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FLOOD RISK ASSESSMENT

ON

PROPOSED RESIDENTIAL DEVELOPMENT

AT

PENISTONE ROAD, FENAY BRIDGE

FOR

HOMES BY HONEY

Date: JANUARY 2024

Ref: 8060RA001

1. Introduction

This report is commissioned to investigate and report on the Flood Risk for this site in accordance Planning Practise Guidance- Flood Risk and Coastal Change April 2015 and the proposals for drainage of this site when redeveloped as residential land. The report is based on information supplied by the client and from relevant authorities in both written and verbal format. Some of this information is in verbal form only. No liability can be accepted for information supplied by third parties which is subsequently found to be inaccurate or incorrect.

2. Site Description

The site is located on land to the south east of the junction of Penistone Road and Rowley Lane, Fenay Bridge and lies around OS Grid Reference 418730, 414480. A site location plan is attached in Appendix A at the rear of the report.

The site is located in an approximately rectangular field with the longer western edge fronting onto Penistone Road and the shorter northern edge onto Rowley Lane. The eastern boundary is formed by a former 3m high railway embankment. There are residential and commercial properties to the south and east of the development and beyond Rowley lane to the north. Beyond Penistone Road to the west there are open fields. The site area is approximately 3.2ha.

The site consists of a single field that was noted to contain rough grass at the time of the site investigation with areas of standing water noted on site, making the overlying topsoil extremely soft. Mature tree growth was noted along the northern, eastern and southern boundaries with broken lies of trees on the western boundary. The area to be developed does not cover the entire field, an approximately 30m wide strip along the western and southern boundaries of the field is being used to create an adopted highway to serve a later development to the south east.

The field boundary was formed by a dry stone wall that was noted to be overgrown and dilapidated in places. There was a gated access to the site from Rowley Lane in the north western corner of the site.

The site falls from east to west at an approximate average grade of 1 in 10 with a high point in the south east of 99.45m AOD and a low point on the western boundary of 85.2m AOD.

3. Existing Drainage Arrangements and Site Constraints

There are no adopted surface or foul water sewers currently serving the site. The site investigation found the site to be drained by small stone land drains, as is common on agricultural land. The investigation works also found stone land drains entering the site on the Eastern boundary, from the former railway embankment. There may also be a toe drain along the historical railway embankment. At present, there is no recognised outfall serving the site, however water will flow overland to Penistone Road on the western boundary.

The site investigation undertaken to date has deemed sustainable drainage in the form of soakaways to be unsuitable for the site due to the ground conditions which primarily consist of impermeable clays and sandstone, which were proven to have poor infiltration rates. Due to the steep nature of the site, the use of soakaways would also present a risk of reemergence. Ground water monitoring has found water table levels varying from 0.80-1.30m below ground level across the site.

The nearest recorded open surface watercourse is Fenay Beck located in third party land on the far side of Penistone Road, approximately 120m west of the site. Permission would be needed from third party landowners to discharge to the drainage channel, and any outfall would need to avoid any services within Penistone Road.

4. Flood Risk

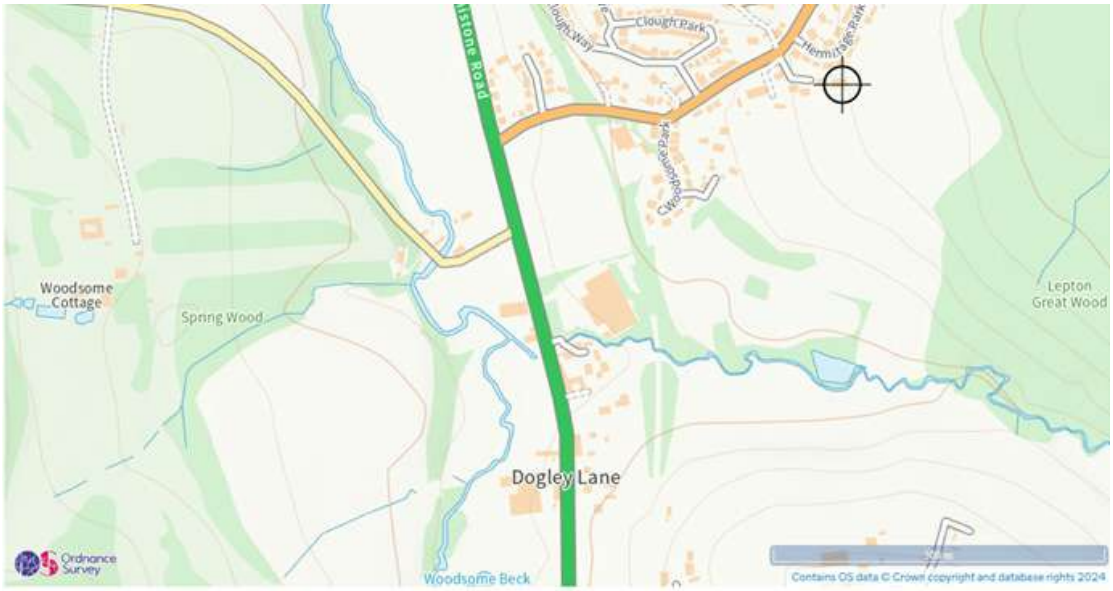
The currently falls within Flood Zone 1, as shown on the Environment Agency Websites extracts included in Appendix B.

It does not fall within an area shown to benefit from flood defences up to the 1 in 100 year flood event. The development is classified as More Vulnerable in Table 2 of the PPG-FRCC. The proposed area of development falls within Zone 1 and as such table 3 of that document also states that the proposed residential development is appropriate.

Extent of flooding from rivers or the sea

High Medium Low Very low Location you selected

The site does not fall within an area subject to flooding from reservoirs according to the EA maps. The site does not fall within a flood warning zone or within a Flood Alert Area.



Maximum extent of flooding from reservoirs:

when river levels are normal | when there is also flooding from rivers | Location you selected

The Long-Term Surface Water Flooding maps for the area around the site show the site is not susceptible to flooding from rainfall falling directly onto the or from overland flow from third party land. Flood routing is shown along Rowley Lane to the north of the site.

Extent of flooding from surface water

High | Medium | Low | Very low | Location you selected

There are a number of potential flooding mechanisms that NPPG now requires are evaluated for each proposed development site. Each method of flooding requires an assessment to be made on its probability relative to the site development. The

normal requirement of the document is for no flooding of properties for storms up to a 1% probability or a once in a 100 years storm. The risk assessment also includes for flooding both on site and off site, and the effects of the development on the downstream catchment or the flow regime of the watercourse. PPG-FRCC also requires that the effects of severe storms above the normal 1% probability are reviewed together with the effects of climatic change relating to the design life of the development.

It also requires that the effects of climate change are taken into account together with the impacts of extreme events and flood defence failures. Prior to this the Sequential Test or the Exceptions test as outlined in (PPG-FRCC), must also be applied to each development site. These are not covered in this report.

Based on the published Environment Agency Flood Risk Maps the proposed development on site does not fall within the 1% Flood Risk (i.e. Zone 3). The proposed residential development falls within the More Vulnerable Classification in Table 02 Technical Guidance to PPG-FRCC. The development is considered appropriate in accordance with Table 3.

PPG-FRCC requires that each flooding mechanism is addressed and levels of risk evaluated. We consider there are four main risks of flooding to the site the alternative mechanisms are not applicable to this site.

- Inundation from floodwaters leaving watercourses or rivers entering the site. This can include the effects on culverted watercourses and where the risk of blockage can occur and from breach scenarios.

- Rainwater falling on the site and not being able to leave the site at sufficient rate to prevent flooding on the site.

- Risk of flooding from reservoirs coupled with overland flows from adjacent land or sewerage systems or other watercourses.

- The impact of the developed site on the existing drainage systems and off-site surface water systems must also be assessed as part of this flood risk assessment.

5. Discussion of Flood risks

5.1 Flood Risk from Watercourses, River & Tidal

The proposed development area does not fall within the 1% probability Flood Risk Maps (Zone 3) as published by the Environment Agency. The site is therefore considered not to be at risk from fluvial flooding for the once in 100 year flood event. We therefore consider the risk of flooding of the site from River and Sea is acceptable for this type of development.

The nearest watercourse shown on the O.S Survey is located approximately 120m west of the site. There are no areas of flood risk associated with this watercourse immediately adjacent the site.

5.2 Risk of Flooding from overland flows from adjacent land.

The site generally slopes from the west to the east towards Penistone Road. There is a fall towards the site from east, however the approximate 3m high former railway embankment is located on the eastern boundary which will prevent surface water flows entering the site. Rowley Lane to the north of the site falls westwards and will act as a flood route directing overland flows away from the site.

In addition to this. the properties to the north, east and south of the site are served by existing drainage systems which will prevent significant overland flows towards the site.

The risk of overland flows entering the site is therefore considered to be negligible, but consideration should be given to flood routing throughout the site.

We would recommend that an overland flood route is provided through the site to cater for such extreme events, as is normal under the Codes for Adoption criteria and floor levels are based a minimum of 300mm above existing ground levels.

5.3 Risk of Flooding from Rainwater Falling on Site

The risk of flooding from water falling on site and not being able to leave is considered to be low due to the constant gradient of the site from the east to the west.

The normal hierarchy for surface water discharge in accordance with current planning and SUDS policies is as follows:

1. The use of infiltration systems such as Soakaways.
2. Discharge to nearby rivers or watercourses with the use of attenuation.
3. Discharge to existing public sewer network with the use of attenuation.

The site investigation undertaken to date has deemed sustainable drainage in the form of soakaways to be unsuitable for the site due to the ground conditions which primarily consist of impermeable clays and sandstone, which were proven to have poor infiltration rates. Due to the steep nature of the site, the use of soakaways would also present a risk of reemergence. Ground water monitoring has found water table levels varying from 0.80-1.30m below ground level across the site.

In accordance with the SUDS hierarchy, preference should be given to a direct connection to Fenay Beck to the West of the site. However, the proposed connection would need to cross multiple existing services in Rowley Lane and Penistone Road and would also require the consent of third party land owners which may prove problematic to agree.

As infiltration systems are deemed unsuitable for this development, storm water attenuation systems should be utilised to ensure the flows from the site to a suitable watercourse, or adoptable sewer, are reduced to agreed agricultural discharge rates. These can take the form of open swales, ponds, or detention basins but these do tend to take a substantial area of developable land, especially given the on-site gradients.

The use of underground attenuation systems may not provide a suitable level of treatment of the run off from the site, and biological systems at source may be needed to ensure suitable discharge contaminants are dealt with. Primary treatment for the roads would be the use of trapped gullies for all hard standings; driveways can be drained via a gravel filled channel alongside the drives which can afford a modicum of biological treatment to surface water run-off. Roof drainage systems can utilise water butts to recycle some of the runoff for horticultural use. There is the potential for using permeable paving within shared driveways to provide a level of surface water treatment at source, where the maintenance and clearing of the permeable pavement will be shared between multiple properties. This will then be connected into the private drainage and adopted sewer systems serving the development.

The size of the storm water storage facilities would need to be determined accurately in the final detailed designs. These should be all in accordance with the NPPG Technical guidance issued in April 2021 and Kirklees Council guidance. The volumes of storage can include flooding to roads and designated areas such as carpark areas or public open space, but must ensure that no buildings are flooded.

Due to the topography of the site and the proposed outfall location to the Yorkshire Water sewers in Rowley Lane to the north of the site, it is proposed that any attenuation is located in the lower western side of the development, beneath the currently shown shared accessways. It is proposed to limit the discharge rate to the existing 375mm diameter surface water sewer in Rowley Lane to 3.5 l/s through the use of a flow control device. On site attenuation should be designed to cater for storms up to the 100 year return period with a 40% allowance made for climatic change.

Whilst detention basins or ponds would be a preferred solution, sewer levels and the high ground water table have meant that an underground storage tank is the only viable option for surface water attenuation. Designing a pond with adequate storage above the water table would require significant raising of site levels on the western boundary and also result in large amounts of surcharge to the sewer network during all storm events.

A preliminary sewer design has been undertaken for the site, using oversized pipes and an attenuation tank to provide storage for the development. The approximate volumes required are calculated as shown in the appendices and are defined as follows:

STORM EVENT	STORAGE REQUIRED (m^3)
1 IN 2 YEAR	190
1 IN 30 YEAR	395
1 IN 100 YEAR	530
1 IN 100 YEAR + 40% CC	790

The flows would have to be controlled by a “Hydrobrake” or similar low maintenance flow control device. If these are provided the risk of onsite flooding from rainfall would be effectively controlled to acceptable levels. Preliminary feasibility calculations and plans based on the above proposals are contained in the appendices to the rear of this report.

The maintenance of the onsite proposed attenuation would be carried out by the Water and Sewerage Undertaker as part of the Section 104 Agreement and they would adopt any below ground oversized pipework and manholes.

The developer will be responsible to maintain the drainage systems on site until final adoption by the Water and Sewerage Undertaker ensuring that they are working effectively in the intervening period between construction and adoption.

6.0 Impact on Existing Drainage Systems

If the site is developed with attenuation systems and an agreed discharge rate reduced to a minimum of 3.5 l/s, there would be minimal increase in the flood risk to properties off site or in the drainage networks downstream of the site.

As part of the proposed development any incoming existing land drains should be picked up and diverted through the site. The land drainage should be constructed as a separate system to the adoptable surface water network. Given the steep nature of the site, the proposed development will include numerous retaining walls across the site which will also require land drainage.

Further consultation will be required with Kirklees Land Drainage to establish a suitable outfall for the on-site land drainage. The existing sewer network should also be investigated to determine if there is a suitable surface water drain in Penistone Road which would be in keeping with the current land drainage arrangements for the site. In any case the land drainage run-off rate should be managed on site to ensure the existing downstream infrastructure is not negatively impacted

7.0 Foul Water Drainage

There are no existing foul sewers serving the site. There are a number of existing combined public sewers located in Rowley Lane and Penistone Road.

The Yorkshire Water Pre-Planning enquiry states the development may discharge foul water to the existing 225mm Diameter combined public sewer in Penistone Road. However, the current drainage design is based on a connection

to the existing public sewer in Rowley Lane, which will be subject to Yorkshire Water approval.

Due to the steep nature of the site, at present it is anticipated that a gravity connection to the existing sewer network will be achievable.

8.0 Conclusions

The area to be developed on site currently falls within Flood Zone 1 as defined by the EA Flood maps. This area of site is shown to not to be at risk of flooding from river or tidal water for a 1% return period or for storms in excess of the 0.1% risk level. The flood risk is therefore considered to be acceptable for this type of development.

The risk of overland flows entering the site is considered to be minimal, however consideration should be given to flood routing through the site. The floor levels of the proposed buildings should be a minimum of 300mm above the existing ground level.

As infiltration methods have proved unviable, and there are no suitable watercourses adjacent the site to accept a discharge from the development, it will be necessary to discharge the surface water run-off from the site to an adoptable sewer, as stated in the Yorkshire Water pre-planning enquiry.

It would be necessary to provide storm water attenuation systems on site to limit flows from the completed development to 3.5 lit/sec, for up to and including the 1 in 100 year + 40% climate change storm events, to the existing 375mm surface water sewer in Rowley Lane to the north of the site. Discharge rates and connection points will need to be agreed with Yorkshire Water.

MARTIN HUDDLESTON MEng
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APPENDICES

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UNIT 4
MIDGLEY BUSINESS
PARK
BAR LANE
MIDGLEY
WF4 4JJ

Client : Homes By Honey

Job Title: Penistone Road, Fenay Bridge

Job Number : E20/8060

LOCATION PLAN

OS Grid Reference : SE187144
Easting : 418748
Northing : 414489

Topographical Survey carried out using GPS.

N

APPENDIX A

SITE LOCATION PLAN

APPENDIX B

ENVIRONMENT AGENCY FLOOD MAP

Flood map for planning

Your reference	Location (easting/northing)	Created
8060	**418739/414473**	**17 Jan 2024 16:08**

Your selected location is in flood zone 1, an area with a low probability of flooding.

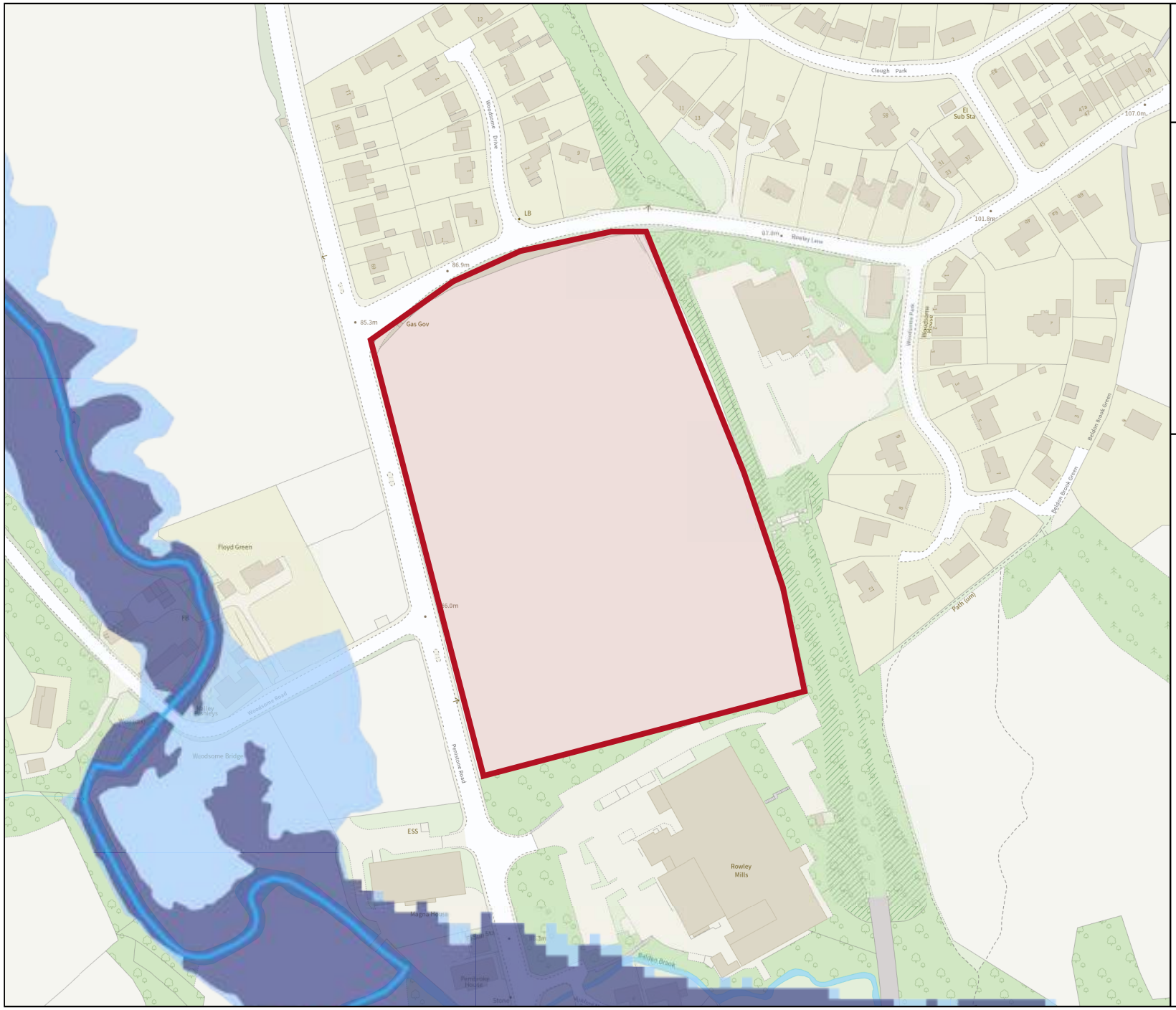
You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.



Environment Agency

Flood map for planning

Your reference
8060

Location (easting/northing)
418739/414473

Scale
1:2500

Created
17 Jan 2024 16:08

- Selected area
- Flood zone 3
- Flood zone 2
- Flood zone 1
- Flood defence
- Main river
- Water storage area

0 20 40 60m

APPENDIX C

YORKSHIRE WATER PRE-PLANNING ENQUIRY

YorkshireWater

Ms P Huddleston
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Dewsbury
West Yorkshire
WF12 7BU
accounts@haighhuddleston.co.uk

Yorkshire Water Services
Developer Services
Pre-Development Team
PO BOX 52
Bradford
BD3 7AY

Tel: 0345 120 8482

Email:
technical.sewerage@yorkshirewater.co.uk

For telephone enquiries ring:
Chris Roberts on 0345 120 8482

Your Ref:
Our Ref: Z006159

20th December 2023

Dear Ms P Huddleston,

Fenay Bridge, Penistone Road, Huddersfield, HD8 0JS. - Pre-planning Enquiry V344434

Thank you for your recent enquiry and remittance. Our official VAT receipt has been sent to you under separate cover. Please find enclosed a complimentary extract from the Statutory Sewer Map which indicates the recorded position of the public sewers. Please note that as of October 2011 and the private to public sewer transfer, there are many uncharted Yorkshire Water assets currently not shown on our records.

The following comments reflect our view, with regard to the public sewer network only, based on a 'desk top' study of the site and are valid for a maximum period of twelve months:

Development of the site should take place with separate systems for foul and surface water drainage. The separate systems should extend to the points of discharge to be agreed.

Foul Water

Foul water domestic waste can discharge to the 225 mm or 600 mm diameter public combined sewer recorded in Rowley Lane, at a point to the northwest of the site.

Surface Water

The developer's attention is drawn to Requirement H3 of the Building Regulations 2010. This establishes a preferred hierarchy for surface water disposal. Consideration should firstly be given to discharge to soakaway, infiltration system and watercourse in that priority order.

Sustainable Drainage Systems (SuDS), for example the use of soakaways and/or permeable hardstanding etc, may be a suitable solution for surface water disposal appropriate in this situation. You are advised to seek comments on the suitability of SuDS in this instance from the appropriate authorities.

As a last resort and subject to providing satisfactory evidence as to why the other methods of surface water disposal have been discounted, curtilage surface water may discharge to the 860 x 600 mm diameter arch brick public surface water sewer recorded in Rowley Lane, at a point to the north west of the site..

The surface water discharge from the site to be restricted to not greater than 3.5 (three point five) litres/second. This permission is not an acceptance in respect to any planning conditions imposed under the Grant of Planning Permission.

Please note further restrictions on surface water disposal from the site may be imposed by other parties. You are strongly advised to seek advice/comments from the Environment Agency/Land Drainage Authority/Internal Drainage Board, with regard to surface water disposal from the site.

Other Observations

Any new connection to an existing public sewer will require the prior approval of Yorkshire Water. You may apply on line or obtain an application form from our website - https://www.yorkshirewater.com/developers/sewerage/sewerage-connections/

An off-site foul and surface water sewer may be required which may be provided by the developer and considered for Code for Adoption under Section 104 of the Water Industry Act 1991. Please telephone 0345 120 84 82 for advice on sewer adoptions. Alternatively, the developer may in certain circumstances be able to requisition off-site sewers under Section 98 of the Water Industry Act 1991 for which an application must be made in writing. For further information, please telephone 0345 120 84 82.

Prospectively adoptable sewers and pumping stations must be designed and constructed in accordance with the Code for Adoption 2023/24, pursuant to an agreement under Section 104 of the Water Industry Act 1991. We are happy to offer pre-development technical advice on any prospective sites that you would like to put forward for adoption, prior to submission of your adoption application.

An application to enter into a Section 104 agreement must be made in writing prior to any works commencing on site. Please contact our Sewer Adoption, Diversion and Requisition (telephone 0345 120 84 82) or email technical.sewerage@yorkshirewater.co.uk or visit - https://www.yorkshirewater.com/developers/sewerage/sewer-adoptions/ for further information.

All the above comments are based upon the information and records available at the present time and is subject to formal planning approval agreement. The information contained in this letter together with that shown on any extract from the Statutory Sewer Map that may be enclosed is believed to be correct and is supplied in good faith. Please note that capacity in the public sewer network is not reserved for specific future development. It is used up on a 'first come, first served' basis. You should visit the site and establish the line and level of any public sewers affecting your proposals before the commencement of any design work.

Yours sincerely

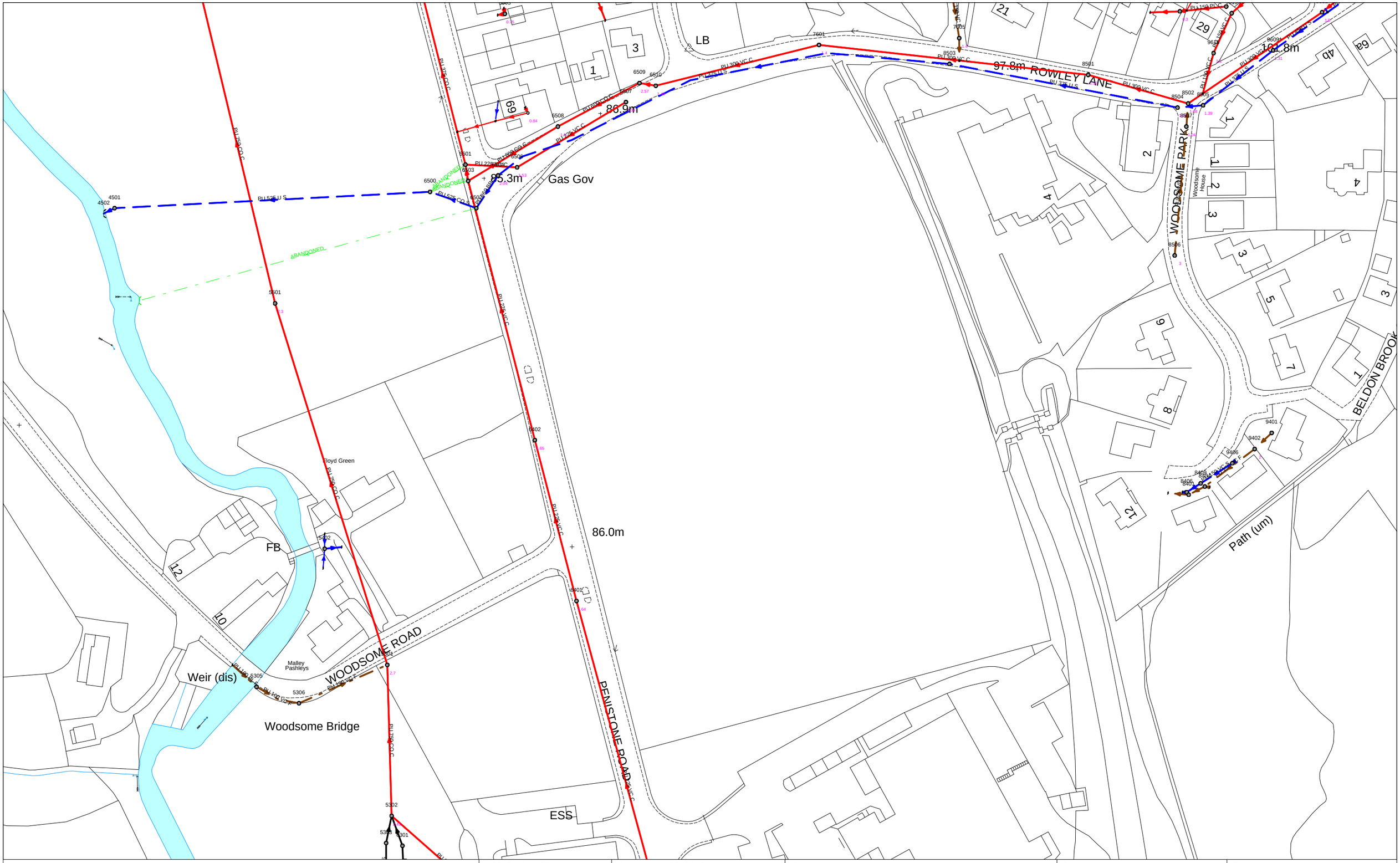
Chris Roberts
Development Services Technician

YorkshireWater

APPENDIX D

YORKSHIRE WATER

RECORDS



	418545 : 414361	Map Name : SE1814SW	Title
		Yorkshire Water, PO Box 500, Halifax Road, Bradford BD6 2LZ Contact Name : YorMap Advisor C ROBERTS Contact Tel : 87 2582	Notes
			(Ody) COPYRIGHT STATEMENTS: Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown copyright and database 2014. All rights reserved Ordnance Survey Licence number 100022432

Partial Key

Foul Sewer = F
Combined Sewer = C
Surface Water Sewer = SW
Trade Sewer = TD
Partially Separate = PS

This plan is furnished as a general guide only and no warranty as to its correctness is given or implied. This plan must not be relied upon in the event of excavations or other works made in the vicinity of public sewers. No house or property connections are shown.

Date Req : 20/12/2023, 11:23:13

Date Gen : 20/12/2023, 11:23:28

Source : Sewer Network Enquiry

UPN: Undefined

Originator: C ROBERTS, YorMap, 87 2582

APPENDIX E

DRAINAGE CALCULATIONS

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	2	Maximum Rainfall (mm/hr)	75.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	19.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.400	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
1	0.049	5.00	96.969	1200	418779.187	414401.600	1.425
2	0.065	5.00	98.114	1200	418801.581	414407.753	2.860
3	0.014	5.00	97.151	1200	418794.857	414432.221	2.151
4	0.049	5.00	96.754	1200	418791.179	414438.681	1.828
15	0.075	5.00	96.408	1200	418775.419	414503.333	1.508
16	0.022	5.00	96.111	1200	418783.446	414475.053	1.505
5	0.108	5.00	95.977	1200	418784.746	414462.092	1.576
6	0.071	5.00	94.401	1200	418747.338	414451.813	1.763
17	0.109	5.00	93.059	1200	418718.169	414436.216	1.500
7	0.089	5.00	93.182	1500	418715.833	414447.413	1.841
8	0.000	5.00	93.700	1500	418709.332	414492.223	2.661
9	0.000		93.600	1200	418707.954	414495.978	4.213
10	0.000		92.600	1200	418695.110	414530.967	3.288
11	0.088	5.00	92.500	1800	418692.441	414538.239	3.203
12	0.000		93.000	1800	418700.303	414564.003	3.757
18	0.095	5.00	95.389	1200	418755.496	414544.126	1.425
19	0.126	5.00	93.693	1200	418743.517	414560.565	1.498
20	0.000		92.487	1200	418737.971	414574.189	1.518
21	0.054	5.00	91.564	1200	418735.050	414586.330	1.711
22	0.048	5.00	92.700	1200	418718.691	414582.394	2.959
13	0.000		92.900	2400	418711.470	414575.172	3.739
23			92.600	1200	418707.508	414579.134	4.983
14			88.550	1200	418702.273	414584.370	1.550

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	1	2	23.224	0.600	95.544	95.254	0.290	80.0	225	5.26	65.3
1.001	2	3	25.375	0.600	95.254	95.000	0.254	100.0	225	5.59	63.6
1.002	3	4	7.434	0.600	95.000	94.926	0.074	100.0	225	5.68	63.1
1.003	4	5	24.279	0.600	94.926	94.476	0.450	54.0	225	5.91	62.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	1.463	58.2	8.7	1.200	2.635	0.049	0.0	58	1.057
1.001	1.307	52.0	19.7	2.635	1.926	0.114	0.0	95	1.216
1.002	1.307	52.0	21.9	1.926	1.603	0.128	0.0	102	1.251
1.003	1.784	70.9	29.8	1.603	1.276	0.177	0.0	102	1.708

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
2.000	15	16	29.397	0.600	94.900	94.606	0.294	100.0	225	5.37	64.7
2.001	16	5	13.026	0.600	94.606	94.476	0.130	100.0	225	5.54	63.8
1.004	5	6	38.795	0.600	94.401	92.638	1.763	22.0	300	6.10	61.1
1.005	6	7	31.811	0.600	92.638	91.416	1.222	26.0	300	6.27	60.4
3.000	17	7	11.438	0.600	91.559	91.416	0.143	80.0	300	5.11	66.1
1.006	7	8	45.279	0.600	91.341	91.039	0.302	150.0	375	6.78	58.2
1.007	8	9	4.000	0.600	91.039	91.012	0.027	150.0	375	6.83	58.0
1.008	9	10	37.272	0.600	89.387	89.312	0.075	500.0	2000	6.97	57.4
1.009	10	11	7.746	0.600	89.312	89.297	0.015	500.0	750	7.08	57.0
1.010	11	12	26.937	0.600	89.297	89.243	0.054	500.0	750	7.44	55.6
1.011	12	13	15.794	0.600	89.243	89.211	0.032	500.0	750	7.65	54.8
4.000	18	19	20.341	0.600	93.964	92.195	1.769	11.5	225	5.09	66.3
4.001	19	20	14.710	0.600	92.195	90.969	1.226	12.0	225	5.15	65.9
4.002	20	21	12.487	0.600	90.969	89.928	1.041	12.0	225	5.21	65.6
4.003	21	22	16.826	0.600	89.853	89.741	0.112	150.0	300	5.43	64.4
4.004	22	13	10.213	0.600	89.741	89.661	0.080	127.7	300	5.55	63.8
1.012	13	23	5.603	0.600	89.161	89.091	0.070	80.0	225	7.71	54.6
1.013	23	14	7.404	0.600	87.617	87.000	0.617	12.0	225	7.75	54.5

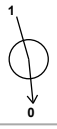
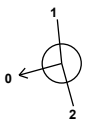
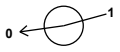
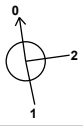
Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
2.000	1.307	52.0	13.2	1.283	1.280	0.075	0.0	77	1.094
2.001	1.307	52.0	16.8	1.280	1.276	0.097	0.0	87	1.167
1.004	3.366	237.9	63.3	1.276	1.463	0.382	0.0	105	2.861
1.005	3.093	218.7	74.1	1.463	1.466	0.453	0.0	120	2.802
3.000	1.759	124.3	19.5	1.200	1.466	0.109	0.0	80	1.293
1.006	1.477	163.1	102.6	1.466	2.286	0.651	0.0	216	1.558
1.007	1.477	163.1	102.3	2.286	2.213	0.651	0.0	216	1.556
1.008	4.274	83334.8	101.3	2.213	1.288	0.651	0.0	29	0.370
1.009	1.244	549.7	100.6	2.538	2.453	0.651	0.0	216	0.959
1.010	1.244	549.7	111.4	2.453	3.007	0.739	0.0	227	0.985
1.011	1.244	549.7	109.9	3.007	2.939	0.739	0.0	226	0.982
4.000	3.880	154.3	17.1	1.200	1.273	0.095	0.0	51	2.586
4.001	3.798	151.0	39.5	1.273	1.293	0.221	0.0	79	3.219
4.002	3.798	151.0	39.3	1.293	1.411	0.221	0.0	78	3.201
4.003	1.281	90.6	48.0	1.411	2.659	0.275	0.0	156	1.300
4.004	1.390	98.2	55.9	2.659	2.939	0.323	0.0	162	1.432
1.012	1.463	58.2	157.2	3.514	3.284	1.062	0.0	225	1.490
1.013	3.798	151.0	156.9	4.758	1.325	1.062	0.0	195	4.286

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	23.224	80.0	225	Circular_Default Sewer Type	96.969	95.544	1.200	98.114	95.254	2.635
1.001	25.375	100.0	225	Circular_Default Sewer Type	98.114	95.254	2.635	97.151	95.000	1.926
1.002	7.434	100.0	225	Circular_Default Sewer Type	97.151	95.000	1.926	96.754	94.926	1.603
1.003	24.279	54.0	225	Circular_Default Sewer Type	96.754	94.926	1.603	95.977	94.476	1.276
2.000	29.397	100.0	225	Circular_Default Sewer Type	96.408	94.900	1.283	96.111	94.606	1.280
2.001	13.026	100.0	225	Circular_Default Sewer Type	96.111	94.606	1.280	95.977	94.476	1.276
1.004	38.795	22.0	300	Circular_Default Sewer Type	95.977	94.401	1.276	94.401	92.638	1.463
1.005	31.811	26.0	300	Circular_Default Sewer Type	94.401	92.638	1.463	93.182	91.416	1.466
3.000	11.438	80.0	300	Circular_Default Sewer Type	93.059	91.559	1.200	93.182	91.416	1.466
1.006	45.279	150.0	375	Circular_Default Sewer Type	93.182	91.341	1.466	93.700	91.039	2.286
1.007	4.000	150.0	375	Circular_Default Sewer Type	93.700	91.039	2.286	93.600	91.012	2.213
1.008	37.272	500.0	2000	Attenuation Tank	93.600	89.387	2.213	92.600	89.312	1.288
1.009	7.746	500.0	750	Circular_Default Sewer Type	92.600	89.312	2.538	92.500	89.297	2.453
1.010	26.937	500.0	750	Circular_Default Sewer Type	92.500	89.297	2.453	93.000	89.243	3.007
1.011	15.794	500.0	750	Circular_Default Sewer Type	93.000	89.243	3.007	92.900	89.211	2.939
4.000	20.341	11.5	225	Circular_Default Sewer Type	95.389	93.964	1.200	93.693	92.195	1.273
4.001	14.710	12.0	225	Circular_Default Sewer Type	93.693	92.195	1.273	92.487	90.969	1.293
4.002	12.487	12.0	225	Circular_Default Sewer Type	92.487	90.969	1.293	91.564	89.928	1.411
4.003	16.826	150.0	300	Circular_Default Sewer Type	91.564	89.853	1.411	92.700	89.741	2.659
4.004	10.213	127.7	300	Circular_Default Sewer Type	92.700	89.741	2.659	92.900	89.661	2.939
1.012	5.603	80.0	225	Circular_Default Sewer Type	92.900	89.161	3.514	92.600	89.091	3.284
1.013	7.404	12.0	225	Circular_Default Sewer Type	92.600	87.617	4.758	88.550	87.000	1.325

