	0.0460	
360 minute winter	BC15	1.013	BC16	13.7	0.081	0.001	74.8574	
360 minute winter	BC16	1.014	S17	9.7	0.272	0.124	0.2531	
360 minute winter	S31	7.000	BC32	1.4	0.979	0.012	0.0032	
360 minute winter	BC32	7.001	BC33	-2.3	0.027	0.000	39.6745	
360 minute winter	BC33	7.002	S17	-3.5	-0.197	-0.041	0.5881	
360 minute winter	S17	Hydro-Brake®	S18	11.0				
360 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	343.5

Results for 30 year 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 99.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	S01	248	127.536	0.029	2.7	0.0463	0.0000	OK
480 minute summer	S02	248	126.037	0.039	5.9	0.0888	0.0000	OK
480 minute summer	S03	368	124.454	0.309	11.2	0.2190	0.0000	OK
480 minute summer	S04	368	124.454	0.423	8.2	0.0000	0.0000	SURCHARGED
480 minute summer	S05	368	124.454	0.429	12.6	1.6169	0.0000	SURCHARGED
480 minute summer	S19	392	124.401	0.226	2.2	0.4617	0.0000	SURCHARGED
480 minute summer	S06	392	124.401	0.487	15.2	1.0610	0.0000	SURCHARGED
480 minute summer	HW07	392	124.401	0.688	15.1	0.0000	0.0000	OK
480 minute summer	S20	368	124.455	0.532	4.8	2.6764	0.0000	OK
480 minute summer	S24	392	124.455	0.573	5.8	1.5110	0.0000	OK
480 minute summer	S21	368	124.455	0.620	7.8	3.6280	0.0000	OK
480 minute summer	S22	368	124.455	0.656	3.8	2.9675	0.0000	SURCHARGED
480 minute summer	HW23	392	124.400	0.687	3.4	0.0000	0.0000	OK
480 minute summer	HW08	392	124.400	0.854	12.5	0.3886	0.0000	SURCHARGED
480 minute summer	S09	392	124.393	0.912	5.5	1.3052	0.0000	SURCHARGED
480 minute summer	S25	456	123.331	0.431	3.8	1.4207	0.0000	OK
480 minute summer	S26	448	123.330	0.608	1.9	1.5483	0.0000	SURCHARGED
480 minute summer	S10	208	122.735	0.038	5.7	0.0430	0.0000	OK
480 minute summer	S11	208	121.070	0.070	5.7	0.0606	0.0000	OK
480 minute summer	S12	240	120.914	0.041	8.5	0.0713	0.0000	OK
480 minute summer	S13	240	117.490	0.046	11.5	0.0688	0.0000	OK
480 minute summer	S27	248	117.451	0.026	3.7	0.0409	0.0000	OK
480 minute summer	BC28	288	114.713	0.138	6.5	0.0334	0.0000	OK
480 minute summer	BC29	288	114.711	0.471	9.5	0.0000	0.0000	SURCHARGED
480 minute summer	S30	288	114.711	0.481	5.0	1.0172	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	S01	1.000	S02	2.7	0.896	0.084	0.1396	
480 minute summer	S02	1.001	S03	5.9	1.641	0.143	0.0476	
480 minute summer	S03	1.002	S04	8.2	0.075	0.002	22.5944	
480 minute summer	S04	1.003	S05	7.3	0.247	0.114	0.1171	
480 minute summer	S05	Hydro-Brake®	S06	12.5				
480 minute summer	S19	2.000	S06	2.2	0.584	0.152	0.2539	
480 minute summer	S06	1.005	HW07	15.1	0.740	0.236	0.6451	
480 minute summer	HW07	Flow through pond	HW08	10.4	0.065	0.000	83.7428	
480 minute summer	S20	3.000	S21	2.9	0.189	0.001	10.9084	
480 minute summer	S24	4.000	S21	4.3	0.200	0.001	12.2954	
480 minute summer	S21	3.001	S22	3.8	0.175	0.001	5.1647	
480 minute summer	S22	Hydro-Brake®	HW23	3.4				
480 minute summer	HW23	Flow through pond	HW08	10.4	0.065	0.000	83.7428	
480 minute summer	HW08	1.006	S09	5.5	0.387	0.383	0.1705	
480 minute summer	S09	Hydro-Brake®	S10	5.4				
480 minute summer	S25	5.000	S26	1.9	0.136	0.001	16.6818	
480 minute summer	S26	Hydro-Brake®	S10	0.4				
480 minute summer	S10	1.008	S11	5.7	0.995	0.141	0.1938	
480 minute summer	S11	1.009	S12	5.7	1.032	0.392	0.1126	
480 minute summer	S12	1.010	S13	8.5	2.026	0.162	0.1669	
480 minute summer	S13	1.011	S14	11.5	2.192	0.200	0.1661	
480 minute summer	S27	6.000	BC28	3.7	1.844	0.063	0.0338	
480 minute summer	BC28	6.001	BC29	9.5	0.060	0.001	15.3555	
480 minute summer	BC29	6.002	S30	4.4	0.174	0.119	0.0793	
480 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 99.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	S14	248	114.256	0.056	17.2	0.1085	0.0000	OK
480 minute summer	BC15	376	113.132	0.353	17.2	0.0000	0.0000	OK
480 minute summer	BC16	384	113.131	0.583	13.5	0.0000	0.0000	SURCHARGED
480 minute summer	S31	248	113.957	0.018	1.5	0.0251	0.0000	OK
480 minute summer	BC32	376	113.131	0.281	3.2	0.0000	0.0000	OK
480 minute summer	BC33	384	113.130	0.550	5.2	0.0732	0.0000	SURCHARGED
480 minute summer	S17	384	113.130	0.600	15.6	2.4049	0.0000	SURCHARGED
480 minute summer	S18	520	112.584	0.080	11.0	0.0904	0.0000	OK
480 minute summer	OUTFALL	520	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute summer	S14	1.012	BC15	17.2	2.323	0.124	0.0471	
480 minute summer	BC15	1.013	BC16	13.5	0.070	0.001	64.5999	
480 minute summer	BC16	1.014	S17	9.8	0.250	0.125	0.2531	
480 minute summer	S31	7.000	BC32	1.5	1.000	0.013	0.0034	
480 minute summer	BC32	7.001	BC33	2.3	0.016	0.000	33.6603	
480 minute summer	BC33	7.002	S17	-4.6	-0.153	-0.054	0.5881	
480 minute summer	S17	Hydro-Brake®	S18	11.0				
480 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	392.3

Results for 30 year 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S01	248	127.532	0.025	2.0	0.0400	0.0000	OK
480 minute winter	S02	248	126.031	0.033	4.3	0.0756	0.0000	OK
480 minute winter	S03	392	124.537	0.392	8.2	0.2778	0.0000	OK
480 minute winter	S04	392	124.537	0.506	6.7	0.0000	0.0000	SURCHARGED
480 minute winter	S05	392	124.537	0.512	10.4	1.9294	0.0000	SURCHARGED
480 minute winter	S19	448	124.484	0.309	1.6	0.6322	0.0000	SURCHARGED
480 minute winter	S06	448	124.484	0.570	12.6	1.2429	0.0000	SURCHARGED
480 minute winter	HW07	424	124.485	0.772	12.4	0.0000	0.0000	OK
480 minute winter	S20	432	124.540	0.617	3.5	3.1016	0.0000	OK
480 minute winter	S24	440	124.540	0.658	4.3	1.7340	0.0000	OK
480 minute winter	S21	432	124.540	0.705	6.1	4.1229	0.0000	OK
480 minute winter	S22	432	124.540	0.741	3.4	3.3501	0.0000	SURCHARGED
480 minute winter	HW23	456	124.484	0.771	3.2	0.0000	0.0000	OK
480 minute winter	HW08	448	124.484	0.937	10.5	0.4266	0.0000	SURCHARGED
480 minute winter	S09	448	124.476	0.995	5.5	1.4239	0.0000	SURCHARGED
480 minute winter	S25	464	123.402	0.502	2.8	1.6574	0.0000	OK
480 minute winter	S26	456	123.402	0.680	2.4	1.7317	0.0000	SURCHARGED
480 minute winter	S10	184	122.735	0.038	5.7	0.0431	0.0000	OK
480 minute winter	S11	184	121.070	0.070	5.7	0.0606	0.0000	OK
480 minute winter	S12	240	120.912	0.039	7.7	0.0680	0.0000	OK
480 minute winter	S13	240	117.487	0.043	10.0	0.0642	0.0000	OK
480 minute winter	S27	248	117.447	0.022	2.7	0.0351	0.0000	OK
480 minute winter	BC28	304	114.675	0.100	4.8	0.0241	0.0000	OK
480 minute winter	BC29	304	114.675	0.435	7.2	0.0000	0.0000	SURCHARGED
480 minute winter	S30	304	114.675	0.445	4.8	0.9417	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S01	1.000	S02	2.0	0.828	0.062	0.1119	
480 minute winter	S02	1.001	S03	4.3	1.501	0.104	0.0380	
480 minute winter	S03	1.002	S04	6.7	0.057	0.001	27.7143	
480 minute winter	S04	1.003	S05	6.1	0.240	0.096	0.1171	
480 minute winter	S05	Hydro-Brake®	S06	10.3				
480 minute winter	S19	2.000	S06	1.6	0.525	0.111	0.2539	
480 minute winter	S06	1.005	HW07	12.4	0.701	0.195	0.6451	
480 minute winter	HW07	Flow through pond	HW08	9.0	0.060	0.000	98.3665	
480 minute winter	S20	3.000	S21	2.3	0.186	0.000	13.0832	
480 minute winter	S24	4.000	S21	3.3	0.200	0.001	14.6514	
480 minute winter	S21	3.001	S22	3.4	0.271	0.001	6.0754	
480 minute winter	S22	Hydro-Brake®	HW23	3.2				
480 minute winter	HW23	Flow through pond	HW08	9.0	0.060	0.000	98.3665	
480 minute winter	HW08	1.006	S09	5.5	0.393	0.380	0.1705	
480 minute winter	S09	Hydro-Brake®	S10	5.4				
480 minute winter	S25	5.000	S26	2.4	0.184	0.001	19.6977	
480 minute winter	S26	Hydro-Brake®	S10	0.4				
480 minute winter	S10	1.008	S11	5.7	0.992	0.141	0.1941	
480 minute winter	S11	1.009	S12	5.7	1.018	0.392	0.1104	
480 minute winter	S12	1.010	S13	7.7	2.013	0.147	0.1537	
480 minute winter	S13	1.011	S14	10.0	2.087	0.175	0.1526	
480 minute winter	S27	6.000	BC28	2.7	1.682	0.046	0.0271	
480 minute winter	BC28	6.001	BC29	7.2	0.039	0.001	13.4792	
480 minute winter	BC29	6.002	S30	4.0	0.172	0.110	0.0793	
480 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 99.61%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S14	240	114.253	0.053	15.5	0.1025	0.0000	OK
480 minute winter	BC15	392	113.204	0.426	15.5	0.0000	0.0000	OK
480 minute winter	BC16	400	113.204	0.656	13.8	0.0000	0.0000	SURCHARGED
480 minute winter	S31	240	113.954	0.016	1.1	0.0217	0.0000	OK
480 minute winter	BC32	400	113.203	0.353	3.0	0.0000	0.0000	OK
480 minute winter	BC33	400	113.203	0.623	3.3	0.0829	0.0000	SURCHARGED
480 minute winter	S17	400	113.204	0.674	13.9	2.6996	0.0000	SURCHARGED
480 minute winter	S18	584	112.584	0.080	11.0	0.0904	0.0000	OK
480 minute winter	OUTFALL	584	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
480 minute winter	S14	1.012	BC15	15.5	2.255	0.111	0.0435	
480 minute winter	BC15	1.013	BC16	13.8	0.073	0.001	74.6329	
480 minute winter	BC16	1.014	S17	9.6	0.266	0.123	0.2531	
480 minute winter	S31	7.000	BC32	1.1	0.911	0.009	0.0027	
480 minute winter	BC32	7.001	BC33	2.2	0.025	0.000	39.5464	
480 minute winter	BC33	7.002	S17	-2.7	-0.163	-0.032	0.5881	
480 minute winter	S17	Hydro-Brake®	S18	11.0				
480 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	407.2