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	1	1200	Manhole	Adoptable	2	1200	Manhole	Adoptable
1.001	2	1200	Manhole	Adoptable	3	1200	Manhole	Adoptable
1.002	3	1200	Manhole	Adoptable	4	1200	Manhole	Adoptable
1.003	4	1200	Manhole	Adoptable	5	1200	Manhole	Adoptable
2.000	15	1200	Manhole	Adoptable	16	1200	Manhole	Adoptable
2.001	16	1200	Manhole	Adoptable	5	1200	Manhole	Adoptable
1.004	5	1200	Manhole	Adoptable	6	1200	Manhole	Adoptable
1.005	6	1200	Manhole	Adoptable	7	1500	Manhole	Adoptable
3.000	17	1200	Manhole	Adoptable	7	1500	Manhole	Adoptable
1.006	7	1500	Manhole	Adoptable	8	1500	Manhole	Adoptable
1.007	8	1500	Manhole	Adoptable	9	1200	Manhole	Adoptable
1.008	9	1200	Manhole	Adoptable	10	1200	Manhole	Adoptable
1.009	10	1200	Manhole	Adoptable	11	1800	Manhole	Adoptable
1.010	11	1800	Manhole	Adoptable	12	1800	Manhole	Adoptable
1.011	12	1800	Manhole	Adoptable	13	2400	Manhole	Adoptable
4.000	18	1200	Manhole	Adoptable	19	1200	Manhole	Adoptable
4.001	19	1200	Manhole	Adoptable	20	1200	Manhole	Adoptable
4.002	20	1200	Manhole	Adoptable	21	1200	Manhole	Adoptable
4.003	21	1200	Manhole	Adoptable	22	1200	Manhole	Adoptable
4.004	22	1200	Manhole	Adoptable	13	2400	Manhole	Adoptable
1.012	13	2400	Manhole	Adoptable	23	1200	Manhole	Adoptable
1.013	23	1200	Manhole	Adoptable	14	1200	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
1	418779.187	414401.600	96.969	1.425	1200				
						0	1.000	95.544	225
2	418801.581	414407.753	98.114	2.860	1200		1	1.000	95.254	225
						0	1.001	95.254	225
3	418794.857	414432.221	97.151	2.151	1200		1	1.001	95.000	225
						0	1.002	95.000	225
4	418791.179	414438.681	96.754	1.828	1200		1	1.002	94.926	225
						0	1.003	94.926	225
15	418775.419	414503.333	96.408	1.508	1200				
						0	2.000	94.900	225
16	418783.446	414475.053	96.111	1.505	1200		1	2.000	94.606	225
						0	2.001	94.606	225
5	418784.746	414462.092	95.977	1.576	1200		1	2.001	94.476	225
							2	1.003	94.476	225
						0	1.004	94.401	300
6	418747.338	414451.813	94.401	1.763	1200		1	1.004	92.638	300
						0	1.005	92.638	300
17	418718.169	414436.216	93.059	1.500	1200				
						0	3.000	91.559	300
7	418715.833	414447.413	93.182	1.841	1500		1	3.000	91.416	300
							2	1.005	91.416	300
						0	1.006	91.341	375
8	418709.332	414492.223	93.700	2.661	1500		1	1.006	91.039	375
						0	1.007	91.039	375
9	418707.954	414495.978	93.600	4.213	1200		1	1.007	91.012	375
						0	1.008	89.387	2000
10	418695.110	414530.967	92.600	3.288	1200		1	1.008	89.312	2000
						0	1.009	89.312	750

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
11	418692.441	414538.239	92.500	3.203	1800	1	1.009	89.297	750
						0	1.010	89.297	750
12	418700.303	414564.003	93.000	3.757	1800	1	1.010	89.243	750
						0	1.011	89.243	750
18	418755.496	414544.126	95.389	1.425	1200	0	4.000	93.964	225
19	418743.517	414560.565	93.693	1.498	1200	1	4.000	92.195	225
						0	4.001	92.195	225
20	418737.971	414574.189	92.487	1.518	1200	1	4.001	90.969	225
						0	4.002	90.969	225
21	418735.050	414586.330	91.564	1.711	1200	1	4.002	89.928	225
						0	4.003	89.853	300
22	418718.691	414582.394	92.700	2.959	1200	1	4.003	89.741	300
						0	4.004	89.741	300
13	418711.470	414575.172	92.900	3.739	2400	1	4.004	89.661	300
						2	1.011	89.211	750
						0	1.012	89.161	225
23	418707.508	414579.134	92.600	4.983	1200	1	1.012	89.091	225
						0	1.013	87.617	225
14	418702.273	414584.370	88.550	1.550	1200	1	1.013	87.000	225

Simulation Settings

Rainfall Methodology	FSR	Skip Steady State	✓
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	19.000	Additional Storage (m³/ha)	0.0
Ratio-R	0.400	Check Discharge Rate(s)	✓
Summer CV	0.750	Check Discharge Volume	✓
Winter CV	0.840	100 year 360 minute (m³)	
Analysis Speed	Detailed		

Storm Durations

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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
2	0	0	0
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 13 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	89.161	Product Number	CTL-SHE-0075-3500-2100-3500
Design Depth (m)	2.100	Min Outlet Diameter (m)	0.100
Design Flow (l/s)	3.5	Min Node Diameter (mm)	1200

Results for 2 year 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	10	95.600	0.056	8.1	0.0635	0.0000	OK
15 minute summer	2	10	95.349	0.095	18.7	0.1072	0.0000	OK
15 minute summer	3	11	95.110	0.110	20.7	0.1249	0.0000	OK
15 minute summer	4	11	95.030	0.104	28.5	0.1175	0.0000	OK
15 minute summer	15	10	94.974	0.074	12.3	0.0838	0.0000	OK
15 minute summer	16	11	94.696	0.090	15.8	0.1015	0.0000	OK
15 minute summer	5	11	94.505	0.104	61.2	0.1175	0.0000	OK
15 minute summer	6	11	92.756	0.118	72.5	0.1336	0.0000	OK
15 minute summer	17	9	91.637	0.078	17.9	0.0880	0.0000	OK
15 minute summer	7	11	91.571	0.230	104.0	0.4066	0.0000	OK
15 minute summer	8	11	91.293	0.254	105.0	0.4484	0.0000	OK
15 minute summer	9	22	89.527	0.140	150.3	0.1579	0.0000	OK
15 minute summer	10	21	89.526	0.214	137.7	0.2416	0.0000	OK
15 minute summer	11	21	89.526	0.229	62.7	0.5836	0.0000	OK
15 minute summer	12	22	89.525	0.282	49.3	0.7165	0.0000	OK
15 minute summer	18	10	94.012	0.048	15.6	0.0544	0.0000	OK
15 minute summer	19	10	92.274	0.079	36.2	0.0893	0.0000	OK
15 minute summer	20	10	91.046	0.077	36.1	0.0872	0.0000	OK
15 minute summer	21	10	90.018	0.165	44.9	0.1867	0.0000	OK
15 minute summer	22	10	89.914	0.173	52.4	0.1960	0.0000	OK
15 minute summer	13	22	89.527	0.366	52.0	1.6536	0.0000	SURCHARGED
15 minute summer	23	14	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute summer	14	14	87.021	0.021	2.6	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	1	1.000	2	8.0	0.687	0.138	0.2739	
15 minute summer	2	1.001	3	18.4	1.050	0.355	0.4455	
15 minute summer	3	1.002	4	20.7	1.111	0.398	0.1385	
15 minute summer	4	1.003	5	28.6	1.652	0.403	0.4207	
15 minute summer	15	2.000	16	12.2	0.935	0.235	0.3841	
15 minute summer	16	2.001	5	15.6	1.107	0.301	0.1841	
15 minute summer	5	1.004	6	61.4	2.591	0.258	0.9194	
15 minute summer	6	1.005	7	72.8	2.366	0.333	0.9941	
15 minute summer	17	3.000	7	17.8	0.959	0.143	0.2883	
15 minute summer	7	1.006	8	105.0	1.397	0.644	3.4017	
15 minute summer	8	1.007	9	104.7	1.451	0.642	0.2883	
15 minute summer	9	1.008	10	104.2	0.241	0.001	62.1206	
15 minute summer	10	1.009	11	-59.7	-1.113	-0.109	0.8406	
15 minute summer	11	1.010	12	-48.9	-0.450	-0.089	3.5059	
15 minute summer	12	1.011	13	-49.3	-0.327	-0.090	2.5800	
15 minute summer	18	4.000	19	15.5	1.693	0.101	0.1892	
15 minute summer	19	4.001	20	36.1	2.955	0.239	0.1796	
15 minute summer	20	4.002	21	36.0	2.746	0.238	0.1676	
15 minute summer	21	4.003	22	44.5	1.087	0.491	0.6887	
15 minute summer	22	4.004	13	52.0	1.331	0.529	0.3997	
15 minute summer	13	Hydro-Brake®	23	2.6				
15 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	38.8

Results for 2 year 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	95.601	0.057	8.5	0.0650	0.0000	OK
15 minute winter	2	10	95.351	0.097	19.6	0.1100	0.0000	OK
15 minute winter	3	11	95.113	0.113	21.6	0.1283	0.0000	OK
15 minute winter	4	11	95.033	0.107	29.8	0.1205	0.0000	OK
15 minute winter	15	10	94.976	0.076	13.0	0.0863	0.0000	OK
15 minute winter	16	10	94.698	0.092	16.6	0.1041	0.0000	OK
15 minute winter	5	11	94.507	0.106	64.0	0.1203	0.0000	OK
15 minute winter	6	11	92.759	0.121	75.8	0.1369	0.0000	OK
15 minute winter	17	10	91.637	0.078	18.8	0.0882	0.0000	OK
15 minute winter	7	11	91.578	0.237	108.9	0.4191	0.0000	OK
15 minute winter	8	11	91.300	0.261	109.7	0.4617	0.0000	OK
15 minute winter	9	21	89.549	0.162	143.6	0.1835	0.0000	OK
15 minute winter	10	26	89.548	0.236	154.4	0.2670	0.0000	OK
15 minute winter	11	26	89.548	0.251	64.1	0.6385	0.0000	OK
15 minute winter	12	28	89.544	0.301	51.6	0.7658	0.0000	OK
15 minute winter	18	10	94.013	0.049	16.4	0.0557	0.0000	OK
15 minute winter	19	10	92.276	0.081	38.1	0.0919	0.0000	OK
15 minute winter	20	10	91.048	0.079	37.9	0.0891	0.0000	OK
15 minute winter	21	10	90.023	0.170	47.1	0.1926	0.0000	OK
15 minute winter	22	10	89.919	0.178	54.8	0.2016	0.0000	OK
15 minute winter	13	24	89.546	0.385	54.3	1.7421	0.0000	SURCHARGED
15 minute winter	23	137	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute winter	14	137	87.021	0.021	2.6	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 winter	1	1.000	2	8.4	0.696	0.144	0.2834	
15 minute winter	2	1.001	3	19.3	1.060	0.370	0.4610	
15 minute winter	3	1.002	4	21.6	1.122	0.416	0.1433	
15 minute winter	4	1.003	5	29.9	1.670	0.421	0.4348	
15 minute winter	15	2.000	16	12.8	0.947	0.247	0.3986	
15 minute winter	16	2.001	5	16.3	1.120	0.314	0.1902	
15 minute winter	5	1.004	6	64.1	2.621	0.269	0.9498	
15 minute winter	6	1.005	7	76.1	2.371	0.348	1.0413	
15 minute winter	17	3.000	7	18.7	0.925	0.150	0.3024	
15 minute winter	7	1.006	8	109.7	1.411	0.673	3.5190	
15 minute winter	8	1.007	9	109.5	1.467	0.671	0.2981	
15 minute winter	9	1.008	10	124.5	0.272	0.001	70.1530	
15 minute winter	10	1.009	11	-57.8	-1.095	-0.105	0.9589	
15 minute winter	11	1.010	12	-49.9	-0.434	-0.091	3.9400	
15 minute winter	12	1.011	13	-51.6	-0.335	-0.094	2.8043	
15 minute winter	18	4.000	19	16.3	1.712	0.106	0.1965	
15 minute winter	19	4.001	20	37.9	2.999	0.251	0.1860	
15 minute winter	20	4.002	21	37.8	2.779	0.250	0.1771	
15 minute winter	21	4.003	22	46.5	1.097	0.514	0.7140	
15 minute winter	22	4.004	13	54.3	1.345	0.553	0.4132	
15 minute winter	13	Hydro-Brake®	23	2.6				
15 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	38.8

Results for 2 year 30 minute summer. 270 minute analysis at 1 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
30 minute summer	1	18	95.597	0.053	7.2	0.0602	0.0000	OK
30 minute summer	2	18	95.343	0.089	16.7	0.1008	0.0000	OK
30 minute summer	3	18	95.104	0.104	18.7	0.1174	0.0000	OK
30 minute summer	4	18	95.024	0.098	25.8	0.1106	0.0000	OK
30 minute summer	15	18	94.970	0.070	11.0	0.0791	0.0000	OK
30 minute summer	16	18	94.691	0.085	14.2	0.0962	0.0000	OK
30 minute summer	5	18	94.500	0.099	55.7	0.1115	0.0000	OK
30 minute summer	6	18	92.751	0.113	66.0	0.1273	0.0000	OK
30 minute summer	17	16	91.631	0.072	15.9	0.0819	0.0000	OK
30 minute summer	7	18	91.556	0.215	94.7	0.3794	0.0000	OK
30 minute summer	8	19	91.275	0.236	93.8	0.4174	0.0000	OK
30 minute summer	9	37	89.573	0.186	108.4	0.2108	0.0000	OK
30 minute summer	10	35	89.573	0.261	114.0	0.2952	0.0000	OK
30 minute summer	11	35	89.574	0.277	53.4	0.7037	0.0000	OK
30 minute summer	12	37	89.571	0.328	42.7	0.8359	0.0000	OK
30 minute summer	18	18	94.009	0.045	13.9	0.0515	0.0000	OK
30 minute summer	19	18	92.269	0.074	32.3	0.0837	0.0000	OK
30 minute summer	20	18	91.043	0.074	32.3	0.0832	0.0000	OK
30 minute summer	21	18	90.007	0.154	40.2	0.1743	0.0000	OK
30 minute summer	22	18	89.904	0.163	47.2	0.1843	0.0000	OK
30 minute summer	13	37	89.573	0.412	47.2	1.8644	0.0000	SURCHARGED
30 minute summer	23	223	87.638	0.021	2.6	0.0238	0.0000	OK
30 minute summer	14	223	87.021	0.021	2.6	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)
30 minute summer	1	1.000	2	7.2	0.669	0.124	0.2529	
30 minute summer	2	1.001	3	16.7	1.028	0.321	0.4125	
30 minute summer	3	1.002	4	18.6	1.084	0.359	0.1279	
30 minute summer	4	1.003	5	25.7	1.606	0.362	0.3887	
30 minute summer	15	2.000	16	11.0	0.911	0.212	0.3561	
30 minute summer	16	2.001	5	14.2	1.078	0.273	0.1714	
30 minute summer	5	1.004	6	55.6	2.513	0.234	0.8585	
30 minute summer	6	1.005	7	65.8	2.379	0.301	0.8949	
30 minute summer	17	3.000	7	15.9	0.945	0.128	0.2577	
30 minute summer	7	1.006	8	93.8	1.363	0.575	3.1164	
30 minute summer	8	1.007	9	93.7	1.412	0.574	0.2653	
30 minute summer	9	1.008	10	80.3	0.166	0.001	79.9526	
30 minute summer	10	1.009	11	-49.8	-0.765	-0.091	1.0979	
30 minute summer	11	1.010	12	-41.7	0.366	-0.076	4.4448	
30 minute summer	12	1.011	13	-42.7	-0.290	-0.078	3.1258	
30 minute summer	18	4.000	19	13.9	1.650	0.090	0.1736	
30 minute summer	19	4.001	20	32.3	2.856	0.214	0.1664	
30 minute summer	20	4.002	21	32.3	2.783	0.214	0.1480	
30 minute summer	21	4.003	22	40.2	1.064	0.444	0.6353	
30 minute summer	22	4.004	13	47.2	1.299	0.481	0.3715	
30 minute summer	13	Hydro-Brake®	23	2.6				
30 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	40.9

Results for 2 year 30 minute winter. 270 minute analysis at 1 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
30 minute winter	1	18	95.595	0.051	6.5	0.0572	0.0000	OK
30 minute winter	2	18	95.338	0.084	15.1	0.0952	0.0000	OK
30 minute winter	3	18	95.098	0.098	17.0	0.1109	0.0000	OK
30 minute winter	4	18	95.019	0.093	23.5	0.1046	0.0000	OK
30 minute winter	15	18	94.966	0.066	9.9	0.0748	0.0000	OK
30 minute winter	16	18	94.686	0.080	12.8	0.0907	0.0000	OK
30 minute winter	5	18	94.494	0.093	50.5	0.1055	0.0000	OK
30 minute winter	6	18	92.746	0.108	59.8	0.1216	0.0000	OK
30 minute winter	17	16	91.628	0.069	14.4	0.0781	0.0000	OK
30 minute winter	7	18	91.542	0.201	85.9	0.3559	0.0000	OK
30 minute winter	8	19	91.262	0.223	85.4	0.3942	0.0000	OK
30 minute winter	9	38	89.602	0.215	98.9	0.2435	0.0000	OK
30 minute winter	10	36	89.603	0.291	111.7	0.3288	0.0000	OK
30 minute winter	11	36	89.603	0.306	48.1	0.7792	0.0000	OK
30 minute winter	12	38	89.600	0.357	39.0	0.9078	0.0000	OK
30 minute winter	18	18	94.007	0.043	12.6	0.0490	0.0000	OK
30 minute winter	19	18	92.265	0.070	29.3	0.0791	0.0000	OK
30 minute winter	20	18	91.040	0.071	29.3	0.0801	0.0000	OK
30 minute winter	21	18	89.998	0.145	36.4	0.1637	0.0000	OK
30 minute winter	22	18	89.894	0.153	42.7	0.1732	0.0000	OK
30 minute winter	13	38	89.601	0.440	42.7	1.9915	0.0000	SURCHARGED
30 minute winter	23	17	87.638	0.021	2.6	0.0238	0.0000	OK
30 minute winter	14	17	87.021	0.021	2.6	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)
30 minute winter	1	1.000	2	6.5	0.652	0.112	0.2344	
30 minute winter	2	1.001	3	15.1	1.003	0.291	0.3823	
30 minute winter	3	1.002	4	17.0	1.062	0.326	0.1188	
30 minute winter	4	1.003	5	23.4	1.568	0.330	0.3620	
30 minute winter	15	2.000	16	9.9	0.886	0.190	0.3292	
30 minute winter	16	2.001	5	12.8	1.049	0.246	0.1587	
30 minute winter	5	1.004	6	50.4	2.440	0.212	0.8019	
30 minute winter	6	1.005	7	59.7	2.374	0.273	0.8091	
30 minute winter	17	3.000	7	14.4	0.913	0.116	0.2302	
30 minute winter	7	1.006	8	85.4	1.332	0.524	2.9025	
30 minute winter	8	1.007	9	85.4	1.379	0.523	0.2476	
30 minute winter	9	1.008	10	83.9	0.178	0.001	90.4820	
30 minute winter	10	1.009	11	-45.8	-0.717	-0.083	1.2645	
30 minute winter	11	1.010	12	-36.5	0.375	-0.066	5.0258	
30 minute winter	12	1.011	13	-39.0	-0.269	-0.071	3.4577	
30 minute winter	18	4.000	19	12.6	1.612	0.082	0.1611	
30 minute winter	19	4.001	20	29.3	2.767	0.194	0.1558	
30 minute winter	20	4.002	21	29.3	2.784	0.194	0.1320	
30 minute winter	21	4.003	22	36.4	1.043	0.402	0.5872	
30 minute winter	22	4.004	13	42.7	1.268	0.435	0.3442	
30 minute winter	13	Hydro-Brake®	23	2.6				
30 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	40.7

Results for 2 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	1	33	95.590	0.046	5.3	0.0517	0.0000	OK
60 minute summer	2	33	95.329	0.075	12.4	0.0854	0.0000	OK
60 minute summer	3	33	95.087	0.087	13.9	0.0985	0.0000	OK
60 minute summer	4	33	95.009	0.083	19.2	0.0933	0.0000	OK
60 minute summer	15	33	94.960	0.060	8.1	0.0675	0.0000	OK
60 minute summer	16	33	94.678	0.072	10.5	0.0813	0.0000	OK
60 minute summer	5	33	94.485	0.084	41.3	0.0949	0.0000	OK
60 minute summer	6	33	92.736	0.098	48.9	0.1111	0.0000	OK
60 minute summer	17	32	91.623	0.064	11.8	0.0729	0.0000	OK
60 minute summer	7	33	91.518	0.177	70.3	0.3136	0.0000	OK
60 minute summer	8	34	91.237	0.198	69.9	0.3500	0.0000	OK
60 minute summer	9	66	89.620	0.233	76.9	0.2641	0.0000	OK
60 minute summer	10	69	89.620	0.308	73.6	0.3484	0.0000	OK
60 minute summer	11	69	89.620	0.323	37.8	0.8226	0.0000	OK
60 minute summer	12	66	89.619	0.376	30.9	0.9569	0.0000	OK
60 minute summer	18	33	94.003	0.039	10.3	0.0445	0.0000	OK
60 minute summer	19	33	92.258	0.063	24.0	0.0709	0.0000	OK
60 minute summer	20	33	91.033	0.064	24.0	0.0724	0.0000	OK
60 minute summer	21	33	89.981	0.128	29.9	0.1451	0.0000	OK
60 minute summer	22	33	89.877	0.136	35.1	0.1540	0.0000	OK
60 minute summer	13	66	89.620	0.459	35.1	2.0758	0.0000	SURCHARGED
60 minute summer	23	33	87.638	0.021	2.6	0.0238	0.0000	OK
60 minute summer	14	33	87.021	0.021	2.6	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)
60 minute summer	1	1.000	2	5.3	0.617	0.091	0.2023	
60 minute summer	2	1.001	3	12.4	0.961	0.239	0.3278	
60 minute summer	3	1.002	4	13.9	1.014	0.267	0.1016	
60 minute summer	4	1.003	5	19.1	1.488	0.269	0.3114	
60 minute summer	15	2.000	16	8.1	0.842	0.156	0.2841	
60 minute summer	16	2.001	5	10.5	0.996	0.201	0.1370	
60 minute summer	5	1.004	6	41.2	2.284	0.173	0.7007	
60 minute summer	6	1.005	7	48.8	2.376	0.223	0.6565	
60 minute summer	17	3.000	7	11.8	0.920	0.095	0.1839	
60 minute summer	7	1.006	8	69.9	1.273	0.429	2.4870	
60 minute summer	8	1.007	9	70.0	1.310	0.429	0.2138	
60 minute summer	9	1.008	10	48.3	0.137	0.001	97.7083	
60 minute summer	10	1.009	11	-35.2	-0.492	-0.064	1.3625	
60 minute summer	11	1.010	12	-28.7	0.332	-0.052	5.4027	
60 minute summer	12	1.011	13	-30.9	-0.225	-0.056	3.6816	
60 minute summer	18	4.000	19	10.3	1.528	0.067	0.1389	
60 minute summer	19	4.001	20	24.0	2.623	0.159	0.1346	
60 minute summer	20	4.002	21	24.0	2.691	0.159	0.1114	
60 minute summer	21	4.003	22	29.9	1.000	0.330	0.5034	
60 minute summer	22	4.004	13	35.1	1.209	0.357	0.2968	
60 minute summer	13	Hydro-Brake®	23	2.6				
60 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	44.9

Results for 2 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	1	33	95.585	0.041	4.3	0.0466	0.0000	OK
60 minute winter	2	33	95.321	0.067	10.0	0.0760	0.0000	OK
60 minute winter	3	33	95.077	0.077	11.2	0.0871	0.0000	OK
60 minute winter	4	33	95.000	0.074	15.5	0.0831	0.0000	OK
60 minute winter	15	33	94.954	0.054	6.6	0.0609	0.0000	OK
60 minute winter	16	33	94.670	0.064	8.5	0.0726	0.0000	OK
60 minute winter	5	33	94.476	0.075	33.4	0.0853	0.0000	OK
60 minute winter	6	33	92.727	0.089	39.6	0.1005	0.0000	OK
60 minute winter	17	33	91.617	0.057	9.6	0.0650	0.0000	OK
60 minute winter	7	33	91.497	0.156	57.0	0.2765	0.0000	OK
60 minute winter	8	34	91.215	0.176	56.9	0.3104	0.0000	OK
60 minute winter	9	65	89.656	0.269	68.9	0.3047	0.0000	OK
60 minute winter	10	68	89.656	0.344	66.9	0.3893	0.0000	OK
60 minute winter	11	68	89.656	0.359	29.9	0.9144	0.0000	OK
60 minute winter	12	65	89.655	0.412	24.6	1.0486	0.0000	OK
60 minute winter	18	33	93.999	0.035	8.3	0.0400	0.0000	OK
60 minute winter	19	33	92.251	0.056	19.4	0.0635	0.0000	OK
60 minute winter	20	33	91.026	0.057	19.4	0.0646	0.0000	OK
60 minute winter	21	33	89.966	0.113	24.1	0.1276	0.0000	OK
60 minute winter	22	33	89.861	0.120	28.3	0.1358	0.0000	OK
60 minute winter	13	65	89.656	0.495	28.3	2.2384	0.0000	SURCHARGED
60 minute winter	23	33	87.638	0.021	2.6	0.0238	0.0000	OK
60 minute winter	14	33	87.021	0.021	2.6	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)
60 minute winter	1	1.000	2	4.3	0.586	0.074	0.1730	
60 minute winter	2	1.001	3	10.0	0.913	0.192	0.2782	
60 minute winter	3	1.002	4	11.2	0.963	0.215	0.0864	
60 minute winter	4	1.003	5	15.5	1.407	0.218	0.2667	
60 minute winter	15	2.000	16	6.6	0.797	0.127	0.2439	
60 minute winter	16	2.001	5	8.5	0.942	0.163	0.1174	
60 minute winter	5	1.004	6	33.4	2.138	0.140	0.6073	
60 minute winter	6	1.005	7	39.6	2.324	0.181	0.5413	
60 minute winter	17	3.000	7	9.6	0.905	0.077	0.1422	
60 minute winter	7	1.006	8	56.9	1.210	0.349	2.1283	
60 minute winter	8	1.007	9	56.9	1.241	0.349	0.1835	
60 minute winter	9	1.008	10	46.6	0.152	0.001	110.8356	
60 minute winter	10	1.009	11	-26.0	-0.414	-0.047	1.5701	
60 minute winter	11	1.010	12	-22.2	0.335	-0.040	6.1254	
60 minute winter	12	1.011	13	-24.6	-0.179	-0.045	4.1041	
60 minute winter	18	4.000	19	8.3	1.439	0.054	0.1189	
60 minute winter	19	4.001	20	19.4	2.484	0.128	0.1149	
60 minute winter	20	4.002	21	19.4	2.542	0.128	0.0953	
60 minute winter	21	4.003	22	24.1	0.954	0.266	0.4252	
60 minute winter	22	4.004	13	28.3	1.145	0.288	0.2525	
60 minute winter	13	Hydro-Brake®	23	2.6				
60 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	44.5

Results for 2 year 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	1	64	95.581	0.037	3.5	0.0422	0.0000	OK
120 minute summer	2	64	95.314	0.060	8.1	0.0680	0.0000	OK
120 minute summer	3	64	95.069	0.069	9.1	0.0776	0.0000	OK
120 minute summer	4	64	94.992	0.066	12.6	0.0745	0.0000	OK
120 minute summer	15	64	94.948	0.048	5.3	0.0546	0.0000	OK
120 minute summer	16	64	94.664	0.058	6.9	0.0650	0.0000	OK
120 minute summer	5	64	94.469	0.068	27.1	0.0768	0.0000	OK
120 minute summer	6	64	92.718	0.080	32.1	0.0900	0.0000	OK
120 minute summer	17	62	91.611	0.052	7.7	0.0584	0.0000	OK
120 minute summer	7	64	91.479	0.138	46.1	0.2446	0.0000	OK
120 minute summer	8	64	91.195	0.156	46.0	0.2750	0.0000	OK
120 minute summer	9	126	89.665	0.278	45.9	0.3140	0.0000	OK
120 minute summer	10	124	89.664	0.352	39.7	0.3980	0.0000	OK
120 minute summer	11	124	89.664	0.367	21.7	0.9338	0.0000	OK
120 minute summer	12	126	89.664	0.421	18.4	1.0716	0.0000	OK
120 minute summer	18	64	93.996	0.032	6.7	0.0361	0.0000	OK
120 minute summer	19	64	92.245	0.050	15.6	0.0567	0.0000	OK
120 minute summer	20	64	91.020	0.051	15.6	0.0576	0.0000	OK
120 minute summer	21	64	89.953	0.100	19.4	0.1127	0.0000	OK
120 minute summer	22	64	89.847	0.106	22.8	0.1202	0.0000	OK
120 minute summer	13	126	89.664	0.503	22.8	2.2772	0.0000	SURCHARGED
120 minute summer	23	64	87.638	0.021	2.6	0.0238	0.0000	OK
120 minute summer	14	64	87.021	0.021	2.6	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)
120 minute summer	1	1.000	2	3.5	0.555	0.060	0.1486	
120 minute summer	2	1.001	3	8.1	0.866	0.156	0.2376	
120 minute summer	3	1.002	4	9.1	0.915	0.175	0.0739	
120 minute summer	4	1.003	5	12.6	1.332	0.178	0.2296	
120 minute summer	15	2.000	16	5.3	0.750	0.102	0.2089	
120 minute summer	16	2.001	5	6.9	0.890	0.133	0.1010	
120 minute summer	5	1.004	6	27.1	2.020	0.114	0.5211	
120 minute summer	6	1.005	7	32.1	2.195	0.147	0.4647	
120 minute summer	17	3.000	7	7.7	0.895	0.062	0.1079	
120 minute summer	7	1.006	8	46.0	1.150	0.282	1.8139	
120 minute summer	8	1.007	9	45.9	1.173	0.281	0.1567	
120 minute summer	9	1.008	10	24.8	0.114	0.000	114.2616	
120 minute summer	10	1.009	11	-19.5	-0.249	-0.036	1.6144	
120 minute summer	11	1.010	12	-15.5	0.310	-0.028	6.3027	
120 minute summer	12	1.011	13	-18.4	-0.134	-0.033	4.2068	
120 minute summer	18	4.000	19	6.7	1.360	0.043	0.1016	
120 minute summer	19	4.001	20	15.6	2.349	0.103	0.0977	
120 minute summer	20	4.002	21	15.6	2.398	0.103	0.0813	
120 minute summer	21	4.003	22	19.4	0.908	0.214	0.3597	
120 minute summer	22	4.004	13	22.8	1.083	0.232	0.2150	
120 minute summer	13	Hydro-Brake®	23	2.6				
120 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	52.9

Results for 2 year 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	64	95.577	0.033	2.7	0.0372	0.0000	OK
120 minute winter	2	64	95.306	0.052	6.2	0.0592	0.0000	OK
120 minute winter	3	64	95.059	0.059	7.0	0.0672	0.0000	OK
120 minute winter	4	64	94.983	0.057	9.7	0.0650	0.0000	OK
120 minute winter	15	64	94.943	0.043	4.1	0.0481	0.0000	OK
120 minute winter	16	64	94.656	0.050	5.3	0.0567	0.0000	OK
120 minute winter	5	64	94.461	0.060	20.9	0.0675	0.0000	OK
120 minute winter	6	64	92.708	0.070	24.8	0.0787	0.0000	OK
120 minute winter	17	62	91.605	0.046	5.9	0.0519	0.0000	OK
120 minute winter	7	64	91.461	0.120	35.5	0.2117	0.0000	OK
120 minute winter	8	64	91.174	0.135	35.5	0.2382	0.0000	OK
120 minute winter	9	128	89.708	0.321	35.7	0.3630	0.0000	OK
120 minute winter	10	124	89.709	0.397	36.9	0.4486	0.0000	OK
120 minute winter	11	124	89.709	0.412	16.7	1.0478	0.0000	OK
120 minute winter	12	126	89.708	0.465	14.0	1.1831	0.0000	OK
120 minute winter	18	64	93.992	0.028	5.2	0.0320	0.0000	OK
120 minute winter	19	64	92.239	0.044	12.1	0.0498	0.0000	OK
120 minute winter	20	64	91.014	0.045	12.1	0.0505	0.0000	OK
120 minute winter	21	64	89.939	0.086	15.0	0.0976	0.0000	OK
120 minute winter	22	64	89.833	0.092	17.6	0.1042	0.0000	OK
120 minute winter	13	128	89.708	0.547	17.6	2.4739	0.0000	SURCHARGED
120 minute winter	23	60	87.638	0.021	2.6	0.0238	0.0000	OK
120 minute winter	14	60	87.021	0.021	2.6	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)
120 minute winter	1	1.000	2	2.7	0.518	0.046	0.1227	
120 minute winter	2	1.001	3	6.2	0.809	0.119	0.1948	
120 minute winter	3	1.002	4	7.0	0.857	0.135	0.0607	
120 minute winter	4	1.003	5	9.7	1.239	0.137	0.1900	
120 minute winter	15	2.000	16	4.1	0.698	0.079	0.1729	
120 minute winter	16	2.001	5	5.3	0.828	0.102	0.0834	
120 minute winter	5	1.004	6	20.9	1.878	0.088	0.4324	
120 minute winter	6	1.005	7	24.8	2.044	0.113	0.3858	
120 minute winter	17	3.000	7	5.9	0.892	0.047	0.0763	
120 minute winter	7	1.006	8	35.5	1.078	0.218	1.4917	
120 minute winter	8	1.007	9	35.4	1.095	0.217	0.1296	
120 minute winter	9	1.008	10	23.1	0.116	0.000	130.2904	
120 minute winter	10	1.009	11	-14.3	-0.209	-0.026	1.8737	
120 minute winter	11	1.010	12	-12.0	0.296	-0.022	7.1936	
120 minute winter	12	1.011	13	-14.0	0.153	-0.025	4.7082	
120 minute winter	18	4.000	19	5.2	1.266	0.034	0.0847	
120 minute winter	19	4.001	20	12.1	2.196	0.080	0.0811	
120 minute winter	20	4.002	21	12.1	2.234	0.080	0.0676	
120 minute winter	21	4.003	22	15.0	0.856	0.166	0.2950	
120 minute winter	22	4.004	13	17.6	1.013	0.179	0.1774	
120 minute winter	13	Hydro-Brake®	23	2.6				
120 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	52.1

Results for 2 year 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	1	96	95.576	0.032	2.6	0.0365	0.0000	OK
180 minute summer	2	96	95.306	0.052	6.0	0.0583	0.0000	OK
180 minute summer	3	96	95.058	0.058	6.7	0.0657	0.0000	OK
180 minute summer	4	96	94.982	0.056	9.3	0.0636	0.0000	OK
180 minute summer	15	96	94.942	0.042	4.0	0.0475	0.0000	OK
180 minute summer	16	96	94.656	0.050	5.2	0.0561	0.0000	OK
180 minute summer	5	96	94.460	0.059	20.2	0.0664	0.0000	OK
180 minute summer	6	96	92.706	0.068	23.9	0.0772	0.0000	OK
180 minute summer	17	96	91.604	0.045	5.7	0.0511	0.0000	OK
180 minute summer	7	96	91.459	0.118	34.3	0.2078	0.0000	OK
180 minute summer	8	96	91.171	0.132	34.3	0.2339	0.0000	OK
180 minute summer	9	188	89.686	0.299	34.3	0.3381	0.0000	OK
180 minute summer	10	184	89.685	0.373	28.5	0.4221	0.0000	OK
180 minute summer	11	184	89.685	0.388	15.5	0.9879	0.0000	OK
180 minute summer	12	188	89.686	0.443	12.8	1.1263	0.0000	OK
180 minute summer	18	96	93.992	0.028	5.0	0.0314	0.0000	OK
180 minute summer	19	96	92.238	0.043	11.6	0.0487	0.0000	OK
180 minute summer	20	96	91.013	0.044	11.6	0.0494	0.0000	OK
180 minute summer	21	96	89.937	0.084	14.4	0.0955	0.0000	OK
180 minute summer	22	96	89.831	0.090	16.9	0.1019	0.0000	OK
180 minute summer	13	188	89.686	0.525	16.9	2.3738	0.0000	SURCHARGED
180 minute summer	23	92	87.638	0.021	2.6	0.0238	0.0000	OK
180 minute summer	14	92	87.021	0.021	2.6	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)
180 minute summer	1	1.000	2	2.6	0.511	0.045	0.1198	
180 minute summer	2	1.001	3	6.0	0.805	0.115	0.1894	
180 minute summer	3	1.002	4	6.7	0.847	0.129	0.0588	
180 minute summer	4	1.003	5	9.3	1.225	0.131	0.1844	
180 minute summer	15	2.000	16	4.0	0.694	0.077	0.1703	
180 minute summer	16	2.001	5	5.2	0.824	0.100	0.0822	
180 minute summer	5	1.004	6	20.2	1.862	0.085	0.4216	
180 minute summer	6	1.005	7	23.9	2.024	0.109	0.3758	
180 minute summer	17	3.000	7	5.7	0.883	0.046	0.0738	
180 minute summer	7	1.006	8	34.3	1.069	0.210	1.4545	
180 minute summer	8	1.007	9	34.3	1.086	0.210	0.1265	
180 minute summer	9	1.008	10	15.2	0.091	0.000	122.1248	
180 minute summer	10	1.009	11	-13.6	0.258	-0.025	1.7378	
180 minute summer	11	1.010	12	-10.9	0.220	-0.020	6.7370	
180 minute summer	12	1.011	13	-12.8	0.162	-0.023	4.4548	
180 minute summer	18	4.000	19	5.0	1.254	0.032	0.0823	
180 minute summer	19	4.001	20	11.6	2.170	0.077	0.0786	
180 minute summer	20	4.002	21	11.6	2.207	0.077	0.0656	
180 minute summer	21	4.003	22	14.4	0.847	0.159	0.2861	
180 minute summer	22	4.004	13	16.9	1.003	0.172	0.1722	
180 minute summer	13	Hydro-Brake®	23	2.6				
180 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	60.7

Results for 2 year 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	1	96	95.572	0.028	2.0	0.0322	0.0000	OK
180 minute winter	2	96	95.299	0.045	4.6	0.0509	0.0000	OK
180 minute winter	3	96	95.051	0.051	5.2	0.0574	0.0000	OK
180 minute winter	4	96	94.975	0.049	7.2	0.0557	0.0000	OK
180 minute winter	15	96	94.937	0.037	3.0	0.0413	0.0000	OK
180 minute winter	16	96	94.649	0.043	3.9	0.0485	0.0000	OK
180 minute winter	5	96	94.453	0.052	15.5	0.0584	0.0000	OK
180 minute winter	6	96	92.698	0.060	18.4	0.0676	0.0000	OK
180 minute winter	17	96	91.599	0.040	4.4	0.0449	0.0000	OK
180 minute winter	7	96	91.443	0.102	26.4	0.1805	0.0000	OK
180 minute winter	8	96	91.154	0.115	26.4	0.2029	0.0000	OK
180 minute winter	9	184	89.737	0.350	26.4	0.3960	0.0000	OK
180 minute winter	10	184	89.738	0.426	26.3	0.4815	0.0000	OK
180 minute winter	11	184	89.738	0.441	11.9	1.1217	0.0000	OK
180 minute winter	12	184	89.737	0.494	9.8	1.2580	0.0000	OK
180 minute winter	18	96	93.989	0.025	3.9	0.0279	0.0000	OK
180 minute winter	19	96	92.233	0.038	9.0	0.0429	0.0000	OK
180 minute winter	20	96	91.007	0.038	9.0	0.0434	0.0000	OK
180 minute winter	21	96	89.927	0.074	11.2	0.0834	0.0000	OK
180 minute winter	22	96	89.820	0.079	13.1	0.0888	0.0000	OK
180 minute winter	13	184	89.737	0.576	13.1	2.6065	0.0000	SURCHARGED
180 minute winter	23	88	87.638	0.021	2.6	0.0238	0.0000	OK
180 minute winter	14	88	87.021	0.021	2.6	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)
180 minute winter	1	1.000	2	2.0	0.476	0.034	0.0991	
180 minute winter	2	1.001	3	4.6	0.748	0.089	0.1563	
180 minute winter	3	1.002	4	5.2	0.794	0.100	0.0487	
180 minute winter	4	1.003	5	7.2	1.141	0.101	0.1533	
180 minute winter	15	2.000	16	3.0	0.639	0.058	0.1385	
180 minute winter	16	2.001	5	3.9	0.759	0.075	0.0669	
180 minute winter	5	1.004	6	15.5	1.724	0.065	0.3492	
180 minute winter	6	1.005	7	18.4	1.880	0.084	0.3115	
180 minute winter	17	3.000	7	4.4	0.821	0.035	0.0613	
180 minute winter	7	1.006	8	26.4	1.001	0.162	1.1955	
180 minute winter	8	1.007	9	26.4	1.013	0.162	0.1044	
180 minute winter	9	1.008	10	16.5	0.095	0.000	140.9805	
180 minute winter	10	1.009	11	-9.8	0.232	-0.018	2.0406	
180 minute winter	11	1.010	12	-8.3	0.211	-0.015	7.7685	
180 minute winter	12	1.011	13	-9.8	0.142	-0.018	5.0370	
180 minute winter	18	4.000	19	3.9	1.168	0.025	0.0687	
180 minute winter	19	4.001	20	9.0	2.024	0.060	0.0654	
180 minute winter	20	4.002	21	9.0	2.055	0.060	0.0547	
180 minute winter	21	4.003	22	11.2	0.798	0.124	0.2362	
180 minute winter	22	4.004	13	13.1	0.937	0.133	0.1429	
180 minute winter	13	Hydro-Brake®	23	2.6				
180 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	59.7

Results for 2 year 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	1	124	95.574	0.030	2.2	0.0336	0.0000	OK
240 minute summer	2	124	95.301	0.047	5.1	0.0534	0.0000	OK
240 minute summer	3	124	95.053	0.053	5.6	0.0597	0.0000	OK
240 minute summer	4	124	94.977	0.051	7.8	0.0579	0.0000	OK
240 minute summer	15	124	94.938	0.038	3.3	0.0432	0.0000	OK
240 minute summer	16	124	94.651	0.045	4.3	0.0506	0.0000	OK
240 minute summer	5	124	94.455	0.054	16.8	0.0606	0.0000	OK
240 minute summer	6	124	92.700	0.062	19.9	0.0702	0.0000	OK
240 minute summer	17	124	91.601	0.042	4.9	0.0472	0.0000	OK
240 minute summer	7	124	91.448	0.107	28.7	0.1885	0.0000	OK
240 minute summer	8	124	91.158	0.119	28.5	0.2108	0.0000	OK
240 minute summer	9	248	89.699	0.312	28.3	0.3533	0.0000	OK
240 minute summer	10	244	89.699	0.387	19.9	0.4375	0.0000	OK
240 minute summer	11	244	89.699	0.402	12.5	1.0226	0.0000	OK
240 minute summer	12	248	89.699	0.456	10.5	1.1609	0.0000	OK
240 minute summer	18	124	93.990	0.026	4.2	0.0289	0.0000	OK
240 minute summer	19	124	92.235	0.040	9.8	0.0448	0.0000	OK
240 minute summer	20	124	91.009	0.040	9.8	0.0453	0.0000	OK
240 minute summer	21	124	89.930	0.077	12.2	0.0871	0.0000	OK
240 minute summer	22	124	89.823	0.082	14.2	0.0927	0.0000	OK
240 minute summer	13	248	89.699	0.538	14.2	2.4351	0.0000	SURCHARGED
240 minute summer	23	120	87.638	0.021	2.6	0.0238	0.0000	OK
240 minute summer	14	120	87.021	0.021	2.6	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)
240 minute summer	1	1.000	2	2.2	0.486	0.038	0.1059	
240 minute summer	2	1.001	3	5.0	0.770	0.097	0.1664	
240 minute summer	3	1.002	4	5.6	0.809	0.108	0.0515	
240 minute summer	4	1.003	5	7.7	1.164	0.109	0.1617	
240 minute summer	15	2.000	16	3.3	0.656	0.063	0.1474	
240 minute summer	16	2.001	5	4.2	0.778	0.082	0.0711	
240 minute summer	5	1.004	6	16.7	1.764	0.070	0.3688	
240 minute summer	6	1.005	7	19.8	1.919	0.091	0.3287	
240 minute summer	17	3.000	7	4.9	0.844	0.039	0.0660	
240 minute summer	7	1.006	8	28.5	1.022	0.175	1.2650	
240 minute summer	8	1.007	9	28.3	1.031	0.174	0.1099	
240 minute summer	9	1.008	10	11.6	0.072	0.000	127.0619	
240 minute summer	10	1.009	11	-11.0	0.267	-0.020	1.8168	
240 minute summer	11	1.010	12	-8.6	0.261	-0.016	7.0092	
240 minute summer	12	1.011	13	-10.5	0.183	-0.019	4.6101	
240 minute summer	18	4.000	19	4.2	1.187	0.027	0.0728	
240 minute summer	19	4.001	20	9.8	2.071	0.065	0.0694	
240 minute summer	20	4.002	21	9.8	2.102	0.065	0.0580	
240 minute summer	21	4.003	22	12.1	0.814	0.134	0.2510	
240 minute summer	22	4.004	13	14.2	0.957	0.144	0.1514	
240 minute summer	13	Hydro-Brake®	23	2.6				
240 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	68.6

Results for 2 year 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	124	95.570	0.026	1.6	0.0290	0.0000	OK
240 minute winter	2	124	95.295	0.041	3.8	0.0463	0.0000	OK
240 minute winter	3	124	95.046	0.046	4.3	0.0518	0.0000	OK
240 minute winter	4	124	94.970	0.044	5.9	0.0503	0.0000	OK
240 minute winter	15	124	94.933	0.033	2.5	0.0378	0.0000	OK
240 minute winter	16	128	94.645	0.039	3.2	0.0439	0.0000	OK
240 minute winter	5	124	94.448	0.047	12.7	0.0529	0.0000	OK
240 minute winter	6	124	92.692	0.054	15.1	0.0611	0.0000	OK
240 minute winter	17	124	91.595	0.036	3.6	0.0407	0.0000	OK
240 minute winter	7	124	91.433	0.092	21.6	0.1626	0.0000	OK
240 minute winter	8	124	91.142	0.103	21.6	0.1819	0.0000	OK
240 minute winter	9	236	89.754	0.367	21.6	0.4146	0.0000	OK
240 minute winter	10	244	89.754	0.442	20.4	0.5002	0.0000	OK
240 minute winter	11	240	89.754	0.457	9.1	1.1640	0.0000	OK
240 minute winter	12	244	89.754	0.511	7.4	1.2997	0.0000	OK
240 minute winter	18	124	93.986	0.022	3.2	0.0254	0.0000	OK
240 minute winter	19	124	92.229	0.034	7.4	0.0389	0.0000	OK
240 minute winter	20	124	91.004	0.035	7.4	0.0393	0.0000	OK
240 minute winter	21	124	89.919	0.066	9.2	0.0750	0.0000	OK
240 minute winter	22	124	89.812	0.071	10.8	0.0800	0.0000	OK
240 minute winter	13	240	89.754	0.593	10.8	2.6806	0.0000	SURCHARGED
240 minute winter	23	112	87.638	0.021	2.6	0.0238	0.0000	OK
240 minute winter	14	112	87.021	0.021	2.6	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)
240 minute winter	1	1.000	2	1.6	0.443	0.028	0.0859	
240 minute winter	2	1.001	3	3.8	0.709	0.073	0.1357	
240 minute winter	3	1.002	4	4.3	0.757	0.082	0.0421	
240 minute winter	4	1.003	5	5.9	1.076	0.083	0.1325	
240 minute winter	15	2.000	16	2.5	0.610	0.048	0.1208	
240 minute winter	16	2.001	5	3.2	0.718	0.062	0.0581	
240 minute winter	5	1.004	6	12.7	1.627	0.053	0.3023	
240 minute winter	6	1.005	7	15.0	1.772	0.069	0.2699	
240 minute winter	17	3.000	7	3.6	0.773	0.029	0.0533	
240 minute winter	7	1.006	8	21.6	0.951	0.132	1.0291	
240 minute winter	8	1.007	9	21.6	0.959	0.132	0.0900	
240 minute winter	9	1.008	10	14.0	0.071	0.000	146.9626	
240 minute winter	10	1.009	11	-7.7	0.255	-0.014	2.1354	
240 minute winter	11	1.010	12	-6.2	0.217	-0.011	8.0886	
240 minute winter	12	1.011	13	-7.4	0.150	-0.013	5.2159	
240 minute winter	18	4.000	19	3.2	1.104	0.021	0.0597	
240 minute winter	19	4.001	20	7.4	1.919	0.049	0.0566	
240 minute winter	20	4.002	21	7.4	1.944	0.049	0.0474	
240 minute winter	21	4.003	22	9.2	0.758	0.101	0.2035	
240 minute winter	22	4.004	13	10.8	0.888	0.109	0.1236	
240 minute winter	13	Hydro-Brake®	23	2.6				
240 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	67.4

Results for 2 year 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	1	184	95.570	0.026	1.7	0.0297	0.0000	OK
360 minute summer	2	184	95.295	0.041	3.9	0.0467	0.0000	OK
360 minute summer	3	184	95.046	0.046	4.4	0.0521	0.0000	OK
360 minute summer	4	184	94.971	0.045	6.0	0.0507	0.0000	OK
360 minute summer	15	184	94.934	0.034	2.6	0.0384	0.0000	OK
360 minute summer	16	184	94.645	0.039	3.3	0.0442	0.0000	OK
360 minute summer	5	184	94.448	0.047	12.9	0.0533	0.0000	OK
360 minute summer	6	184	92.692	0.054	15.3	0.0614	0.0000	OK
360 minute summer	17	184	91.595	0.036	3.7	0.0411	0.0000	OK
360 minute summer	7	184	91.433	0.092	21.8	0.1633	0.0000	OK
360 minute summer	8	184	91.142	0.103	21.7	0.1819	0.0000	OK
360 minute summer	9	360	89.711	0.324	21.5	0.3663	0.0000	OK
360 minute summer	10	360	89.711	0.399	13.5	0.4515	0.0000	OK
360 minute summer	11	360	89.711	0.414	8.8	1.0542	0.0000	OK
360 minute summer	12	360	89.711	0.468	7.3	1.1910	0.0000	OK
360 minute summer	18	184	93.986	0.022	3.2	0.0254	0.0000	OK
360 minute summer	19	184	92.230	0.035	7.5	0.0392	0.0000	OK
360 minute summer	20	184	91.004	0.035	7.5	0.0395	0.0000	OK
360 minute summer	21	184	89.920	0.067	9.3	0.0753	0.0000	OK
360 minute summer	22	184	89.812	0.071	10.8	0.0801	0.0000	OK
360 minute summer	13	360	89.711	0.550	10.8	2.4877	0.0000	SURCHARGED
360 minute summer	23	176	87.638	0.021	2.6	0.0238	0.0000	OK
360 minute summer	14	176	87.021	0.021	2.6	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)
360 minute summer	1	1.000	2	1.7	0.453	0.029	0.0877	
360 minute summer	2	1.001	3	3.9	0.714	0.074	0.1370	
360 minute summer	3	1.002	4	4.3	0.756	0.083	0.0425	
360 minute summer	4	1.003	5	6.0	1.081	0.084	0.1341	
360 minute summer	15	2.000	16	2.6	0.619	0.050	0.1227	
360 minute summer	16	2.001	5	3.2	0.720	0.062	0.0587	
360 minute summer	5	1.004	6	12.9	1.639	0.054	0.3051	
360 minute summer	6	1.005	7	15.2	1.776	0.069	0.2717	
360 minute summer	17	3.000	7	3.7	0.778	0.030	0.0541	
360 minute summer	7	1.006	8	21.7	0.954	0.133	1.0319	
360 minute summer	8	1.007	9	21.5	0.958	0.132	0.0899	
360 minute summer	9	1.008	10	7.8	0.070	0.000	131.3953	
360 minute summer	10	1.009	11	-7.8	0.266	-0.014	1.8884	
360 minute summer	11	1.010	12	-5.8	0.273	-0.010	7.2498	
360 minute summer	12	1.011	13	-7.3	0.191	-0.013	4.7432	
360 minute summer	18	4.000	19	3.2	1.097	0.021	0.0600	
360 minute summer	19	4.001	20	7.5	1.926	0.049	0.0571	
360 minute summer	20	4.002	21	7.5	1.949	0.049	0.0478	
360 minute summer	21	4.003	22	9.2	0.760	0.102	0.2041	
360 minute summer	22	4.004	13	10.8	0.888	0.110	0.1238	
360 minute summer	13	Hydro-Brake®	23	2.6				
360 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	84.3

Results for 2 year 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	1	184	95.566	0.022	1.2	0.0253	0.0000	OK
360 minute winter	2	184	95.289	0.035	2.8	0.0399	0.0000	OK
360 minute winter	3	184	95.039	0.039	3.1	0.0439	0.0000	OK
360 minute winter	4	184	94.964	0.038	4.3	0.0430	0.0000	OK
360 minute winter	15	184	94.929	0.029	1.9	0.0331	0.0000	OK
360 minute winter	16	184	94.640	0.033	2.4	0.0379	0.0000	OK
360 minute winter	5	184	94.441	0.040	9.4	0.0458	0.0000	OK
360 minute winter	6	184	92.685	0.047	11.2	0.0527	0.0000	OK
360 minute winter	17	184	91.590	0.031	2.7	0.0353	0.0000	OK
360 minute winter	7	184	91.420	0.079	16.1	0.1395	0.0000	OK
360 minute winter	8	184	91.127	0.088	16.0	0.1553	0.0000	OK
360 minute winter	9	360	89.772	0.385	16.0	0.4359	0.0000	OK
360 minute winter	10	352	89.772	0.460	14.0	0.5202	0.0000	OK
360 minute winter	11	352	89.772	0.475	6.1	1.2088	0.0000	OK
360 minute winter	12	360	89.772	0.529	4.9	1.3471	0.0000	OK
360 minute winter	18	184	93.984	0.020	2.4	0.0222	0.0000	OK
360 minute winter	19	184	92.225	0.030	5.5	0.0337	0.0000	OK
360 minute winter	20	184	90.999	0.030	5.5	0.0340	0.0000	OK
360 minute winter	21	184	89.910	0.057	6.8	0.0641	0.0000	OK
360 minute winter	22	184	89.801	0.060	8.0	0.0684	0.0000	OK
360 minute winter	13	360	89.772	0.611	8.0	2.7663	0.0000	SURCHARGED
360 minute winter	23	168	87.638	0.021	2.6	0.0238	0.0000	OK
360 minute winter	14	168	87.021	0.021	2.6	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)
360 minute winter	1	1.000	2	1.2	0.406	0.021	0.0697	
360 minute winter	2	1.001	3	2.8	0.657	0.054	0.1081	
360 minute winter	3	1.002	4	3.1	0.691	0.060	0.0334	
360 minute winter	4	1.003	5	4.3	0.983	0.061	0.1062	
360 minute winter	15	2.000	16	1.9	0.566	0.036	0.0985	
360 minute winter	16	2.001	5	2.4	0.660	0.046	0.0471	
360 minute winter	5	1.004	6	9.4	1.490	0.039	0.2444	
360 minute winter	6	1.005	7	11.2	1.629	0.051	0.2182	
360 minute winter	17	3.000	7	2.7	0.711	0.022	0.0434	
360 minute winter	7	1.006	8	16.0	0.881	0.098	0.8251	
360 minute winter	8	1.007	9	16.0	0.886	0.098	0.0724	
360 minute winter	9	1.008	10	10.3	0.047	0.000	153.6180	
360 minute winter	10	1.009	11	-5.1	0.275	-0.009	2.2350	
360 minute winter	11	1.010	12	-3.9	0.252	-0.007	8.4324	
360 minute winter	12	1.011	13	-4.9	0.295	-0.009	5.4159	
360 minute winter	18	4.000	19	2.4	1.021	0.016	0.0485	
360 minute winter	19	4.001	20	5.5	1.765	0.036	0.0458	
360 minute winter	20	4.002	21	5.5	1.784	0.036	0.0384	
360 minute winter	21	4.003	22	6.8	0.702	0.075	0.1628	
360 minute winter	22	4.004	13	8.0	0.819	0.081	0.1410	
360 minute winter	13	Hydro-Brake®	23	2.6				
360 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	82.5

Results for 2 year 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	1	248	95.567	0.023	1.3	0.0263	0.0000	OK
480 minute summer	2	248	95.291	0.037	3.0	0.0413	0.0000	OK
480 minute summer	3	248	95.041	0.041	3.4	0.0460	0.0000	OK
480 minute summer	4	248	94.966	0.040	4.7	0.0450	0.0000	OK
480 minute summer	15	248	94.930	0.030	2.0	0.0340	0.0000	OK
480 minute summer	16	248	94.641	0.035	2.6	0.0395	0.0000	OK
480 minute summer	5	248	94.443	0.042	10.2	0.0476	0.0000	OK
480 minute summer	6	248	92.686	0.048	12.1	0.0548	0.0000	OK
480 minute summer	17	248	91.591	0.032	2.9	0.0366	0.0000	OK
480 minute summer	7	248	91.423	0.082	17.4	0.1453	0.0000	OK
480 minute summer	8	248	91.131	0.092	17.4	0.1623	0.0000	OK
480 minute summer	9	480	89.709	0.322	17.4	0.3638	0.0000	OK
480 minute summer	10	472	89.709	0.397	12.3	0.4487	0.0000	OK
480 minute summer	11	472	89.709	0.412	6.7	1.0478	0.0000	OK
480 minute summer	12	480	89.709	0.466	5.3	1.1848	0.0000	OK
480 minute summer	18	248	93.984	0.020	2.5	0.0226	0.0000	OK
480 minute summer	19	248	92.226	0.031	5.9	0.0349	0.0000	OK
480 minute summer	20	248	91.000	0.031	5.9	0.0352	0.0000	OK
480 minute summer	21	248	89.912	0.059	7.3	0.0666	0.0000	OK
480 minute summer	22	248	89.804	0.063	8.6	0.0711	0.0000	OK
480 minute summer	13	480	89.709	0.548	8.6	2.4772	0.0000	SURCHARGED
480 minute summer	23	232	87.638	0.021	2.6	0.0238	0.0000	OK
480 minute summer	14	232	87.021	0.021	2.6	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)
480 minute summer	1	1.000	2	1.3	0.418	0.022	0.0734	
480 minute summer	2	1.001	3	3.0	0.664	0.058	0.1147	
480 minute summer	3	1.002	4	3.4	0.709	0.065	0.0357	
480 minute summer	4	1.003	5	4.7	1.009	0.066	0.1132	
480 minute summer	15	2.000	16	2.0	0.569	0.038	0.1036	
480 minute summer	16	2.001	5	2.6	0.677	0.050	0.0500	
480 minute summer	5	1.004	6	10.2	1.531	0.043	0.2591	
480 minute summer	6	1.005	7	12.1	1.665	0.055	0.2311	
480 minute summer	17	3.000	7	2.9	0.726	0.023	0.0457	
480 minute summer	7	1.006	8	17.4	0.899	0.107	0.8764	
480 minute summer	8	1.007	9	17.4	0.906	0.107	0.0769	
480 minute summer	9	1.008	10	8.4	0.036	0.000	130.4799	
480 minute summer	10	1.009	11	-5.8	0.267	-0.010	1.8738	
480 minute summer	11	1.010	12	-4.3	0.273	-0.008	7.1993	
480 minute summer	12	1.011	13	-5.3	0.334	-0.010	4.7164	
480 minute summer	18	4.000	19	2.5	1.020	0.016	0.0506	
480 minute summer	19	4.001	20	5.9	1.800	0.039	0.0482	
480 minute summer	20	4.002	21	5.9	1.821	0.039	0.0405	
480 minute summer	21	4.003	22	7.3	0.715	0.081	0.1719	
480 minute summer	22	4.004	13	8.6	0.836	0.088	0.1051	
480 minute summer	13	Hydro-Brake®	23	2.6				
480 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	99.8

Results for 2 year 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	1	248	95.565	0.021	1.0	0.0232	0.0000	OK
480 minute winter	2	248	95.286	0.032	2.3	0.0363	0.0000	OK
480 minute winter	3	248	95.035	0.035	2.6	0.0401	0.0000	OK
480 minute winter	4	248	94.961	0.035	3.6	0.0394	0.0000	OK
480 minute winter	15	240	94.926	0.026	1.5	0.0297	0.0000	OK
480 minute winter	16	248	94.636	0.030	1.9	0.0339	0.0000	OK
480 minute winter	5	248	94.438	0.037	7.7	0.0417	0.0000	OK
480 minute winter	6	248	92.680	0.042	9.1	0.0477	0.0000	OK
480 minute winter	17	248	91.587	0.028	2.2	0.0320	0.0000	OK
480 minute winter	7	248	91.412	0.071	13.1	0.1259	0.0000	OK
480 minute winter	8	248	91.118	0.079	13.1	0.1397	0.0000	OK
480 minute winter	9	472	89.778	0.391	13.1	0.4422	0.0000	OK
480 minute winter	10	464	89.778	0.466	10.3	0.5267	0.0000	OK
480 minute winter	11	464	89.778	0.481	4.6	1.2229	0.0000	OK
480 minute winter	12	472	89.777	0.534	3.5	1.3597	0.0000	OK
480 minute winter	18	248	93.982	0.018	1.9	0.0199	0.0000	OK
480 minute winter	19	248	92.222	0.027	4.4	0.0303	0.0000	OK
480 minute winter	20	248	90.996	0.027	4.4	0.0305	0.0000	OK
480 minute winter	21	248	89.904	0.051	5.5	0.0576	0.0000	OK
480 minute winter	22	248	89.795	0.054	6.5	0.0616	0.0000	OK
480 minute winter	13	472	89.777	0.616	6.5	2.7884	0.0000	SURCHARGED
480 minute winter	23	216	87.638	0.021	2.6	0.0238	0.0000	OK
480 minute winter	14	216	87.021	0.021	2.6	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)
480 minute winter	1	1.000	2	1.0	0.387	0.017	0.0609	
480 minute winter	2	1.001	3	2.3	0.618	0.044	0.0946	
480 minute winter	3	1.002	4	2.6	0.659	0.050	0.0293	
480 minute winter	4	1.003	5	3.6	0.935	0.051	0.0935	
480 minute winter	15	2.000	16	1.5	0.528	0.029	0.0836	
480 minute winter	16	2.001	5	1.9	0.618	0.037	0.0401	
480 minute winter	5	1.004	6	7.7	1.413	0.032	0.2121	
480 minute winter	6	1.005	7	9.1	1.533	0.042	0.1889	
480 minute winter	17	3.000	7	2.2	0.671	0.018	0.0375	
480 minute winter	7	1.006	8	13.1	0.835	0.080	0.7110	
480 minute winter	8	1.007	9	13.1	0.839	0.080	0.0625	
480 minute winter	9	1.008	10	7.4	0.059	0.000	155.6499	
480 minute winter	10	1.009	11	-3.7	0.278	-0.007	2.2664	
480 minute winter	11	1.010	12	-2.8	0.275	-0.005	8.5303	
480 minute winter	12	1.011	13	-3.5	0.283	-0.006	5.4670	
480 minute winter	18	4.000	19	1.9	0.946	0.012	0.0414	
480 minute winter	19	4.001	20	4.4	1.654	0.029	0.0391	
480 minute winter	20	4.002	21	4.4	1.670	0.029	0.0329	
480 minute winter	21	4.003	22	5.5	0.663	0.061	0.1398	
480 minute winter	22	4.004	13	6.5	0.774	0.066	0.1554	
480 minute winter	13	Hydro-Brake®	23	2.6				
480 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	98.2

Results for 2 year 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	1	315	95.565	0.021	1.1	0.0243	0.0000	OK
600 minute summer	2	315	95.287	0.033	2.5	0.0378	0.0000	OK
600 minute summer	3	315	95.037	0.037	2.8	0.0417	0.0000	OK
600 minute summer	4	315	94.962	0.036	3.9	0.0410	0.0000	OK
600 minute summer	15	315	94.927	0.027	1.6	0.0306	0.0000	OK
600 minute summer	16	315	94.637	0.031	2.1	0.0356	0.0000	OK
600 minute summer	5	315	94.439	0.038	8.4	0.0434	0.0000	OK
600 minute summer	6	315	92.682	0.044	10.0	0.0499	0.0000	OK
600 minute summer	17	315	91.588	0.029	2.4	0.0334	0.0000	OK
600 minute summer	7	315	91.415	0.074	14.3	0.1316	0.0000	OK
600 minute summer	8	315	91.122	0.083	14.3	0.1463	0.0000	OK
600 minute summer	9	525	89.706	0.319	14.3	0.3607	0.0000	OK
600 minute summer	10	540	89.706	0.394	7.9	0.4456	0.0000	OK
600 minute summer	11	540	89.706	0.409	4.9	1.0409	0.0000	OK
600 minute summer	12	540	89.706	0.463	4.0	1.1780	0.0000	OK
600 minute summer	18	315	93.982	0.018	2.1	0.0209	0.0000	OK
600 minute summer	19	315	92.223	0.028	4.9	0.0319	0.0000	OK
600 minute summer	20	315	90.997	0.028	4.9	0.0321	0.0000	OK
600 minute summer	21	315	89.907	0.054	6.1	0.0608	0.0000	OK
600 minute summer	22	315	89.798	0.057	7.2	0.0649	0.0000	OK
600 minute summer	13	525	89.706	0.545	7.2	2.4652	0.0000	SURCHARGED
600 minute summer	23	300	87.638	0.021	2.6	0.0238	0.0000	OK
600 minute summer	14	300	87.021	0.021	2.6	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)
600 minute summer	1	1.000	2	1.1	0.400	0.019	0.0648	
600 minute summer	2	1.001	3	2.5	0.635	0.048	0.1001	
600 minute summer	3	1.002	4	2.8	0.671	0.054	0.0310	
600 minute summer	4	1.003	5	3.9	0.956	0.055	0.0991	
600 minute summer	15	2.000	16	1.6	0.531	0.031	0.0888	
600 minute summer	16	2.001	5	2.1	0.636	0.040	0.0430	
600 minute summer	5	1.004	6	8.4	1.443	0.035	0.2261	
600 minute summer	6	1.005	7	10.0	1.576	0.046	0.2019	
600 minute summer	17	3.000	7	2.4	0.687	0.019	0.0399	
600 minute summer	7	1.006	8	14.3	0.854	0.088	0.7579	
600 minute summer	8	1.007	9	14.3	0.859	0.088	0.0666	
600 minute summer	9	1.008	10	6.1	0.028	0.000	129.5290	
600 minute summer	10	1.009	11	-4.3	0.264	-0.008	1.8582	
600 minute summer	11	1.010	12	-3.0	0.277	-0.006	7.1476	
600 minute summer	12	1.011	13	-4.0	0.319	-0.007	4.6863	
600 minute summer	18	4.000	19	2.1	0.973	0.014	0.0446	
600 minute summer	19	4.001	20	4.9	1.706	0.032	0.0422	
600 minute summer	20	4.002	21	4.9	1.724	0.032	0.0355	
600 minute summer	21	4.003	22	6.1	0.681	0.067	0.1507	
600 minute summer	22	4.004	13	7.2	0.796	0.073	0.0924	
600 minute summer	13	Hydro-Brake®	23	2.6				
600 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	114.3

Results for 2 year 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	1	300	95.563	0.018	0.8	0.0209	0.0000	OK
600 minute winter	2	315	95.283	0.029	1.9	0.0332	0.0000	OK
600 minute winter	3	315	95.032	0.032	2.1	0.0360	0.0000	OK
600 minute winter	4	315	94.957	0.031	2.9	0.0355	0.0000	OK
600 minute winter	15	315	94.925	0.025	1.3	0.0277	0.0000	OK
600 minute winter	16	315	94.634	0.028	1.7	0.0321	0.0000	OK
600 minute winter	5	315	94.435	0.034	6.4	0.0382	0.0000	OK
600 minute winter	6	315	92.677	0.039	7.6	0.0437	0.0000	OK
600 minute winter	17	315	91.585	0.026	1.8	0.0291	0.0000	OK
600 minute winter	7	315	91.406	0.065	10.9	0.1150	0.0000	OK
600 minute winter	8	315	91.111	0.072	10.9	0.1269	0.0000	OK
600 minute winter	9	570	89.771	0.384	10.9	0.4346	0.0000	OK
600 minute winter	10	585	89.771	0.459	10.1	0.5197	0.0000	OK
600 minute winter	11	585	89.771	0.474	3.3	1.2075	0.0000	OK
600 minute winter	12	570	89.771	0.528	2.5	1.3441	0.0000	OK
600 minute winter	18	315	93.980	0.016	1.6	0.0184	0.0000	OK
600 minute winter	19	315	92.220	0.025	3.7	0.0279	0.0000	OK
600 minute winter	20	315	90.994	0.025	3.7	0.0281	0.0000	OK
600 minute winter	21	315	89.900	0.047	4.6	0.0527	0.0000	OK
600 minute winter	22	315	89.791	0.050	5.4	0.0560	0.0000	OK
600 minute winter	13	570	89.771	0.610	5.4	2.7605	0.0000	SURCHARGED
600 minute winter	23	285	87.638	0.021	2.6	0.0238	0.0000	OK
600 minute winter	14	285	87.021	0.021	2.6	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)
600 minute winter	1	1.000	2	0.8	0.365	0.014	0.0529	
600 minute winter	2	1.001	3	1.9	0.590	0.037	0.0818	
600 minute winter	3	1.002	4	2.1	0.621	0.040	0.0251	
600 minute winter	4	1.003	5	2.9	0.876	0.041	0.0803	
600 minute winter	15	2.000	16	1.3	0.500	0.025	0.0766	
600 minute winter	16	2.001	5	1.7	0.598	0.033	0.0371	
600 minute winter	5	1.004	6	6.4	1.331	0.027	0.1865	
600 minute winter	6	1.005	7	7.6	1.453	0.035	0.1664	
600 minute winter	17	3.000	7	1.8	0.632	0.014	0.0326	
600 minute winter	7	1.006	8	10.9	0.795	0.067	0.6212	
600 minute winter	8	1.007	9	10.9	0.798	0.067	0.0547	
600 minute winter	9	1.008	10	7.7	0.038	0.000	153.2805	
600 minute winter	10	1.009	11	-2.7	0.268	-0.005	2.2320	
600 minute winter	11	1.010	12	2.5	0.269	0.004	8.4165	
600 minute winter	12	1.011	13	2.5	0.275	0.005	5.4031	
600 minute winter	18	4.000	19	1.6	0.900	0.010	0.0367	
600 minute winter	19	4.001	20	3.7	1.574	0.025	0.0346	
600 minute winter	20	4.002	21	3.7	1.588	0.025	0.0291	
600 minute winter	21	4.003	22	4.6	0.634	0.051	0.1222	
600 minute winter	22	4.004	13	5.4	0.734	0.055	0.1385	
600 minute winter	13	Hydro-Brake®	23	2.6				
600 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	113.5

Results for 2 year 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	1	375	95.565	0.021	1.0	0.0232	0.0000	OK
720 minute summer	2	375	95.286	0.032	2.3	0.0363	0.0000	OK
720 minute summer	3	375	95.035	0.035	2.6	0.0401	0.0000	OK
720 minute summer	4	375	94.961	0.035	3.6	0.0394	0.0000	OK
720 minute summer	15	375	94.926	0.026	1.5	0.0297	0.0000	OK
720 minute summer	16	375	94.636	0.030	1.9	0.0339	0.0000	OK
720 minute summer	5	375	94.438	0.037	7.6	0.0414	0.0000	OK
720 minute summer	6	375	92.680	0.042	9.0	0.0474	0.0000	OK
720 minute summer	17	375	91.587	0.028	2.1	0.0313	0.0000	OK
720 minute summer	7	375	91.411	0.070	12.8	0.1245	0.0000	OK
720 minute summer	8	375	91.117	0.078	12.8	0.1380	0.0000	OK
720 minute summer	9	600	89.701	0.314	12.8	0.3549	0.0000	OK
720 minute summer	10	585	89.701	0.389	10.1	0.4397	0.0000	OK
720 minute summer	11	585	89.701	0.404	4.4	1.0277	0.0000	OK
720 minute summer	12	600	89.701	0.458	3.4	1.1650	0.0000	OK
720 minute summer	18	375	93.982	0.018	1.9	0.0199	0.0000	OK
720 minute summer	19	375	92.222	0.027	4.4	0.0303	0.0000	OK
720 minute summer	20	375	90.996	0.027	4.4	0.0305	0.0000	OK
720 minute summer	21	375	89.904	0.051	5.5	0.0577	0.0000	OK
720 minute summer	22	375	89.795	0.054	6.4	0.0611	0.0000	OK
720 minute summer	13	600	89.701	0.540	6.4	2.4420	0.0000	SURCHARGED
720 minute summer	23	360	87.638	0.021	2.6	0.0238	0.0000	OK
720 minute summer	14	360	87.021	0.021	2.6	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)
720 minute summer	1	1.000	2	1.0	0.387	0.017	0.0609	
720 minute summer	2	1.001	3	2.3	0.618	0.044	0.0946	
720 minute summer	3	1.002	4	2.6	0.659	0.050	0.0293	
720 minute summer	4	1.003	5	3.6	0.935	0.051	0.0935	
720 minute summer	15	2.000	16	1.5	0.528	0.029	0.0836	
720 minute summer	16	2.001	5	1.9	0.618	0.037	0.0401	
720 minute summer	5	1.004	6	7.6	1.406	0.032	0.2103	
720 minute summer	6	1.005	7	9.0	1.528	0.041	0.1874	
720 minute summer	17	3.000	7	2.1	0.662	0.017	0.0363	
720 minute summer	7	1.006	8	12.8	0.830	0.078	0.6991	
720 minute summer	8	1.007	9	12.8	0.834	0.078	0.0615	
720 minute summer	9	1.008	10	7.4	0.027	0.000	127.6580	
720 minute summer	10	1.009	11	-3.6	0.268	-0.007	1.8282	
720 minute summer	11	1.010	12	-2.7	0.281	-0.005	7.0444	
720 minute summer	12	1.011	13	-3.4	0.349	-0.006	4.6281	
720 minute summer	18	4.000	19	1.9	0.946	0.012	0.0414	
720 minute summer	19	4.001	20	4.4	1.654	0.029	0.0391	
720 minute summer	20	4.002	21	4.4	1.670	0.029	0.0329	
720 minute summer	21	4.003	22	5.5	0.667	0.061	0.1390	
720 minute summer	22	4.004	13	6.4	0.770	0.065	0.0849	
720 minute summer	13	Hydro-Brake®	23	2.6				
720 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	129.7