Results for 30 year 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	S01	315	127.534	0.027	2.2	0.0419	0.0000	OK
600 minute summer	S02	315	126.033	0.035	4.8	0.0799	0.0000	OK
600 minute summer	S03	435	124.443	0.298	9.1	0.2113	0.0000	OK
600 minute summer	S04	435	124.443	0.412	7.3	0.0000	0.0000	SURCHARGED
600 minute summer	S05	435	124.443	0.418	11.4	1.5760	0.0000	SURCHARGED
600 minute summer	S19	465	124.390	0.215	1.8	0.4395	0.0000	SURCHARGED
600 minute summer	S06	465	124.390	0.476	13.8	1.0374	0.0000	SURCHARGED
600 minute summer	HW07	465	124.392	0.679	13.7	0.0000	0.0000	OK
600 minute summer	S20	450	124.445	0.522	3.9	2.6278	0.0000	OK
600 minute summer	S24	435	124.445	0.563	4.7	1.4854	0.0000	OK
600 minute summer	S21	435	124.445	0.610	6.6	3.5715	0.0000	OK
600 minute summer	S22	435	124.445	0.646	3.4	2.9239	0.0000	SURCHARGED
600 minute summer	HW23	450	124.390	0.677	3.1	0.0000	0.0000	OK
600 minute summer	HW08	465	124.389	0.843	11.4	0.3837	0.0000	SURCHARGED
600 minute summer	S09	465	124.382	0.901	5.5	1.2894	0.0000	SURCHARGED
600 minute summer	S25	510	123.330	0.430	3.1	1.4178	0.0000	OK
600 minute summer	S26	510	123.329	0.607	1.7	1.5445	0.0000	SURCHARGED
600 minute summer	S10	270	122.735	0.038	5.7	0.0431	0.0000	OK
600 minute summer	S11	840	121.070	0.070	5.7	0.0608	0.0000	OK
600 minute summer	S12	300	120.913	0.040	8.0	0.0692	0.0000	OK
600 minute summer	S13	300	117.488	0.044	10.5	0.0657	0.0000	OK
600 minute summer	S27	315	117.448	0.023	3.0	0.0369	0.0000	OK
600 minute summer	BC28	360	114.655	0.080	5.3	0.0193	0.0000	OK
600 minute summer	BC29	345	114.657	0.417	6.6	0.0000	0.0000	SURCHARGED
600 minute summer	S30	345	114.657	0.427	4.8	0.9031	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute summer	S01	1.000	S02	2.2	0.845	0.068	0.1206	
600 minute summer	S02	1.001	S03	4.8	1.548	0.117	0.0411	
600 minute summer	S03	1.002	S04	7.3	0.060	0.001	21.9244	
600 minute summer	S04	1.003	S05	6.7	0.246	0.105	0.1171	
600 minute summer	S05	Hydro-Brake®	S06	11.3				
600 minute summer	S19	2.000	S06	1.8	0.552	0.125	0.2539	
600 minute summer	S06	1.005	HW07	13.7	0.703	0.214	0.6451	
600 minute summer	HW07	Flow through pond	HW08	9.8	0.050	0.000	81.9157	
600 minute summer	S20	3.000	S21	2.6	0.191	0.000	10.6628	
600 minute summer	S24	4.000	S21	3.6	0.192	0.001	12.0299	
600 minute summer	S21	3.001	S22	3.4	0.132	0.001	5.0616	
600 minute summer	S22	Hydro-Brake®	HW23	3.1				
600 minute summer	HW23	Flow through pond	HW08	9.8	0.050	0.000	81.9157	
600 minute summer	HW08	1.006	S09	5.5	0.385	0.382	0.1705	
600 minute summer	S09	Hydro-Brake®	S10	5.4				
600 minute summer	S25	5.000	S26	1.7	0.086	0.001	16.6318	
600 minute summer	S26	Hydro-Brake®	S10	0.4				
600 minute summer	S10	1.008	S11	5.7	0.993	0.141	0.1942	
600 minute summer	S11	1.009	S12	5.7	1.034	0.392	0.1115	
600 minute summer	S12	1.010	S13	8.0	2.018	0.152	0.1582	
600 minute summer	S13	1.011	S14	10.5	2.127	0.183	0.1567	
600 minute summer	S27	6.000	BC28	3.0	1.736	0.051	0.0291	
600 minute summer	BC28	6.001	BC29	6.6	0.035	0.001	12.4908	
600 minute summer	BC29	6.002	S30	4.0	0.168	0.110	0.0793	
600 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	S14	315	114.254	0.054	16.0	0.1044	0.0000	OK
600 minute summer	BC15	435	113.128	0.350	16.0	0.0000	0.0000	OK
600 minute summer	BC16	435	113.127	0.579	12.5	0.0000	0.0000	SURCHARGED
600 minute summer	S31	315	113.955	0.017	1.2	0.0226	0.0000	OK
600 minute summer	BC32	435	113.127	0.277	2.7	0.0000	0.0000	OK
600 minute summer	BC33	435	113.127	0.547	3.7	0.0727	0.0000	SURCHARGED
600 minute summer	S17	435	113.127	0.597	14.3	2.3910	0.0000	SURCHARGED
600 minute summer	S18	600	112.584	0.080	11.0	0.0904	0.0000	OK
600 minute summer	OUTFALL	600	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute summer	S14	1.012	BC15	16.0	2.276	0.115	0.0446	
600 minute summer	BC15	1.013	BC16	12.5	0.063	0.001	64.0970	
600 minute summer	BC16	1.014	S17	9.7	0.241	0.124	0.2531	
600 minute summer	S31	7.000	BC32	1.2	0.935	0.010	0.0029	
600 minute summer	BC32	7.001	BC33	2.2	0.013	0.000	33.3640	
600 minute summer	BC33	7.002	S17	-3.1	-0.127	-0.036	0.5881	
600 minute summer	S17	Hydro-Brake®	S18	11.0				
600 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	437.0

Results for 30 year 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S01	315	127.530	0.023	1.7	0.0370	0.0000	OK
600 minute winter	S02	315	126.029	0.031	3.7	0.0701	0.0000	OK
600 minute winter	S03	465	124.529	0.384	7.0	0.2721	0.0000	OK
600 minute winter	S04	465	124.529	0.498	6.1	0.0000	0.0000	SURCHARGED
600 minute winter	S05	465	124.529	0.504	8.6	1.8991	0.0000	SURCHARGED
600 minute winter	S19	495	124.474	0.299	1.4	0.6117	0.0000	SURCHARGED
600 minute winter	S06	495	124.474	0.560	10.5	1.2210	0.0000	SURCHARGED
600 minute winter	HW07	480	124.476	0.763	10.4	0.0000	0.0000	OK
600 minute winter	S20	465	124.529	0.606	3.0	3.0484	0.0000	OK
600 minute winter	S24	465	124.529	0.647	3.6	1.7062	0.0000	OK
600 minute winter	S21	465	124.529	0.694	5.2	4.0615	0.0000	OK
600 minute winter	S22	465	124.529	0.730	3.3	3.3026	0.0000	SURCHARGED
600 minute winter	HW23	495	124.474	0.761	3.2	0.0000	0.0000	OK
600 minute winter	HW08	495	124.473	0.927	9.5	0.4220	0.0000	SURCHARGED
600 minute winter	S09	495	124.466	0.985	5.5	1.4097	0.0000	SURCHARGED
600 minute winter	S25	570	123.406	0.506	2.4	1.6694	0.0000	OK
600 minute winter	S26	570	123.406	0.684	1.9	1.7399	0.0000	SURCHARGED
600 minute winter	S10	240	122.735	0.038	5.7	0.0431	0.0000	OK
600 minute winter	S11	240	121.070	0.070	5.7	0.0607	0.0000	OK
600 minute winter	S12	300	120.911	0.038	7.5	0.0667	0.0000	OK
600 minute winter	S13	300	117.485	0.041	9.4	0.0620	0.0000	OK
600 minute winter	S27	315	117.446	0.021	2.3	0.0324	0.0000	OK
600 minute winter	BC28	360	114.602	0.027	4.0	0.0066	0.0000	OK
600 minute winter	BC29	360	114.602	0.362	4.2	0.0000	0.0000	SURCHARGED
600 minute winter	S30	360	114.602	0.372	4.6	0.7866	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S01	1.000	S02	1.7	0.786	0.053	0.1002	
600 minute winter	S02	1.001	S03	3.7	1.437	0.090	0.0341	
600 minute winter	S03	1.002	S04	6.1	0.053	0.001	27.2177	
600 minute winter	S04	1.003	S05	5.1	0.235	0.081	0.1171	
600 minute winter	S05	Hydro-Brake®	S06	8.6				
600 minute winter	S19	2.000	S06	1.4	0.504	0.097	0.2539	
600 minute winter	S06	1.005	HW07	10.4	0.670	0.163	0.6451	
600 minute winter	HW07	Flow through pond	HW08	8.2	0.051	0.000	96.5065	
600 minute winter	S20	3.000	S21	2.0	0.190	0.000	12.8095	
600 minute winter	S24	4.000	S21	2.9	0.192	0.001	14.3570	
600 minute winter	S21	3.001	S22	3.3	0.135	0.001	5.9617	
600 minute winter	S22	Hydro-Brake®	HW23	3.2				
600 minute winter	HW23	Flow through pond	HW08	8.2	0.051	0.000	96.5065	
600 minute winter	HW08	1.006	S09	5.5	0.388	0.379	0.1705	
600 minute winter	S09	Hydro-Brake®	S10	5.4				
600 minute winter	S25	5.000	S26	1.9	0.107	0.001	19.8446	
600 minute winter	S26	Hydro-Brake®	S10	0.4				
600 minute winter	S10	1.008	S11	5.7	0.990	0.141	0.1942	
600 minute winter	S11	1.009	S12	5.7	1.022	0.392	0.1098	
600 minute winter	S12	1.010	S13	7.5	2.010	0.142	0.1479	
600 minute winter	S13	1.011	S14	9.4	2.044	0.163	0.1454	
600 minute winter	S27	6.000	BC28	2.3	1.603	0.039	0.0242	
600 minute winter	BC28	6.001	BC29	4.2	0.046	0.000	9.8044	
600 minute winter	BC29	6.002	S30	3.5	0.173	0.095	0.0793	
600 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	S14	315	114.251	0.051	14.5	0.0991	0.0000	OK
600 minute winter	BC15	450	113.191	0.413	14.5	0.0000	0.0000	OK
600 minute winter	BC16	450	113.190	0.642	12.8	0.0000	0.0000	SURCHARGED
600 minute winter	S31	300	113.953	0.015	0.9	0.0198	0.0000	OK
600 minute winter	BC32	450	113.190	0.340	2.1	0.0000	0.0000	OK
600 minute winter	BC33	450	113.190	0.610	2.7	0.0811	0.0000	SURCHARGED
600 minute winter	S17	450	113.190	0.660	13.4	2.6433	0.0000	SURCHARGED
600 minute winter	S18	315	112.584	0.080	11.0	0.0904	0.0000	OK
600 minute winter	OUTFALL	315	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
600 minute winter	S14	1.012	BC15	14.5	2.216	0.104	0.0415	
600 minute winter	BC15	1.013	BC16	12.8	0.070	0.001	72.7921	
600 minute winter	BC16	1.014	S17	9.2	0.244	0.118	0.2531	
600 minute winter	S31	7.000	BC32	0.9	0.859	0.008	0.0024	
600 minute winter	BC32	7.001	BC33	1.9	0.010	0.000	38.4696	
600 minute winter	BC33	7.002	S17	2.4	-0.156	0.028	0.5881	
600 minute winter	S17	Hydro-Brake®	S18	11.0				
600 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	461.5