Results for 2 year 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	1	360	95.561	0.017	0.7	0.0197	0.0000	OK
720 minute winter	2	375	95.282	0.028	1.7	0.0314	0.0000	OK
720 minute winter	3	375	95.030	0.030	1.9	0.0343	0.0000	OK
720 minute winter	4	375	94.956	0.030	2.6	0.0336	0.0000	OK
720 minute winter	15	360	94.923	0.023	1.1	0.0256	0.0000	OK
720 minute winter	16	360	94.632	0.026	1.4	0.0292	0.0000	OK
720 minute winter	5	375	94.433	0.032	5.6	0.0359	0.0000	OK
720 minute winter	6	375	92.674	0.036	6.6	0.0408	0.0000	OK
720 minute winter	17	375	91.583	0.024	1.6	0.0274	0.0000	OK
720 minute winter	7	375	91.402	0.061	9.5	0.1074	0.0000	OK
720 minute winter	8	375	91.106	0.067	9.5	0.1181	0.0000	OK
720 minute winter	9	690	89.766	0.379	9.5	0.4290	0.0000	OK
720 minute winter	10	675	89.766	0.454	8.1	0.5137	0.0000	OK
720 minute winter	11	690	89.766	0.469	2.8	1.1942	0.0000	OK
720 minute winter	12	690	89.766	0.523	2.5	1.3320	0.0000	OK
720 minute winter	18	375	93.979	0.015	1.4	0.0173	0.0000	OK
720 minute winter	19	375	92.218	0.023	3.3	0.0264	0.0000	OK
720 minute winter	20	375	90.992	0.023	3.3	0.0265	0.0000	OK
720 minute winter	21	375	89.897	0.044	4.1	0.0497	0.0000	OK
720 minute winter	22	375	89.788	0.047	4.8	0.0528	0.0000	OK
720 minute winter	13	690	89.766	0.605	4.8	2.7388	0.0000	SURCHARGED
720 minute winter	23	330	87.638	0.021	2.6	0.0238	0.0000	OK
720 minute winter	14	330	87.021	0.021	2.6	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)
720 minute winter	1	1.000	2	0.7	0.348	0.012	0.0488	
720 minute winter	2	1.001	3	1.7	0.569	0.033	0.0759	
720 minute winter	3	1.002	4	1.9	0.606	0.037	0.0233	
720 minute winter	4	1.003	5	2.6	0.849	0.037	0.0744	
720 minute winter	15	2.000	16	1.1	0.482	0.021	0.0673	
720 minute winter	16	2.001	5	1.4	0.564	0.027	0.0323	
720 minute winter	5	1.004	6	5.6	1.286	0.024	0.1694	
720 minute winter	6	1.005	7	6.6	1.392	0.030	0.1508	
720 minute winter	17	3.000	7	1.6	0.609	0.013	0.0300	
720 minute winter	7	1.006	8	9.5	0.767	0.058	0.5615	
720 minute winter	8	1.007	9	9.5	0.769	0.058	0.0495	
720 minute winter	9	1.008	10	6.4	0.025	0.000	151.4710	
720 minute winter	10	1.009	11	2.3	0.266	0.004	2.2025	
720 minute winter	11	1.010	12	2.5	0.280	0.004	8.3225	
720 minute winter	12	1.011	13	2.5	0.323	0.005	5.3522	
720 minute winter	18	4.000	19	1.4	0.858	0.009	0.0337	
720 minute winter	19	4.001	20	3.3	1.522	0.022	0.0319	
720 minute winter	20	4.002	21	3.3	1.535	0.022	0.0269	
720 minute winter	21	4.003	22	4.1	0.615	0.045	0.1122	
720 minute winter	22	4.004	13	4.8	0.711	0.049	0.1269	
720 minute winter	13	Hydro-Brake®	23	2.6				
720 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	128.8

Results for 2 year 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	1	495	95.563	0.018	0.8	0.0209	0.0000	OK
960 minute summer	2	495	95.283	0.029	1.8	0.0323	0.0000	OK
960 minute summer	3	495	95.031	0.031	2.0	0.0352	0.0000	OK
960 minute summer	4	495	94.957	0.031	2.8	0.0349	0.0000	OK
960 minute summer	15	495	94.924	0.024	1.2	0.0267	0.0000	OK
960 minute summer	16	495	94.634	0.028	1.6	0.0311	0.0000	OK
960 minute summer	5	495	94.434	0.033	6.1	0.0374	0.0000	OK
960 minute summer	6	495	92.676	0.038	7.2	0.0425	0.0000	OK
960 minute summer	17	495	91.584	0.025	1.7	0.0283	0.0000	OK
960 minute summer	7	495	91.404	0.063	10.3	0.1118	0.0000	OK
960 minute summer	8	495	91.109	0.070	10.3	0.1232	0.0000	OK
960 minute summer	9	705	89.688	0.301	10.3	0.3408	0.0000	OK
960 minute summer	10	735	89.688	0.376	8.9	0.4256	0.0000	OK
960 minute summer	11	735	89.688	0.391	3.2	0.9959	0.0000	OK
960 minute summer	12	705	89.688	0.445	2.5	1.1330	0.0000	OK
960 minute summer	18	495	93.980	0.016	1.5	0.0179	0.0000	OK
960 minute summer	19	495	92.219	0.024	3.5	0.0271	0.0000	OK
960 minute summer	20	495	90.993	0.024	3.5	0.0273	0.0000	OK
960 minute summer	21	495	89.899	0.046	4.4	0.0515	0.0000	OK
960 minute summer	22	495	89.790	0.049	5.2	0.0550	0.0000	OK
960 minute summer	13	705	89.688	0.527	5.2	2.3853	0.0000	SURCHARGED
960 minute summer	23	480	87.638	0.021	2.6	0.0238	0.0000	OK
960 minute summer	14	480	87.021	0.021	2.6	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)
960 minute summer	1	1.000	2	0.8	0.365	0.014	0.0517	
960 minute summer	2	1.001	3	1.8	0.581	0.035	0.0788	
960 minute summer	3	1.002	4	2.0	0.610	0.038	0.0244	
960 minute summer	4	1.003	5	2.8	0.868	0.039	0.0784	
960 minute summer	15	2.000	16	1.2	0.486	0.023	0.0729	
960 minute summer	16	2.001	5	1.6	0.587	0.031	0.0355	
960 minute summer	5	1.004	6	6.1	1.315	0.026	0.1799	
960 minute summer	6	1.005	7	7.2	1.429	0.033	0.1603	
960 minute summer	17	3.000	7	1.7	0.621	0.014	0.0313	
960 minute summer	7	1.006	8	10.3	0.784	0.063	0.5961	
960 minute summer	8	1.007	9	10.3	0.787	0.063	0.0525	
960 minute summer	9	1.008	10	6.4	0.030	0.000	123.0772	
960 minute summer	10	1.009	11	-2.5	0.268	-0.005	1.7559	
960 minute summer	11	1.010	12	2.5	0.282	0.005	6.7948	
960 minute summer	12	1.011	13	2.6	0.369	0.005	4.4845	
960 minute summer	18	4.000	19	1.5	0.881	0.010	0.0352	
960 minute summer	19	4.001	20	3.5	1.548	0.023	0.0333	
960 minute summer	20	4.002	21	3.5	1.562	0.023	0.0280	
960 minute summer	21	4.003	22	4.4	0.625	0.049	0.1186	
960 minute summer	22	4.004	13	5.2	0.727	0.053	0.0731	
960 minute summer	13	Hydro-Brake®	23	2.6				
960 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	160.0

Results for 2 year 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	1	480	95.560	0.016	0.6	0.0183	0.0000	OK
960 minute winter	2	480	95.279	0.025	1.4	0.0287	0.0000	OK
960 minute winter	3	480	95.028	0.028	1.6	0.0315	0.0000	OK
960 minute winter	4	480	94.953	0.027	2.2	0.0310	0.0000	OK
960 minute winter	15	480	94.921	0.021	0.9	0.0233	0.0000	OK
960 minute winter	16	480	94.630	0.024	1.2	0.0271	0.0000	OK
960 minute winter	5	480	94.430	0.029	4.7	0.0330	0.0000	OK
960 minute winter	6	480	92.671	0.033	5.5	0.0374	0.0000	OK
960 minute winter	17	480	91.581	0.022	1.3	0.0249	0.0000	OK
960 minute winter	7	495	91.397	0.056	7.9	0.0981	0.0000	OK
960 minute winter	8	495	91.100	0.061	7.9	0.1074	0.0000	OK
960 minute winter	9	780	89.750	0.363	7.9	0.4102	0.0000	OK
960 minute winter	10	780	89.750	0.438	6.5	0.4948	0.0000	OK
960 minute winter	11	780	89.750	0.453	2.2	1.1517	0.0000	OK
960 minute winter	12	780	89.750	0.507	2.4	1.2894	0.0000	OK
960 minute winter	18	465	93.978	0.014	1.1	0.0155	0.0000	OK
960 minute winter	19	480	92.216	0.021	2.6	0.0235	0.0000	OK
960 minute winter	20	480	90.990	0.021	2.6	0.0236	0.0000	OK
960 minute winter	21	480	89.892	0.039	3.2	0.0440	0.0000	OK
960 minute winter	22	480	89.783	0.042	3.8	0.0469	0.0000	OK
960 minute winter	13	780	89.750	0.589	3.8	2.6631	0.0000	SURCHARGED
960 minute winter	23	450	87.638	0.021	2.6	0.0238	0.0000	OK
960 minute winter	14	450	87.021	0.021	2.6	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)
960 minute winter	1	1.000	2	0.6	0.329	0.010	0.0430	
960 minute winter	2	1.001	3	1.4	0.533	0.027	0.0667	
960 minute winter	3	1.002	4	1.6	0.576	0.031	0.0207	
960 minute winter	4	1.003	5	2.2	0.807	0.031	0.0662	
960 minute winter	15	2.000	16	0.9	0.446	0.017	0.0595	
960 minute winter	16	2.001	5	1.2	0.539	0.023	0.0290	
960 minute winter	5	1.004	6	4.7	1.222	0.020	0.1493	
960 minute winter	6	1.005	7	5.5	1.320	0.025	0.1326	
960 minute winter	17	3.000	7	1.3	0.572	0.010	0.0260	
960 minute winter	7	1.006	8	7.9	0.730	0.048	0.4907	
960 minute winter	8	1.007	9	7.9	0.732	0.048	0.0433	
960 minute winter	9	1.008	10	5.6	0.027	0.000	145.4150	
960 minute winter	10	1.009	11	2.2	0.266	0.004	2.1080	
960 minute winter	11	1.010	12	2.4	0.277	0.004	8.0022	
960 minute winter	12	1.011	13	2.5	0.336	0.005	5.1726	
960 minute winter	18	4.000	19	1.1	0.809	0.007	0.0285	
960 minute winter	19	4.001	20	2.6	1.421	0.017	0.0269	
960 minute winter	20	4.002	21	2.6	1.432	0.017	0.0227	
960 minute winter	21	4.003	22	3.2	0.572	0.035	0.0942	
960 minute winter	22	4.004	13	3.8	0.665	0.039	0.0978	
960 minute winter	13	Hydro-Brake®	23	2.6				
960 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	160.0

Results for 2 year 1440 minute summer. 1680 minute analysis at 30 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
1440 minute summer	1	750	95.560	0.016	0.6	0.0183	0.0000	OK
1440 minute summer	2	750	95.279	0.025	1.4	0.0287	0.0000	OK
1440 minute summer	3	750	95.028	0.028	1.6	0.0315	0.0000	OK
1440 minute summer	4	750	94.953	0.027	2.2	0.0310	0.0000	OK
1440 minute summer	15	750	94.921	0.021	0.9	0.0233	0.0000	OK
1440 minute summer	16	750	94.630	0.024	1.2	0.0271	0.0000	OK
1440 minute summer	5	750	94.430	0.029	4.7	0.0330	0.0000	OK
1440 minute summer	6	750	92.671	0.033	5.5	0.0374	0.0000	OK
1440 minute summer	17	750	91.581	0.022	1.3	0.0249	0.0000	OK
1440 minute summer	7	750	91.396	0.055	7.8	0.0975	0.0000	OK
1440 minute summer	8	750	91.099	0.060	7.8	0.1067	0.0000	OK
1440 minute summer	9	990	89.672	0.285	7.8	0.3225	0.0000	OK
1440 minute summer	10	990	89.672	0.360	5.9	0.4075	0.0000	OK
1440 minute summer	11	990	89.672	0.375	2.3	0.9553	0.0000	OK
1440 minute summer	12	990	89.672	0.429	2.4	1.0924	0.0000	OK
1440 minute summer	18	750	93.978	0.014	1.1	0.0155	0.0000	OK
1440 minute summer	19	750	92.216	0.021	2.6	0.0235	0.0000	OK
1440 minute summer	20	750	90.990	0.021	2.6	0.0236	0.0000	OK
1440 minute summer	21	750	89.892	0.039	3.2	0.0440	0.0000	OK
1440 minute summer	22	750	89.783	0.042	3.8	0.0469	0.0000	OK
1440 minute summer	13	990	89.672	0.511	3.8	2.3127	0.0000	SURCHARGED
1440 minute summer	23	720	87.638	0.021	2.6	0.0238	0.0000	OK
1440 minute summer	14	720	87.021	0.021	2.6	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)
1440 minute summer	1	1.000	2	0.6	0.329	0.010	0.0430	
1440 minute summer	2	1.001	3	1.4	0.533	0.027	0.0667	
1440 minute summer	3	1.002	4	1.6	0.576	0.031	0.0207	
1440 minute summer	4	1.003	5	2.2	0.807	0.031	0.0662	
1440 minute summer	15	2.000	16	0.9	0.445	0.017	0.0595	
1440 minute summer	16	2.001	5	1.2	0.539	0.023	0.0290	
1440 minute summer	5	1.004	6	4.7	1.222	0.020	0.1493	
1440 minute summer	6	1.005	7	5.5	1.320	0.025	0.1326	
1440 minute summer	17	3.000	7	1.3	0.572	0.010	0.0260	
1440 minute summer	7	1.006	8	7.8	0.728	0.048	0.4862	
1440 minute summer	8	1.007	9	7.8	0.730	0.048	0.0429	
1440 minute summer	9	1.008	10	5.1	0.014	0.000	117.2969	
1440 minute summer	10	1.009	11	2.3	0.266	0.004	1.6633	
1440 minute summer	11	1.010	12	2.4	0.277	0.004	6.4765	
1440 minute summer	12	1.011	13	2.5	0.380	0.005	4.3000	
1440 minute summer	18	4.000	19	1.1	0.796	0.007	0.0285	
1440 minute summer	19	4.001	20	2.6	1.421	0.017	0.0269	
1440 minute summer	20	4.002	21	2.6	1.432	0.017	0.0227	
1440 minute summer	21	4.003	22	3.2	0.572	0.035	0.0942	
1440 minute summer	22	4.004	13	3.8	0.665	0.039	0.0584	
1440 minute summer	13	Hydro-Brake®	23	2.6				
1440 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	215.4

Results for 2 year 1440 minute winter. 1680 minute analysis at 30 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
1440 minute winter	1	660	95.557	0.013	0.4	0.0152	0.0000	OK
1440 minute winter	2	750	95.276	0.022	1.0	0.0245	0.0000	OK
1440 minute winter	3	750	95.023	0.023	1.1	0.0263	0.0000	OK
1440 minute winter	4	750	94.949	0.023	1.5	0.0258	0.0000	OK
1440 minute winter	15	750	94.918	0.018	0.7	0.0207	0.0000	OK
1440 minute winter	16	750	94.627	0.021	0.9	0.0236	0.0000	OK
1440 minute winter	5	750	94.426	0.025	3.3	0.0280	0.0000	OK
1440 minute winter	6	750	92.666	0.028	3.9	0.0317	0.0000	OK
1440 minute winter	17	750	91.579	0.020	1.0	0.0221	0.0000	OK
1440 minute winter	7	750	91.388	0.047	5.7	0.0839	0.0000	OK
1440 minute winter	8	750	91.090	0.051	5.7	0.0908	0.0000	OK
1440 minute winter	9	1080	89.719	0.332	5.7	0.3751	0.0000	OK
1440 minute winter	10	1080	89.719	0.407	4.3	0.4600	0.0000	OK
1440 minute winter	11	1080	89.719	0.422	2.3	1.0732	0.0000	OK
1440 minute winter	12	1110	89.719	0.476	2.4	1.2105	0.0000	OK
1440 minute winter	18	690	93.976	0.012	0.8	0.0133	0.0000	OK
1440 minute winter	19	720	92.213	0.018	1.9	0.0203	0.0000	OK
1440 minute winter	20	720	90.987	0.018	1.9	0.0204	0.0000	OK
1440 minute winter	21	720	89.887	0.034	2.4	0.0383	0.0000	OK
1440 minute winter	22	720	89.777	0.036	2.8	0.0404	0.0000	OK
1440 minute winter	13	1110	89.719	0.558	2.8	2.5227	0.0000	SURCHARGED
1440 minute winter	23	690	87.638	0.021	2.6	0.0238	0.0000	OK
1440 minute winter	14	690	87.021	0.021	2.6	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)
1440 minute winter	1	1.000	2	0.4	0.295	0.007	0.0335	
1440 minute winter	2	1.001	3	1.0	0.490	0.019	0.0518	
1440 minute winter	3	1.002	4	1.1	0.518	0.021	0.0158	
1440 minute winter	4	1.003	5	1.5	0.720	0.021	0.0506	
1440 minute winter	15	2.000	16	0.7	0.420	0.013	0.0492	
1440 minute winter	16	2.001	5	0.9	0.496	0.017	0.0237	
1440 minute winter	5	1.004	6	3.3	1.101	0.014	0.1169	
1440 minute winter	6	1.005	7	3.9	1.192	0.018	0.1041	
1440 minute winter	17	3.000	7	1.0	0.529	0.008	0.0216	
1440 minute winter	7	1.006	8	5.7	0.668	0.035	0.3874	
1440 minute winter	8	1.007	9	5.7	0.669	0.035	0.0342	
1440 minute winter	9	1.008	10	4.3	0.019	0.000	134.1772	
1440 minute winter	10	1.009	11	2.3	0.265	0.004	1.9313	
1440 minute winter	11	1.010	12	2.4	0.277	0.004	7.3986	
1440 minute winter	12	1.011	13	2.5	0.366	0.005	4.8301	
1440 minute winter	18	4.000	19	0.8	0.745	0.005	0.0229	
1440 minute winter	19	4.001	20	1.9	1.293	0.013	0.0216	
1440 minute winter	20	4.002	21	1.9	1.301	0.013	0.0182	
1440 minute winter	21	4.003	22	2.4	0.530	0.027	0.0762	
1440 minute winter	22	4.004	13	2.8	0.608	0.029	0.0571	
1440 minute winter	13	Hydro-Brake®	23	2.6				
1440 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	218.8

Results for 30 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	1	10	95.622	0.078	15.3	0.0882	0.0000	OK
15 minute summer	2	10	95.398	0.144	35.5	0.1625	0.0000	OK
15 minute summer	3	11	95.172	0.172	39.3	0.1941	0.0000	OK
15 minute summer	4	11	95.084	0.158	54.0	0.1791	0.0000	OK
15 minute summer	15	10	95.007	0.107	23.4	0.1214	0.0000	OK
15 minute summer	16	10	94.739	0.133	30.1	0.1501	0.0000	OK
15 minute summer	5	10	94.551	0.150	116.3	0.1700	0.0000	OK
15 minute summer	6	11	92.827	0.189	138.0	0.2133	0.0000	OK
15 minute summer	17	11	92.011	0.452	34.0	0.5112	0.0000	SURCHARGED
15 minute summer	7	11	91.994	0.653	195.8	1.1534	0.0000	SURCHARGED
15 minute summer	8	11	91.474	0.435	194.4	0.7688	0.0000	SURCHARGED
15 minute summer	9	29	89.692	0.305	283.9	0.3451	0.0000	OK
15 minute summer	10	24	89.694	0.382	303.2	0.4321	0.0000	OK
15 minute summer	11	24	89.697	0.400	119.9	1.0177	0.0000	OK
15 minute summer	12	28	89.688	0.445	95.2	1.1331	0.0000	OK
15 minute summer	18	10	94.030	0.066	29.6	0.0751	0.0000	OK
15 minute summer	19	10	92.312	0.117	68.8	0.1319	0.0000	OK
15 minute summer	20	10	91.075	0.106	68.5	0.1194	0.0000	OK
15 minute summer	21	11	90.174	0.321	85.1	0.3629	0.0000	SURCHARGED
15 minute summer	22	11	90.046	0.305	97.8	0.3445	0.0000	SURCHARGED
15 minute summer	13	30	89.691	0.530	98.0	2.3955	0.0000	SURCHARGED
15 minute summer	23	8	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute summer	14	8	87.021	0.021	2.6	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	1	1.000	2	15.2	0.780	0.261	0.4524	
15 minute summer	2	1.001	3	34.9	1.179	0.672	0.7498	
15 minute summer	3	1.002	4	39.2	1.255	0.754	0.2319	
15 minute summer	4	1.003	5	54.2	1.898	0.765	0.6936	
15 minute summer	15	2.000	16	23.2	1.076	0.446	0.6327	
15 minute summer	16	2.001	5	29.6	1.290	0.569	0.2994	
15 minute summer	5	1.004	6	116.4	2.994	0.489	1.5719	
15 minute summer	6	1.005	7	137.5	2.365	0.629	1.8616	
15 minute summer	17	3.000	7	31.8	0.928	0.256	0.8055	
15 minute summer	7	1.006	8	194.4	1.763	1.192	4.9941	
15 minute summer	8	1.007	9	194.1	1.771	1.190	0.4212	
15 minute summer	9	1.008	10	215.1	0.272	0.003	121.6135	
15 minute summer	10	1.009	11	-109.7	-1.280	-0.200	1.7973	
15 minute summer	11	1.010	12	-93.7	-0.580	-0.170	6.8447	
15 minute summer	12	1.011	13	-95.2	-0.456	-0.173	4.4926	
15 minute summer	18	4.000	19	29.5	1.949	0.191	0.3106	
15 minute summer	19	4.001	20	68.5	3.511	0.454	0.2871	
15 minute summer	20	4.002	21	68.3	2.784	0.453	0.3620	
15 minute summer	21	4.003	22	83.2	1.202	0.919	1.1849	
15 minute summer	22	4.004	13	98.0	1.489	0.997	0.6717	
15 minute summer	13	Hydro-Brake®	23	2.6				
15 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	37.9

Results for 30 year 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	95.624	0.080	16.1	0.0905	0.0000	OK
15 minute winter	2	10	95.402	0.148	37.2	0.1678	0.0000	OK
15 minute winter	3	11	95.178	0.178	41.2	0.2017	0.0000	OK
15 minute winter	4	11	95.090	0.164	56.4	0.1854	0.0000	OK
15 minute winter	15	10	95.011	0.111	24.6	0.1252	0.0000	OK
15 minute winter	16	10	94.743	0.137	31.5	0.1545	0.0000	OK
15 minute winter	5	10	94.554	0.153	121.4	0.1730	0.0000	OK
15 minute winter	6	11	92.841	0.203	144.5	0.2297	0.0000	OK
15 minute winter	17	11	92.074	0.515	35.7	0.5826	0.0000	SURCHARGED
15 minute winter	7	11	92.058	0.717	203.8	1.2677	0.0000	SURCHARGED
15 minute winter	8	11	91.490	0.451	203.5	0.7976	0.0000	SURCHARGED
15 minute winter	9	39	89.730	0.343	266.3	0.3879	0.0000	OK
15 minute winter	10	22	89.736	0.424	334.9	0.4798	0.0000	OK
15 minute winter	11	23	89.738	0.441	118.2	1.1214	0.0000	OK
15 minute winter	12	36	89.725	0.482	97.4	1.2271	0.0000	OK
15 minute winter	18	10	94.032	0.068	31.1	0.0771	0.0000	OK
15 minute winter	19	10	92.315	0.120	72.3	0.1361	0.0000	OK
15 minute winter	20	10	91.078	0.109	71.9	0.1227	0.0000	OK
15 minute winter	21	10	90.211	0.358	89.4	0.4051	0.0000	SURCHARGED
15 minute winter	22	10	90.062	0.321	102.9	0.3627	0.0000	SURCHARGED
15 minute winter	13	38	89.729	0.568	102.4	2.5686	0.0000	SURCHARGED
15 minute winter	23	7	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute winter	14	8	87.021	0.021	2.6	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 winter	1	1.000	2	15.9	0.788	0.274	0.4692	
15 minute winter	2	1.001	3	36.6	1.190	0.704	0.7777	
15 minute winter	3	1.002	4	40.9	1.262	0.787	0.2407	
15 minute winter	4	1.003	5	56.6	1.912	0.798	0.7189	
15 minute winter	15	2.000	16	24.3	1.087	0.467	0.6562	
15 minute winter	16	2.001	5	30.9	1.303	0.594	0.3096	
15 minute winter	5	1.004	6	121.2	2.962	0.510	1.6690	
15 minute winter	6	1.005	7	143.4	2.390	0.656	1.9273	
15 minute winter	17	3.000	7	33.0	0.965	0.266	0.8055	
15 minute winter	7	1.006	8	203.5	1.845	1.247	4.9941	
15 minute winter	8	1.007	9	203.2	1.848	1.246	0.4244	
15 minute winter	9	1.008	10	233.4	0.284	0.003	136.7212	
15 minute winter	10	1.009	11	-115.4	-1.243	-0.210	2.0350	
15 minute winter	11	1.010	12	-90.8	-0.577	-0.165	7.6395	
15 minute winter	12	1.011	13	-97.4	-0.458	-0.177	4.9222	
15 minute winter	18	4.000	19	31.0	1.968	0.201	0.3226	
15 minute winter	19	4.001	20	71.9	3.548	0.476	0.2981	
15 minute winter	20	4.002	21	71.7	2.746	0.475	0.3665	
15 minute winter	21	4.003	22	87.2	1.239	0.963	1.1849	
15 minute winter	22	4.004	13	102.4	1.484	1.042	0.6774	
15 minute winter	13	Hydro-Brake®	23	2.6				
15 minute winter	23	1.013	14	2.6	1.418	0.017	0.0135	37.2

Results for 30 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	1	18	95.618	0.074	13.6	0.0832	0.0000	OK
30 minute summer	2	18	95.387	0.133	31.7	0.1507	0.0000	OK
30 minute summer	3	18	95.159	0.159	35.6	0.1801	0.0000	OK
30 minute summer	4	18	95.073	0.147	49.1	0.1664	0.0000	OK
30 minute summer	15	18	95.000	0.100	20.9	0.1136	0.0000	OK
30 minute summer	16	18	94.731	0.125	27.0	0.1412	0.0000	OK
30 minute summer	5	18	94.543	0.142	106.0	0.1609	0.0000	OK
30 minute summer	6	18	92.799	0.161	125.8	0.1824	0.0000	OK
30 minute summer	17	19	91.857	0.298	30.4	0.3366	0.0000	OK
30 minute summer	7	19	91.847	0.506	178.1	0.8935	0.0000	SURCHARGED
30 minute summer	8	19	91.438	0.399	174.7	0.7046	0.0000	SURCHARGED
30 minute summer	9	37	89.789	0.402	178.7	0.4549	0.0000	OK
30 minute summer	10	46	89.787	0.475	196.3	0.5377	0.0000	OK
30 minute summer	11	45	89.788	0.491	101.6	1.2498	0.0000	OK
30 minute summer	12	36	89.788	0.545	83.9	1.3859	0.0000	OK
30 minute summer	18	18	94.027	0.063	26.5	0.0711	0.0000	OK
30 minute summer	19	18	92.304	0.109	61.6	0.1231	0.0000	OK
30 minute summer	20	18	91.069	0.100	61.6	0.1125	0.0000	OK
30 minute summer	21	18	90.108	0.255	76.6	0.2882	0.0000	OK
30 minute summer	22	18	90.003	0.262	89.9	0.2961	0.0000	OK
30 minute summer	13	36	89.790	0.628	89.7	2.8433	0.0000	SURCHARGED
30 minute summer	23	15	87.638	0.021	2.6	0.0238	0.0000	OK
30 minute summer	14	15	87.021	0.021	2.6	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)
30 minute summer	1	1.000	2	13.6	0.766	0.234	0.4151	
30 minute summer	2	1.001	3	31.7	1.161	0.610	0.6918	
30 minute summer	3	1.002	4	35.5	1.234	0.684	0.2139	
30 minute summer	4	1.003	5	48.9	1.860	0.690	0.6390	
30 minute summer	15	2.000	16	20.9	1.053	0.402	0.5840	
30 minute summer	16	2.001	5	27.0	1.261	0.519	0.2788	
30 minute summer	5	1.004	6	106.0	2.964	0.445	1.3868	
30 minute summer	6	1.005	7	125.4	2.381	0.574	1.7338	
30 minute summer	17	3.000	7	28.2	0.919	0.227	0.8050	
30 minute summer	7	1.006	8	174.7	1.584	1.071	4.9941	
30 minute summer	8	1.007	9	174.8	1.625	1.072	0.4135	
30 minute summer	9	1.008	10	118.0	0.212	0.001	158.0915	
30 minute summer	10	1.009	11	-94.9	-0.863	-0.173	2.3226	
30 minute summer	11	1.010	12	-78.8	-0.458	-0.143	8.6803	
30 minute summer	12	1.011	13	-83.9	-0.396	-0.153	5.5830	
30 minute summer	18	4.000	19	26.5	1.906	0.172	0.2854	
30 minute summer	19	4.001	20	61.6	3.429	0.408	0.2643	
30 minute summer	20	4.002	21	61.6	2.770	0.408	0.3181	
30 minute summer	21	4.003	22	76.5	1.193	0.845	1.0852	
30 minute summer	22	4.004	13	89.7	1.479	0.914	0.6176	
30 minute summer	13	Hydro-Brake®	23	2.6				
30 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	37.8

Results for 30 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	1	18	95.614	0.070	12.3	0.0790	0.0000	OK
30 minute winter	2	18	95.378	0.124	28.7	0.1407	0.0000	OK
30 minute winter	3	18	95.148	0.148	32.2	0.1674	0.0000	OK
30 minute winter	4	18	95.063	0.137	44.5	0.1552	0.0000	OK
30 minute winter	15	18	94.995	0.095	18.9	0.1070	0.0000	OK
30 minute winter	16	18	94.723	0.117	24.4	0.1325	0.0000	OK
30 minute winter	5	18	94.535	0.134	96.0	0.1516	0.0000	OK
30 minute winter	6	18	92.790	0.152	113.8	0.1719	0.0000	OK
30 minute winter	17	19	91.688	0.129	27.5	0.1460	0.0000	OK
30 minute winter	7	19	91.691	0.350	162.7	0.6192	0.0000	OK
30 minute winter	8	19	91.405	0.366	159.8	0.6460	0.0000	OK
30 minute winter	9	39	89.844	0.457	176.6	0.5166	0.0000	OK
30 minute winter	10	43	89.843	0.531	187.2	0.6006	0.0000	OK
30 minute winter	11	43	89.843	0.546	93.0	1.3890	0.0000	OK
30 minute winter	12	38	89.842	0.599	76.5	1.5245	0.0000	OK
30 minute winter	18	18	94.024	0.060	23.9	0.0675	0.0000	OK
30 minute winter	19	18	92.297	0.102	55.6	0.1156	0.0000	OK
30 minute winter	20	18	91.063	0.094	55.6	0.1063	0.0000	OK
30 minute winter	21	18	90.082	0.229	69.2	0.2589	0.0000	OK
30 minute winter	22	18	89.978	0.237	81.3	0.2677	0.0000	OK
30 minute winter	13	38	89.844	0.683	81.3	3.0909	0.0000	SURCHARGED
30 minute winter	23	14	87.638	0.021	2.6	0.0238	0.0000	OK
30 minute winter	14	14	87.021	0.021	2.6	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)
30 minute winter	1	1.000	2	12.3	0.751	0.211	0.3831	
30 minute winter	2	1.001	3	28.7	1.142	0.552	0.6369	
30 minute winter	3	1.002	4	32.2	1.213	0.619	0.1972	
30 minute winter	4	1.003	5	44.4	1.824	0.626	0.5907	
30 minute winter	15	2.000	16	18.9	1.031	0.364	0.5395	
30 minute winter	16	2.001	5	24.4	1.232	0.469	0.2579	
30 minute winter	5	1.004	6	95.9	2.896	0.403	1.2853	
30 minute winter	6	1.005	7	113.6	2.371	0.520	1.6373	
30 minute winter	17	3.000	7	26.8	0.910	0.216	0.5530	
30 minute winter	7	1.006	8	159.8	1.495	0.980	4.9057	
30 minute winter	8	1.007	9	159.9	1.564	0.980	0.4021	
30 minute winter	9	1.008	10	119.9	0.226	0.001	177.9266	
30 minute winter	10	1.009	11	-81.0	-0.779	-0.147	2.6208	
30 minute winter	11	1.010	12	-70.8	0.417	-0.129	9.6551	
30 minute winter	12	1.011	13	-76.5	-0.359	-0.139	6.1094	
30 minute winter	18	4.000	19	23.9	1.862	0.155	0.2637	
30 minute winter	19	4.001	20	55.6	3.348	0.368	0.2443	
30 minute winter	20	4.002	21	55.6	2.773	0.368	0.2787	
30 minute winter	21	4.003	22	69.2	1.179	0.764	0.9870	
30 minute winter	22	4.004	13	81.3	1.463	0.827	0.5661	
30 minute winter	13	Hydro-Brake®	23	2.6				
30 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	35.5

Results for 30 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	1	33	95.607	0.063	10.1	0.0714	0.0000	OK
60 minute summer	2	33	95.363	0.109	23.5	0.1236	0.0000	OK
60 minute summer	3	33	95.129	0.129	26.4	0.1461	0.0000	OK
60 minute summer	4	33	95.047	0.121	36.5	0.1363	0.0000	OK
60 minute summer	15	33	94.984	0.084	15.5	0.0954	0.0000	OK
60 minute summer	16	33	94.710	0.104	20.1	0.1177	0.0000	OK
60 minute summer	5	33	94.521	0.120	78.8	0.1353	0.0000	OK
60 minute summer	6	33	92.774	0.136	93.4	0.1534	0.0000	OK
60 minute summer	17	33	91.645	0.086	22.5	0.0969	0.0000	OK
60 minute summer	7	33	91.618	0.277	134.2	0.4891	0.0000	OK
60 minute summer	8	34	91.342	0.303	133.6	0.5350	0.0000	OK
60 minute summer	9	67	89.888	0.501	133.3	0.5667	0.0000	OK
60 minute summer	10	69	89.888	0.576	123.8	0.6511	0.0000	OK
60 minute summer	11	69	89.887	0.590	71.7	1.5021	0.0000	OK
60 minute summer	12	66	89.888	0.645	60.7	1.6425	0.0000	OK
60 minute summer	18	33	94.018	0.054	19.7	0.0612	0.0000	OK
60 minute summer	19	33	92.286	0.091	45.8	0.1027	0.0000	OK
60 minute summer	20	33	91.055	0.086	45.8	0.0969	0.0000	OK
60 minute summer	21	33	90.049	0.196	57.0	0.2213	0.0000	OK
60 minute summer	22	33	89.946	0.205	66.9	0.2315	0.0000	OK
60 minute summer	13	66	89.889	0.728	66.9	3.2915	0.0000	SURCHARGED
60 minute summer	23	28	87.638	0.021	2.6	0.0238	0.0000	OK
60 minute summer	14	28	87.021	0.021	2.6	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)
60 minute summer	1	1.000	2	10.1	0.722	0.174	0.3276	
60 minute summer	2	1.001	3	23.5	1.101	0.452	0.5416	
60 minute summer	3	1.002	4	26.4	1.167	0.507	0.1681	
60 minute summer	4	1.003	5	36.4	1.747	0.513	0.5060	
60 minute summer	15	2.000	16	15.5	0.985	0.298	0.4633	
60 minute summer	16	2.001	5	20.1	1.176	0.387	0.2226	
60 minute summer	5	1.004	6	78.7	2.760	0.331	1.1075	
60 minute summer	6	1.005	7	93.3	2.371	0.427	1.2933	
60 minute summer	17	3.000	7	22.5	0.914	0.181	0.3829	
60 minute summer	7	1.006	8	133.6	1.465	0.819	4.1240	
60 minute summer	8	1.007	9	133.3	1.528	0.817	0.3474	
60 minute summer	9	1.008	10	60.9	0.171	0.001	195.1447	
60 minute summer	10	1.009	11	-62.9	-0.482	-0.114	2.8445	
60 minute summer	11	1.010	12	-53.5	0.375	-0.097	10.4211	
60 minute summer	12	1.011	13	-60.7	-0.285	-0.110	6.4886	
60 minute summer	18	4.000	19	19.7	1.786	0.128	0.2270	
60 minute summer	19	4.001	20	45.8	3.175	0.303	0.2123	
60 minute summer	20	4.002	21	45.8	2.776	0.303	0.2218	
60 minute summer	21	4.003	22	57.0	1.141	0.629	0.8401	
60 minute summer	22	4.004	13	66.9	1.407	0.681	0.4855	
60 minute summer	13	Hydro-Brake®	23	2.6				
60 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	38.5

Results for 30 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	1	33	95.601	0.057	8.2	0.0642	0.0000	OK
60 minute winter	2	33	95.350	0.096	19.1	0.1090	0.0000	OK
60 minute winter	3	33	95.113	0.113	21.4	0.1277	0.0000	OK
60 minute winter	4	33	95.032	0.106	29.6	0.1199	0.0000	OK
60 minute winter	15	33	94.975	0.075	12.6	0.0851	0.0000	OK
60 minute winter	16	33	94.698	0.092	16.3	0.1041	0.0000	OK
60 minute winter	5	33	94.507	0.106	63.9	0.1203	0.0000	OK
60 minute winter	6	33	92.759	0.121	75.8	0.1366	0.0000	OK
60 minute winter	17	33	91.636	0.077	18.2	0.0870	0.0000	OK
60 minute winter	7	33	91.577	0.236	108.9	0.4177	0.0000	OK
60 minute winter	8	34	91.299	0.260	108.7	0.4590	0.0000	OK
60 minute winter	9	69	89.956	0.569	112.3	0.6432	0.0000	OK
60 minute winter	10	67	89.956	0.644	102.2	0.7285	0.0000	OK
60 minute winter	11	68	89.956	0.659	54.0	1.6777	0.0000	OK
60 minute winter	12	66	89.958	0.715	46.7	1.8202	0.0000	OK
60 minute winter	18	33	94.013	0.049	15.9	0.0550	0.0000	OK
60 minute winter	19	33	92.275	0.080	37.0	0.0905	0.0000	OK
60 minute winter	20	33	91.047	0.078	37.0	0.0881	0.0000	OK
60 minute winter	21	33	90.021	0.168	46.0	0.1904	0.0000	OK
60 minute winter	22	65	89.964	0.223	54.0	0.2521	0.0000	OK
60 minute winter	13	68	89.956	0.795	54.0	3.5972	0.0000	SURCHARGED
60 minute winter	23	26	87.638	0.021	2.6	0.0238	0.0000	OK
60 minute winter	14	26	87.021	0.021	2.6	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)
60 minute winter	1	1.000	2	8.2	0.689	0.141	0.2796	
60 minute winter	2	1.001	3	19.1	1.057	0.368	0.4588	
60 minute winter	3	1.002	4	21.4	1.117	0.412	0.1424	
60 minute winter	4	1.003	5	29.6	1.663	0.417	0.4315	
60 minute winter	15	2.000	16	12.6	0.939	0.242	0.3951	
60 minute winter	16	2.001	5	16.3	1.117	0.314	0.1901	
60 minute winter	5	1.004	6	63.9	2.617	0.269	0.9483	
60 minute winter	6	1.005	7	75.8	2.380	0.346	1.0362	
60 minute winter	17	3.000	7	18.2	0.907	0.146	0.3023	
60 minute winter	7	1.006	8	108.7	1.406	0.666	3.4976	
60 minute winter	8	1.007	9	108.6	1.465	0.666	0.2962	
60 minute winter	9	1.008	10	62.2	0.191	0.001	220.0637	
60 minute winter	10	1.009	11	-49.1	-0.426	-0.089	3.1460	
60 minute winter	11	1.010	12	-39.6	0.371	-0.072	11.3431	
60 minute winter	12	1.011	13	-46.7	-0.226	-0.085	6.8902	
60 minute winter	18	4.000	19	15.9	1.702	0.103	0.1926	
60 minute winter	19	4.001	20	37.0	2.981	0.245	0.1826	
60 minute winter	20	4.002	21	37.0	2.793	0.245	0.1732	
60 minute winter	21	4.003	22	46.0	1.095	0.508	0.7070	
60 minute winter	22	4.004	13	54.0	1.340	0.550	0.6435	
60 minute winter	13	Hydro-Brake®	23	2.6				
60 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	39.4

Results for 30 year 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	1	64	95.595	0.051	6.5	0.0572	0.0000	OK
120 minute summer	2	64	95.338	0.084	15.2	0.0955	0.0000	OK
120 minute summer	3	64	95.098	0.098	17.1	0.1113	0.0000	OK
120 minute summer	4	64	95.019	0.093	23.6	0.1051	0.0000	OK
120 minute summer	15	64	94.966	0.066	10.0	0.0752	0.0000	OK
120 minute summer	16	64	94.687	0.081	12.9	0.0912	0.0000	OK
120 minute summer	5	64	94.495	0.094	50.9	0.1061	0.0000	OK
120 minute summer	6	64	92.746	0.108	60.4	0.1222	0.0000	OK
120 minute summer	17	64	91.628	0.069	14.5	0.0776	0.0000	OK
120 minute summer	7	64	91.544	0.203	86.8	0.3589	0.0000	OK
120 minute summer	8	64	91.264	0.225	86.8	0.3981	0.0000	OK
120 minute summer	9	128	89.986	0.599	86.7	0.6780	0.0000	OK
120 minute summer	10	128	89.986	0.674	62.8	0.7628	0.0000	OK
120 minute summer	11	126	89.986	0.689	41.8	1.7547	0.0000	OK
120 minute summer	12	126	89.986	0.743	36.7	1.8919	0.0000	OK
120 minute summer	18	64	94.008	0.044	12.7	0.0492	0.0000	OK
120 minute summer	19	64	92.265	0.070	29.5	0.0794	0.0000	OK
120 minute summer	20	64	91.040	0.071	29.5	0.0803	0.0000	OK
120 minute summer	21	64	89.999	0.146	36.7	0.1646	0.0000	OK
120 minute summer	22	128	89.987	0.246	43.1	0.2786	0.0000	OK
120 minute summer	13	126	89.986	0.825	43.1	3.7335	0.0000	SURCHARGED
120 minute summer	23	52	87.638	0.021	2.6	0.0238	0.0000	OK
120 minute summer	14	52	87.021	0.021	2.6	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)
120 minute summer	1	1.000	2	6.5	0.650	0.112	0.2351	
120 minute summer	2	1.001	3	15.2	1.004	0.292	0.3843	
120 minute summer	3	1.002	4	17.1	1.064	0.329	0.1195	
120 minute summer	4	1.003	5	23.6	1.573	0.333	0.3644	
120 minute summer	15	2.000	16	10.0	0.889	0.192	0.3315	
120 minute summer	16	2.001	5	12.9	1.052	0.248	0.1598	
120 minute summer	5	1.004	6	50.9	2.448	0.214	0.8073	
120 minute summer	6	1.005	7	60.4	2.383	0.276	0.8196	
120 minute summer	17	3.000	7	14.5	0.890	0.117	0.2334	
120 minute summer	7	1.006	8	86.8	1.335	0.532	2.9442	
120 minute summer	8	1.007	9	86.7	1.384	0.531	0.2505	
120 minute summer	9	1.008	10	30.2	0.134	0.000	231.4958	
120 minute summer	10	1.009	11	-37.5	-0.225	-0.068	3.2563	
120 minute summer	11	1.010	12	-30.1	0.324	-0.055	11.6254	
120 minute summer	12	1.011	13	-36.7	-0.155	-0.067	6.9468	
120 minute summer	18	4.000	19	12.7	1.616	0.082	0.1620	
120 minute summer	19	4.001	20	29.5	2.774	0.195	0.1565	
120 minute summer	20	4.002	21	29.5	2.786	0.195	0.1332	
120 minute summer	21	4.003	22	36.7	1.045	0.405	0.7738	
120 minute summer	22	4.004	13	43.1	1.271	0.439	0.6757	
120 minute summer	13	Hydro-Brake®	23	2.6				
120 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	48.3

Results for 30 year 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	64	95.588	0.044	5.0	0.0502	0.0000	OK
120 minute winter	2	64	95.327	0.073	11.7	0.0827	0.0000	OK
120 minute winter	3	64	95.084	0.084	13.1	0.0952	0.0000	OK
120 minute winter	4	64	95.006	0.080	18.1	0.0906	0.0000	OK
120 minute winter	15	64	94.958	0.058	7.7	0.0658	0.0000	OK
120 minute winter	16	64	94.676	0.070	10.0	0.0793	0.0000	OK
120 minute winter	5	64	94.483	0.082	39.2	0.0925	0.0000	OK
120 minute winter	6	64	92.734	0.096	46.5	0.1088	0.0000	OK
120 minute winter	17	62	91.622	0.063	11.2	0.0709	0.0000	OK
120 minute winter	7	64	91.513	0.172	66.9	0.3045	0.0000	OK
120 minute winter	8	64	91.232	0.193	66.9	0.3409	0.0000	OK
120 minute winter	9	124	90.075	0.688	66.9	0.7783	0.0000	OK
120 minute winter	10	128	90.075	0.763	62.8	0.8630	0.0000	SURCHARGED
120 minute winter	11	126	90.075	0.778	33.7	1.9801	0.0000	SURCHARGED
120 minute winter	12	124	90.076	0.833	28.8	2.1197	0.0000	SURCHARGED
120 minute winter	18	64	94.002	0.038	9.8	0.0434	0.0000	OK
120 minute winter	19	64	92.256	0.061	22.8	0.0690	0.0000	OK
120 minute winter	20	64	91.031	0.062	22.8	0.0704	0.0000	OK
120 minute winter	21	128	90.075	0.222	28.4	0.2516	0.0000	OK
120 minute winter	22	124	90.076	0.335	33.3	0.3785	0.0000	SURCHARGED
120 minute winter	13	124	90.076	0.915	33.3	4.1408	0.0000	SURCHARGED
120 minute winter	23	48	87.638	0.021	2.6	0.0238	0.0000	OK
120 minute winter	14	48	87.021	0.021	2.6	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)
120 minute winter	1	1.000	2	5.0	0.608	0.086	0.1938	
120 minute winter	2	1.001	3	11.7	0.948	0.225	0.3136	
120 minute winter	3	1.002	4	13.1	1.000	0.252	0.0974	
120 minute winter	4	1.003	5	18.1	1.468	0.255	0.2993	
120 minute winter	15	2.000	16	7.7	0.828	0.148	0.2742	
120 minute winter	16	2.001	5	10.0	0.984	0.192	0.1324	
120 minute winter	5	1.004	6	39.2	2.244	0.165	0.6786	
120 minute winter	6	1.005	7	46.5	2.376	0.213	0.6241	
120 minute winter	17	3.000	7	11.2	0.901	0.090	0.1739	
120 minute winter	7	1.006	8	66.9	1.257	0.410	2.4109	
120 minute winter	8	1.007	9	66.9	1.294	0.410	0.2067	
120 minute winter	9	1.008	10	36.0	0.132	0.000	263.6908	
120 minute winter	10	1.009	11	-28.4	-0.254	-0.052	3.4092	
120 minute winter	11	1.010	12	-24.6	0.273	-0.045	11.8555	
120 minute winter	12	1.011	13	-28.8	0.156	-0.052	6.9513	
120 minute winter	18	4.000	19	9.8	1.510	0.064	0.1339	
120 minute winter	19	4.001	20	22.8	2.589	0.151	0.1296	
120 minute winter	20	4.002	21	22.8	2.655	0.151	0.1772	
120 minute winter	21	4.003	22	28.4	0.989	0.314	1.0637	
120 minute winter	22	4.004	13	33.3	1.193	0.339	0.7192	
120 minute winter	13	Hydro-Brake®	23	2.6				
120 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	49.9

Results for 30 year 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	1	96	95.588	0.044	4.8	0.0492	0.0000	OK
180 minute summer	2	96	95.325	0.071	11.2	0.0807	0.0000	OK
180 minute summer	3	96	95.082	0.082	12.6	0.0931	0.0000	OK
180 minute summer	4	96	95.004	0.078	17.4	0.0886	0.0000	OK
180 minute summer	15	96	94.957	0.057	7.4	0.0645	0.0000	OK
180 minute summer	16	96	94.675	0.069	9.6	0.0776	0.0000	OK
180 minute summer	5	96	94.481	0.080	37.7	0.0907	0.0000	OK
180 minute summer	6	96	92.733	0.095	44.7	0.1070	0.0000	OK
180 minute summer	17	96	91.620	0.061	10.7	0.0690	0.0000	OK
180 minute summer	7	96	91.509	0.168	64.2	0.2970	0.0000	OK
180 minute summer	8	96	91.227	0.188	64.2	0.3329	0.0000	OK
180 minute summer	9	188	90.042	0.655	64.2	0.7404	0.0000	OK
180 minute summer	10	188	90.042	0.730	51.5	0.8255	0.0000	OK
180 minute summer	11	188	90.042	0.745	31.0	1.8955	0.0000	OK
180 minute summer	12	192	90.041	0.798	26.5	2.0320	0.0000	SURCHARGED
180 minute summer	18	96	94.002	0.038	9.4	0.0425	0.0000	OK
180 minute summer	19	96	92.255	0.060	21.8	0.0674	0.0000	OK
180 minute summer	20	96	91.030	0.061	21.8	0.0687	0.0000	OK
180 minute summer	21	188	90.042	0.189	27.1	0.2137	0.0000	OK
180 minute summer	22	192	90.042	0.301	31.8	0.3399	0.0000	SURCHARGED
180 minute summer	13	192	90.042	0.881	31.8	3.9837	0.0000	SURCHARGED
180 minute summer	23	76	87.638	0.021	2.6	0.0238	0.0000	OK
180 minute summer	14	76	87.021	0.021	2.6	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)
180 minute summer	1	1.000	2	4.8	0.602	0.083	0.1878	
180 minute summer	2	1.001	3	11.2	0.936	0.215	0.3038	
180 minute summer	3	1.002	4	12.6	0.991	0.242	0.0945	
180 minute summer	4	1.003	5	17.4	1.453	0.245	0.2908	
180 minute summer	15	2.000	16	7.4	0.821	0.142	0.2662	
180 minute summer	16	2.001	5	9.6	0.973	0.185	0.1285	
180 minute summer	5	1.004	6	37.7	2.214	0.158	0.6617	
180 minute summer	6	1.005	7	44.7	2.378	0.204	0.5981	
180 minute summer	17	3.000	7	10.7	0.892	0.086	0.1650	
180 minute summer	7	1.006	8	64.2	1.244	0.394	2.3368	
180 minute summer	8	1.007	9	64.2	1.281	0.394	0.2006	
180 minute summer	9	1.008	10	24.8	0.093	0.000	251.6026	
180 minute summer	10	1.009	11	-27.3	0.149	-0.050	3.3948	
180 minute summer	11	1.010	12	-22.3	0.306	-0.041	11.8486	
180 minute summer	12	1.011	13	-26.5	-0.105	-0.048	6.9513	
180 minute summer	18	4.000	19	9.4	1.495	0.061	0.1297	
180 minute summer	19	4.001	20	21.8	2.560	0.144	0.1253	
180 minute summer	20	4.002	21	21.8	2.623	0.144	0.1298	
180 minute summer	21	4.003	22	27.1	0.979	0.299	0.9852	
180 minute summer	22	4.004	13	31.8	1.179	0.324	0.7190	
180 minute summer	13	Hydro-Brake®	23	2.6				
180 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	57.6

Results for 30 year 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	1	96	95.582	0.038	3.7	0.0433	0.0000	OK
180 minute winter	2	96	95.316	0.062	8.6	0.0701	0.0000	OK
180 minute winter	3	96	95.071	0.071	9.7	0.0804	0.0000	OK
180 minute winter	4	96	94.994	0.068	13.4	0.0770	0.0000	OK
180 minute winter	15	96	94.950	0.050	5.7	0.0566	0.0000	OK
180 minute winter	16	96	94.666	0.060	7.4	0.0675	0.0000	OK
180 minute winter	5	96	94.471	0.070	29.0	0.0795	0.0000	OK
180 minute winter	6	96	92.721	0.083	34.4	0.0933	0.0000	OK
180 minute winter	17	92	91.612	0.053	8.3	0.0604	0.0000	OK
180 minute winter	7	96	91.485	0.144	49.5	0.2549	0.0000	OK
180 minute winter	8	96	91.201	0.162	49.5	0.2868	0.0000	OK
180 minute winter	9	184	90.142	0.755	49.5	0.8543	0.0000	OK
180 minute winter	10	184	90.142	0.830	41.9	0.9392	0.0000	SURCHARGED
180 minute winter	11	184	90.142	0.845	22.8	2.1516	0.0000	SURCHARGED
180 minute winter	12	188	90.142	0.899	19.8	2.2889	0.0000	SURCHARGED
180 minute winter	18	96	93.997	0.033	7.2	0.0373	0.0000	OK
180 minute winter	19	96	92.247	0.052	16.8	0.0589	0.0000	OK
180 minute winter	20	96	91.022	0.053	16.8	0.0599	0.0000	OK
180 minute winter	21	184	90.142	0.289	20.9	0.3272	0.0000	OK
180 minute winter	22	188	90.142	0.401	24.5	0.4539	0.0000	SURCHARGED
180 minute winter	13	188	90.142	0.981	24.5	4.4398	0.0000	SURCHARGED
180 minute winter	23	68	87.638	0.021	2.6	0.0238	0.0000	OK
180 minute winter	14	68	87.021	0.021	2.6	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)
180 minute winter	1	1.000	2	3.7	0.563	0.064	0.1550	
180 minute winter	2	1.001	3	8.6	0.878	0.165	0.2489	
180 minute winter	3	1.002	4	9.7	0.931	0.187	0.0775	
180 minute winter	4	1.003	5	13.4	1.355	0.189	0.2402	
180 minute winter	15	2.000	16	5.7	0.764	0.110	0.2200	
180 minute winter	16	2.001	5	7.4	0.908	0.142	0.1062	
180 minute winter	5	1.004	6	29.0	2.056	0.122	0.5481	
180 minute winter	6	1.005	7	34.4	2.238	0.157	0.4890	
180 minute winter	17	3.000	7	8.3	0.898	0.067	0.1185	
180 minute winter	7	1.006	8	49.5	1.169	0.303	1.9176	
180 minute winter	8	1.007	9	49.5	1.196	0.303	0.1656	
180 minute winter	9	1.008	10	23.0	0.126	0.000	288.1790	
180 minute winter	10	1.009	11	-20.8	-0.149	-0.038	3.4092	
180 minute winter	11	1.010	12	-16.3	0.233	-0.030	11.8555	
180 minute winter	12	1.011	13	-19.8	0.120	-0.036	6.9513	
180 minute winter	18	4.000	19	7.2	1.385	0.047	0.1072	
180 minute winter	19	4.001	20	16.8	2.394	0.111	0.1032	
180 minute winter	20	4.002	21	16.8	2.445	0.111	0.2497	
180 minute winter	21	4.003	22	20.9	0.924	0.231	1.1784	
180 minute winter	22	4.004	13	24.5	1.104	0.249	0.7192	
180 minute winter	13	Hydro-Brake®	23	2.6				
180 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	59.4

Results for 30 year 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	1	124	95.584	0.040	4.1	0.0455	0.0000	OK
240 minute summer	2	124	95.319	0.065	9.5	0.0737	0.0000	OK
240 minute summer	3	124	95.075	0.075	10.6	0.0844	0.0000	OK
240 minute summer	4	124	94.997	0.071	14.7	0.0806	0.0000	OK
240 minute summer	15	124	94.952	0.052	6.2	0.0589	0.0000	OK
240 minute summer	16	124	94.668	0.062	8.0	0.0700	0.0000	OK
240 minute summer	5	124	94.474	0.073	31.4	0.0826	0.0000	OK
240 minute summer	6	124	92.724	0.086	37.2	0.0971	0.0000	OK
240 minute summer	17	124	91.615	0.056	9.0	0.0629	0.0000	OK
240 minute summer	7	124	91.492	0.151	53.4	0.2660	0.0000	OK
240 minute summer	8	124	91.207	0.168	53.1	0.2976	0.0000	OK
240 minute summer	9	248	90.078	0.691	52.8	0.7815	0.0000	OK
240 minute summer	10	248	90.078	0.766	45.0	0.8665	0.0000	SURCHARGED
240 minute summer	11	248	90.078	0.781	26.1	1.9879	0.0000	SURCHARGED
240 minute summer	12	248	90.078	0.835	22.3	2.1245	0.0000	SURCHARGED
240 minute summer	18	124	93.999	0.035	7.9	0.0390	0.0000	OK
240 minute summer	19	124	92.249	0.054	18.3	0.0615	0.0000	OK
240 minute summer	20	124	91.024	0.055	18.2	0.0625	0.0000	OK
240 minute summer	21	248	90.078	0.225	22.7	0.2545	0.0000	OK
240 minute summer	22	248	90.078	0.337	26.6	0.3808	0.0000	SURCHARGED
240 minute summer	13	248	90.078	0.917	26.5	4.1468	0.0000	SURCHARGED
240 minute summer	23	100	87.638	0.021	2.6	0.0238	0.0000	OK
240 minute summer	14	100	87.021	0.021	2.6	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)
240 minute summer	1	1.000	2	4.1	0.579	0.070	0.1661	
240 minute summer	2	1.001	3	9.4	0.898	0.181	0.2662	
240 minute summer	3	1.002	4	10.6	0.949	0.203	0.0827	
240 minute summer	4	1.003	5	14.6	1.385	0.205	0.2555	
240 minute summer	15	2.000	16	6.2	0.783	0.119	0.2321	
240 minute summer	16	2.001	5	7.9	0.924	0.152	0.1116	
240 minute summer	5	1.004	6	31.3	2.102	0.132	0.5790	
240 minute summer	6	1.005	7	37.0	2.283	0.169	0.5160	
240 minute summer	17	3.000	7	9.0	0.898	0.072	0.1307	
240 minute summer	7	1.006	8	53.1	1.190	0.326	2.0207	
240 minute summer	8	1.007	9	52.8	1.216	0.324	0.1737	
240 minute summer	9	1.008	10	22.7	0.103	0.000	264.7971	
240 minute summer	10	1.009	11	-22.3	0.218	-0.041	3.4092	
240 minute summer	11	1.010	12	-18.8	0.302	-0.034	11.8555	
240 minute summer	12	1.011	13	-22.3	0.097	-0.041	6.9513	
240 minute summer	18	4.000	19	7.9	1.425	0.051	0.1141	
240 minute summer	19	4.001	20	18.2	2.447	0.121	0.1097	
240 minute summer	20	4.002	21	18.2	2.499	0.121	0.1797	
240 minute summer	21	4.003	22	22.6	0.940	0.250	1.0694	
240 minute summer	22	4.004	13	26.5	1.126	0.270	0.7192	
240 minute summer	13	Hydro-Brake®	23	2.6				
240 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	66.8

Results for 30 year 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	124	95.579	0.035	3.0	0.0392	0.0000	OK
240 minute winter	2	124	95.310	0.056	7.0	0.0630	0.0000	OK
240 minute winter	3	124	95.063	0.063	7.9	0.0717	0.0000	OK
240 minute winter	4	124	94.987	0.061	10.9	0.0689	0.0000	OK
240 minute winter	15	124	94.945	0.045	4.6	0.0509	0.0000	OK
240 minute winter	16	124	94.659	0.053	6.0	0.0604	0.0000	OK
240 minute winter	5	124	94.464	0.063	23.5	0.0715	0.0000	OK
240 minute winter	6	124	92.712	0.074	27.9	0.0836	0.0000	OK
240 minute winter	17	124	91.607	0.048	6.7	0.0547	0.0000	OK
240 minute winter	7	124	91.469	0.128	40.0	0.2261	0.0000	OK
240 minute winter	8	124	91.183	0.144	40.0	0.2545	0.0000	OK
240 minute winter	9	244	90.185	0.798	39.9	0.9028	0.0000	OK
240 minute winter	10	244	90.185	0.873	36.9	0.9876	0.0000	SURCHARGED
240 minute winter	11	244	90.185	0.888	19.2	2.2605	0.0000	SURCHARGED
240 minute winter	12	244	90.185	0.942	16.3	2.3979	0.0000	SURCHARGED
240 minute winter	18	124	93.994	0.030	5.8	0.0337	0.0000	OK
240 minute winter	19	124	92.242	0.047	13.6	0.0528	0.0000	OK
240 minute winter	20	124	91.016	0.047	13.6	0.0536	0.0000	OK
240 minute winter	21	244	90.185	0.332	16.9	0.3758	0.0000	SURCHARGED
240 minute winter	22	244	90.185	0.444	19.9	0.5024	0.0000	SURCHARGED
240 minute winter	13	244	90.185	1.024	19.9	4.6333	0.0000	SURCHARGED
240 minute winter	23	88	87.638	0.021	2.6	0.0238	0.0000	OK
240 minute winter	14	88	87.021	0.021	2.6	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)
240 minute winter	1	1.000	2	3.0	0.533	0.052	0.1333	
240 minute winter	2	1.001	3	7.0	0.834	0.134	0.2130	
240 minute winter	3	1.002	4	7.9	0.884	0.152	0.0663	
240 minute winter	4	1.003	5	10.9	1.279	0.153	0.2064	
240 minute winter	15	2.000	16	4.6	0.723	0.089	0.1885	
240 minute winter	16	2.001	5	6.0	0.856	0.115	0.0911	
240 minute winter	5	1.004	6	23.5	1.939	0.099	0.4701	
240 minute winter	6	1.005	7	27.8	2.111	0.127	0.4196	
240 minute winter	17	3.000	7	6.7	0.892	0.054	0.0897	
240 minute winter	7	1.006	8	40.0	1.110	0.245	1.6322	
240 minute winter	8	1.007	9	39.9	1.130	0.245	0.1415	
240 minute winter	9	1.008	10	20.6	0.089	0.000	303.7437	
240 minute winter	10	1.009	11	-16.5	0.189	-0.030	3.4092	
240 minute winter	11	1.010	12	-13.8	0.216	-0.025	11.8555	
240 minute winter	12	1.011	13	-16.3	0.103	-0.030	6.9513	
240 minute winter	18	4.000	19	5.8	1.305	0.038	0.0919	
240 minute winter	19	4.001	20	13.6	2.265	0.090	0.0883	
240 minute winter	20	4.002	21	13.6	2.308	0.090	0.2589	
240 minute winter	21	4.003	22	16.9	0.878	0.186	1.1849	
240 minute winter	22	4.004	13	19.9	1.046	0.202	0.7192	
240 minute winter	13	Hydro-Brake®	23	2.6				
240 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	68.7

Results for 30 year 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	1	184	95.579	0.035	3.0	0.0391	0.0000	OK
360 minute summer	2	184	95.310	0.056	7.0	0.0628	0.0000	OK
360 minute summer	3	184	95.063	0.063	7.8	0.0713	0.0000	OK
360 minute summer	4	184	94.987	0.061	10.8	0.0685	0.0000	OK
360 minute summer	15	184	94.945	0.045	4.7	0.0513	0.0000	OK
360 minute summer	16	184	94.660	0.054	6.1	0.0606	0.0000	OK
360 minute summer	5	184	94.464	0.063	23.5	0.0714	0.0000	OK
360 minute summer	6	184	92.712	0.074	27.8	0.0833	0.0000	OK
360 minute summer	17	184	91.608	0.049	6.8	0.0552	0.0000	OK
360 minute summer	7	184	91.469	0.128	39.9	0.2256	0.0000	OK
360 minute summer	8	184	91.182	0.143	39.7	0.2528	0.0000	OK
360 minute summer	9	368	90.116	0.729	39.5	0.8248	0.0000	OK
360 minute summer	10	368	90.116	0.804	28.3	0.9097	0.0000	SURCHARGED
360 minute summer	11	368	90.116	0.819	18.7	2.0852	0.0000	SURCHARGED
360 minute summer	12	368	90.116	0.873	15.9	2.2223	0.0000	SURCHARGED
360 minute summer	18	184	93.994	0.030	5.9	0.0339	0.0000	OK
360 minute summer	19	184	92.242	0.047	13.7	0.0530	0.0000	OK
360 minute summer	20	184	91.016	0.047	13.7	0.0537	0.0000	OK
360 minute summer	21	368	90.116	0.263	17.0	0.2978	0.0000	OK
360 minute summer	22	368	90.116	0.375	20.0	0.4243	0.0000	SURCHARGED
360 minute summer	13	368	90.116	0.955	19.9	4.3211	0.0000	SURCHARGED
360 minute summer	23	152	87.638	0.021	2.6	0.0238	0.0000	OK
360 minute summer	14	152	87.021	0.021	2.6	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)
360 minute summer	1	1.000	2	3.0	0.530	0.051	0.1328	
360 minute summer	2	1.001	3	6.9	0.832	0.134	0.2118	
360 minute summer	3	1.002	4	7.8	0.882	0.150	0.0658	
360 minute summer	4	1.003	5	10.7	1.275	0.151	0.2047	
360 minute summer	15	2.000	16	4.7	0.725	0.090	0.1899	
360 minute summer	16	2.001	5	6.0	0.857	0.116	0.0915	
360 minute summer	5	1.004	6	23.4	1.940	0.098	0.4688	
360 minute summer	6	1.005	7	27.7	2.107	0.126	0.4177	
360 minute summer	17	3.000	7	6.8	0.886	0.055	0.0899	
360 minute summer	7	1.006	8	39.7	1.109	0.244	1.6224	
360 minute summer	8	1.007	9	39.5	1.126	0.242	0.1403	
360 minute summer	9	1.008	10	15.2	0.055	0.000	278.6995	
360 minute summer	10	1.009	11	-16.4	0.258	-0.030	3.4092	
360 minute summer	11	1.010	12	-13.2	0.213	-0.024	11.8555	
360 minute summer	12	1.011	13	-15.9	0.136	-0.029	6.9513	
360 minute summer	18	4.000	19	5.9	1.313	0.038	0.0925	
360 minute summer	19	4.001	20	13.7	2.269	0.090	0.0886	
360 minute summer	20	4.002	21	13.6	2.309	0.090	0.2263	
360 minute summer	21	4.003	22	17.0	0.880	0.187	1.1437	
360 minute summer	22	4.004	13	19.9	1.045	0.202	0.7192	
360 minute summer	13	Hydro-Brake®	23	2.6				
360 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	84.3

Results for 30 year 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	1	184	95.574	0.030	2.2	0.0337	0.0000	OK
360 minute winter	2	184	95.301	0.047	5.1	0.0536	0.0000	OK
360 minute winter	3	184	95.053	0.053	5.7	0.0602	0.0000	OK
360 minute winter	4	184	94.978	0.052	7.9	0.0584	0.0000	OK
360 minute winter	15	184	94.939	0.039	3.4	0.0439	0.0000	OK
360 minute winter	16	184	94.652	0.045	4.4	0.0515	0.0000	OK
360 minute winter	5	184	94.455	0.054	17.2	0.0614	0.0000	OK
360 minute winter	6	184	92.701	0.063	20.4	0.0712	0.0000	OK
360 minute winter	17	184	91.601	0.042	4.9	0.0473	0.0000	OK
360 minute winter	7	184	91.449	0.108	29.3	0.1906	0.0000	OK
360 minute winter	8	184	91.160	0.121	29.2	0.2143	0.0000	OK
360 minute winter	9	360	90.235	0.848	29.2	0.9593	0.0000	OK
360 minute winter	10	360	90.235	0.923	25.3	1.0441	0.0000	SURCHARGED
360 minute winter	11	360	90.235	0.938	13.3	2.3877	0.0000	SURCHARGED
360 minute winter	12	360	90.235	0.992	11.0	2.5251	0.0000	SURCHARGED
360 minute winter	18	184	93.990	0.026	4.3	0.0292	0.0000	OK
360 minute winter	19	184	92.235	0.040	10.0	0.0453	0.0000	OK
360 minute winter	20	184	91.009	0.040	10.0	0.0458	0.0000	OK
360 minute winter	21	360	90.235	0.382	12.4	0.4322	0.0000	SURCHARGED
360 minute winter	22	360	90.235	0.494	14.6	0.5589	0.0000	SURCHARGED
360 minute winter	13	360	90.235	1.074	14.6	4.8595	0.0000	SURCHARGED
360 minute winter	23	128	87.638	0.021	2.6	0.0238	0.0000	OK
360 minute winter	14	128	87.021	0.021	2.6	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)
360 minute winter	1	1.000	2	2.2	0.487	0.038	0.1065	
360 minute winter	2	1.001	3	5.1	0.771	0.098	0.1680	
360 minute winter	3	1.002	4	5.7	0.813	0.110	0.0521	
360 minute winter	4	1.003	5	7.9	1.171	0.111	0.1639	
360 minute winter	15	2.000	16	3.4	0.662	0.065	0.1510	
360 minute winter	16	2.001	5	4.4	0.786	0.084	0.0728	
360 minute winter	5	1.004	6	17.2	1.777	0.072	0.3757	
360 minute winter	6	1.005	7	20.4	1.934	0.093	0.3350	
360 minute winter	17	3.000	7	4.9	0.846	0.039	0.0662	
360 minute winter	7	1.006	8	29.2	1.027	0.179	1.2900	
360 minute winter	8	1.007	9	29.2	1.040	0.179	0.1124	
360 minute winter	9	1.008	10	14.4	0.088	0.000	321.8964	
360 minute winter	10	1.009	11	-11.4	0.226	-0.021	3.4092	
360 minute winter	11	1.010	12	-9.4	0.210	-0.017	11.8555	
360 minute winter	12	1.011	13	-11.0	0.090	-0.020	6.9513	
360 minute winter	18	4.000	19	4.3	1.198	0.028	0.0740	
360 minute winter	19	4.001	20	10.0	2.083	0.066	0.0706	
360 minute winter	20	4.002	21	10.0	2.117	0.066	0.2594	
360 minute winter	21	4.003	22	12.4	0.813	0.137	1.1849	
360 minute winter	22	4.004	13	14.6	0.956	0.149	0.7192	
360 minute winter	13	Hydro-Brake®	23	2.6				
360 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	86.7