Results for 30 year 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	S01	375	127.532	0.025	2.0	0.0400	0.0000	OK
720 minute summer	S02	375	126.031	0.033	4.3	0.0756	0.0000	OK
720 minute summer	S03	495	124.434	0.288	8.2	0.2045	0.0000	OK
720 minute summer	S04	495	124.434	0.402	6.6	0.0000	0.0000	SURCHARGED
720 minute summer	S05	495	124.434	0.408	10.6	1.5400	0.0000	SURCHARGED
720 minute summer	S19	525	124.380	0.205	1.6	0.4182	0.0000	SURCHARGED
720 minute summer	S06	525	124.380	0.466	12.8	1.0145	0.0000	SURCHARGED
720 minute summer	HW07	525	124.379	0.666	12.6	0.0000	0.0000	OK
720 minute summer	S20	510	124.435	0.512	3.5	2.5771	0.0000	OK
720 minute summer	S24	510	124.435	0.553	4.3	1.4586	0.0000	OK
720 minute summer	S21	510	124.435	0.600	6.0	3.5126	0.0000	OK
720 minute summer	S22	510	124.435	0.636	3.4	2.8783	0.0000	SURCHARGED
720 minute summer	HW23	525	124.379	0.666	3.2	0.0000	0.0000	OK
720 minute summer	HW08	525	124.379	0.833	10.6	0.3789	0.0000	SURCHARGED
720 minute summer	S09	525	124.371	0.890	5.5	1.2740	0.0000	SURCHARGED
720 minute summer	S25	570	123.328	0.428	2.8	1.4108	0.0000	OK
720 minute summer	S26	585	123.327	0.605	2.2	1.5396	0.0000	SURCHARGED
720 minute summer	S10	960	122.735	0.038	5.7	0.0430	0.0000	OK
720 minute summer	S11	960	121.071	0.071	5.7	0.0612	0.0000	OK
720 minute summer	S12	360	120.912	0.039	7.8	0.0683	0.0000	OK
720 minute summer	S13	360	117.487	0.042	10.0	0.0641	0.0000	OK
720 minute summer	S27	375	117.447	0.022	2.7	0.0351	0.0000	OK
720 minute summer	BC28	405	114.613	0.038	4.7	0.0092	0.0000	OK
720 minute summer	BC29	405	114.614	0.374	5.6	0.0000	0.0000	SURCHARGED
720 minute summer	S30	405	114.614	0.384	4.7	0.8121	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	S01	1.000	S02	2.0	0.828	0.062	0.1119	
720 minute summer	S02	1.001	S03	4.3	1.501	0.104	0.0380	
720 minute summer	S03	1.002	S04	6.6	0.057	0.001	21.3348	
720 minute summer	S04	1.003	S05	6.2	0.241	0.097	0.1171	
720 minute summer	S05	Hydro-Brake®	S06	10.5				
720 minute summer	S19	2.000	S06	1.6	0.534	0.111	0.2539	
720 minute summer	S06	1.005	HW07	12.6	0.700	0.197	0.6451	
720 minute summer	HW07	Flow through pond	HW08	9.1	0.051	0.000	80.1717	
720 minute summer	S20	3.000	S21	2.5	0.185	0.000	10.4080	
720 minute summer	S24	4.000	S21	3.4	0.198	0.001	11.7523	
720 minute summer	S21	3.001	S22	3.4	0.133	0.001	4.9540	
720 minute summer	S22	Hydro-Brake®	HW23	3.2				
720 minute summer	HW23	Flow through pond	HW08	9.1	0.051	0.000	80.1717	
720 minute summer	HW08	1.006	S09	5.5	0.385	0.380	0.1705	
720 minute summer	S09	Hydro-Brake®	S10	5.4				
720 minute summer	S25	5.000	S26	2.2	0.095	0.001	16.5459	
720 minute summer	S26	Hydro-Brake®	S10	0.4				
720 minute summer	S10	1.008	S11	5.7	0.992	0.141	0.1956	
720 minute summer	S11	1.009	S12	5.7	1.037	0.392	0.1109	
720 minute summer	S12	1.010	S13	7.8	2.018	0.149	0.1540	
720 minute summer	S13	1.011	S14	10.0	2.093	0.174	0.1519	
720 minute summer	S27	6.000	BC28	2.7	1.682	0.046	0.0271	
720 minute summer	BC28	6.001	BC29	5.6	0.034	0.001	10.3800	
720 minute summer	BC29	6.002	S30	3.6	0.162	0.097	0.0793	
720 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 30 year 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 99.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	S14	375	114.253	0.053	15.4	0.1023	0.0000	OK
720 minute summer	BC15	495	113.123	0.344	15.4	0.0000	0.0000	OK
720 minute summer	BC16	495	113.122	0.574	12.2	0.0000	0.0000	SURCHARGED
720 minute summer	S31	375	113.954	0.016	1.1	0.0217	0.0000	OK
720 minute summer	BC32	495	113.122	0.272	2.5	0.0000	0.0000	OK
720 minute summer	BC33	495	113.122	0.542	3.4	0.0721	0.0000	SURCHARGED
720 minute summer	S17	495	113.122	0.592	13.9	2.3714	0.0000	SURCHARGED
720 minute summer	S18	645	112.584	0.080	11.0	0.0904	0.0000	OK
720 minute summer	OUTFALL	645	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute summer	S14	1.012	BC15	15.4	2.251	0.111	0.0433	
720 minute summer	BC15	1.013	BC16	12.2	0.063	0.001	63.4082	
720 minute summer	BC16	1.014	S17	9.5	0.233	0.122	0.2531	
720 minute summer	S31	7.000	BC32	1.1	0.911	0.009	0.0027	
720 minute summer	BC32	7.001	BC33	1.7	0.015	0.000	32.9612	
720 minute summer	BC33	7.002	S17	-2.9	-0.107	-0.034	0.5881	
720 minute summer	S17	Hydro-Brake®	S18	11.0				
720 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	481.1

Results for 30 year 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 99.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S01	375	127.529	0.022	1.5	0.0348	0.0000	OK
720 minute winter	S02	375	126.027	0.029	3.3	0.0662	0.0000	OK
720 minute winter	S03	540	124.515	0.370	6.2	0.2621	0.0000	OK
720 minute winter	S04	540	124.515	0.484	5.5	0.0000	0.0000	SURCHARGED
720 minute winter	S05	540	124.515	0.490	8.2	1.8461	0.0000	SURCHARGED
720 minute winter	S19	570	124.460	0.285	1.2	0.5828	0.0000	SURCHARGED
720 minute winter	S06	570	124.460	0.546	9.8	1.1903	0.0000	SURCHARGED
720 minute winter	HW07	555	124.460	0.747	9.7	0.0000	0.0000	OK
720 minute winter	S20	555	124.515	0.592	2.6	2.9771	0.0000	OK
720 minute winter	S24	555	124.515	0.633	3.2	1.6691	0.0000	OK
720 minute winter	S21	555	124.515	0.680	4.8	3.9789	0.0000	OK
720 minute winter	S22	555	124.515	0.716	3.1	3.2388	0.0000	SURCHARGED
720 minute winter	HW23	570	124.460	0.747	3.0	0.0000	0.0000	OK
720 minute winter	HW08	570	124.459	0.913	9.0	0.4156	0.0000	SURCHARGED
720 minute winter	S09	570	124.452	0.971	5.5	1.3897	0.0000	SURCHARGED
720 minute winter	S25	660	123.401	0.501	2.1	1.6532	0.0000	OK
720 minute winter	S26	660	123.401	0.679	2.0	1.7273	0.0000	SURCHARGED
720 minute winter	S10	315	122.735	0.038	5.7	0.0430	0.0000	OK
720 minute winter	S11	285	121.070	0.070	5.7	0.0607	0.0000	OK
720 minute winter	S12	345	120.911	0.038	7.2	0.0656	0.0000	OK
720 minute winter	S13	360	117.484	0.040	8.9	0.0603	0.0000	OK
720 minute winter	S27	360	117.444	0.019	2.0	0.0303	0.0000	OK
720 minute winter	BC28	360	114.581	0.006	3.5	0.0014	0.0000	OK
720 minute winter	BC29	420	114.519	0.279	3.5	0.0000	0.0000	SURCHARGED
720 minute winter	S30	420	114.519	0.289	4.4	0.6118	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S01	1.000	S02	1.5	0.755	0.046	0.0921	
720 minute winter	S02	1.001	S03	3.3	1.390	0.080	0.0315	
720 minute winter	S03	1.002	S04	5.5	0.051	0.001	26.3501	
720 minute winter	S04	1.003	S05	4.9	0.232	0.076	0.1171	
720 minute winter	S05	Hydro-Brake®	S06	8.1				
720 minute winter	S19	2.000	S06	1.2	0.493	0.083	0.2539	
720 minute winter	S06	1.005	HW07	9.7	0.668	0.152	0.6451	
720 minute winter	HW07	Flow through pond	HW08	7.9	0.064	0.000	93.9692	
720 minute winter	S20	3.000	S21	2.0	0.184	0.000	12.4435	
720 minute winter	S24	4.000	S21	2.5	0.198	0.001	13.9631	
720 minute winter	S21	3.001	S22	3.1	0.138	0.001	5.8094	
720 minute winter	S22	Hydro-Brake®	HW23	3.0				
720 minute winter	HW23	Flow through pond	HW08	7.9	0.064	0.000	93.9692	
720 minute winter	HW08	1.006	S09	5.5	0.386	0.378	0.1705	
720 minute winter	S09	Hydro-Brake®	S10	5.4				
720 minute winter	S25	5.000	S26	2.0	0.096	0.001	19.6363	
720 minute winter	S26	Hydro-Brake®	S10	0.4				
720 minute winter	S10	1.008	S11	5.7	0.990	0.141	0.1942	
720 minute winter	S11	1.009	S12	5.7	1.027	0.392	0.1095	
720 minute winter	S12	1.010	S13	7.2	2.007	0.137	0.1430	
720 minute winter	S13	1.011	S14	8.9	2.040	0.155	0.1399	
720 minute winter	S27	6.000	BC28	2.0	1.537	0.034	0.0219	
720 minute winter	BC28	6.001	BC29	3.5	0.042	0.000	7.1744	
720 minute winter	BC29	6.002	S30	3.2	0.176	0.088	0.0793	
720 minute winter	S30	Hydro-Brake®	S14	4.4				