Results for 30 year 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	1	248	95.575	0.031	2.4	0.0352	0.0000	OK
480 minute summer	2	248	95.303	0.049	5.5	0.0557	0.0000	OK
480 minute summer	3	248	95.056	0.056	6.2	0.0630	0.0000	OK
480 minute summer	4	248	94.980	0.054	8.6	0.0611	0.0000	OK
480 minute summer	15	248	94.940	0.040	3.6	0.0452	0.0000	OK
480 minute summer	16	248	94.653	0.047	4.7	0.0533	0.0000	OK
480 minute summer	5	248	94.457	0.056	18.5	0.0636	0.0000	OK
480 minute summer	6	248	92.703	0.065	21.9	0.0738	0.0000	OK
480 minute summer	17	248	91.603	0.044	5.3	0.0492	0.0000	OK
480 minute summer	7	248	91.453	0.112	31.5	0.1984	0.0000	OK
480 minute summer	8	248	91.165	0.126	31.5	0.2233	0.0000	OK
480 minute summer	9	488	90.136	0.749	31.5	0.8471	0.0000	OK
480 minute summer	10	488	90.136	0.824	25.6	0.9319	0.0000	SURCHARGED
480 minute summer	11	488	90.136	0.839	14.5	2.1352	0.0000	SURCHARGED
480 minute summer	12	488	90.136	0.893	12.1	2.2726	0.0000	SURCHARGED
480 minute summer	18	248	93.991	0.027	4.6	0.0302	0.0000	OK
480 minute summer	19	248	92.236	0.041	10.7	0.0468	0.0000	OK
480 minute summer	20	248	91.011	0.042	10.7	0.0474	0.0000	OK
480 minute summer	21	488	90.136	0.283	13.3	0.3200	0.0000	OK
480 minute summer	22	488	90.136	0.395	15.6	0.4467	0.0000	SURCHARGED
480 minute summer	13	488	90.136	0.975	15.5	4.4108	0.0000	SURCHARGED
480 minute summer	23	200	87.638	0.021	2.6	0.0238	0.0000	OK
480 minute summer	14	200	87.021	0.021	2.6	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)
480 minute summer	1	1.000	2	2.4	0.502	0.041	0.1126	
480 minute summer	2	1.001	3	5.5	0.784	0.106	0.1781	
480 minute summer	3	1.002	4	6.2	0.830	0.119	0.0555	
480 minute summer	4	1.003	5	8.6	1.199	0.121	0.1742	
480 minute summer	15	2.000	16	3.6	0.671	0.069	0.1581	
480 minute summer	16	2.001	5	4.7	0.801	0.090	0.0765	
480 minute summer	5	1.004	6	18.5	1.816	0.078	0.3958	
480 minute summer	6	1.005	7	21.9	1.975	0.100	0.3528	
480 minute summer	17	3.000	7	5.3	0.865	0.043	0.0701	
480 minute summer	7	1.006	8	31.5	1.046	0.193	1.3645	
480 minute summer	8	1.007	9	31.5	1.062	0.193	0.1188	
480 minute summer	9	1.008	10	13.2	0.059	0.000	285.8385	
480 minute summer	10	1.009	11	-12.5	0.258	-0.023	3.4092	
480 minute summer	11	1.010	12	-10.2	0.254	-0.019	11.8555	
480 minute summer	12	1.011	13	-12.1	0.231	-0.022	6.9513	
480 minute summer	18	4.000	19	4.6	1.223	0.030	0.0776	
480 minute summer	19	4.001	20	10.7	2.122	0.071	0.0742	
480 minute summer	20	4.002	21	10.7	2.157	0.071	0.2443	
480 minute summer	21	4.003	22	13.3	0.839	0.147	1.1717	
480 minute summer	22	4.004	13	15.5	0.978	0.158	0.7192	
480 minute summer	13	Hydro-Brake®	23	2.6				
480 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	101.5

Results for 30 year 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	1	248	95.571	0.027	1.8	0.0307	0.0000	OK
480 minute winter	2	248	95.297	0.043	4.1	0.0481	0.0000	OK
480 minute winter	3	248	95.048	0.048	4.6	0.0538	0.0000	OK
480 minute winter	4	248	94.972	0.046	6.4	0.0525	0.0000	OK
480 minute winter	15	248	94.935	0.035	2.7	0.0393	0.0000	OK
480 minute winter	16	248	94.647	0.041	3.5	0.0459	0.0000	OK
480 minute winter	5	248	94.450	0.049	13.8	0.0551	0.0000	OK
480 minute winter	6	248	92.694	0.056	16.4	0.0638	0.0000	OK
480 minute winter	17	248	91.596	0.037	3.9	0.0423	0.0000	OK
480 minute winter	7	248	91.437	0.096	23.5	0.1698	0.0000	OK
480 minute winter	8	248	91.147	0.108	23.5	0.1905	0.0000	OK
480 minute winter	9	480	90.260	0.873	23.5	0.9876	0.0000	OK
480 minute winter	10	480	90.260	0.948	20.6	1.0724	0.0000	SURCHARGED
480 minute winter	11	480	90.260	0.963	10.3	2.4513	0.0000	SURCHARGED
480 minute winter	12	472	90.260	1.017	8.4	2.5887	0.0000	SURCHARGED
480 minute winter	18	248	93.987	0.023	3.4	0.0262	0.0000	OK
480 minute winter	19	248	92.231	0.036	7.9	0.0402	0.0000	OK
480 minute winter	20	248	91.005	0.036	7.9	0.0407	0.0000	OK
480 minute winter	21	472	90.260	0.407	9.8	0.4605	0.0000	SURCHARGED
480 minute winter	22	472	90.260	0.519	11.5	0.5872	0.0000	SURCHARGED
480 minute winter	13	472	90.260	1.099	11.6	4.9727	0.0000	SURCHARGED
480 minute winter	23	480	87.638	0.021	2.6	0.0239	0.0000	OK
480 minute winter	14	480	87.021	0.021	2.6	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)
480 minute winter	1	1.000	2	1.8	0.463	0.031	0.0917	
480 minute winter	2	1.001	3	4.1	0.727	0.079	0.1433	
480 minute winter	3	1.002	4	4.6	0.768	0.089	0.0446	
480 minute winter	4	1.003	5	6.4	1.103	0.090	0.1409	
480 minute winter	15	2.000	16	2.7	0.620	0.052	0.1282	
480 minute winter	16	2.001	5	3.5	0.737	0.067	0.0619	
480 minute winter	5	1.004	6	13.8	1.669	0.058	0.3216	
480 minute winter	6	1.005	7	16.4	1.817	0.075	0.2871	
480 minute winter	17	3.000	7	3.9	0.792	0.031	0.0564	
480 minute winter	7	1.006	8	23.5	0.971	0.144	1.0961	
480 minute winter	8	1.007	9	23.5	0.982	0.144	0.0958	
480 minute winter	9	1.008	10	12.0	0.051	0.000	330.9862	
480 minute winter	10	1.009	11	-8.6	0.261	-0.016	3.4092	
480 minute winter	11	1.010	12	-7.1	0.211	-0.013	11.8555	
480 minute winter	12	1.011	13	-8.4	0.193	-0.015	6.9513	
480 minute winter	18	4.000	19	3.4	1.122	0.022	0.0625	
480 minute winter	19	4.001	20	7.9	1.954	0.052	0.0595	
480 minute winter	20	4.002	21	7.9	1.981	0.052	0.2599	
480 minute winter	21	4.003	22	9.8	0.807	0.108	1.1849	
480 minute winter	22	4.004	13	11.6	0.899	0.118	0.7192	
480 minute winter	13	Hydro-Brake®	23	2.6				
480 minute winter	23	1.013	14	2.6	1.422	0.017	0.0136	104.4

Results for 30 year 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	1	315	95.572	0.028	1.9	0.0315	0.0000	OK
600 minute summer	2	315	95.299	0.045	4.5	0.0503	0.0000	OK
600 minute summer	3	315	95.050	0.050	5.1	0.0568	0.0000	OK
600 minute summer	4	315	94.975	0.049	7.0	0.0549	0.0000	OK
600 minute summer	15	315	94.936	0.036	2.9	0.0406	0.0000	OK
600 minute summer	16	315	94.648	0.042	3.8	0.0478	0.0000	OK
600 minute summer	5	315	94.452	0.051	15.0	0.0574	0.0000	OK
600 minute summer	6	315	92.697	0.059	17.8	0.0665	0.0000	OK
600 minute summer	17	315	91.598	0.039	4.3	0.0444	0.0000	OK
600 minute summer	7	315	91.442	0.101	25.6	0.1776	0.0000	OK
600 minute summer	8	315	91.152	0.113	25.6	0.1995	0.0000	OK
600 minute summer	9	600	90.147	0.760	25.6	0.8596	0.0000	OK
600 minute summer	10	600	90.147	0.835	18.3	0.9444	0.0000	SURCHARGED
600 minute summer	11	600	90.147	0.850	11.0	2.1632	0.0000	SURCHARGED
600 minute summer	12	600	90.147	0.904	9.2	2.3007	0.0000	SURCHARGED
600 minute summer	18	315	93.988	0.024	3.7	0.0272	0.0000	OK
600 minute summer	19	315	92.232	0.037	8.7	0.0422	0.0000	OK
600 minute summer	20	315	91.007	0.038	8.7	0.0427	0.0000	OK
600 minute summer	21	600	90.147	0.294	10.8	0.3325	0.0000	OK
600 minute summer	22	600	90.147	0.406	12.7	0.4592	0.0000	SURCHARGED
600 minute summer	13	600	90.147	0.986	12.8	4.4606	0.0000	SURCHARGED
600 minute summer	23	255	87.638	0.021	2.6	0.0238	0.0000	OK
600 minute summer	14	255	87.021	0.021	2.6	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)
600 minute summer	1	1.000	2	1.9	0.463	0.033	0.0969	
600 minute summer	2	1.001	3	4.5	0.742	0.087	0.1539	
600 minute summer	3	1.002	4	5.1	0.793	0.098	0.0478	
600 minute summer	4	1.003	5	7.0	1.131	0.099	0.1502	
600 minute summer	15	2.000	16	2.9	0.631	0.056	0.1356	
600 minute summer	16	2.001	5	3.8	0.754	0.073	0.0657	
600 minute summer	5	1.004	6	15.0	1.709	0.063	0.3410	
600 minute summer	6	1.005	7	17.8	1.861	0.081	0.3042	
600 minute summer	17	3.000	7	4.3	0.815	0.035	0.0604	
600 minute summer	7	1.006	8	25.6	0.993	0.157	1.1684	
600 minute summer	8	1.007	9	25.6	1.004	0.157	0.1020	
600 minute summer	9	1.008	10	8.8	0.074	0.000	289.8435	
600 minute summer	10	1.009	11	-9.7	0.264	-0.018	3.4092	
600 minute summer	11	1.010	12	-7.5	0.260	-0.014	11.8555	
600 minute summer	12	1.011	13	-9.2	0.161	-0.017	6.9513	
600 minute summer	18	4.000	19	3.7	1.142	0.024	0.0668	
600 minute summer	19	4.001	20	8.7	2.005	0.058	0.0638	
600 minute summer	20	4.002	21	8.7	2.035	0.058	0.2509	
600 minute summer	21	4.003	22	10.8	0.798	0.119	1.1820	
600 minute summer	22	4.004	13	12.8	0.926	0.130	0.7192	
600 minute summer	13	Hydro-Brake®	23	2.6				
600 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	117.7

Results for 30 year 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	1	315	95.569	0.025	1.5	0.0282	0.0000	OK
600 minute winter	2	315	95.293	0.039	3.5	0.0445	0.0000	OK
600 minute winter	3	315	95.044	0.044	3.9	0.0494	0.0000	OK
600 minute winter	4	315	94.969	0.043	5.4	0.0482	0.0000	OK
600 minute winter	15	315	94.932	0.032	2.3	0.0363	0.0000	OK
600 minute winter	16	315	94.644	0.038	3.0	0.0425	0.0000	OK
600 minute winter	5	315	94.446	0.045	11.6	0.0507	0.0000	OK
600 minute winter	6	315	92.690	0.052	13.7	0.0584	0.0000	OK
600 minute winter	17	315	91.593	0.034	3.3	0.0390	0.0000	OK
600 minute winter	7	315	91.429	0.088	19.7	0.1550	0.0000	OK
600 minute winter	8	315	91.137	0.098	19.7	0.1734	0.0000	OK
600 minute winter	9	600	90.281	0.894	19.7	1.0110	0.0000	OK
600 minute winter	10	600	90.281	0.969	16.3	1.0959	0.0000	SURCHARGED
600 minute winter	11	600	90.281	0.984	8.2	2.5041	0.0000	SURCHARGED
600 minute winter	12	600	90.281	1.038	6.8	2.6416	0.0000	SURCHARGED
600 minute winter	18	315	93.985	0.021	2.9	0.0243	0.0000	OK
600 minute winter	19	315	92.228	0.033	6.7	0.0371	0.0000	OK
600 minute winter	20	315	91.002	0.033	6.7	0.0374	0.0000	OK
600 minute winter	21	600	90.281	0.428	8.3	0.4840	0.0000	SURCHARGED
600 minute winter	22	600	90.281	0.540	9.7	0.6107	0.0000	SURCHARGED
600 minute winter	13	600	90.281	1.120	9.8	5.0666	0.0000	SURCHARGED
600 minute winter	23	600	87.638	0.021	2.6	0.0240	0.0000	OK
600 minute winter	14	600	87.021	0.021	2.6	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)
600 minute winter	1	1.000	2	1.5	0.433	0.026	0.0816	
600 minute winter	2	1.001	3	3.5	0.697	0.067	0.1274	
600 minute winter	3	1.002	4	3.9	0.736	0.075	0.0394	
600 minute winter	4	1.003	5	5.4	1.050	0.076	0.1249	
600 minute winter	15	2.000	16	2.3	0.592	0.044	0.1147	
600 minute winter	16	2.001	5	3.0	0.705	0.058	0.0554	
600 minute winter	5	1.004	6	11.6	1.590	0.049	0.2834	
600 minute winter	6	1.005	7	13.7	1.725	0.063	0.2526	
600 minute winter	17	3.000	7	3.3	0.754	0.027	0.0501	
600 minute winter	7	1.006	8	19.7	0.929	0.121	0.9614	
600 minute winter	8	1.007	9	19.7	0.937	0.121	0.0842	
600 minute winter	9	1.008	10	9.5	0.035	0.000	338.5239	
600 minute winter	10	1.009	11	-7.1	0.221	-0.013	3.4092	
600 minute winter	11	1.010	12	-5.6	0.216	-0.010	11.8555	
600 minute winter	12	1.011	13	-6.8	0.294	-0.012	6.9513	
600 minute winter	18	4.000	19	2.9	1.073	0.019	0.0557	
600 minute winter	19	4.001	20	6.7	1.866	0.044	0.0528	
600 minute winter	20	4.002	21	6.7	1.889	0.044	0.2599	
600 minute winter	21	4.003	22	8.3	0.770	0.092	1.1849	
600 minute winter	22	4.004	13	9.8	0.851	0.099	0.7192	
600 minute winter	13	Hydro-Brake®	23	2.6				
600 minute winter	23	1.013	14	2.6	1.425	0.017	0.0136	121.3

Results for 30 year 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	1	375	95.570	0.026	1.7	0.0298	0.0000	OK
720 minute summer	2	375	95.296	0.042	4.0	0.0475	0.0000	OK
720 minute summer	3	375	95.047	0.047	4.5	0.0532	0.0000	OK
720 minute summer	4	375	94.972	0.046	6.2	0.0517	0.0000	OK
720 minute summer	15	375	94.934	0.034	2.6	0.0385	0.0000	OK
720 minute summer	16	375	94.646	0.040	3.4	0.0452	0.0000	OK
720 minute summer	5	375	94.449	0.048	13.4	0.0544	0.0000	OK
720 minute summer	6	375	92.694	0.056	15.9	0.0628	0.0000	OK
720 minute summer	17	375	91.596	0.037	3.8	0.0417	0.0000	OK
720 minute summer	7	375	91.436	0.095	22.8	0.1672	0.0000	OK
720 minute summer	8	375	91.145	0.106	22.8	0.1875	0.0000	OK
720 minute summer	9	720	90.148	0.761	22.8	0.8602	0.0000	OK
720 minute summer	10	720	90.148	0.836	16.9	0.9450	0.0000	SURCHARGED
720 minute summer	11	720	90.148	0.851	9.8	2.1647	0.0000	SURCHARGED
720 minute summer	12	720	90.148	0.905	8.1	2.3021	0.0000	SURCHARGED
720 minute summer	18	375	93.987	0.023	3.3	0.0258	0.0000	OK
720 minute summer	19	375	92.230	0.035	7.7	0.0397	0.0000	OK
720 minute summer	20	375	91.005	0.035	7.7	0.0401	0.0000	OK
720 minute summer	21	720	90.148	0.295	9.6	0.3332	0.0000	OK
720 minute summer	22	720	90.148	0.407	11.3	0.4598	0.0000	SURCHARGED
720 minute summer	13	720	90.148	0.987	11.4	4.4632	0.0000	SURCHARGED
720 minute summer	23	300	87.638	0.021	2.6	0.0238	0.0000	OK
720 minute summer	14	300	87.021	0.021	2.6	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)
720 minute summer	1	1.000	2	1.7	0.449	0.029	0.0894	
720 minute summer	2	1.001	3	4.0	0.721	0.077	0.1409	
720 minute summer	3	1.002	4	4.5	0.766	0.087	0.0437	
720 minute summer	4	1.003	5	6.2	1.093	0.087	0.1377	
720 minute summer	15	2.000	16	2.6	0.611	0.050	0.1253	
720 minute summer	16	2.001	5	3.4	0.731	0.065	0.0607	
720 minute summer	5	1.004	6	13.4	1.655	0.056	0.3147	
720 minute summer	6	1.005	7	15.9	1.801	0.073	0.2809	
720 minute summer	17	3.000	7	3.8	0.786	0.031	0.0553	
720 minute summer	7	1.006	8	22.8	0.964	0.140	1.0718	
720 minute summer	8	1.007	9	22.8	0.974	0.140	0.0937	
720 minute summer	9	1.008	10	8.8	0.028	0.000	290.0532	
720 minute summer	10	1.009	11	-8.7	0.266	-0.016	3.4092	
720 minute summer	11	1.010	12	-6.7	0.254	-0.012	11.8555	
720 minute summer	12	1.011	13	-8.1	0.185	-0.015	6.9513	
720 minute summer	18	4.000	19	3.3	1.110	0.021	0.0613	
720 minute summer	19	4.001	20	7.7	1.940	0.051	0.0584	
720 minute summer	20	4.002	21	7.7	1.968	0.051	0.2511	
720 minute summer	21	4.003	22	9.6	0.786	0.106	1.1824	
720 minute summer	22	4.004	13	11.4	0.898	0.116	0.7192	
720 minute summer	13	Hydro-Brake®	23	2.6				
720 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	134.5

Results for 30 year 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	1	375	95.567	0.023	1.3	0.0263	0.0000	OK
720 minute winter	2	375	95.291	0.037	3.0	0.0413	0.0000	OK
720 minute winter	3	375	95.041	0.041	3.4	0.0460	0.0000	OK
720 minute winter	4	375	94.966	0.040	4.7	0.0450	0.0000	OK
720 minute winter	15	375	94.930	0.030	2.0	0.0340	0.0000	OK
720 minute winter	16	375	94.641	0.035	2.6	0.0395	0.0000	OK
720 minute winter	5	375	94.443	0.042	10.1	0.0474	0.0000	OK
720 minute winter	6	375	92.686	0.048	12.0	0.0546	0.0000	OK
720 minute winter	17	375	91.591	0.032	2.9	0.0366	0.0000	OK
720 minute winter	7	375	91.423	0.082	17.2	0.1445	0.0000	OK
720 minute winter	8	375	91.130	0.091	17.2	0.1613	0.0000	OK
720 minute winter	9	705	90.282	0.895	17.2	1.0126	0.0000	OK
720 minute winter	10	705	90.282	0.970	13.6	1.0975	0.0000	SURCHARGED
720 minute winter	11	705	90.282	0.985	7.3	2.5077	0.0000	SURCHARGED
720 minute winter	12	705	90.282	1.039	5.9	2.6451	0.0000	SURCHARGED
720 minute winter	18	375	93.984	0.020	2.5	0.0226	0.0000	OK
720 minute winter	19	375	92.226	0.031	5.8	0.0346	0.0000	OK
720 minute winter	20	375	91.000	0.031	5.8	0.0349	0.0000	OK
720 minute winter	21	705	90.282	0.429	7.2	0.4855	0.0000	SURCHARGED
720 minute winter	22	705	90.282	0.541	8.5	0.6122	0.0000	SURCHARGED
720 minute winter	13	705	90.282	1.121	8.5	5.0728	0.0000	SURCHARGED
720 minute winter	23	705	87.638	0.021	2.6	0.0240	0.0000	OK
720 minute winter	14	705	87.021	0.021	2.6	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)
720 minute winter	1	1.000	2	1.3	0.418	0.022	0.0734	
720 minute winter	2	1.001	3	3.0	0.664	0.058	0.1147	
720 minute winter	3	1.002	4	3.4	0.709	0.065	0.0357	
720 minute winter	4	1.003	5	4.7	1.009	0.066	0.1132	
720 minute winter	15	2.000	16	2.0	0.568	0.038	0.1036	
720 minute winter	16	2.001	5	2.6	0.677	0.050	0.0500	
720 minute winter	5	1.004	6	10.1	1.525	0.042	0.2575	
720 minute winter	6	1.005	7	12.0	1.662	0.055	0.2298	
720 minute winter	17	3.000	7	2.9	0.726	0.023	0.0457	
720 minute winter	7	1.006	8	17.2	0.897	0.105	0.8689	
720 minute winter	8	1.007	9	17.2	0.903	0.105	0.0762	
720 minute winter	9	1.008	10	7.4	0.038	0.000	339.0358	
720 minute winter	10	1.009	11	-6.3	0.250	-0.011	3.4092	
720 minute winter	11	1.010	12	-5.0	0.248	-0.009	11.8555	
720 minute winter	12	1.011	13	-5.9	0.190	-0.011	6.9513	
720 minute winter	18	4.000	19	2.5	1.028	0.016	0.0502	
720 minute winter	19	4.001	20	5.8	1.791	0.038	0.0476	
720 minute winter	20	4.002	21	5.8	1.813	0.038	0.2593	
720 minute winter	21	4.003	22	7.2	0.740	0.080	1.1849	
720 minute winter	22	4.004	13	8.5	0.824	0.086	0.7192	
720 minute winter	13	Hydro-Brake®	23	2.6				
720 minute winter	23	1.013	14	2.6	1.425	0.017	0.0136	138.1

Results for 30 year 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	1	495	95.568	0.024	1.4	0.0272	0.0000	OK
960 minute summer	2	495	95.292	0.038	3.2	0.0426	0.0000	OK
960 minute summer	3	495	95.042	0.042	3.6	0.0474	0.0000	OK
960 minute summer	4	495	94.967	0.041	5.0	0.0464	0.0000	OK
960 minute summer	15	495	94.931	0.031	2.1	0.0348	0.0000	OK
960 minute summer	16	495	94.642	0.036	2.7	0.0403	0.0000	OK
960 minute summer	5	495	94.444	0.043	10.8	0.0490	0.0000	OK
960 minute summer	6	495	92.688	0.050	12.8	0.0564	0.0000	OK
960 minute summer	17	495	91.592	0.033	3.1	0.0378	0.0000	OK
960 minute summer	7	495	91.426	0.085	18.4	0.1496	0.0000	OK
960 minute summer	8	495	91.134	0.095	18.4	0.1672	0.0000	OK
960 minute summer	9	960	90.131	0.744	18.4	0.8409	0.0000	OK
960 minute summer	10	960	90.131	0.819	12.7	0.9258	0.0000	SURCHARGED
960 minute summer	11	960	90.131	0.834	7.4	2.1213	0.0000	SURCHARGED
960 minute summer	12	960	90.131	0.888	6.1	2.2588	0.0000	SURCHARGED
960 minute summer	18	495	93.985	0.021	2.7	0.0235	0.0000	OK
960 minute summer	19	495	92.227	0.032	6.3	0.0360	0.0000	OK
960 minute summer	20	495	91.001	0.032	6.3	0.0363	0.0000	OK
960 minute summer	21	960	90.131	0.278	7.8	0.3139	0.0000	OK
960 minute summer	22	960	90.131	0.390	9.2	0.4406	0.0000	SURCHARGED
960 minute summer	13	960	90.131	0.970	9.3	4.3861	0.0000	SURCHARGED
960 minute summer	23	405	87.638	0.021	2.6	0.0238	0.0000	OK
960 minute summer	14	405	87.021	0.021	2.6	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)
960 minute summer	1	1.000	2	1.4	0.429	0.024	0.0770	
960 minute summer	2	1.001	3	3.2	0.679	0.062	0.1199	
960 minute summer	3	1.002	4	3.6	0.719	0.069	0.0372	
960 minute summer	4	1.003	5	5.0	1.027	0.070	0.1183	
960 minute summer	15	2.000	16	2.1	0.579	0.040	0.1068	
960 minute summer	16	2.001	5	2.7	0.684	0.052	0.0514	
960 minute summer	5	1.004	6	10.8	1.557	0.045	0.2698	
960 minute summer	6	1.005	7	12.8	1.692	0.059	0.2406	
960 minute summer	17	3.000	7	3.1	0.741	0.025	0.0479	
960 minute summer	7	1.006	8	18.4	0.913	0.113	0.9138	
960 minute summer	8	1.007	9	18.4	0.920	0.113	0.0801	
960 minute summer	9	1.008	10	6.4	0.026	0.000	283.8596	
960 minute summer	10	1.009	11	-6.5	0.265	-0.012	3.4092	
960 minute summer	11	1.010	12	-4.9	0.276	-0.009	11.8555	
960 minute summer	12	1.011	13	-6.1	0.315	-0.011	6.9513	
960 minute summer	18	4.000	19	2.7	1.047	0.018	0.0532	
960 minute summer	19	4.001	20	6.3	1.834	0.042	0.0505	
960 minute summer	20	4.002	21	6.3	1.856	0.042	0.2387	
960 minute summer	21	4.003	22	7.8	0.751	0.086	1.1651	
960 minute summer	22	4.004	13	9.3	0.850	0.095	0.7192	
960 minute summer	13	Hydro-Brake®	23	2.6				
960 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	166.5

Results for 30 year 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	1	465	95.565	0.021	1.0	0.0232	0.0000	OK
960 minute winter	2	495	95.287	0.033	2.4	0.0371	0.0000	OK
960 minute winter	3	495	95.036	0.036	2.7	0.0409	0.0000	OK
960 minute winter	4	495	94.961	0.035	3.7	0.0400	0.0000	OK
960 minute winter	15	495	94.927	0.027	1.6	0.0306	0.0000	OK
960 minute winter	16	495	94.637	0.031	2.1	0.0356	0.0000	OK
960 minute winter	5	495	94.439	0.038	8.1	0.0427	0.0000	OK
960 minute winter	6	495	92.681	0.043	9.6	0.0489	0.0000	OK
960 minute winter	17	495	91.588	0.029	2.3	0.0327	0.0000	OK
960 minute winter	7	495	91.414	0.073	13.8	0.1293	0.0000	OK
960 minute winter	8	495	91.120	0.081	13.8	0.1435	0.0000	OK
960 minute winter	9	930	90.285	0.898	13.8	1.0157	0.0000	OK
960 minute winter	10	930	90.285	0.973	8.8	1.1006	0.0000	SURCHARGED
960 minute winter	11	930	90.285	0.988	5.0	2.5147	0.0000	SURCHARGED
960 minute winter	12	930	90.285	1.042	3.8	2.6521	0.0000	SURCHARGED
960 minute winter	18	495	93.982	0.018	2.0	0.0204	0.0000	OK
960 minute winter	19	495	92.222	0.027	4.6	0.0309	0.0000	OK
960 minute winter	20	495	90.997	0.028	4.6	0.0311	0.0000	OK
960 minute winter	21	930	90.285	0.432	5.7	0.4887	0.0000	SURCHARGED
960 minute winter	22	930	90.285	0.544	6.7	0.6154	0.0000	SURCHARGED
960 minute winter	13	930	90.285	1.124	6.7	5.0854	0.0000	SURCHARGED
960 minute winter	23	930	87.638	0.021	2.6	0.0240	0.0000	OK
960 minute winter	14	930	87.021	0.021	2.6	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)
960 minute winter	1	1.000	2	1.0	0.387	0.017	0.0621	
960 minute winter	2	1.001	3	2.4	0.627	0.046	0.0974	
960 minute winter	3	1.002	4	2.7	0.668	0.052	0.0301	
960 minute winter	4	1.003	5	3.7	0.942	0.052	0.0954	
960 minute winter	15	2.000	16	1.6	0.531	0.031	0.0888	
960 minute winter	16	2.001	5	2.1	0.636	0.040	0.0430	
960 minute winter	5	1.004	6	8.1	1.431	0.034	0.2200	
960 minute winter	6	1.005	7	9.6	1.557	0.044	0.1962	
960 minute winter	17	3.000	7	2.3	0.679	0.018	0.0387	
960 minute winter	7	1.006	8	13.8	0.847	0.085	0.7385	
960 minute winter	8	1.007	9	13.8	0.851	0.085	0.0649	
960 minute winter	9	1.008	10	5.1	0.045	0.000	340.0334	
960 minute winter	10	1.009	11	-4.5	0.269	-0.008	3.4092	
960 minute winter	11	1.010	12	-3.2	0.263	-0.006	11.8555	
960 minute winter	12	1.011	13	-3.8	0.280	-0.007	6.9513	
960 minute winter	18	4.000	19	2.0	0.964	0.013	0.0428	
960 minute winter	19	4.001	20	4.6	1.675	0.030	0.0404	
960 minute winter	20	4.002	21	4.6	1.692	0.030	0.2586	
960 minute winter	21	4.003	22	5.7	0.693	0.063	1.1849	
960 minute winter	22	4.004	13	6.7	0.770	0.068	0.7192	
960 minute winter	13	Hydro-Brake®	23	2.6				
960 minute winter	23	1.013	14	2.6	1.426	0.017	0.0137	172.3

Results for 30 year 1440 minute summer. 1680 minute analysis at 30 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	1	750	95.565	0.021	1.0	0.0232	0.0000	OK
1440 minute summer	2	750	95.286	0.032	2.3	0.0363	0.0000	OK
1440 minute summer	3	750	95.035	0.035	2.6	0.0401	0.0000	OK
1440 minute summer	4	750	94.961	0.035	3.6	0.0394	0.0000	OK
1440 minute summer	15	750	94.926	0.026	1.5	0.0297	0.0000	OK
1440 minute summer	16	750	94.636	0.030	1.9	0.0339	0.0000	OK
1440 minute summer	5	750	94.438	0.037	7.7	0.0417	0.0000	OK
1440 minute summer	6	750	92.680	0.042	9.1	0.0477	0.0000	OK
1440 minute summer	17	750	91.587	0.028	2.2	0.0320	0.0000	OK
1440 minute summer	7	750	91.412	0.071	13.1	0.1259	0.0000	OK
1440 minute summer	8	750	91.118	0.079	13.1	0.1397	0.0000	OK
1440 minute summer	9	1230	90.093	0.706	13.1	0.7985	0.0000	OK
1440 minute summer	10	1230	90.093	0.781	9.2	0.8834	0.0000	SURCHARGED
1440 minute summer	11	1230	90.093	0.796	4.5	2.0259	0.0000	SURCHARGED
1440 minute summer	12	1230	90.093	0.850	3.6	2.1633	0.0000	SURCHARGED
1440 minute summer	18	750	93.982	0.018	1.9	0.0199	0.0000	OK
1440 minute summer	19	750	92.222	0.027	4.4	0.0303	0.0000	OK
1440 minute summer	20	750	90.996	0.027	4.4	0.0305	0.0000	OK
1440 minute summer	21	1230	90.093	0.240	5.5	0.2715	0.0000	OK
1440 minute summer	22	1230	90.093	0.352	6.5	0.3982	0.0000	SURCHARGED
1440 minute summer	13	1230	90.093	0.932	6.5	4.2165	0.0000	SURCHARGED
1440 minute summer	23	630	87.638	0.021	2.6	0.0238	0.0000	OK
1440 minute summer	14	630	87.021	0.021	2.6	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)
1440 minute summer	1	1.000	2	1.0	0.387	0.017	0.0609	
1440 minute summer	2	1.001	3	2.3	0.618	0.044	0.0946	
1440 minute summer	3	1.002	4	2.6	0.659	0.050	0.0293	
1440 minute summer	4	1.003	5	3.6	0.935	0.051	0.0935	
1440 minute summer	15	2.000	16	1.5	0.527	0.029	0.0836	
1440 minute summer	16	2.001	5	1.9	0.618	0.037	0.0401	
1440 minute summer	5	1.004	6	7.7	1.413	0.032	0.2121	
1440 minute summer	6	1.005	7	9.1	1.533	0.042	0.1889	
1440 minute summer	17	3.000	7	2.2	0.671	0.018	0.0375	
1440 minute summer	7	1.006	8	13.1	0.835	0.080	0.7110	
1440 minute summer	8	1.007	9	13.1	0.839	0.080	0.0625	
1440 minute summer	9	1.008	10	5.5	0.027	0.000	270.2339	
1440 minute summer	10	1.009	11	-3.9	0.271	-0.007	3.4092	
1440 minute summer	11	1.010	12	-2.7	0.275	-0.005	11.8555	
1440 minute summer	12	1.011	13	-3.6	0.349	-0.006	6.9513	
1440 minute summer	18	4.000	19	1.9	0.946	0.012	0.0414	
1440 minute summer	19	4.001	20	4.4	1.654	0.029	0.0391	
1440 minute summer	20	4.002	21	4.4	1.670	0.029	0.1985	
1440 minute summer	21	4.003	22	5.5	0.685	0.061	1.1009	
1440 minute summer	22	4.004	13	6.5	0.772	0.066	0.7192	
1440 minute summer	13	Hydro-Brake®	23	2.6				
1440 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	224.7

Results for 30 year 1440 minute winter. 1680 minute analysis at 30 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
1440 minute winter	1	690	95.561	0.017	0.7	0.0197	0.0000	OK
1440 minute winter	2	720	95.282	0.028	1.7	0.0314	0.0000	OK
1440 minute winter	3	720	95.030	0.030	1.9	0.0343	0.0000	OK
1440 minute winter	4	720	94.956	0.030	2.6	0.0336	0.0000	OK
1440 minute winter	15	720	94.923	0.023	1.1	0.0256	0.0000	OK
1440 minute winter	16	720	94.632	0.026	1.4	0.0292	0.0000	OK
1440 minute winter	5	720	94.433	0.032	5.6	0.0359	0.0000	OK
1440 minute winter	6	750	92.674	0.036	6.7	0.0411	0.0000	OK
1440 minute winter	17	750	91.584	0.025	1.7	0.0283	0.0000	OK
1440 minute winter	7	750	91.403	0.062	9.8	0.1090	0.0000	OK
1440 minute winter	8	750	91.107	0.068	9.8	0.1201	0.0000	OK
1440 minute winter	9	1230	90.225	0.838	9.8	0.9474	0.0000	OK
1440 minute winter	10	1230	90.225	0.913	7.6	1.0322	0.0000	SURCHARGED
1440 minute winter	11	1230	90.225	0.928	3.1	2.3608	0.0000	SURCHARGED
1440 minute winter	12	1230	90.225	0.982	2.5	2.4983	0.0000	SURCHARGED
1440 minute winter	18	720	93.979	0.015	1.4	0.0173	0.0000	OK
1440 minute winter	19	750	92.218	0.023	3.3	0.0264	0.0000	OK
1440 minute winter	20	750	90.992	0.023	3.3	0.0265	0.0000	OK
1440 minute winter	21	1230	90.225	0.372	4.1	0.4203	0.0000	SURCHARGED
1440 minute winter	22	1230	90.225	0.484	4.8	0.5470	0.0000	SURCHARGED
1440 minute winter	13	1230	90.225	1.064	4.8	4.8119	0.0000	SURCHARGED
1440 minute winter	23	570	87.638	0.021	2.6	0.0238	0.0000	OK
1440 minute winter	14	570	87.021	0.021	2.6	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)
1440 minute winter	1	1.000	2	0.7	0.348	0.012	0.0488	
1440 minute winter	2	1.001	3	1.7	0.569	0.033	0.0759	
1440 minute winter	3	1.002	4	1.9	0.606	0.037	0.0233	
1440 minute winter	4	1.003	5	2.6	0.849	0.037	0.0744	
1440 minute winter	15	2.000	16	1.1	0.482	0.021	0.0673	
1440 minute winter	16	2.001	5	1.4	0.564	0.027	0.0323	
1440 minute winter	5	1.004	6	5.6	1.286	0.024	0.1704	
1440 minute winter	6	1.005	7	6.7	1.399	0.031	0.1524	
1440 minute winter	17	3.000	7	1.7	0.621	0.014	0.0313	
1440 minute winter	7	1.006	8	9.8	0.773	0.060	0.5746	
1440 minute winter	8	1.007	9	9.8	0.776	0.060	0.0506	
1440 minute winter	9	1.008	10	5.0	0.018	0.000	318.0633	
1440 minute winter	10	1.009	11	-2.8	0.271	-0.005	3.4092	
1440 minute winter	11	1.010	12	2.5	0.279	0.004	11.8555	
1440 minute winter	12	1.011	13	2.5	0.310	0.005	6.9513	
1440 minute winter	18	4.000	19	1.4	0.869	0.009	0.0337	
1440 minute winter	19	4.001	20	3.3	1.522	0.022	0.0319	
1440 minute winter	20	4.002	21	3.3	1.535	0.022	0.2556	
1440 minute winter	21	4.003	22	4.1	0.632	0.045	1.1849	
1440 minute winter	22	4.004	13	4.8	0.706	0.049	0.7192	
1440 minute winter	13	Hydro-Brake®	23	2.6				
1440 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	234.4