Results for 30 year 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 99.73%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S14	375	114.250	0.050	13.8	0.0965	0.0000	OK
720 minute winter	BC15	510	113.169	0.391	13.8	0.0000	0.0000	OK
720 minute winter	BC16	510	113.169	0.621	11.3	0.0000	0.0000	SURCHARGED
720 minute winter	S31	360	113.952	0.014	0.8	0.0186	0.0000	OK
720 minute winter	BC32	510	113.168	0.318	1.8	0.0000	0.0000	OK
720 minute winter	BC33	510	113.168	0.588	2.3	0.0782	0.0000	SURCHARGED
720 minute winter	S17	510	113.168	0.638	13.0	2.5576	0.0000	SURCHARGED
720 minute winter	S18	720	112.584	0.080	11.0	0.0904	0.0000	OK
720 minute winter	OUTFALL	720	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
720 minute winter	S14	1.012	BC15	13.8	2.184	0.099	0.0400	
720 minute winter	BC15	1.013	BC16	11.3	0.062	0.001	69.8158	
720 minute winter	BC16	1.014	S17	9.3	0.239	0.118	0.2531	
720 minute winter	S31	7.000	BC32	0.8	0.829	0.007	0.0022	
720 minute winter	BC32	7.001	BC33	1.4	0.012	0.000	36.7252	
720 minute winter	BC33	7.002	S17	2.3	-0.117	0.026	0.5881	
720 minute winter	S17	Hydro-Brake®	S18	11.0				
720 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	509.1

Results for 30 year 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	S01	495	127.530	0.023	1.6	0.0359	0.0000	OK
960 minute summer	S02	495	126.028	0.030	3.5	0.0682	0.0000	OK
960 minute summer	S03	630	124.410	0.265	6.7	0.1877	0.0000	OK
960 minute summer	S04	630	124.410	0.379	5.8	0.0000	0.0000	SURCHARGED
960 minute summer	S05	630	124.410	0.385	8.7	1.4507	0.0000	SURCHARGED
960 minute summer	S19	660	124.355	0.180	1.3	0.3677	0.0000	SURCHARGED
960 minute summer	S06	660	124.355	0.441	10.7	0.9615	0.0000	SURCHARGED
960 minute summer	HW07	660	124.355	0.642	10.5	0.0000	0.0000	OK
960 minute summer	S20	645	124.412	0.489	2.9	2.4586	0.0000	OK
960 minute summer	S24	645	124.412	0.530	3.5	1.3972	0.0000	OK
960 minute summer	S21	645	124.412	0.577	5.1	3.3755	0.0000	OK
960 minute summer	S22	645	124.412	0.613	3.2	2.7724	0.0000	SURCHARGED
960 minute summer	HW23	660	124.354	0.642	3.1	0.0000	0.0000	OK
960 minute summer	HW08	660	124.354	0.808	9.4	0.3678	0.0000	SURCHARGED
960 minute summer	S09	660	124.346	0.865	5.5	1.2384	0.0000	SURCHARGED
960 minute summer	S25	690	123.318	0.418	2.3	1.3779	0.0000	OK
960 minute summer	S26	690	123.318	0.595	1.9	1.5154	0.0000	SURCHARGED
960 minute summer	S10	1170	122.735	0.038	5.7	0.0433	0.0000	OK
960 minute summer	S11	1170	121.071	0.071	5.7	0.0615	0.0000	OK
960 minute summer	S12	480	120.911	0.038	7.4	0.0665	0.0000	OK
960 minute summer	S13	480	117.485	0.041	9.3	0.0618	0.0000	OK
960 minute summer	S27	495	117.445	0.020	2.2	0.0318	0.0000	OK
960 minute summer	BC28	495	114.581	0.006	3.9	0.0015	0.0000	OK
960 minute summer	BC29	525	114.528	0.287	3.9	0.0000	0.0000	SURCHARGED
960 minute summer	S30	525	114.527	0.297	4.4	0.6295	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute summer	S01	1.000	S02	1.6	0.771	0.050	0.0961	
960 minute summer	S02	1.001	S03	3.5	1.414	0.085	0.0328	
960 minute summer	S03	1.002	S04	5.8	0.054	0.001	19.8720	
960 minute summer	S04	1.003	S05	4.9	0.231	0.077	0.1171	
960 minute summer	S05	Hydro-Brake®	S06	8.6				
960 minute summer	S19	2.000	S06	1.3	0.504	0.090	0.2539	
960 minute summer	S06	1.005	HW07	10.5	0.659	0.164	0.6451	
960 minute summer	HW07	Flow through pond	HW08	8.1	0.051	0.000	76.2940	
960 minute summer	S20	3.000	S21	2.0	0.191	0.000	9.8170	
960 minute summer	S24	4.000	S21	2.6	0.190	0.001	11.1144	
960 minute summer	S21	3.001	S22	3.2	0.133	0.001	4.7052	
960 minute summer	S22	Hydro-Brake®	HW23	3.1				
960 minute summer	HW23	Flow through pond	HW08	8.1	0.051	0.000	76.2940	
960 minute summer	HW08	1.006	S09	5.5	0.385	0.379	0.1705	
960 minute summer	S09	Hydro-Brake®	S10	5.4				
960 minute summer	S25	5.000	S26	1.9	0.083	0.001	16.1415	
960 minute summer	S26	Hydro-Brake®	S10	0.4				
960 minute summer	S10	1.008	S11	5.7	0.991	0.142	0.1969	
960 minute summer	S11	1.009	S12	5.7	1.040	0.395	0.1099	
960 minute summer	S12	1.010	S13	7.4	2.010	0.141	0.1473	
960 minute summer	S13	1.011	S14	9.3	2.068	0.162	0.1445	
960 minute summer	S27	6.000	BC28	2.2	1.583	0.038	0.0234	
960 minute summer	BC28	6.001	BC29	3.9	0.034	0.000	7.3857	
960 minute summer	BC29	6.002	S30	3.2	0.156	0.089	0.0793	
960 minute summer	S30	Hydro-Brake®	S14	4.4				

Results for 30 year 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	S14	495	114.251	0.051	14.4	0.0986	0.0000	OK
960 minute summer	BC15	615	113.100	0.322	14.4	0.0000	0.0000	OK
960 minute summer	BC16	615	113.099	0.551	11.8	0.0000	0.0000	SURCHARGED
960 minute summer	S31	495	113.953	0.015	0.9	0.0198	0.0000	OK
960 minute summer	BC32	615	113.099	0.249	2.3	0.0000	0.0000	OK
960 minute summer	BC33	615	113.099	0.519	2.7	0.0690	0.0000	SURCHARGED
960 minute summer	S17	615	113.099	0.569	13.3	2.2785	0.0000	SURCHARGED
960 minute summer	S18	765	112.584	0.080	11.0	0.0904	0.0000	OK
960 minute summer	OUTFALL	765	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute summer	S14	1.012	BC15	14.4	2.210	0.103	0.0412	
960 minute summer	BC15	1.013	BC16	11.8	0.065	0.001	60.2347	
960 minute summer	BC16	1.014	S17	9.4	0.232	0.119	0.2531	
960 minute summer	S31	7.000	BC32	0.9	0.859	0.008	0.0024	
960 minute summer	BC32	7.001	BC33	1.9	0.006	0.000	31.1032	
960 minute summer	BC33	7.002	S17	-2.2	-0.091	-0.025	0.5881	
960 minute summer	S17	Hydro-Brake®	S18	11.0				
960 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	563.9