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	1	10	95.634	0.090	19.8	0.1013	0.0000	OK
15 minute summer	2	10	95.427	0.173	45.9	0.1962	0.0000	OK
15 minute summer	3	11	95.245	0.245	50.9	0.2776	0.0000	SURCHARGED
15 minute summer	4	11	95.132	0.206	69.7	0.2327	0.0000	OK
15 minute summer	15	10	95.027	0.127	30.3	0.1437	0.0000	OK
15 minute summer	16	10	94.765	0.159	38.9	0.1798	0.0000	OK
15 minute summer	5	11	94.578	0.177	149.5	0.2002	0.0000	OK
15 minute summer	6	11	93.276	0.638	177.5	0.7218	0.0000	SURCHARGED
15 minute summer	17	11	92.385	0.826	44.0	0.9341	0.0000	SURCHARGED
15 minute summer	7	11	92.360	1.019	243.7	1.8002	0.0000	SURCHARGED
15 minute summer	8	11	91.555	0.516	241.7	0.9122	0.0000	SURCHARGED
15 minute summer	9	32	89.794	0.407	352.7	0.4604	0.0000	OK
15 minute summer	10	23	89.797	0.485	345.2	0.5487	0.0000	OK
15 minute summer	11	23	89.799	0.502	151.5	1.2768	0.0000	OK
15 minute summer	12	31	89.788	0.545	121.9	1.3881	0.0000	OK
15 minute summer	18	10	94.040	0.076	38.4	0.0860	0.0000	OK
15 minute summer	19	10	92.330	0.135	89.2	0.1526	0.0000	OK
15 minute summer	20	10	91.111	0.142	88.9	0.1606	0.0000	OK
15 minute summer	21	10	90.391	0.538	110.0	0.6086	0.0000	SURCHARGED
15 minute summer	22	10	90.160	0.419	128.2	0.4738	0.0000	SURCHARGED
15 minute summer	13	32	89.792	0.631	127.6	2.8566	0.0000	SURCHARGED
15 minute summer	23	7	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute summer	14	7	87.021	0.021	2.6	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	1	1.000	2	19.7	0.816	0.338	0.5524	
15 minute summer	2	1.001	3	45.2	1.218	0.869	0.9215	
15 minute summer	3	1.002	4	50.4	1.274	0.969	0.2894	
15 minute summer	4	1.003	5	69.5	1.951	0.979	0.9295	
15 minute summer	15	2.000	16	30.0	1.128	0.577	0.7802	
15 minute summer	16	2.001	5	38.3	1.361	0.737	0.3673	
15 minute summer	5	1.004	6	148.9	2.996	0.626	2.2052	
15 minute summer	6	1.005	7	170.6	2.423	0.780	2.2401	
15 minute summer	17	3.000	7	46.1	0.942	0.371	0.8055	
15 minute summer	7	1.006	8	241.7	2.192	1.482	4.9941	
15 minute summer	8	1.007	9	241.3	2.188	1.479	0.4330	
15 minute summer	9	1.008	10	296.3	0.260	0.004	158.7703	
15 minute summer	10	1.009	11	-146.5	-1.365	-0.267	2.3790	
15 minute summer	11	1.010	12	-116.0	-0.652	-0.211	8.7826	
15 minute summer	12	1.011	13	-121.9	-0.522	-0.222	5.5997	
15 minute summer	18	4.000	19	38.3	2.097	0.248	0.3727	
15 minute summer	19	4.001	20	88.9	3.546	0.589	0.3770	
15 minute summer	20	4.002	21	88.2	2.720	0.584	0.4131	
15 minute summer	21	4.003	22	108.8	1.545	1.201	1.1849	
15 minute summer	22	4.004	13	127.6	1.814	1.299	0.7001	
15 minute summer	13	Hydro-Brake®	23	2.6				
15 minute summer	23	1.013	14	2.6	1.418	0.017	0.0135	35.7

Results for 100 year 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	10	95.636	0.092	20.8	0.1040	0.0000	OK
15 minute winter	2	11	95.471	0.217	48.2	0.2452	0.0000	OK
15 minute winter	3	11	95.267	0.267	51.8	0.3020	0.0000	SURCHARGED
15 minute winter	4	11	95.162	0.236	71.6	0.2670	0.0000	SURCHARGED
15 minute winter	15	10	95.031	0.131	31.8	0.1485	0.0000	OK
15 minute winter	16	10	94.770	0.164	40.7	0.1857	0.0000	OK
15 minute winter	5	11	94.588	0.187	155.3	0.2115	0.0000	OK
15 minute winter	6	11	93.409	0.771	183.6	0.8720	0.0000	SURCHARGED
15 minute winter	17	11	92.463	0.904	46.3	1.0222	0.0000	SURCHARGED
15 minute winter	7	11	92.436	1.095	252.2	1.9342	0.0000	SURCHARGED
15 minute winter	8	11	91.571	0.532	250.9	0.9400	0.0000	SURCHARGED
15 minute winter	9	27	89.851	0.464	403.0	0.5248	0.0000	OK
15 minute winter	10	22	89.852	0.540	356.5	0.6103	0.0000	OK
15 minute winter	11	22	89.852	0.555	159.2	1.4124	0.0000	OK
15 minute winter	12	27	89.847	0.604	127.4	1.5361	0.0000	OK
15 minute winter	18	10	94.042	0.078	40.3	0.0882	0.0000	OK
15 minute winter	19	10	92.334	0.139	93.7	0.1568	0.0000	OK
15 minute winter	20	10	91.122	0.153	93.3	0.1728	0.0000	OK
15 minute winter	21	10	90.436	0.583	115.2	0.6599	0.0000	SURCHARGED
15 minute winter	22	10	90.184	0.443	133.9	0.5011	0.0000	SURCHARGED
15 minute winter	13	27	89.850	0.689	133.2	3.1180	0.0000	SURCHARGED
15 minute winter	23	7	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute winter	14	7	87.021	0.021	2.6	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 winter	1	1.000	2	20.6	0.817	0.354	0.6276	
15 minute winter	2	1.001	3	45.9	1.221	0.883	1.0029	
15 minute winter	3	1.002	4	50.8	1.279	0.978	0.2957	
15 minute winter	4	1.003	5	69.9	1.954	0.986	0.9464	
15 minute winter	15	2.000	16	31.4	1.137	0.604	0.8098	
15 minute winter	16	2.001	5	40.0	1.372	0.769	0.3800	
15 minute winter	5	1.004	6	153.5	2.967	0.645	2.2614	
15 minute winter	6	1.005	7	174.9	2.483	0.800	2.2401	
15 minute winter	17	3.000	7	42.6	0.943	0.343	0.8055	
15 minute winter	7	1.006	8	250.9	2.275	1.538	4.9941	
15 minute winter	8	1.007	9	250.5	2.272	1.536	0.4342	
15 minute winter	9	1.008	10	265.7	0.282	0.003	178.5008	
15 minute winter	10	1.009	11	-149.5	-1.327	-0.272	2.6666	
15 minute winter	11	1.010	12	-121.8	-0.652	-0.222	9.7166	
15 minute winter	12	1.011	13	-127.4	-0.532	-0.232	6.1561	
15 minute winter	18	4.000	19	40.2	2.126	0.260	0.3852	
15 minute winter	19	4.001	20	93.3	3.530	0.618	0.3998	
15 minute winter	20	4.002	21	92.3	2.761	0.612	0.4275	
15 minute winter	21	4.003	22	113.5	1.612	1.254	1.1849	
15 minute winter	22	4.004	13	133.2	1.893	1.356	0.7034	
15 minute winter	13	Hydro-Brake®	23	2.6				
15 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	33.4

Results for 100 year 30 minute summer. 270 minute analysis at 1 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
30 minute summer	1	18	95.629	0.085	17.8	0.0960	0.0000	OK
30 minute summer	2	18	95.415	0.161	41.5	0.1818	0.0000	OK
30 minute summer	3	18	95.207	0.207	46.7	0.2345	0.0000	OK
30 minute summer	4	18	95.110	0.184	64.2	0.2077	0.0000	OK
30 minute summer	15	18	95.019	0.119	27.3	0.1343	0.0000	OK
30 minute summer	16	18	94.755	0.149	35.3	0.1690	0.0000	OK
30 minute summer	5	18	94.564	0.163	138.4	0.1839	0.0000	OK
30 minute summer	6	19	92.974	0.336	164.1	0.3805	0.0000	SURCHARGED
30 minute summer	17	18	92.256	0.697	39.7	0.7887	0.0000	SURCHARGED
30 minute summer	7	18	92.235	0.894	229.4	1.5796	0.0000	SURCHARGED
30 minute summer	8	18	91.528	0.489	225.9	0.8638	0.0000	SURCHARGED
30 minute summer	9	37	89.925	0.538	236.4	0.6085	0.0000	OK
30 minute summer	10	35	89.925	0.613	212.8	0.6930	0.0000	OK
30 minute summer	11	40	89.925	0.628	132.7	1.5990	0.0000	OK
30 minute summer	12	36	89.931	0.688	110.4	1.7506	0.0000	OK
30 minute summer	18	18	94.036	0.072	34.6	0.0816	0.0000	OK
30 minute summer	19	17	92.323	0.128	80.5	0.1444	0.0000	OK
30 minute summer	20	18	91.094	0.125	80.5	0.1414	0.0000	OK
30 minute summer	21	18	90.314	0.461	100.2	0.5209	0.0000	SURCHARGED
30 minute summer	22	18	90.119	0.378	117.7	0.4277	0.0000	SURCHARGED
30 minute summer	13	36	89.928	0.767	117.7	3.4702	0.0000	SURCHARGED
30 minute summer	23	14	87.638	0.021	2.6	0.0238	0.0000	OK
30 minute summer	14	14	87.021	0.021	2.6	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)
30 minute summer	1	1.000	2	17.8	0.804	0.306	0.5113	
30 minute summer	2	1.001	3	41.6	1.207	0.801	0.8708	
30 minute summer	3	1.002	4	46.4	1.269	0.894	0.2713	
30 minute summer	4	1.003	5	63.9	1.939	0.900	0.8002	
30 minute summer	15	2.000	16	27.3	1.109	0.525	0.7235	
30 minute summer	16	2.001	5	35.3	1.337	0.679	0.3438	
30 minute summer	5	1.004	6	138.3	2.997	0.581	2.0993	
30 minute summer	6	1.005	7	158.9	2.393	0.727	2.2401	
30 minute summer	17	3.000	7	38.1	0.898	0.307	0.8055	
30 minute summer	7	1.006	8	225.9	2.049	1.385	4.9941	
30 minute summer	8	1.007	9	225.2	2.044	1.381	0.4299	
30 minute summer	9	1.008	10	129.8	0.219	0.002	208.5217	
30 minute summer	10	1.009	11	-123.5	-0.862	-0.225	3.0161	
30 minute summer	11	1.010	12	-100.7	-0.487	-0.183	10.9966	
30 minute summer	12	1.011	13	-110.4	-0.444	-0.201	6.7627	
30 minute summer	18	4.000	19	34.6	2.036	0.224	0.3475	
30 minute summer	19	4.001	20	80.5	3.541	0.533	0.3372	
30 minute summer	20	4.002	21	80.5	2.784	0.533	0.3897	
30 minute summer	21	4.003	22	100.2	1.423	1.106	1.1849	
30 minute summer	22	4.004	13	117.7	1.675	1.198	0.6934	
30 minute summer	13	Hydro-Brake®	23	2.6				
30 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	34.8

Results for 100 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	1	18	95.624	0.080	16.1	0.0909	0.0000	OK
30 minute winter	2	18	95.404	0.150	37.5	0.1695	0.0000	OK
30 minute winter	3	18	95.184	0.184	42.1	0.2081	0.0000	OK
30 minute winter	4	18	95.094	0.168	58.2	0.1898	0.0000	OK
30 minute winter	15	18	95.011	0.111	24.7	0.1259	0.0000	OK
30 minute winter	16	18	94.745	0.139	31.9	0.1575	0.0000	OK
30 minute winter	5	18	94.554	0.153	125.5	0.1734	0.0000	OK
30 minute winter	6	18	92.852	0.214	148.8	0.2424	0.0000	OK
30 minute winter	17	19	92.122	0.563	35.9	0.6371	0.0000	SURCHARGED
30 minute winter	7	19	92.105	0.764	211.4	1.3498	0.0000	SURCHARGED
30 minute winter	8	19	91.502	0.463	210.4	0.8190	0.0000	SURCHARGED
30 minute winter	9	41	90.000	0.613	210.6	0.6931	0.0000	OK
30 minute winter	10	39	90.000	0.688	253.9	0.7785	0.0000	OK
30 minute winter	11	36	89.999	0.702	119.8	1.7877	0.0000	OK
30 minute winter	12	41	90.001	0.758	100.1	1.9297	0.0000	SURCHARGED
30 minute winter	18	18	94.032	0.068	31.3	0.0774	0.0000	OK
30 minute winter	19	18	92.316	0.121	72.8	0.1366	0.0000	OK
30 minute winter	20	18	91.080	0.111	72.8	0.1251	0.0000	OK
30 minute winter	21	18	90.236	0.383	90.6	0.4335	0.0000	SURCHARGED
30 minute winter	22	18	90.077	0.336	106.4	0.3804	0.0000	SURCHARGED
30 minute winter	13	37	90.004	0.843	106.4	3.8142	0.0000	SURCHARGED
30 minute winter	23	12	87.638	0.021	2.6	0.0238	0.0000	OK
30 minute winter	14	12	87.021	0.021	2.6	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)
30 minute winter	1	1.000	2	16.1	0.788	0.277	0.4738	
30 minute winter	2	1.001	3	37.5	1.190	0.722	0.7974	
30 minute winter	3	1.002	4	42.1	1.263	0.809	0.2473	
30 minute winter	4	1.003	5	58.0	1.915	0.818	0.7350	
30 minute winter	15	2.000	16	24.7	1.088	0.475	0.6670	
30 minute winter	16	2.001	5	31.9	1.309	0.614	0.3174	
30 minute winter	5	1.004	6	125.4	2.997	0.527	1.7471	
30 minute winter	6	1.005	7	147.0	2.382	0.672	1.9767	
30 minute winter	17	3.000	7	35.0	0.908	0.282	0.8055	
30 minute winter	7	1.006	8	210.4	1.908	1.290	4.9941	
30 minute winter	8	1.007	9	210.6	1.912	1.291	0.4267	
30 minute winter	9	1.008	10	167.3	0.230	0.002	235.1404	
30 minute winter	10	1.009	11	-101.2	-0.831	-0.184	3.2977	
30 minute winter	11	1.010	12	-90.8	0.443	-0.165	11.6962	
30 minute winter	12	1.011	13	-100.1	-0.400	-0.182	6.9511	
30 minute winter	18	4.000	19	31.3	1.976	0.203	0.3244	
30 minute winter	19	4.001	20	72.8	3.552	0.482	0.3024	
30 minute winter	20	4.002	21	72.8	2.742	0.482	0.3695	
30 minute winter	21	4.003	22	90.6	1.287	1.000	1.1849	
30 minute winter	22	4.004	13	106.4	1.524	1.083	0.6909	
30 minute winter	13	Hydro-Brake®	23	2.6				
30 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	36.2

Results for 100 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	1	33	95.617	0.073	13.3	0.0823	0.0000	OK
60 minute summer	2	33	95.385	0.131	31.0	0.1484	0.0000	OK
60 minute summer	3	33	95.157	0.157	34.8	0.1771	0.0000	OK
60 minute summer	4	33	95.071	0.145	48.1	0.1639	0.0000	OK
60 minute summer	15	33	94.999	0.099	20.4	0.1119	0.0000	OK
60 minute summer	16	33	94.729	0.123	26.4	0.1392	0.0000	OK
60 minute summer	5	33	94.541	0.140	103.7	0.1588	0.0000	OK
60 minute summer	6	33	92.797	0.159	123.0	0.1801	0.0000	OK
60 minute summer	17	34	91.846	0.287	29.6	0.3241	0.0000	OK
60 minute summer	7	34	91.835	0.494	173.2	0.8721	0.0000	SURCHARGED
60 minute summer	8	34	91.434	0.395	172.9	0.6981	0.0000	SURCHARGED
60 minute summer	9	70	90.070	0.683	172.9	0.7723	0.0000	OK
60 minute summer	10	69	90.070	0.758	147.4	0.8573	0.0000	SURCHARGED
60 minute summer	11	67	90.069	0.772	92.7	1.9651	0.0000	SURCHARGED
60 minute summer	12	70	90.072	0.829	79.7	2.1102	0.0000	SURCHARGED
60 minute summer	18	33	94.026	0.062	25.8	0.0701	0.0000	OK
60 minute summer	19	33	92.302	0.107	60.0	0.1211	0.0000	OK
60 minute summer	20	33	91.067	0.098	60.0	0.1109	0.0000	OK
60 minute summer	21	33	90.100	0.247	74.7	0.2797	0.0000	OK
60 minute summer	22	70	90.072	0.331	87.6	0.3744	0.0000	SURCHARGED
60 minute summer	13	70	90.074	0.913	87.6	4.1283	0.0000	SURCHARGED
60 minute summer	23	26	87.638	0.021	2.6	0.0238	0.0000	OK
60 minute summer	14	26	87.021	0.021	2.6	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)
60 minute summer	1	1.000	2	13.3	0.762	0.229	0.4077	
60 minute summer	2	1.001	3	31.0	1.157	0.596	0.6791	
60 minute summer	3	1.002	4	34.8	1.229	0.669	0.2101	
60 minute summer	4	1.003	5	48.0	1.853	0.676	0.6283	
60 minute summer	15	2.000	16	20.4	1.047	0.393	0.5734	
60 minute summer	16	2.001	5	26.4	1.255	0.508	0.2740	
60 minute summer	5	1.004	6	103.7	2.950	0.436	1.3640	
60 minute summer	6	1.005	7	122.8	2.379	0.562	1.7240	
60 minute summer	17	3.000	7	28.4	0.903	0.229	0.7992	
60 minute summer	7	1.006	8	172.9	1.567	1.060	4.9941	
60 minute summer	8	1.007	9	172.9	1.615	1.060	0.4126	
60 minute summer	9	1.008	10	71.8	0.181	0.001	261.5384	
60 minute summer	10	1.009	11	-81.5	-0.461	-0.148	3.4090	
60 minute summer	11	1.010	12	-68.8	0.387	-0.125	11.8555	
60 minute summer	12	1.011	13	-79.7	-0.296	-0.145	6.9513	
60 minute summer	18	4.000	19	25.8	1.895	0.167	0.2797	
60 minute summer	19	4.001	20	60.0	3.408	0.397	0.2590	
60 minute summer	20	4.002	21	60.0	2.769	0.397	0.3073	
60 minute summer	21	4.003	22	74.7	1.190	0.824	1.0586	
60 minute summer	22	4.004	13	87.6	1.476	0.891	0.7192	
60 minute summer	13	Hydro-Brake®	23	2.6				
60 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	41.7

Results for 100 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	1	33	95.609	0.065	10.8	0.0739	0.0000	OK
60 minute winter	2	33	95.368	0.114	25.1	0.1289	0.0000	OK
60 minute winter	3	33	95.135	0.135	28.2	0.1527	0.0000	OK
60 minute winter	4	33	95.052	0.126	39.0	0.1423	0.0000	OK
60 minute winter	15	33	94.987	0.087	16.5	0.0989	0.0000	OK
60 minute winter	16	33	94.714	0.108	21.3	0.1219	0.0000	OK
60 minute winter	5	33	94.525	0.124	84.1	0.1404	0.0000	OK
60 minute winter	6	33	92.779	0.141	99.6	0.1592	0.0000	OK
60 minute winter	17	33	91.648	0.089	24.0	0.1001	0.0000	OK
60 minute winter	7	33	91.635	0.294	143.2	0.5193	0.0000	OK
60 minute winter	8	34	91.362	0.323	142.9	0.5707	0.0000	OK
60 minute winter	9	66	90.166	0.779	142.7	0.8815	0.0000	OK
60 minute winter	10	67	90.167	0.855	152.1	0.9665	0.0000	SURCHARGED
60 minute winter	11	66	90.167	0.870	74.6	2.2130	0.0000	SURCHARGED
60 minute winter	12	66	90.167	0.924	64.0	2.3527	0.0000	SURCHARGED
60 minute winter	18	33	94.020	0.056	20.9	0.0631	0.0000	OK
60 minute winter	19	33	92.289	0.094	48.6	0.1064	0.0000	OK
60 minute winter	20	33	91.057	0.088	48.6	0.0996	0.0000	OK
60 minute winter	21	65	90.169	0.316	60.5	0.3568	0.0000	SURCHARGED
60 minute winter	22	68	90.166	0.425	71.1	0.4812	0.0000	SURCHARGED
60 minute winter	13	64	90.168	1.007	71.1	4.5545	0.0000	SURCHARGED
60 minute winter	23	23	87.638	0.021	2.6	0.0238	0.0000	OK
60 minute winter	14	23	87.021	0.021	2.6	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)
60 minute winter	1	1.000	2	10.8	0.734	0.186	0.3449	
60 minute winter	2	1.001	3	25.1	1.114	0.483	0.5713	
60 minute winter	3	1.002	4	28.2	1.182	0.542	0.1773	
60 minute winter	4	1.003	5	39.0	1.774	0.549	0.5332	
60 minute winter	15	2.000	16	16.5	1.000	0.317	0.4854	
60 minute winter	16	2.001	5	21.3	1.193	0.410	0.2326	
60 minute winter	5	1.004	6	84.0	2.805	0.353	1.1629	
60 minute winter	6	1.005	7	99.6	2.381	0.455	1.3922	
60 minute winter	17	3.000	7	24.0	0.908	0.193	0.4142	
60 minute winter	7	1.006	8	142.9	1.475	0.876	4.3799	
60 minute winter	8	1.007	9	142.7	1.542	0.875	0.3678	
60 minute winter	9	1.008	10	92.0	0.200	0.001	296.8942	
60 minute winter	10	1.009	11	-64.8	-0.508	-0.118	3.4092	
60 minute winter	11	1.010	12	-55.2	0.388	-0.100	11.8555	
60 minute winter	12	1.011	13	-64.0	-0.242	-0.116	6.9513	
60 minute winter	18	4.000	19	20.9	1.809	0.135	0.2377	
60 minute winter	19	4.001	20	48.6	3.228	0.322	0.2215	
60 minute winter	20	4.002	21	48.6	2.782	0.322	0.2709	
60 minute winter	21	4.003	22	60.5	1.153	0.668	1.1849	
60 minute winter	22	4.004	13	71.1	1.424	0.724	0.7192	
60 minute winter	13	Hydro-Brake®	23	2.6				
60 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	43.3

Results for 100 year 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	1	64	95.602	0.058	8.6	0.0658	0.0000	OK
120 minute summer	2	64	95.353	0.099	20.0	0.1120	0.0000	OK
120 minute summer	3	64	95.117	0.117	22.5	0.1318	0.0000	OK
120 minute summer	4	64	95.035	0.109	31.1	0.1236	0.0000	OK
120 minute summer	15	64	94.977	0.077	13.2	0.0873	0.0000	OK
120 minute summer	16	64	94.701	0.095	17.1	0.1070	0.0000	OK
120 minute summer	5	64	94.510	0.109	67.1	0.1236	0.0000	OK
120 minute summer	6	64	92.762	0.124	79.6	0.1404	0.0000	OK
120 minute summer	17	64	91.638	0.079	19.1	0.0891	0.0000	OK
120 minute summer	7	64	91.586	0.245	114.3	0.4326	0.0000	OK
120 minute summer	8	64	91.308	0.269	114.3	0.4746	0.0000	OK
120 minute summer	9	128	90.217	0.830	114.2	0.9383	0.0000	OK
120 minute summer	10	128	90.217	0.905	89.8	1.0231	0.0000	SURCHARGED
120 minute summer	11	128	90.217	0.920	56.2	2.3404	0.0000	SURCHARGED
120 minute summer	12	128	90.217	0.974	49.2	2.4778	0.0000	SURCHARGED
120 minute summer	18	64	94.014	0.050	16.7	0.0564	0.0000	OK
120 minute summer	19	64	92.277	0.082	38.8	0.0931	0.0000	OK
120 minute summer	20	64	91.049	0.080	38.8	0.0899	0.0000	OK
120 minute summer	21	128	90.217	0.364	48.3	0.4114	0.0000	SURCHARGED
120 minute summer	22	128	90.217	0.476	56.7	0.5380	0.0000	SURCHARGED
120 minute summer	13	128	90.217	1.056	56.7	4.7755	0.0000	SURCHARGED
120 minute summer	23	48	87.638	0.021	2.6	0.0238	0.0000	OK
120 minute summer	14	48	87.021	0.021	2.6	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)
120 minute summer	1	1.000	2	8.6	0.697	0.148	0.2895	
120 minute summer	2	1.001	3	20.0	1.065	0.385	0.4766	
120 minute summer	3	1.002	4	22.5	1.129	0.433	0.1482	
120 minute summer	4	1.003	5	31.1	1.684	0.438	0.4484	
120 minute summer	15	2.000	16	13.2	0.949	0.254	0.4096	
120 minute summer	16	2.001	5	17.1	1.130	0.329	0.1971	
120 minute summer	5	1.004	6	67.1	2.649	0.282	0.9832	
120 minute summer	6	1.005	7	79.6	2.369	0.364	1.0915	
120 minute summer	17	3.000	7	19.1	0.908	0.154	0.3194	
120 minute summer	7	1.006	8	114.3	1.422	0.701	3.6373	
120 minute summer	8	1.007	9	114.2	1.483	0.700	0.3075	
120 minute summer	9	1.008	10	47.9	0.148	0.001	315.1377	
120 minute summer	10	1.009	11	-50.8	-0.250	-0.092	3.4092	
120 minute summer	11	1.010	12	-40.8	0.309	-0.074	11.8555	
120 minute summer	12	1.011	13	-49.2	-0.159	-0.090	6.9513	
120 minute summer	18	4.000	19	16.7	1.722	0.108	0.1998	
120 minute summer	19	4.001	20	38.8	3.025	0.257	0.1887	
120 minute summer	20	4.002	21	38.8	2.772	0.257	0.2655	
120 minute summer	21	4.003	22	48.3	1.106	0.533	1.1849	
120 minute summer	22	4.004	13	56.7	1.355	0.577	0.7192	
120 minute summer	13	Hydro-Brake®	23	2.6				
120 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	52.9

Results for 100 year 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	64	95.595	0.051	6.6	0.0576	0.0000	OK
120 minute winter	2	64	95.339	0.085	15.4	0.0962	0.0000	OK
120 minute winter	3	64	95.099	0.099	17.3	0.1121	0.0000	OK
120 minute winter	4	64	95.020	0.094	23.9	0.1059	0.0000	OK
120 minute winter	15	64	94.967	0.067	10.2	0.0759	0.0000	OK
120 minute winter	16	64	94.688	0.082	13.2	0.0924	0.0000	OK
120 minute winter	5	64	94.496	0.095	51.7	0.1070	0.0000	OK
120 minute winter	6	64	92.747	0.109	61.3	0.1230	0.0000	OK
120 minute winter	17	64	91.628	0.069	14.8	0.0784	0.0000	OK
120 minute winter	7	64	91.546	0.205	88.1	0.3625	0.0000	OK
120 minute winter	8	64	91.267	0.227	88.1	0.4020	0.0000	OK
120 minute winter	9	126	90.335	0.948	88.1	1.0726	0.0000	OK
120 minute winter	10	126	90.335	1.023	80.6	1.1574	0.0000	SURCHARGED
120 minute winter	11	126	90.335	1.038	45.3	2.6427	0.0000	SURCHARGED
120 minute winter	12	126	90.335	1.092	38.7	2.7800	0.0000	SURCHARGED
120 minute winter	18	64	94.008	0.044	12.9	0.0496	0.0000	OK
120 minute winter	19	64	92.266	0.071	30.0	0.0802	0.0000	OK
120 minute winter	20	62	91.040	0.071	30.0	0.0808	0.0000	OK
120 minute winter	21	128	90.335	0.482	37.3	0.5454	0.0000	SURCHARGED
120 minute winter	22	126	90.335	0.594	43.8	0.6721	0.0000	SURCHARGED
120 minute winter	13	126	90.335	1.174	43.5	5.3125	0.0000	SURCHARGED
120 minute winter	23	126	87.638	0.021	2.7	0.0242	0.0000	OK
120 minute winter	14	126	87.021	0.021	2.7	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)
120 minute winter	1	1.000	2	6.6	0.654	0.113	0.2376	
120 minute winter	2	1.001	3	15.4	1.008	0.296	0.3880	
120 minute winter	3	1.002	4	17.3	1.066	0.333	0.1206	
120 minute winter	4	1.003	5	23.9	1.578	0.337	0.3678	
120 minute winter	15	2.000	16	10.2	0.892	0.196	0.3369	
120 minute winter	16	2.001	5	13.2	1.058	0.254	0.1625	
120 minute winter	5	1.004	6	51.7	2.460	0.217	0.8159	
120 minute winter	6	1.005	7	61.3	2.378	0.280	0.8323	
120 minute winter	17	3.000	7	14.8	0.892	0.119	0.2378	
120 minute winter	7	1.006	8	88.1	1.339	0.540	2.9792	
120 minute winter	8	1.007	9	88.1	1.389	0.540	0.2535	
120 minute winter	9	1.008	10	43.4	0.159	0.001	358.3136	
120 minute winter	10	1.009	11	-39.1	-0.333	-0.071	3.4092	
120 minute winter	11	1.010	12	-33.4	0.336	-0.061	11.8555	
120 minute winter	12	1.011	13	-38.7	-0.152	-0.070	6.9513	
120 minute winter	18	4.000	19	12.9	1.620	0.084	0.1641	
120 minute winter	19	4.001	20	30.0	2.790	0.199	0.1582	
120 minute winter	20	4.002	21	30.0	2.794	0.199	0.2853	
120 minute winter	21	4.003	22	37.3	1.047	0.412	1.1849	
120 minute winter	22	4.004	13	43.5	1.273	0.443	0.7192	
120 minute winter	13	Hydro-Brake®	23	2.7				
120 minute winter	23	1.013	14	2.7	1.434	0.018	0.0139	54.8

Results for 100 year 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	1	96	95.594	0.050	6.3	0.0563	0.0000	OK
180 minute summer	2	96	95.337	0.083	14.7	0.0938	0.0000	OK
180 minute summer	3	96	95.096	0.096	16.5	0.1090	0.0000	OK
180 minute summer	4	96	95.017	0.091	22.8	0.1031	0.0000	OK
180 minute summer	15	96	94.965	0.065	9.7	0.0740	0.0000	OK
180 minute summer	16	96	94.685	0.079	12.5	0.0896	0.0000	OK
180 minute summer	5	96	94.493	0.092	49.3	0.1042	0.0000	OK
180 minute summer	6	96	92.744	0.106	58.5	0.1204	0.0000	OK
180 minute summer	17	96	91.627	0.068	14.1	0.0765	0.0000	OK
180 minute summer	7	96	91.540	0.199	84.1	0.3516	0.0000	OK
180 minute summer	8	96	91.260	0.221	84.1	0.3908	0.0000	OK
180 minute summer	9	188	90.295	0.908	84.1	1.0270	0.0000	OK
180 minute summer	10	188	90.295	0.983	70.6	1.1118	0.0000	SURCHARGED
180 minute summer	11	188	90.295	0.998	42.6	2.5401	0.0000	SURCHARGED
180 minute summer	12	188	90.295	1.052	36.2	2.6774	0.0000	SURCHARGED
180 minute summer	18	96	94.007	0.043	12.3	0.0485	0.0000	OK
180 minute summer	19	96	92.264	0.069	28.6	0.0780	0.0000	OK
180 minute summer	20	96	91.039	0.070	28.6	0.0792	0.0000	OK
180 minute summer	21	188	90.295	0.442	35.6	0.4996	0.0000	SURCHARGED
180 minute summer	22	188	90.295	0.554	41.8	0.6265	0.0000	SURCHARGED
180 minute summer	13	188	90.295	1.134	41.3	5.1302	0.0000	SURCHARGED
180 minute summer	23	188	87.638	0.021	2.6	0.0240	0.0000	OK
180 minute summer	14	188	87.021	0.021	2.6	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)
180 minute summer	1	1.000	2	6.3	0.646	0.108	0.2295	
180 minute summer	2	1.001	3	14.7	0.998	0.283	0.3741	
180 minute summer	3	1.002	4	16.5	1.055	0.317	0.1163	
180 minute summer	4	1.003	5	22.8	1.559	0.321	0.3551	
180 minute summer	15	2.000	16	9.7	0.883	0.187	0.3240	
180 minute summer	16	2.001	5	12.5	1.043	0.241	0.1561	
180 minute summer	5	1.004	6	49.3	2.424	0.207	0.7897	
180 minute summer	6	1.005	7	58.5	2.372	0.268	0.7927	
180 minute summer	17	3.000	7	14.1	0.904	0.113	0.2250	
180 minute summer	7	1.006	8	84.1	1.325	0.516	2.8745	
180 minute summer	8	1.007	9	84.1	1.373	0.516	0.2449	
180 minute summer	9	1.008	10	33.0	0.124	0.000	343.6588	
180 minute summer	10	1.009	11	-37.5	-0.144	-0.068	3.4092	
180 minute summer	11	1.010	12	-31.2	0.294	-0.057	11.8555	
180 minute summer	12	1.011	13	-36.2	0.139	-0.066	6.9513	
180 minute summer	18	4.000	19	12.3	1.603	0.080	0.1582	
180 minute summer	19	4.001	20	28.6	2.748	0.189	0.1531	
180 minute summer	20	4.002	21	28.6	2.785	0.189	0.2691	
180 minute summer	21	4.003	22	35.6	1.035	0.393	1.1849	
180 minute summer	22	4.004	13	41.3	1.253	0.420	0.7192	
180 minute summer	13	Hydro-Brake®	23	2.6				
180 minute summer	23	1.013	14	2.6	1.428	0.017	0.0137	63.0

Results for 100 year 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	1	96	95.588	0.044	4.9	0.0497	0.0000	OK
180 minute winter	2	96	95.326	0.072	11.4	0.0815	0.0000	OK
180 minute winter	3	96	95.083	0.083	12.8	0.0940	0.0000	OK
180 minute winter	4	96	95.005	0.079	17.7	0.0895	0.0000	OK
180 minute winter	15	96	94.957	0.057	7.5	0.0649	0.0000	OK
180 minute winter	16	96	94.675	0.069	9.7	0.0780	0.0000	OK
180 minute winter	5	96	94.482	0.081	38.2	0.0913	0.0000	OK
180 minute winter	6	96	92.733	0.095	45.3	0.1076	0.0000	OK
180 minute winter	17	96	91.621	0.062	10.9	0.0698	0.0000	OK
180 minute winter	7	96	91.510	0.169	65.1	0.2995	0.0000	OK
180 minute winter	8	96	91.229	0.190	65.1	0.3356	0.0000	OK
180 minute winter	9	188	90.427	1.040	65.1	1.1758	0.0000	OK
180 minute winter	10	188	90.427	1.115	63.5	1.2607	0.0000	SURCHARGED
180 minute winter	11	188	90.427	1.130	33.4	2.8749	0.0000	SURCHARGED
180 minute winter	12	188	90.427	1.184	27.6	3.0123	0.0000	SURCHARGED
180 minute winter	18	96	94.002	0.038	9.5	0.0427	0.0000	OK
180 minute winter	19	96	92.255	0.060	22.1	0.0679	0.0000	OK
180 minute winter	20	96	91.030	0.061	22.1	0.0692	0.0000	OK
180 minute winter	21	188	90.426	0.573	27.5	0.6486	0.0000	SURCHARGED
180 minute winter	22	188	90.427	0.686	32.4	0.7753	0.0000	SURCHARGED
180 minute winter	13	188	90.427	1.266	32.0	5.7255	0.0000	SURCHARGED
180 minute winter	23	188	87.639	0.022	2.8	0.0246	0.0000	OK
180 minute winter	14	188	87.021	0.021	2.8	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)
180 minute winter	1	1.000	2	4.9	0.606	0.084	0.1904	
180 minute winter	2	1.001	3	11.4	0.941	0.219	0.3077	
180 minute winter	3	1.002	4	12.8	0.994	0.246	0.0957	
180 minute winter	4	1.003	5	17.7	1.460	0.250	0.2945	
180 minute winter	15	2.000	16	7.5	0.823	0.144	0.2685	
180 minute winter	16	2.001	5	9.7	0.976	0.187	0.1295	
180 minute winter	5	1.004	6	38.2	2.224	0.161	0.6673	
180 minute winter	6	1.005	7	45.3	2.380	0.207	0.6068	
180 minute winter	17	3.000	7	10.9	0.898	0.088	0.1682	
180 minute winter	7	1.006	8	65.1	1.248	0.399	2.3617	
180 minute winter	8	1.007	9	65.1	1.285	0.399	0.2027	
180 minute winter	9	1.008	10	34.4	0.131	0.000	391.4830	
180 minute winter	10	1.009	11	-29.4	-0.235	-0.053	3.4092	
180 minute winter	11	1.010	12	-24.6	0.310	-0.045	11.8555	
180 minute winter	12	1.011	13	-27.6	0.089	-0.050	6.9513	
180 minute winter	18	4.000	19	9.5	1.497	0.062	0.1309	
180 minute winter	19	4.001	20	22.1	2.571	0.146	0.1266	
180 minute winter	20	4.002	21	22.1	2.633	0.146	0.2854	
180 minute winter	21	4.003	22	27.6	0.971	0.304	1.1849	
180 minute winter	22	4.004	13	32.0	1.167	0.326	0.7192	
180 minute winter	13	Hydro-Brake®	23	2.8				
180 minute winter	23	1.013	14	2.8	1.448	0.018	0.0142	65.1