Results for 30 year 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S01	480	127.527	0.020	1.2	0.0313	0.0000	OK
960 minute winter	S02	480	126.024	0.026	2.6	0.0589	0.0000	OK
960 minute winter	S03	705	124.475	0.329	5.0	0.2336	0.0000	OK
960 minute winter	S04	705	124.475	0.443	4.6	0.0000	0.0000	SURCHARGED
960 minute winter	S05	705	124.475	0.449	7.2	1.6945	0.0000	SURCHARGED
960 minute winter	S19	735	124.422	0.247	1.0	0.5039	0.0000	SURCHARGED
960 minute winter	S06	735	124.422	0.508	8.7	1.1061	0.0000	SURCHARGED
960 minute winter	HW07	705	124.422	0.710	8.5	0.0000	0.0000	OK
960 minute winter	S20	720	124.476	0.553	2.2	2.7815	0.0000	OK
960 minute winter	S24	720	124.476	0.594	2.6	1.5662	0.0000	OK
960 minute winter	S21	720	124.476	0.641	4.1	3.7509	0.0000	OK
960 minute winter	S22	720	124.476	0.677	2.8	3.0625	0.0000	SURCHARGED
960 minute winter	HW23	705	124.421	0.708	2.7	0.0000	0.0000	OK
960 minute winter	HW08	735	124.421	0.875	8.4	0.3980	0.0000	SURCHARGED
960 minute winter	S09	735	124.414	0.933	5.4	1.3349	0.0000	SURCHARGED
960 minute winter	S25	750	123.380	0.480	1.7	1.5852	0.0000	OK
960 minute winter	S26	750	123.381	0.659	1.7	1.6763	0.0000	SURCHARGED
960 minute winter	S10	420	122.735	0.038	5.7	0.0430	0.0000	OK
960 minute winter	S11	1200	121.070	0.070	5.7	0.0610	0.0000	OK
960 minute winter	S12	465	120.910	0.037	6.9	0.0643	0.0000	OK
960 minute winter	S13	480	117.483	0.039	8.3	0.0582	0.0000	OK
960 minute winter	S27	495	117.443	0.018	1.7	0.0281	0.0000	OK
960 minute winter	BC28	495	114.581	0.005	3.0	0.0013	0.0000	OK
960 minute winter	BC29	525	114.416	0.176	3.0	0.0000	0.0000	OK
960 minute winter	S30	525	114.416	0.186	4.0	0.3931	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S01	1.000	S02	1.2	0.711	0.037	0.0782	
960 minute winter	S02	1.001	S03	2.6	1.296	0.063	0.0266	
960 minute winter	S03	1.002	S04	4.6	0.057	0.001	23.8663	
960 minute winter	S04	1.003	S05	4.3	0.228	0.068	0.1171	
960 minute winter	S05	Hydro-Brake®	S06	7.2				
960 minute winter	S19	2.000	S06	1.0	0.467	0.069	0.2539	
960 minute winter	S06	1.005	HW07	8.5	0.638	0.134	0.6451	
960 minute winter	HW07	Flow through pond	HW08	7.4	0.051	0.000	87.3068	
960 minute winter	S20	3.000	S21	1.6	0.185	0.000	11.4432	
960 minute winter	S24	4.000	S21	1.9	0.198	0.001	12.8762	
960 minute winter	S21	3.001	S22	2.8	0.133	0.001	5.3900	
960 minute winter	S22	Hydro-Brake®	HW23	2.7				
960 minute winter	HW23	Flow through pond	HW08	7.4	0.051	0.000	87.3068	
960 minute winter	HW08	1.006	S09	5.4	0.385	0.377	0.1705	
960 minute winter	S09	Hydro-Brake®	S10	5.4				
960 minute winter	S25	5.000	S26	1.7	0.137	0.001	18.7804	
960 minute winter	S26	Hydro-Brake®	S10	0.4				
960 minute winter	S10	1.008	S11	5.7	0.989	0.141	0.1948	
960 minute winter	S11	1.009	S12	5.7	1.035	0.392	0.1089	
960 minute winter	S12	1.010	S13	6.9	2.001	0.131	0.1375	
960 minute winter	S13	1.011	S14	8.3	2.059	0.144	0.1329	
960 minute winter	S27	6.000	BC28	1.7	1.463	0.029	0.0196	
960 minute winter	BC28	6.001	BC29	3.0	0.029	0.000	4.5641	
960 minute winter	BC29	6.002	S30	2.8	0.169	0.077	0.0682	
960 minute winter	S30	Hydro-Brake®	S14	4.0				

Results for 30 year 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 99.82%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	S14	495	114.248	0.048	12.8	0.0928	0.0000	OK
960 minute winter	BC15	645	113.119	0.341	12.8	0.0000	0.0000	OK
960 minute winter	BC16	645	113.120	0.571	10.9	0.0000	0.0000	SURCHARGED
960 minute winter	S31	480	113.951	0.013	0.7	0.0174	0.0000	OK
960 minute winter	BC32	645	113.119	0.269	1.4	0.0000	0.0000	OK
960 minute winter	BC33	645	113.119	0.539	1.7	0.0717	0.0000	SURCHARGED
960 minute winter	S17	645	113.119	0.589	12.4	2.3603	0.0000	SURCHARGED
960 minute winter	S18	510	112.584	0.080	11.0	0.0904	0.0000	OK
960 minute winter	OUTFALL	510	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
960 minute winter	S14	1.012	BC15	12.8	2.139	0.092	0.0379	
960 minute winter	BC15	1.013	BC16	10.9	0.070	0.001	63.0039	
960 minute winter	BC16	1.014	S17	9.2	0.223	0.118	0.2531	
960 minute winter	S31	7.000	BC32	0.7	0.796	0.006	0.0020	
960 minute winter	BC32	7.001	BC33	1.4	0.009	0.000	32.7285	
960 minute winter	BC33	7.002	S17	1.9	-0.093	0.022	0.5881	
960 minute winter	S17	Hydro-Brake®	S18	11.0				
960 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	592.5

Results for 100 year 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S01	10	127.585	0.078	17.3	0.1224	0.0000	OK
15 minute summer	S02	10	126.116	0.118	37.6	0.2693	0.0000	OK
15 minute summer	S03	16	124.589	0.444	71.1	0.3149	0.0000	OK
15 minute summer	S04	14	124.593	0.562	72.7	0.0000	0.0000	SURCHARGED
15 minute summer	S05	14	124.594	0.568	46.0	2.1432	0.0000	SURCHARGED
15 minute summer	S19	10	124.300	0.125	14.0	0.2559	0.0000	OK
15 minute summer	S06	41	124.183	0.269	51.3	0.5858	0.0000	OK
15 minute summer	HW07	41	124.183	0.470	51.3	0.0000	0.0000	OK
15 minute summer	S20	19	124.325	0.402	30.9	2.0233	0.0000	OK
15 minute summer	S24	17	124.325	0.443	37.4	1.1680	0.0000	OK
15 minute summer	S21	18	124.320	0.485	56.4	2.8360	0.0000	OK
15 minute summer	S22	18	124.328	0.529	37.1	2.3925	0.0000	SURCHARGED
15 minute summer	HW23	43	124.184	0.471	4.8	0.0000	0.0000	OK
15 minute summer	HW08	42	124.182	0.636	56.1	0.2895	0.0000	SURCHARGED
15 minute summer	S09	42	124.172	0.691	6.9	0.9893	0.0000	SURCHARGED
15 minute summer	S25	22	123.135	0.235	25.2	0.7748	0.0000	OK
15 minute summer	S26	20	123.136	0.414	24.9	1.0524	0.0000	SURCHARGED
15 minute summer	S10	16	122.735	0.038	5.7	0.0432	0.0000	OK
15 minute summer	S11	220	121.071	0.071	5.7	0.0612	0.0000	OK
15 minute summer	S12	10	120.945	0.072	24.5	0.1250	0.0000	OK
15 minute summer	S13	10	117.544	0.100	44.1	0.1511	0.0000	OK
15 minute summer	S27	10	117.493	0.068	23.7	0.1076	0.0000	OK
15 minute summer	BC28	18	114.822	0.247	58.3	0.0598	0.0000	OK
15 minute summer	BC29	19	114.825	0.585	54.2	0.0000	0.0000	SURCHARGED
15 minute summer	S30	19	114.828	0.598	18.7	1.2652	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S01	1.000	S02	17.1	1.409	0.530	0.5553	
15 minute summer	S02	1.001	S03	36.9	2.559	0.896	0.1911	
15 minute summer	S03	1.002	S04	72.3	0.230	0.014	30.7250	
15 minute summer	S04	1.003	S05	30.0	-0.814	0.471	0.1171	
15 minute summer	S05	Hydro-Brake®	S06	27.9				
15 minute summer	S19	2.000	S06	13.6	0.927	0.944	0.2116	
15 minute summer	S06	1.005	HW07	51.3	1.116	0.805	0.6263	
15 minute summer	HW07	Flow through pond	HW08	41.4	0.156	0.001	51.2283	
15 minute summer	S20	3.000	S21	24.4	0.392	0.005	7.6108	
15 minute summer	S24	4.000	S21	25.6	0.414	0.007	8.6785	
15 minute summer	S21	3.001	S22	37.1	0.556	0.007	3.7866	
15 minute summer	S22	Hydro-Brake®	HW23	4.8				
15 minute summer	HW23	Flow through pond	HW08	41.4	0.156	0.001	51.2283	
15 minute summer	HW08	1.006	S09	6.9	0.612	0.476	0.1705	
15 minute summer	S09	Hydro-Brake®	S10	5.4				
15 minute summer	S25	5.000	S26	24.9	0.471	0.008	8.6275	
15 minute summer	S26	Hydro-Brake®	S10	0.3				
15 minute summer	S10	1.008	S11	5.7	1.327	0.141	0.1957	
15 minute summer	S11	1.009	S12	5.7	1.037	0.392	0.1493	
15 minute summer	S12	1.010	S13	24.3	2.328	0.462	0.4135	
15 minute summer	S13	1.011	S14	43.6	3.331	0.761	0.4148	
15 minute summer	S27	6.000	BC28	23.6	3.091	0.403	0.1285	
15 minute summer	BC28	6.001	BC29	54.2	0.310	0.005	20.5191	
15 minute summer	BC29	6.002	S30	-10.8	-0.519	-0.295	0.0793	
15 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 100 year 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.89%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S14	10	114.309	0.109	56.7	0.2116	0.0000	OK
15 minute summer	BC15	21	112.889	0.111	56.4	0.0000	0.0000	OK
15 minute summer	BC16	22	112.890	0.342	68.2	0.0000	0.0000	SURCHARGED
15 minute summer	S31	10	113.986	0.048	9.7	0.0646	0.0000	OK
15 minute summer	BC32	21	112.889	0.039	10.4	0.0000	0.0000	OK
15 minute summer	BC33	20	112.892	0.312	50.1	0.0415	0.0000	SURCHARGED
15 minute summer	S17	22	112.889	0.359	51.8	1.4370	0.0000	SURCHARGED
15 minute summer	S18	22	112.583	0.079	10.8	0.0897	0.0000	OK
15 minute summer	OUTFALL	22	112.504	0.077	10.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute summer	S14	1.012	BC15	56.4	3.142	0.406	0.1138	
15 minute summer	BC15	1.013	BC16	56.3	0.203	0.005	31.2037	
15 minute summer	BC16	1.014	S17	-29.5	-1.034	-0.377	0.2531	
15 minute summer	S31	7.000	BC32	9.7	1.685	0.083	0.0130	
15 minute summer	BC32	7.001	BC33	-9.9	0.108	-0.001	14.1283	
15 minute summer	BC33	7.002	S17	-35.9	-0.629	-0.418	0.5881	
15 minute summer	S17	Hydro-Brake®	S18	10.8				
15 minute summer	S18	1.016	OUTFALL	10.8	0.885	0.255	0.1405	143.3

Results for 100 year 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	127.587	0.080	18.1	0.1257	0.0000	OK
15 minute winter	S02	10	126.122	0.124	39.4	0.2812	0.0000	OK
15 minute winter	S03	17	124.665	0.520	87.6	0.3690	0.0000	OK
15 minute winter	S04	15	124.669	0.638	70.4	0.0000	0.0000	SURCHARGED
15 minute winter	S05	15	124.669	0.644	48.4	2.4294	0.0000	SURCHARGED
15 minute winter	S19	11	124.306	0.131	14.7	0.2678	0.0000	OK
15 minute winter	S06	45	124.222	0.308	52.6	0.6717	0.0000	SURCHARGED
15 minute winter	HW07	47	124.223	0.511	52.6	0.0000	0.0000	OK
15 minute winter	S20	19	124.372	0.449	32.5	2.2597	0.0000	OK
15 minute winter	S24	17	124.371	0.489	39.3	1.2902	0.0000	OK
15 minute winter	S21	17	124.371	0.536	60.3	3.1338	0.0000	OK
15 minute winter	S22	20	124.374	0.575	44.4	2.6019	0.0000	SURCHARGED
15 minute winter	HW23	48	124.223	0.510	4.8	0.0000	0.0000	OK
15 minute winter	HW08	44	124.221	0.675	62.6	0.3073	0.0000	SURCHARGED
15 minute winter	S09	44	124.212	0.731	8.9	1.0458	0.0000	SURCHARGED
15 minute winter	S25	21	123.166	0.266	25.7	0.8792	0.0000	OK
15 minute winter	S26	19	123.166	0.444	22.8	1.1300	0.0000	SURCHARGED
15 minute winter	S10	14	122.735	0.038	5.7	0.0432	0.0000	OK
15 minute winter	S11	254	121.071	0.071	5.7	0.0612	0.0000	OK
15 minute winter	S12	10	120.946	0.073	25.5	0.1279	0.0000	OK
15 minute winter	S13	10	117.548	0.104	46.0	0.1563	0.0000	OK
15 minute winter	S27	10	117.495	0.070	24.9	0.1106	0.0000	OK
15 minute winter	BC28	18	114.881	0.306	57.8	0.0741	0.0000	OK
15 minute winter	BC29	19	114.883	0.643	58.0	0.0000	0.0000	SURCHARGED
15 minute winter	S30	19	114.888	0.658	19.6	1.3922	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S01	1.000	S02	17.9	1.415	0.553	0.5765	
15 minute winter	S02	1.001	S03	38.4	2.567	0.934	0.1987	
15 minute winter	S03	1.002	S04	70.4	0.239	0.014	35.3336	
15 minute winter	S04	1.003	S05	29.8	-0.858	0.467	0.1171	
15 minute winter	S05	Hydro-Brake®	S06	27.9				
15 minute winter	S19	2.000	S06	14.2	0.935	0.984	0.2183	
15 minute winter	S06	1.005	HW07	52.6	1.126	0.825	0.6451	
15 minute winter	HW07	Flow through pond	HW08	46.9	0.165	0.001	56.4799	
15 minute winter	S20	3.000	S21	19.8	0.403	0.004	8.7710	
15 minute winter	S24	4.000	S21	28.8	0.429	0.008	10.0100	
15 minute winter	S21	3.001	S22	44.4	0.570	0.008	4.2676	
15 minute winter	S22	Hydro-Brake®	HW23	4.8				
15 minute winter	HW23	Flow through pond	HW08	46.9	0.165	0.001	56.4799	
15 minute winter	HW08	1.006	S09	8.9	0.607	0.616	0.1705	
15 minute winter	S09	Hydro-Brake®	S10	5.4				
15 minute winter	S25	5.000	S26	22.8	0.487	0.008	9.7263	
15 minute winter	S26	Hydro-Brake®	S10	0.3				
15 minute winter	S10	1.008	S11	5.7	1.380	0.142	0.1959	
15 minute winter	S11	1.009	S12	5.7	1.038	0.392	0.1519	
15 minute winter	S12	1.010	S13	25.2	2.337	0.480	0.4281	
15 minute winter	S13	1.011	S14	45.5	3.365	0.794	0.4284	
15 minute winter	S27	6.000	BC28	24.7	3.129	0.423	0.1333	
15 minute winter	BC28	6.001	BC29	56.7	0.322	0.006	23.4019	
15 minute winter	BC29	6.002	S30	-15.2	-0.563	-0.416	0.0793	
15 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 100 year 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S14	10	114.312	0.112	59.1	0.2170	0.0000	OK
15 minute winter	BC15	22	112.917	0.139	62.4	0.0000	0.0000	OK
15 minute winter	BC16	21	112.918	0.370	68.6	0.0000	0.0000	SURCHARGED
15 minute winter	S31	10	113.987	0.049	10.2	0.0663	0.0000	OK
15 minute winter	BC32	19	112.917	0.067	23.4	0.0000	0.0000	OK
15 minute winter	BC33	18	112.917	0.337	52.5	0.0448	0.0000	SURCHARGED
15 minute winter	S17	21	112.917	0.387	54.4	1.5507	0.0000	SURCHARGED
15 minute winter	S18	21	112.584	0.080	10.9	0.0900	0.0000	OK
15 minute winter	OUTFALL	23	112.504	0.077	10.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S14	1.012	BC15	58.7	3.171	0.423	0.1174	
15 minute winter	BC15	1.013	BC16	56.9	0.210	0.005	34.7263	
15 minute winter	BC16	1.014	S17	-25.4	-1.099	-0.324	0.2531	
15 minute winter	S31	7.000	BC32	10.2	1.706	0.087	0.0134	
15 minute winter	BC32	7.001	BC33	-19.1	0.111	-0.002	16.2067	
15 minute winter	BC33	7.002	S17	-37.7	-0.637	-0.440	0.5881	
15 minute winter	S17	Hydro-Brake®	S18	10.9				
15 minute winter	S18	1.016	OUTFALL	10.9	0.887	0.257	0.1413	150.7

Results for 100 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 99.52%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S01	18	127.584	0.077	16.8	0.1210	0.0000	OK
30 minute summer	S02	18	126.115	0.117	36.7	0.2669	0.0000	OK
30 minute summer	S03	25	124.699	0.554	69.8	0.3926	0.0000	OK
30 minute summer	S04	24	124.701	0.670	51.3	0.0000	0.0000	SURCHARGED
30 minute summer	S05	24	124.700	0.675	44.8	2.5450	0.0000	SURCHARGED
30 minute summer	S19	53	124.314	0.138	13.6	0.2829	0.0000	OK
30 minute summer	S06	53	124.314	0.399	51.5	0.8704	0.0000	SURCHARGED
30 minute summer	HW07	52	124.314	0.601	51.4	0.0000	0.0000	OK
30 minute summer	S20	32	124.445	0.522	30.1	2.6274	0.0000	OK
30 minute summer	S24	33	124.445	0.563	36.4	1.4846	0.0000	OK
30 minute summer	S21	33	124.446	0.611	62.8	3.5749	0.0000	OK
30 minute summer	S22	34	124.448	0.649	36.1	2.9347	0.0000	SURCHARGED
30 minute summer	HW23	55	124.314	0.602	4.8	0.0000	0.0000	OK
30 minute summer	HW08	56	124.313	0.767	44.2	0.3490	0.0000	SURCHARGED
30 minute summer	S09	55	124.305	0.824	6.4	1.1785	0.0000	SURCHARGED
30 minute summer	S25	36	123.226	0.326	23.8	1.0755	0.0000	OK
30 minute summer	S26	32	123.225	0.503	21.4	1.2805	0.0000	SURCHARGED
30 minute summer	S10	20	122.735	0.038	5.7	0.0432	0.0000	OK
30 minute summer	S11	270	121.070	0.070	5.7	0.0608	0.0000	OK
30 minute summer	S12	18	120.944	0.071	24.1	0.1246	0.0000	OK
30 minute summer	S13	18	117.543	0.099	43.3	0.1500	0.0000	OK
30 minute summer	S27	18	117.492	0.067	23.1	0.1062	0.0000	OK
30 minute summer	BC28	33	114.971	0.396	48.1	0.0958	0.0000	OK
30 minute summer	BC29	32	114.970	0.730	54.5	0.0000	0.0000	SURCHARGED
30 minute summer	S30	32	114.974	0.744	18.2	1.5756	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S01	1.000	S02	16.8	1.405	0.520	0.5492	
30 minute summer	S02	1.001	S03	36.6	2.556	0.890	0.1897	
30 minute summer	S03	1.002	S04	40.5	0.221	0.008	37.6567	
30 minute summer	S04	1.003	S05	27.1	-0.722	0.425	0.1171	
30 minute summer	S05	Hydro-Brake®	S06	27.9				
30 minute summer	S19	2.000	S06	13.5	0.924	0.935	0.2495	
30 minute summer	S06	1.005	HW07	51.4	1.116	0.806	0.6451	
30 minute summer	HW07	Flow through pond	HW08	32.6	0.132	0.001	69.7846	
30 minute summer	S20	3.000	S21	20.3	0.346	0.004	10.6433	
30 minute summer	S24	4.000	S21	22.6	0.386	0.006	12.0338	
30 minute summer	S21	3.001	S22	36.1	0.507	0.007	5.0615	
30 minute summer	S22	Hydro-Brake®	HW23	4.8				
30 minute summer	HW23	Flow through pond	HW08	32.6	0.132	0.001	69.7846	
30 minute summer	HW08	1.006	S09	6.4	0.545	0.444	0.1705	
30 minute summer	S09	Hydro-Brake®	S10	5.4				
30 minute summer	S25	5.000	S26	21.4	0.416	0.007	12.1756	
30 minute summer	S26	Hydro-Brake®	S10	0.3				
30 minute summer	S10	1.008	S11	5.7	1.176	0.141	0.1942	
30 minute summer	S11	1.009	S12	5.7	1.034	0.392	0.1515	
30 minute summer	S12	1.010	S13	24.1	2.334	0.459	0.4109	
30 minute summer	S13	1.011	S14	43.3	3.326	0.756	0.4126	
30 minute summer	S27	6.000	BC28	23.1	3.077	0.395	0.1265	
30 minute summer	BC28	6.001	BC29	54.5	0.283	0.006	27.8536	
30 minute summer	BC29	6.002	S30	-12.0	-0.443	-0.326	0.0793	
30 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 100 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 99.52%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S14	18	114.309	0.109	56.2	0.2109	0.0000	OK
30 minute summer	BC15	33	112.985	0.207	67.6	0.0000	0.0000	OK
30 minute summer	BC16	35	112.985	0.437	67.2	0.0000	0.0000	SURCHARGED
30 minute summer	S31	18	113.985	0.047	9.4	0.0636	0.0000	OK
30 minute summer	BC32	36	112.984	0.134	27.2	0.0000	0.0000	OK
30 minute summer	BC33	35	112.984	0.404	44.1	0.0538	0.0000	SURCHARGED
30 minute summer	S17	35	112.984	0.454	50.3	1.8205	0.0000	SURCHARGED
30 minute summer	S18	38	112.584	0.080	11.0	0.0904	0.0000	OK
30 minute summer	OUTFALL	34	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S14	1.012	BC15	56.2	3.142	0.405	0.1134	
30 minute summer	BC15	1.013	BC16	52.7	0.189	0.004	43.9608	
30 minute summer	BC16	1.014	S17	-33.0	-0.712	-0.422	0.2531	
30 minute summer	S31	7.000	BC32	9.4	1.674	0.080	0.0127	
30 minute summer	BC32	7.001	BC33	-20.1	0.096	-0.002	21.5517	
30 minute summer	BC33	7.002	S17	-30.4	-0.553	-0.354	0.5881	
30 minute summer	S17	Hydro-Brake®	S18	11.0				
30 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	167.0

Results for 100 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.40%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S01	18	127.579	0.072	15.2	0.1141	0.0000	OK
30 minute winter	S02	18	126.106	0.108	33.2	0.2448	0.0000	OK
30 minute winter	S03	26	124.787	0.642	63.2	0.4553	0.0000	OK
30 minute winter	S04	25	124.788	0.756	47.1	0.0000	0.0000	SURCHARGED
30 minute winter	S05	25	124.787	0.762	40.5	2.8732	0.0000	SURCHARGED
30 minute winter	S19	60	124.366	0.191	12.3	0.3899	0.0000	SURCHARGED
30 minute winter	S06	61	124.366	0.452	49.4	0.9852	0.0000	SURCHARGED
30 minute winter	HW07	54	124.366	0.653	49.4	0.0000	0.0000	OK
30 minute winter	S20	32	124.512	0.589	27.2	2.9617	0.0000	OK
30 minute winter	S24	33	124.512	0.630	32.9	1.6625	0.0000	OK
30 minute winter	S21	31	124.512	0.677	58.1	3.9623	0.0000	OK
30 minute winter	S22	30	124.515	0.716	46.8	3.2377	0.0000	SURCHARGED
30 minute winter	HW23	62	124.367	0.654	4.8	0.0000	0.0000	OK
30 minute winter	HW08	59	124.366	0.820	45.0	0.3729	0.0000	SURCHARGED
30 minute winter	S09	59	124.358	0.877	6.4	1.2550	0.0000	SURCHARGED
30 minute winter	S25	40	123.263	0.363	21.5	1.1969	0.0000	OK
30 minute winter	S26	35	123.266	0.544	21.8	1.3839	0.0000	SURCHARGED
30 minute winter	S10	19	122.735	0.038	5.7	0.0432	0.0000	OK
30 minute winter	S11	270	121.070	0.070	5.7	0.0603	0.0000	OK
30 minute winter	S12	18	120.942	0.069	22.5	0.1196	0.0000	OK
30 minute winter	S13	18	117.537	0.093	39.9	0.1410	0.0000	OK
30 minute winter	S27	18	117.488	0.063	20.9	0.1003	0.0000	OK
30 minute winter	BC28	32	115.050	0.475	51.8	0.1150	0.0000	OK
30 minute winter	BC29	33	115.053	0.813	51.5	0.0000	0.0000	SURCHARGED
30 minute winter	S30	33	115.056	0.826	16.4	1.7482	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S01	1.000	S02	15.2	1.382	0.470	0.5052	
30 minute winter	S02	1.001	S03	33.2	2.524	0.806	0.1740	
30 minute winter	S03	1.002	S04	43.2	0.229	0.008	43.0874	
30 minute winter	S04	1.003	S05	27.9	-0.765	0.438	0.1171	
30 minute winter	S05	Hydro-Brake®	S06	27.9				
30 minute winter	S19	2.000	S06	12.3	0.902	0.849	0.2539	
30 minute winter	S06	1.005	HW07	49.4	1.101	0.774	0.6451	
30 minute winter	HW07	Flow through pond	HW08	32.1	0.135	0.001	78.1033	
30 minute winter	S20	3.000	S21	16.9	0.366	0.003	12.3569	
30 minute winter	S24	4.000	S21	19.6	0.412	0.005	13.8531	
30 minute winter	S21	3.001	S22	46.8	0.542	0.009	5.7749	
30 minute winter	S22	Hydro-Brake®	HW23	4.8				
30 minute winter	HW23	Flow through pond	HW08	32.1	0.135	0.001	78.1033	
30 minute winter	HW08	1.006	S09	6.4	0.569	0.443	0.1705	
30 minute winter	S09	Hydro-Brake®	S10	5.4				
30 minute winter	S25	5.000	S26	21.8	0.432	0.007	13.7531	
30 minute winter	S26	Hydro-Brake®	S10	0.4				
30 minute winter	S10	1.008	S11	5.7	1.220	0.141	0.1920	
30 minute winter	S11	1.009	S12	5.7	1.030	0.393	0.1478	
30 minute winter	S12	1.010	S13	22.5	2.318	0.427	0.3853	
30 minute winter	S13	1.011	S14	39.9	3.254	0.696	0.3879	
30 minute winter	S27	6.000	BC28	20.9	2.999	0.357	0.1175	
30 minute winter	BC28	6.001	BC29	49.6	0.278	0.005	32.1047	
30 minute winter	BC29	6.002	S30	-12.3	-0.472	-0.336	0.0793	
30 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 100 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.40%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S14	18	114.304	0.103	51.9	0.2009	0.0000	OK
30 minute winter	BC15	37	113.020	0.242	51.9	0.0000	0.0000	OK
30 minute winter	BC16	34	113.021	0.472	62.4	0.0000	0.0000	SURCHARGED
30 minute winter	S31	18	113.982	0.044	8.5	0.0603	0.0000	OK
30 minute winter	BC32	32	113.019	0.169	26.1	0.0000	0.0000	OK
30 minute winter	BC33	34	113.020	0.440	37.1	0.0585	0.0000	SURCHARGED
30 minute winter	S17	34	113.020	0.490	51.2	1.9641	0.0000	SURCHARGED
30 minute winter	S18	26	112.584	0.080	11.0	0.0904	0.0000	OK
30 minute winter	OUTFALL	69	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S14	1.012	BC15	51.9	3.084	0.374	0.1067	
30 minute winter	BC15	1.013	BC16	46.3	0.200	0.004	48.8310	
30 minute winter	BC16	1.014	S17	-37.9	-0.786	-0.484	0.2531	
30 minute winter	S31	7.000	BC32	8.5	1.628	0.073	0.0118	
30 minute winter	BC32	7.001	BC33	-17.9	0.102	-0.002	24.4016	
30 minute winter	BC33	7.002	S17	-31.5	-0.515	-0.367	0.5881	
30 minute winter	S17	Hydro-Brake®	S18	11.0				
30 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	169.3

Results for 100 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S01	33	127.575	0.068	13.6	0.1071	0.0000	OK
60 minute summer	S02	33	126.097	0.099	29.7	0.2248	0.0000	OK
60 minute summer	S03	42	124.738	0.593	56.5	0.4205	0.0000	OK
60 minute summer	S04	41	124.739	0.708	33.5	0.0000	0.0000	SURCHARGED
60 minute summer	S05	41	124.738	0.713	36.2	2.6868	0.0000	SURCHARGED
60 minute summer	S19	80	124.456	0.281	11.0	0.5747	0.0000	SURCHARGED
60 minute summer	S06	77	124.456	0.542	47.0	1.1811	0.0000	SURCHARGED
60 minute summer	HW07	83	124.457	0.744	45.9	0.0000	0.0000	OK
60 minute summer	S20	61	124.559	0.636	24.3	3.1971	0.0000	OK
60 minute summer	S24	62	124.559	0.677	29.4	1.7845	0.0000	OK
60 minute summer	S21	61	124.559	0.724	40.7	4.2360	0.0000	OK
60 minute summer	S22	63	124.559	0.760	28.7	3.4380	0.0000	SURCHARGED
60 minute summer	HW23	83	124.457	0.744	5.2	0.0000	0.0000	OK
60 minute summer	HW08	77	124.456	0.910	35.5	0.4140	0.0000	SURCHARGED
60 minute summer	S09	77	124.449	0.968	6.1	1.3848	0.0000	SURCHARGED
60 minute summer	S25	63	123.320	0.420	19.2	1.3850	0.0000	OK
60 minute summer	S26	65	123.323	0.601	14.1	1.5306	0.0000	SURCHARGED
60 minute summer	S10	31	122.735	0.038	5.7	0.0431	0.0000	OK
60 minute summer	S11	24	121.069	0.068	5.7	0.0593	0.0000	OK
60 minute summer	S12	33	120.938	0.065	20.7	0.1141	0.0000	OK
60 minute summer	S13	33	117.531	0.087	36.2	0.1316	0.0000	OK
60 minute summer	S27	33	117.485	0.060	18.7	0.0943	0.0000	OK
60 minute summer	BC28	62	115.104	0.529	36.7	0.1281	0.0000	OK
60 minute summer	BC29	61	115.102	0.862	40.6	0.0000	0.0000	SURCHARGED
60 minute summer	S30	61	115.104	0.874	14.7	1.8496	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	S01	1.000	S02	13.6	1.354	0.421	0.4618	
60 minute summer	S02	1.001	S03	29.7	2.476	0.721	0.1587	
60 minute summer	S03	1.002	S04	29.2	0.190	0.006	40.1619	
60 minute summer	S04	1.003	S05	21.9	-0.613	0.343	0.1171	
60 minute summer	S05	Hydro-Brake®	S06	27.9				
60 minute summer	S19	2.000	S06	11.0	0.874	0.760	0.2539	
60 minute summer	S06	1.005	HW07	45.9	1.042	0.719	0.6451	
60 minute summer	HW07	Flow through pond	HW08	24.0	0.118	0.000	93.3490	
60 minute summer	S20	3.000	S21	13.3	0.315	0.002	13.5809	
60 minute summer	S24	4.000	S21	19.9	0.334	0.005	15.1893	
60 minute summer	S21	3.001	S22	28.7	0.488	0.005	6.2762	
60 minute summer	S22	Hydro-Brake®	HW23	4.7				
60 minute summer	HW23	Flow through pond	HW08	24.0	0.118	0.000	93.3490	
60 minute summer	HW08	1.006	S09	6.1	0.490	0.422	0.1705	
60 minute summer	S09	Hydro-Brake®	S10	5.4				
60 minute summer	S25	5.000	S26	14.1	0.377	0.005	16.3104	
60 minute summer	S26	Hydro-Brake®	S10	0.4				
60 minute summer	S10	1.008	S11	5.7	1.036	0.141	0.1899	
60 minute summer	S11	1.009	S12	5.7	1.018	0.393	0.1433	
60 minute summer	S12	1.010	S13	20.7	2.298	0.393	0.3579	
60 minute summer	S13	1.011	S14	36.2	3.170	0.631	0.3613	
60 minute summer	S27	6.000	BC28	18.7	2.913	0.319	0.1082	
60 minute summer	BC28	6.001	BC29	37.2	0.220	0.004	34.8582	
60 minute summer	BC29	6.002	S30	-9.3	-0.384	-0.253	0.0793	
60 minute summer	S30	Hydro-Brake®	S14	4.5				

Results for 100 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S14	33	114.298	0.098	47.4	0.1902	0.0000	OK
60 minute summer	BC15	64	113.088	0.310	47.4	0.0000	0.0000	OK
60 minute summer	BC16	66	113.087	0.539	37.9	0.0000	0.0000	SURCHARGED
60 minute summer	S31	33	113.980	0.042	7.6	0.0568	0.0000	OK
60 minute summer	BC32	64	113.088	0.238	24.1	0.0000	0.0000	OK
60 minute summer	BC33	63	113.086	0.506	28.1	0.0673	0.0000	SURCHARGED
60 minute summer	S17	66	113.087	0.557	40.7	2.2303	0.0000	SURCHARGED
60 minute summer	S18	38	112.584	0.080	11.0	0.0904	0.0000	OK
60 minute summer	OUTFALL	38	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute summer	S14	1.012	BC15	47.4	3.018	0.341	0.0996	
60 minute summer	BC15	1.013	BC16	30.3	0.170	0.003	58.6172	
60 minute summer	BC16	1.014	S17	-24.9	-0.587	-0.318	0.2531	
60 minute summer	S31	7.000	BC32	7.6	1.581	0.065	0.0109	
60 minute summer	BC32	7.001	BC33	-16.5	0.086	-0.002	30.1478	
60 minute summer	BC33	7.002	S17	-24.1	-0.342	-0.281	0.5881	
60 minute summer	S17	Hydro-Brake®	S18	11.0				
60 minute summer	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	184.9

Results for 100 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S01	33	127.567	0.060	11.0	0.0952	0.0000	OK
60 minute winter	S02	33	126.084	0.085	24.0	0.1945	0.0000	OK
60 minute winter	S03	45	124.805	0.660	45.7	0.4681	0.0000	OK
60 minute winter	S04	44	124.804	0.773	27.7	0.0000	0.0000	SURCHARGED
60 minute winter	S05	44	124.804	0.778	31.0	2.9349	0.0000	SURCHARGED
60 minute winter	S19	79	124.520	0.345	8.9	0.7055	0.0000	SURCHARGED
60 minute winter	S06	81	124.520	0.606	43.3	1.3204	0.0000	SURCHARGED
60 minute winter	HW07	77	124.522	0.809	42.0	0.0000	0.0000	OK
60 minute winter	S20	61	124.649	0.726	19.7	3.6507	0.0000	OK
60 minute winter	S24	60	124.649	0.767	23.8	2.0218	0.0000	OK
60 minute winter	S21	61	124.649	0.814	45.1	4.7626	0.0000	OK
60 minute winter	S22	61	124.647	0.848	31.3	3.8366	0.0000	SURCHARGED
60 minute winter	HW23	82	124.521	0.808	4.7	0.0000	0.0000	OK
60 minute winter	HW08	80	124.520	0.974	34.1	0.4430	0.0000	SURCHARGED
60 minute winter	S09	80	124.512	1.031	6.1	1.4752	0.0000	SURCHARGED
60 minute winter	S25	68	123.374	0.474	15.5	1.5649	0.0000	OK
60 minute winter	S26	61	123.375	0.653	14.8	1.6614	0.0000	SURCHARGED
60 minute winter	S10	29	122.735	0.038	5.7	0.0431	0.0000	OK
60 minute winter	S11	23	121.068	0.068	5.7	0.0591	0.0000	OK
60 minute winter	S12	33	120.933	0.060	17.7	0.1048	0.0000	OK
60 minute winter	S13	33	117.522	0.078	30.3	0.1173	0.0000	OK
60 minute winter	S27	33	117.478	0.053	15.1	0.0838	0.0000	OK
60 minute winter	BC28	61	115.210	0.635	40.7	0.1536	0.0000	OK
60 minute winter	BC29	59	115.209	0.969	38.4	0.0000	0.0000	SURCHARGED
60 minute winter	S30	59	115.212	0.982	11.9	2.0785	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S01	1.000	S02	11.0	1.296	0.340	0.3915	
60 minute winter	S02	1.001	S03	24.0	2.369	0.583	0.1342	
60 minute winter	S03	1.002	S04	27.7	0.201	0.005	44.2555	
60 minute winter	S04	1.003	S05	21.7	-0.636	0.341	0.1171	
60 minute winter	S05	Hydro-Brake®	S06	27.9				
60 minute winter	S19	2.000	S06	8.9	0.836	0.616	0.2539	
60 minute winter	S06	1.005	HW07	42.0	1.024	0.659	0.6451	
60 minute winter	HW07	Flow through pond	HW08	24.5	0.122	0.000	105.0517	
60 minute winter	S20	3.000	S21	11.9	0.324	0.002	15.9334	
60 minute winter	S24	4.000	S21	16.2	0.336	0.004	17.7261	
60 minute winter	S21	3.001	S22	31.3	0.488	0.006	7.2473	
60 minute winter	S22	Hydro-Brake®	HW23	4.7				
60 minute winter	HW23	Flow through pond	HW08	24.5	0.122	0.000	105.0517	
60 minute winter	HW08	1.006	S09	6.1	0.513	0.419	0.1705	
60 minute winter	S09	Hydro-Brake®	S10	5.4				
60 minute winter	S25	5.000	S26	14.8	0.379	0.005	18.4751	
60 minute winter	S26	Hydro-Brake®	S10	0.4				
60 minute winter	S10	1.008	S11	5.7	1.096	0.141	0.1894	
60 minute winter	S11	1.009	S12	5.7	1.000	0.393	0.1361	
60 minute winter	S12	1.010	S13	17.7	2.249	0.337	0.3142	
60 minute winter	S13	1.011	S14	30.3	3.019	0.529	0.3183	
60 minute winter	S27	6.000	BC28	15.1	2.751	0.258	0.0925	
60 minute winter	BC28	6.001	BC29	36.1	0.213	0.004	40.2539	
60 minute winter	BC29	6.002	S30	-8.2	-0.389	-0.223	0.0793	
60 minute winter	S30	Hydro-Brake®	S14	4.5				

Results for 100 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.22%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S14	33	114.289	0.089	40.2	0.1728	0.0000	OK
60 minute winter	BC15	65	113.138	0.360	40.2	0.0000	0.0000	OK
60 minute winter	BC16	62	113.139	0.591	34.4	0.0000	0.0000	SURCHARGED
60 minute winter	S31	33	113.976	0.038	6.2	0.0511	0.0000	OK
60 minute winter	BC32	65	113.137	0.287	17.9	0.0000	0.0000	OK
60 minute winter	BC33	62	113.137	0.557	24.7	0.0741	0.0000	SURCHARGED
60 minute winter	S17	62	113.138	0.608	33.0	2.4358	0.0000	SURCHARGED
60 minute winter	S18	270	112.584	0.080	11.0	0.0904	0.0000	OK
60 minute winter	OUTFALL	270	112.505	0.077	11.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S14	1.012	BC15	40.2	2.899	0.290	0.0880	
60 minute winter	BC15	1.013	BC16	29.8	0.171	0.003	65.3753	
60 minute winter	BC16	1.014	S17	-20.5	-0.637	-0.261	0.2531	
60 minute winter	S31	7.000	BC32	6.2	1.496	0.053	0.0094	
60 minute winter	BC32	7.001	BC33	-13.0	0.093	-0.002	34.1125	
60 minute winter	BC33	7.002	S17	-21.5	-0.341	-0.250	0.5881	
60 minute winter	S17	Hydro-Brake®	S18	11.0				
60 minute winter	S18	1.016	OUTFALL	11.0	0.889	0.259	0.1421	185.3

Results for 100 year 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 99.27%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	S01	64	127.561	0.054	8.8	0.0844	0.0000	OK
120 minute summer	S02	64	126.072	0.074	19.2	0.1694	0.0000	OK
120 minute summer	S03	76	124.622	0.477	36.6	0.3379	0.0000	OK
120 minute summer	S04	76	124.622	0.591	20.9	0.0000	0.0000	SURCHARGED
120 minute summer	S05	76	124.621	0.596	28.4	2.2469	0.0000	SURCHARGED
120 minute summer	S19	130	124.537	0.362	7.1	0.7400	0.0000	SURCHARGED
120 minute summer	S06	128	124.537	0.623	38.9	1.3580	0.0000	SURCHARGED
120 minute summer	HW07	130	124.539	0.826	37.9	0.0000	0.0000	OK
120 minute summer	S20	122	124.609	0.686	15.7	3.4498	0.0000	OK
120 minute summer	S24	122	124.609	0.727	19.0	1.9174	0.0000	OK
120 minute summer	S21	122	124.609	0.774	24.3	4.5292	0.0000	OK
120 minute summer	S22	122	124.609	0.810	8.9	3.6642	0.0000	SURCHARGED
120 minute summer	HW23	132	124.538	0.825	4.3	0.0000	0.0000	OK
120 minute summer	HW08	130	124.536	0.990	28.5	0.4506	0.0000	SURCHARGED
120 minute summer	S09	128	124.529	1.048	5.8	1.4991	0.0000	SURCHARGED
120 minute summer	S25	122	123.389	0.489	12.4	1.6151	0.0000	OK
120 minute summer	S26	126	123.389	0.667	7.5	1.6979	0.0000	SURCHARGED
120 minute summer	S10	48	122.735	0.038	5.7	0.0431	0.0000	OK
120 minute summer	S11	44	121.070	0.070	5.7	0.0602	0.0000	OK
120 minute summer	S12	64	120.928	0.055	15.3	0.0966	0.0000	OK
120 minute summer	S13	64	117.514	0.070	25.3	0.1055	0.0000	OK
120 minute summer	S27	64	117.472	0.047	12.1	0.0745	0.0000	OK
120 minute summer	BC28	102	115.103	0.528	27.5	0.1277	0.0000	OK
120 minute summer	BC29	100	115.102	0.862	27.1	0.0000	0.0000	SURCHARGED
120 minute summer	S30	100	115.104	0.874	9.5	1.8498	0.0000	SURCHARGED

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
120 minute summer	S01	1.000	S02	8.8	1.229	0.272	0.3306	
120 minute summer	S02	1.001	S03	19.2	2.249	0.466	0.1131	
120 minute summer	S03	1.002	S04	20.9	0.172	0.004	32.9631	
120 minute summer	S04	1.003	S05	16.0	-0.497	0.250	0.1171	
120 minute summer	S05	Hydro-Brake®	S06	27.1				
120 minute summer	S19	2.000	S06	7.2	0.771	0.497	0.2539	
120 minute summer	S06	1.005	HW07	37.9	0.902	0.595	0.6451	
120 minute summer	HW07	Flow through pond	HW08	20.6	0.099	0.000	108.2386	
120 minute summer	S20	3.000	S21	8.8	0.257	0.002	14.8905	
120 minute summer	S24	4.000	S21	12.8	0.279	0.003	16.6067	
120 minute summer	S21	3.001	S22	8.9	0.406	0.002	6.8268	
120 minute summer	S22	Hydro-Brake®	HW23	4.3				
120 minute summer	HW23	Flow through pond	HW08	20.6	0.099	0.000	108.2386	
120 minute summer	HW08	1.006	S09	5.8	0.447	0.398	0.1705	
120 minute summer	S09	Hydro-Brake®	S10	5.4				
120 minute summer	S25	5.000	S26	7.5	0.344	0.002	19.1303	
120 minute summer	S26	Hydro-Brake®	S10	0.4				
120 minute summer	S10	1.008	S11	5.7	1.014	0.141	0.1929	
120 minute summer	S11	1.009	S12	5.7	1.000	0.394	0.1294	
120 minute summer	S12	1.010	S13	15.2	2.193	0.290	0.2773	
120 minute summer	S13	1.011	S14	25.3	2.857	0.442	0.2811	
120 minute summer	S27	6.000	BC28	12.1	2.589	0.207	0.0788	
120 minute summer	BC28	6.001	BC29	27.1	0.156	0.003	34.8717	
120 minute summer	BC29	6.002	S30	-5.4	-0.228	-0.146	0.0793	
120 minute summer	S30	Hydro-Brake®	S14	4.5				