Results for 100 year 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	1	124	95.590	0.046	5.3	0.0516	0.0000	OK
240 minute summer	2	124	95.329	0.075	12.3	0.0848	0.0000	OK
240 minute summer	3	124	95.086	0.086	13.7	0.0977	0.0000	OK
240 minute summer	4	124	95.008	0.082	19.0	0.0928	0.0000	OK
240 minute summer	15	124	94.960	0.060	8.1	0.0674	0.0000	OK
240 minute summer	16	124	94.678	0.072	10.5	0.0811	0.0000	OK
240 minute summer	5	124	94.485	0.084	41.0	0.0945	0.0000	OK
240 minute summer	6	124	92.736	0.098	48.6	0.1109	0.0000	OK
240 minute summer	17	124	91.623	0.064	11.8	0.0722	0.0000	OK
240 minute summer	7	124	91.518	0.177	69.9	0.3120	0.0000	OK
240 minute summer	8	124	91.236	0.197	69.4	0.3474	0.0000	OK
240 minute summer	9	248	90.343	0.956	69.0	1.0810	0.0000	OK
240 minute summer	10	248	90.343	1.031	58.2	1.1659	0.0000	SURCHARGED
240 minute summer	11	248	90.343	1.046	35.0	2.6616	0.0000	SURCHARGED
240 minute summer	12	248	90.343	1.100	29.8	2.7991	0.0000	SURCHARGED
240 minute summer	18	124	94.003	0.039	10.3	0.0444	0.0000	OK
240 minute summer	19	124	92.258	0.063	23.9	0.0707	0.0000	OK
240 minute summer	20	124	91.033	0.064	23.8	0.0721	0.0000	OK
240 minute summer	21	248	90.343	0.490	29.6	0.5538	0.0000	SURCHARGED
240 minute summer	22	248	90.343	0.602	34.7	0.6806	0.0000	SURCHARGED
240 minute summer	13	248	90.343	1.182	34.3	5.3465	0.0000	SURCHARGED
240 minute summer	23	248	87.638	0.021	2.7	0.0243	0.0000	OK
240 minute summer	14	248	87.021	0.021	2.7	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)
240 minute summer	1	1.000	2	5.3	0.619	0.091	0.2008	
240 minute summer	2	1.001	3	12.2	0.957	0.235	0.3244	
240 minute summer	3	1.002	4	13.7	1.009	0.263	0.1007	
240 minute summer	4	1.003	5	18.9	1.484	0.266	0.3090	
240 minute summer	15	2.000	16	8.1	0.840	0.155	0.2830	
240 minute summer	16	2.001	5	10.4	0.994	0.200	0.1363	
240 minute summer	5	1.004	6	40.9	2.277	0.172	0.6980	
240 minute summer	6	1.005	7	48.5	2.378	0.222	0.6514	
240 minute summer	17	3.000	7	11.8	0.893	0.095	0.1826	
240 minute summer	7	1.006	8	69.4	1.268	0.425	2.4782	
240 minute summer	8	1.007	9	69.0	1.305	0.423	0.2117	
240 minute summer	9	1.008	10	27.6	0.095	0.000	361.0157	
240 minute summer	10	1.009	11	-30.5	0.139	-0.056	3.4092	
240 minute summer	11	1.010	12	-25.5	0.306	-0.046	11.8555	
240 minute summer	12	1.011	13	-29.8	0.090	-0.054	6.9513	
240 minute summer	18	4.000	19	10.3	1.531	0.067	0.1385	
240 minute summer	19	4.001	20	23.8	2.619	0.158	0.1339	
240 minute summer	20	4.002	21	23.8	2.684	0.158	0.2714	
240 minute summer	21	4.003	22	29.5	0.981	0.326	1.1849	
240 minute summer	22	4.004	13	34.3	1.180	0.350	0.7192	
240 minute summer	13	Hydro-Brake®	23	2.7				
240 minute summer	23	1.013	14	2.7	1.435	0.018	0.0139	72.9

Results for 100 year 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	124	95.583	0.039	3.9	0.0445	0.0000	OK
240 minute winter	2	124	95.318	0.064	9.1	0.0723	0.0000	OK
240 minute winter	3	124	95.073	0.073	10.2	0.0827	0.0000	OK
240 minute winter	4	124	94.996	0.070	14.1	0.0791	0.0000	OK
240 minute winter	15	124	94.951	0.051	6.0	0.0581	0.0000	OK
240 minute winter	16	124	94.667	0.061	7.8	0.0694	0.0000	OK
240 minute winter	5	124	94.473	0.072	30.6	0.0816	0.0000	OK
240 minute winter	6	124	92.723	0.085	36.3	0.0960	0.0000	OK
240 minute winter	17	124	91.614	0.055	8.8	0.0622	0.0000	OK
240 minute winter	7	124	91.490	0.149	52.3	0.2629	0.0000	OK
240 minute winter	8	124	91.206	0.167	52.2	0.2955	0.0000	OK
240 minute winter	9	244	90.486	1.099	52.2	1.2433	0.0000	OK
240 minute winter	10	244	90.486	1.174	47.6	1.3281	0.0000	SURCHARGED
240 minute winter	11	244	90.486	1.189	25.5	3.0267	0.0000	SURCHARGED
240 minute winter	12	244	90.486	1.243	21.4	3.1640	0.0000	SURCHARGED
240 minute winter	18	124	93.998	0.034	7.7	0.0386	0.0000	OK
240 minute winter	19	124	92.249	0.054	17.8	0.0607	0.0000	OK
240 minute winter	20	124	91.024	0.055	17.8	0.0617	0.0000	OK
240 minute winter	21	244	90.486	0.633	22.1	0.7160	0.0000	SURCHARGED
240 minute winter	22	244	90.486	0.745	26.1	0.8427	0.0000	SURCHARGED
240 minute winter	13	244	90.486	1.325	25.4	5.9951	0.0000	SURCHARGED
240 minute winter	23	244	87.639	0.022	2.8	0.0249	0.0000	OK
240 minute winter	14	244	87.021	0.021	2.8	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)
240 minute winter	1	1.000	2	3.9	0.569	0.067	0.1614	
240 minute winter	2	1.001	3	9.1	0.892	0.175	0.2591	
240 minute winter	3	1.002	4	10.2	0.942	0.196	0.0805	
240 minute winter	4	1.003	5	14.1	1.374	0.199	0.2493	
240 minute winter	15	2.000	16	6.0	0.778	0.115	0.2284	
240 minute winter	16	2.001	5	7.8	0.920	0.150	0.1103	
240 minute winter	5	1.004	6	30.6	2.086	0.129	0.5695	
240 minute winter	6	1.005	7	36.3	2.270	0.166	0.5081	
240 minute winter	17	3.000	7	8.8	0.886	0.071	0.1273	
240 minute winter	7	1.006	8	52.2	1.185	0.320	1.9964	
240 minute winter	8	1.007	9	52.2	1.213	0.320	0.1722	
240 minute winter	9	1.008	10	25.7	0.112	0.000	413.1447	
240 minute winter	10	1.009	11	-23.8	-0.166	-0.043	3.4092	
240 minute winter	11	1.010	12	-18.5	0.235	-0.034	11.8555	
240 minute winter	12	1.011	13	-21.4	0.168	-0.039	6.9513	
240 minute winter	18	4.000	19	7.7	1.417	0.050	0.1120	
240 minute winter	19	4.001	20	17.8	2.440	0.118	0.1077	
240 minute winter	20	4.002	21	17.8	2.483	0.118	0.2830	
240 minute winter	21	4.003	22	22.2	0.913	0.245	1.1849	
240 minute winter	22	4.004	13	25.4	1.089	0.258	0.7192	
240 minute winter	13	Hydro-Brake®	23	2.8				
240 minute winter	23	1.013	14	2.8	1.457	0.019	0.0144	75.2

Results for 100 year 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	1	184	95.584	0.040	4.0	0.0449	0.0000	OK
360 minute summer	2	184	95.318	0.064	9.2	0.0724	0.0000	OK
360 minute summer	3	184	95.073	0.073	10.2	0.0826	0.0000	OK
360 minute summer	4	184	94.996	0.070	14.2	0.0791	0.0000	OK
360 minute summer	15	184	94.952	0.052	6.1	0.0584	0.0000	OK
360 minute summer	16	184	94.667	0.061	7.9	0.0695	0.0000	OK
360 minute summer	5	184	94.473	0.072	30.6	0.0815	0.0000	OK
360 minute summer	6	184	92.723	0.085	36.2	0.0957	0.0000	OK
360 minute summer	17	184	91.614	0.055	8.8	0.0622	0.0000	OK
360 minute summer	7	184	91.489	0.148	52.0	0.2619	0.0000	OK
360 minute summer	8	184	91.205	0.166	51.7	0.2931	0.0000	OK
360 minute summer	9	368	90.395	1.008	51.4	1.1401	0.0000	OK
360 minute summer	10	368	90.395	1.083	39.6	1.2249	0.0000	SURCHARGED
360 minute summer	11	368	90.395	1.098	25.5	2.7945	0.0000	SURCHARGED
360 minute summer	12	368	90.395	1.152	21.5	2.9319	0.0000	SURCHARGED
360 minute summer	18	184	93.998	0.034	7.7	0.0386	0.0000	OK
360 minute summer	19	184	92.249	0.054	17.9	0.0608	0.0000	OK
360 minute summer	20	184	91.024	0.055	17.8	0.0618	0.0000	OK
360 minute summer	21	368	90.395	0.542	22.2	0.6128	0.0000	SURCHARGED
360 minute summer	22	368	90.395	0.654	26.0	0.7396	0.0000	SURCHARGED
360 minute summer	13	368	90.395	1.234	25.8	5.5827	0.0000	SURCHARGED
360 minute summer	23	368	87.639	0.022	2.7	0.0245	0.0000	OK
360 minute summer	14	368	87.021	0.021	2.7	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)
360 minute summer	1	1.000	2	4.0	0.576	0.068	0.1625	
360 minute summer	2	1.001	3	9.1	0.893	0.175	0.2593	
360 minute summer	3	1.002	4	10.2	0.939	0.196	0.0805	
360 minute summer	4	1.003	5	14.1	1.373	0.199	0.2492	
360 minute summer	15	2.000	16	6.1	0.779	0.117	0.2295	
360 minute summer	16	2.001	5	7.8	0.920	0.150	0.1105	
360 minute summer	5	1.004	6	30.5	2.088	0.128	0.5679	
360 minute summer	6	1.005	7	36.0	2.266	0.165	0.5059	
360 minute summer	17	3.000	7	8.8	0.884	0.071	0.1264	
360 minute summer	7	1.006	8	51.7	1.183	0.317	1.9802	
360 minute summer	8	1.007	9	51.4	1.208	0.315	0.1703	
360 minute summer	9	1.008	10	19.2	0.055	0.000	380.0001	
360 minute summer	10	1.009	11	-23.2	0.211	-0.042	3.4092	
360 minute summer	11	1.010	12	-18.4	0.214	-0.033	11.8555	
360 minute summer	12	1.011	13	-21.5	0.090	-0.039	6.9513	
360 minute summer	18	4.000	19	7.7	1.413	0.050	0.1122	
360 minute summer	19	4.001	20	17.8	2.433	0.118	0.1079	
360 minute summer	20	4.002	21	17.8	2.484	0.118	0.2698	
360 minute summer	21	4.003	22	22.1	0.905	0.245	1.1849	
360 minute summer	22	4.004	13	25.8	1.075	0.263	0.7192	
360 minute summer	13	Hydro-Brake®	23	2.7				
360 minute summer	23	1.013	14	2.7	1.443	0.018	0.0141	91.6

Results for 100 year 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	1	184	95.578	0.034	2.9	0.0385	0.0000	OK
360 minute winter	2	184	95.308	0.054	6.7	0.0616	0.0000	OK
360 minute winter	3	184	95.062	0.062	7.5	0.0697	0.0000	OK
360 minute winter	4	184	94.985	0.059	10.4	0.0672	0.0000	OK
360 minute winter	15	184	94.944	0.044	4.4	0.0498	0.0000	OK
360 minute winter	16	184	94.658	0.052	5.7	0.0588	0.0000	OK
360 minute winter	5	184	94.463	0.062	22.4	0.0698	0.0000	OK
360 minute winter	6	184	92.710	0.072	26.5	0.0815	0.0000	OK
360 minute winter	17	184	91.606	0.047	6.4	0.0537	0.0000	OK
360 minute winter	7	184	91.466	0.125	38.1	0.2201	0.0000	OK
360 minute winter	8	184	91.179	0.140	38.1	0.2477	0.0000	OK
360 minute winter	9	360	90.549	1.162	38.0	1.3142	0.0000	OK
360 minute winter	10	360	90.549	1.237	27.1	1.3990	0.0000	SURCHARGED
360 minute winter	11	360	90.549	1.252	18.2	3.1862	0.0000	SURCHARGED
360 minute winter	12	360	90.549	1.306	14.7	3.3236	0.0000	SURCHARGED
360 minute winter	18	184	93.993	0.029	5.6	0.0331	0.0000	OK
360 minute winter	19	184	92.241	0.046	13.0	0.0516	0.0000	OK
360 minute winter	20	184	91.015	0.046	13.0	0.0523	0.0000	OK
360 minute winter	21	360	90.549	0.696	16.2	0.7870	0.0000	SURCHARGED
360 minute winter	22	360	90.549	0.808	19.0	0.9137	0.0000	SURCHARGED
360 minute winter	13	360	90.549	1.388	18.1	6.2790	0.0000	SURCHARGED
360 minute winter	23	360	87.639	0.022	2.9	0.0251	0.0000	OK
360 minute winter	14	360	87.022	0.022	2.9	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)
360 minute winter	1	1.000	2	2.9	0.527	0.050	0.1295	
360 minute winter	2	1.001	3	6.7	0.826	0.129	0.2055	
360 minute winter	3	1.002	4	7.5	0.871	0.144	0.0638	
360 minute winter	4	1.003	5	10.4	1.262	0.146	0.1994	
360 minute winter	15	2.000	16	4.4	0.711	0.085	0.1820	
360 minute winter	16	2.001	5	5.7	0.845	0.109	0.0878	
360 minute winter	5	1.004	6	22.3	1.913	0.094	0.4540	
360 minute winter	6	1.005	7	26.5	2.082	0.121	0.4052	
360 minute winter	17	3.000	7	6.4	0.891	0.051	0.0842	
360 minute winter	7	1.006	8	38.1	1.097	0.233	1.5732	
360 minute winter	8	1.007	9	38.0	1.116	0.233	0.1365	
360 minute winter	9	1.008	10	12.7	0.078	0.000	435.9261	
360 minute winter	10	1.009	11	-17.0	0.183	-0.031	3.4092	
360 minute winter	11	1.010	12	-13.1	0.204	-0.024	11.8555	
360 minute winter	12	1.011	13	-14.7	0.152	-0.027	6.9513	
360 minute winter	18	4.000	19	5.6	1.294	0.036	0.0892	
360 minute winter	19	4.001	20	13.0	2.270	0.086	0.0854	
360 minute winter	20	4.002	21	13.0	2.279	0.086	0.2772	
360 minute winter	21	4.003	22	16.2	0.836	0.179	1.1849	
360 minute winter	22	4.004	13	18.1	0.987	0.184	0.7192	
360 minute winter	13	Hydro-Brake®	23	2.9				
360 minute winter	23	1.013	14	2.9	1.465	0.019	0.0146	94.4

Results for 100 year 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	1	248	95.579	0.035	3.1	0.0398	0.0000	OK
480 minute summer	2	248	95.311	0.057	7.2	0.0639	0.0000	OK
480 minute summer	3	248	95.064	0.064	8.1	0.0728	0.0000	OK
480 minute summer	4	248	94.988	0.062	11.2	0.0700	0.0000	OK
480 minute summer	15	248	94.945	0.045	4.7	0.0514	0.0000	OK
480 minute summer	16	248	94.660	0.054	6.1	0.0610	0.0000	OK
480 minute summer	5	248	94.465	0.064	24.1	0.0724	0.0000	OK
480 minute summer	6	248	92.713	0.075	28.5	0.0846	0.0000	OK
480 minute summer	17	240	91.608	0.049	6.8	0.0551	0.0000	OK
480 minute summer	7	248	91.471	0.130	40.9	0.2288	0.0000	OK
480 minute summer	8	248	91.185	0.146	40.9	0.2578	0.0000	OK
480 minute summer	9	488	90.427	1.040	40.9	1.1763	0.0000	OK
480 minute summer	10	488	90.427	1.115	28.8	1.2611	0.0000	SURCHARGED
480 minute summer	11	488	90.427	1.130	19.0	2.8760	0.0000	SURCHARGED
480 minute summer	12	488	90.427	1.184	16.0	3.0135	0.0000	SURCHARGED
480 minute summer	18	248	93.994	0.030	6.0	0.0342	0.0000	OK
480 minute summer	19	248	92.242	0.047	13.9	0.0534	0.0000	OK
480 minute summer	20	248	91.017	0.048	13.9	0.0542	0.0000	OK
480 minute summer	21	488	90.427	0.574	17.3	0.6492	0.0000	SURCHARGED
480 minute summer	22	488	90.427	0.686	20.3	0.7759	0.0000	SURCHARGED
480 minute summer	13	488	90.427	1.266	20.1	5.7276	0.0000	SURCHARGED
480 minute summer	23	488	87.639	0.022	2.8	0.0246	0.0000	OK
480 minute summer	14	488	87.021	0.021	2.8	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)
480 minute summer	1	1.000	2	3.1	0.536	0.053	0.1363	
480 minute summer	2	1.001	3	7.2	0.841	0.139	0.2176	
480 minute summer	3	1.002	4	8.1	0.890	0.156	0.0677	
480 minute summer	4	1.003	5	11.2	1.290	0.158	0.2108	
480 minute summer	15	2.000	16	4.7	0.725	0.090	0.1912	
480 minute summer	16	2.001	5	6.1	0.861	0.117	0.0923	
480 minute summer	5	1.004	6	24.1	1.956	0.101	0.4787	
480 minute summer	6	1.005	7	28.5	2.125	0.130	0.4268	
480 minute summer	17	3.000	7	6.8	0.891	0.055	0.0921	
480 minute summer	7	1.006	8	40.9	1.116	0.251	1.6604	
480 minute summer	8	1.007	9	40.9	1.137	0.251	0.1440	
480 minute summer	9	1.008	10	15.1	0.055	0.000	391.6301	
480 minute summer	10	1.009	11	-17.1	0.244	-0.031	3.4092	
480 minute summer	11	1.010	12	-13.5	0.214	-0.025	11.8555	
480 minute summer	12	1.011	13	-16.0	0.128	-0.029	6.9513	
480 minute summer	18	4.000	19	6.0	1.321	0.039	0.0937	
480 minute summer	19	4.001	20	13.9	2.278	0.092	0.0897	
480 minute summer	20	4.002	21	13.9	2.322	0.092	0.2697	
480 minute summer	21	4.003	22	17.3	0.872	0.191	1.1849	
480 minute summer	22	4.004	13	20.1	0.971	0.204	0.7192	
480 minute summer	13	Hydro-Brake®	23	2.8				
480 minute summer	23	1.013	14	2.8	1.448	0.018	0.0142	110.6

Results for 100 year 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	1	248	95.574	0.030	2.3	0.0345	0.0000	OK
480 minute winter	2	248	95.302	0.048	5.3	0.0546	0.0000	OK
480 minute winter	3	248	95.055	0.055	6.0	0.0619	0.0000	OK
480 minute winter	4	248	94.979	0.053	8.3	0.0599	0.0000	OK
480 minute winter	15	248	94.939	0.039	3.5	0.0446	0.0000	OK
480 minute winter	16	248	94.652	0.046	4.5	0.0521	0.0000	OK
480 minute winter	5	248	94.456	0.055	17.8	0.0624	0.0000	OK
480 minute winter	6	248	92.702	0.064	21.1	0.0725	0.0000	OK
480 minute winter	17	248	91.602	0.043	5.1	0.0483	0.0000	OK
480 minute winter	7	248	91.451	0.110	30.3	0.1943	0.0000	OK
480 minute winter	8	248	91.163	0.124	30.3	0.2186	0.0000	OK
480 minute winter	9	480	90.590	1.203	30.3	1.3604	0.0000	OK
480 minute winter	10	480	90.590	1.278	24.6	1.4452	0.0000	SURCHARGED
480 minute winter	11	480	90.590	1.293	14.3	3.2902	0.0000	SURCHARGED
480 minute winter	12	480	90.590	1.347	11.0	3.4276	0.0000	SURCHARGED
480 minute winter	18	248	93.990	0.026	4.4	0.0296	0.0000	OK
480 minute winter	19	248	92.236	0.041	10.3	0.0460	0.0000	OK
480 minute winter	20	240	91.010	0.041	10.3	0.0465	0.0000	OK
480 minute winter	21	480	90.590	0.737	12.9	0.8332	0.0000	SURCHARGED
480 minute winter	22	480	90.590	0.849	15.0	0.9599	0.0000	SURCHARGED
480 minute winter	13	480	90.590	1.429	14.6	6.4638	0.0000	SURCHARGED
480 minute winter	23	480	87.639	0.022	2.9	0.0253	0.0000	OK
480 minute winter	14	480	87.022	0.022	2.9	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)
480 minute winter	1	1.000	2	2.3	0.495	0.040	0.1095	
480 minute winter	2	1.001	3	5.3	0.776	0.102	0.1736	
480 minute winter	3	1.002	4	6.0	0.824	0.115	0.0541	
480 minute winter	4	1.003	5	8.3	1.187	0.117	0.1698	
480 minute winter	15	2.000	16	3.5	0.669	0.067	0.1540	
480 minute winter	16	2.001	5	4.5	0.791	0.087	0.0741	
480 minute winter	5	1.004	6	17.8	1.796	0.075	0.3853	
480 minute winter	6	1.005	7	21.1	1.954	0.096	0.3436	
480 minute winter	17	3.000	7	5.1	0.856	0.041	0.0682	
480 minute winter	7	1.006	8	30.3	1.036	0.186	1.3253	
480 minute winter	8	1.007	9	30.3	1.051	0.186	0.1155	
480 minute winter	9	1.008	10	12.9	0.098	0.000	450.7855	
480 minute winter	10	1.009	11	-13.8	0.205	-0.025	3.4092	
480 minute winter	11	1.010	12	-10.3	0.198	-0.019	11.8555	
480 minute winter	12	1.011	13	-11.0	0.110	-0.020	6.9513	
480 minute winter	18	4.000	19	4.4	1.203	0.029	0.0755	
480 minute winter	19	4.001	20	10.3	2.125	0.068	0.0721	
480 minute winter	20	4.002	21	10.4	2.133	0.069	0.2738	
480 minute winter	21	4.003	22	12.8	0.840	0.141	1.1849	
480 minute winter	22	4.004	13	14.6	0.920	0.149	0.7192	
480 minute winter	13	Hydro-Brake®	23	2.9				
480 minute winter	23	1.013	14	2.9	1.471	0.019	0.0148	113.6

Results for 100 year 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	1	315	95.576	0.032	2.5	0.0358	0.0000	OK
600 minute summer	2	315	95.305	0.051	5.8	0.0572	0.0000	OK
600 minute summer	3	315	95.057	0.057	6.5	0.0646	0.0000	OK
600 minute summer	4	315	94.981	0.055	9.0	0.0625	0.0000	OK
600 minute summer	15	315	94.941	0.041	3.8	0.0464	0.0000	OK
600 minute summer	16	315	94.654	0.048	4.9	0.0544	0.0000	OK
600 minute summer	5	315	94.459	0.058	19.4	0.0651	0.0000	OK
600 minute summer	6	315	92.705	0.067	23.0	0.0757	0.0000	OK
600 minute summer	17	315	91.603	0.044	5.5	0.0501	0.0000	OK
600 minute summer	7	315	91.456	0.115	33.0	0.2034	0.0000	OK
600 minute summer	8	315	91.169	0.130	33.0	0.2290	0.0000	OK
600 minute summer	9	615	90.442	1.055	33.0	1.1928	0.0000	OK
600 minute summer	10	615	90.442	1.130	26.5	1.2776	0.0000	SURCHARGED
600 minute summer	11	615	90.442	1.145	15.7	2.9132	0.0000	SURCHARGED
600 minute summer	12	615	90.442	1.199	12.5	3.0506	0.0000	SURCHARGED
600 minute summer	18	315	93.991	0.027	4.8	0.0308	0.0000	OK
600 minute summer	19	315	92.237	0.042	11.2	0.0479	0.0000	OK
600 minute summer	20	315	91.012	0.043	11.2	0.0485	0.0000	OK
600 minute summer	21	615	90.442	0.589	13.9	0.6658	0.0000	SURCHARGED
600 minute summer	22	615	90.442	0.701	16.3	0.7925	0.0000	SURCHARGED
600 minute summer	13	615	90.442	1.281	16.1	5.7937	0.0000	SURCHARGED
600 minute summer	23	615	87.639	0.022	2.8	0.0247	0.0000	OK
600 minute summer	14	615	87.021	0.021	2.8	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)
600 minute summer	1	1.000	2	2.5	0.505	0.043	0.1168	
600 minute summer	2	1.001	3	5.8	0.797	0.112	0.1849	
600 minute summer	3	1.002	4	6.5	0.841	0.125	0.0575	
600 minute summer	4	1.003	5	9.0	1.214	0.127	0.1801	
600 minute summer	15	2.000	16	3.8	0.685	0.073	0.1636	
600 minute summer	16	2.001	5	4.9	0.810	0.094	0.0788	
600 minute summer	5	1.004	6	19.4	1.839	0.082	0.4098	
600 minute summer	6	1.005	7	23.0	2.003	0.105	0.3655	
600 minute summer	17	3.000	7	5.5	0.874	0.044	0.0720	
600 minute summer	7	1.006	8	33.0	1.058	0.202	1.4128	
600 minute summer	8	1.007	9	33.0	1.075	0.202	0.1230	
600 minute summer	9	1.008	10	12.4	0.066	0.000	396.9385	
600 minute summer	10	1.009	11	-14.1	0.255	-0.026	3.4092	
600 minute summer	11	1.010	12	-11.2	0.247	-0.020	11.8555	
600 minute summer	12	1.011	13	-12.5	0.103	-0.023	6.9513	
600 minute summer	18	4.000	19	4.8	1.237	0.031	0.0802	
600 minute summer	19	4.001	20	11.2	2.149	0.074	0.0767	
600 minute summer	20	4.002	21	11.2	2.185	0.074	0.2675	
600 minute summer	21	4.003	22	13.9	0.853	0.153	1.1849	
600 minute summer	22	4.004	13	16.1	0.937	0.164	0.7192	
600 minute summer	13	Hydro-Brake®	23	2.8				
600 minute summer	23	1.013	14	2.8	1.450	0.018	0.0143	127.8

Results for 100 year 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	1	315	95.572	0.028	1.9	0.0315	0.0000	OK
600 minute winter	2	315	95.298	0.044	4.4	0.0498	0.0000	OK
600 minute winter	3	315	95.049	0.049	4.9	0.0556	0.0000	OK
600 minute winter	4	315	94.974	0.048	6.8	0.0541	0.0000	OK
600 minute winter	15	315	94.936	0.036	2.9	0.0406	0.0000	OK
600 minute winter	16	315	94.648	0.042	3.8	0.0478	0.0000	OK
600 minute winter	5	315	94.451	0.050	14.8	0.0571	0.0000	OK
600 minute winter	6	315	92.696	0.058	17.6	0.0661	0.0000	OK
600 minute winter	17	315	91.598	0.039	4.2	0.0439	0.0000	OK
600 minute winter	7	315	91.441	0.100	25.3	0.1765	0.0000	OK
600 minute winter	8	315	91.151	0.112	25.3	0.1983	0.0000	OK
600 minute winter	9	600	90.614	1.227	25.3	1.3874	0.0000	OK
600 minute winter	10	600	90.614	1.302	22.5	1.4723	0.0000	SURCHARGED
600 minute winter	11	600	90.614	1.317	11.9	3.3511	0.0000	SURCHARGED
600 minute winter	12	600	90.614	1.371	9.1	3.4885	0.0000	SURCHARGED
600 minute winter	18	315	93.988	0.024	3.7	0.0272	0.0000	OK
600 minute winter	19	315	92.232	0.037	8.6	0.0423	0.0000	OK
600 minute winter	20	300	91.007	0.037	8.6	0.0424	0.0000	OK
600 minute winter	21	600	90.614	0.761	10.7	0.8604	0.0000	SURCHARGED
600 minute winter	22	600	90.614	0.873	12.6	0.9871	0.0000	SURCHARGED
600 minute winter	13	600	90.614	1.453	11.9	6.5722	0.0000	SURCHARGED
600 minute winter	23	600	87.639	0.022	3.0	0.0254	0.0000	OK
600 minute winter	14	600	87.022	0.022	3.0	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	1	1.000	2	1.9	0.467	0.033	0.0960	
600 minute winter	2	1.001	3	4.4	0.743	0.085	0.1504	
600 minute winter	3	1.002	4	4.9	0.781	0.094	0.0466	
600 minute winter	4	1.003	5	6.8	1.122	0.096	0.1472	
600 minute winter	15	2.000	16	2.9	0.631	0.056	0.1356	
600 minute winter	16	2.001	5	3.8	0.754	0.073	0.0657	
600 minute winter	5	1.004	6	14.8	1.701	0.062	0.3381	
600 minute winter	6	1.005	7	17.6	1.855	0.080	0.3018	
600 minute winter	17	3.000	7	4.2	0.809	0.034	0.0594	
600 minute winter	7	1.006	8	25.3	0.990	0.155	1.1581	
600 minute winter	8	1.007	9	25.3	1.001	0.155	0.1012	
600 minute winter	9	1.008	10	12.1	0.036	0.000	459.4770	
600 minute winter	10	1.009	11	-11.2	0.254	-0.020	3.4092	
600 minute winter	11	1.010	12	-8.5	0.234	-0.016	11.8555	
600 minute winter	12	1.011	13	-9.1	0.195	-0.017	6.9513	
600 minute winter	18	4.000	19	3.7	1.148	0.024	0.0669	
600 minute winter	19	4.001	20	8.6	2.035	0.057	0.0632	
600 minute winter	20	4.002	21	8.6	2.028	0.057	0.2718	
600 minute winter	21	4.003	22	10.7	0.756	0.118	1.1849	
600 minute winter	22	4.004	13	11.9	0.865	0.121	0.7192	
600 minute winter	13	Hydro-Brake®	23	3.0				
600 minute winter	23	1.013	14	3.0	1.474	0.020	0.0149	131.6

Results for 100 year 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	1	375	95.574	0.030	2.2	0.0337	0.0000	OK
720 minute summer	2	375	95.301	0.047	5.1	0.0536	0.0000	OK
720 minute summer	3	375	95.053	0.053	5.7	0.0602	0.0000	OK
720 minute summer	4	375	94.978	0.052	7.9	0.0584	0.0000	OK
720 minute summer	15	375	94.939	0.039	3.4	0.0439	0.0000	OK
720 minute summer	16	375	94.652	0.046	4.4	0.0515	0.0000	OK
720 minute summer	5	375	94.455	0.054	17.1	0.0612	0.0000	OK
720 minute summer	6	375	92.701	0.063	20.3	0.0710	0.0000	OK
720 minute summer	17	375	91.601	0.042	4.9	0.0473	0.0000	OK
720 minute summer	7	375	91.449	0.108	29.2	0.1904	0.0000	OK
720 minute summer	8	375	91.160	0.121	29.2	0.2143	0.0000	OK
720 minute summer	9	720	90.451	1.064	29.2	1.2030	0.0000	OK
720 minute summer	10	720	90.451	1.139	22.8	1.2878	0.0000	SURCHARGED
720 minute summer	11	720	90.451	1.154	13.2	2.9361	0.0000	SURCHARGED
720 minute summer	12	720	90.451	1.208	10.9	3.0735	0.0000	SURCHARGED
720 minute summer	18	375	93.990	0.026	4.3	0.0292	0.0000	OK
720 minute summer	19	375	92.235	0.040	9.9	0.0451	0.0000	OK
720 minute summer	20	375	91.009	0.040	9.9	0.0456	0.0000	OK
720 minute summer	21	720	90.451	0.598	12.3	0.6760	0.0000	SURCHARGED
720 minute summer	22	720	90.451	0.710	14.5	0.8027	0.0000	SURCHARGED
720 minute summer	13	720	90.451	1.290	14.1	5.8345	0.0000	SURCHARGED
720 minute summer	23	720	87.639	0.022	2.8	0.0247	0.0000	OK
720 minute summer	14	720	87.021	0.021	2.8	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)
720 minute summer	1	1.000	2	2.2	0.487	0.038	0.1065	
720 minute summer	2	1.001	3	5.1	0.771	0.098	0.1680	
720 minute summer	3	1.002	4	5.7	0.813	0.110	0.0521	
720 minute summer	4	1.003	5	7.9	1.171	0.111	0.1639	
720 minute summer	15	2.000	16	3.4	0.662	0.065	0.1512	
720 minute summer	16	2.001	5	4.4	0.786	0.085	0.0729	
720 minute summer	5	1.004	6	17.1	1.774	0.072	0.3746	
720 minute summer	6	1.005	7	20.3	1.932	0.093	0.3342	
720 minute summer	17	3.000	7	4.9	0.846	0.039	0.0663	
720 minute summer	7	1.006	8	29.2	1.027	0.179	1.2889	
720 minute summer	8	1.007	9	29.2	1.040	0.179	0.1124	
720 minute summer	9	1.008	10	11.2	0.070	0.000	400.2140	
720 minute summer	10	1.009	11	-11.9	0.278	-0.022	3.4092	
720 minute summer	11	1.010	12	-9.3	0.237	-0.017	11.8555	
720 minute summer	12	1.011	13	-10.9	0.134	-0.020	6.9513	
720 minute summer	18	4.000	19	4.3	1.203	0.028	0.0736	
720 minute summer	19	4.001	20	9.9	2.078	0.066	0.0701	
720 minute summer	20	4.002	21	9.9	2.111	0.066	0.2675	
720 minute summer	21	4.003	22	12.3	0.801	0.136	1.1849	
720 minute summer	22	4.004	13	14.1	0.869	0.144	0.7192	
720 minute summer	13	Hydro-Brake®	23	2.8				
720 minute summer	23	1.013	14	2.8	1.452	0.019	0.0143	146.2

Results for 100 year 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	1	375	95.570	0.026	1.7	0.0298	0.0000	OK
720 minute winter	2	375	95.296	0.041	3.9	0.0469	0.0000	OK
720 minute winter	3	375	95.046	0.046	4.4	0.0526	0.0000	OK
720 minute winter	4	375	94.971	0.045	6.1	0.0512	0.0000	OK
720 minute winter	15	375	94.933	0.033	2.5	0.0378	0.0000	OK
720 minute winter	16	375	94.645	0.039	3.2	0.0439	0.0000	OK
720 minute winter	5	375	94.448	0.047	12.9	0.0534	0.0000	OK
720 minute winter	6	375	92.693	0.055	15.3	0.0616	0.0000	OK
720 minute winter	17	375	91.595	0.036	3.7	0.0412	0.0000	OK
720 minute winter	7	375	91.434	0.093	22.0	0.1641	0.0000	OK
720 minute winter	8	375	91.143	0.104	22.0	0.1839	0.0000	OK
720 minute winter	9	705	90.629	1.242	22.0	1.4047	0.0000	OK
720 minute winter	10	705	90.629	1.317	17.5	1.4895	0.0000	SURCHARGED
720 minute winter	11	705	90.629	1.332	10.1	3.3900	0.0000	SURCHARGED
720 minute winter	12	705	90.629	1.386	7.6	3.5274	0.0000	SURCHARGED
720 minute winter	18	375	93.986	0.022	3.2	0.0254	0.0000	OK
720 minute winter	19	375	92.230	0.035	7.4	0.0392	0.0000	OK
720 minute winter	20	360	91.004	0.035	7.4	0.0393	0.0000	OK
720 minute winter	21	705	90.629	0.776	9.2	0.8777	0.0000	SURCHARGED
720 minute winter	22	705	90.629	0.888	10.6	1.0043	0.0000	SURCHARGED
720 minute winter	13	705	90.629	1.468	10.4	6.6413	0.0000	SURCHARGED
720 minute winter	23	705	87.640	0.023	3.0	0.0255	0.0000	OK
720 minute winter	14	705	87.022	0.022	3.0	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	1	1.000	2	1.7	0.454	0.029	0.0884	
720 minute winter	2	1.001	3	3.9	0.715	0.075	0.1385	
720 minute winter	3	1.002	4	4.4	0.759	0.085	0.0431	
720 minute winter	4	1.003	5	6.1	1.088	0.086	0.1361	
720 minute winter	15	2.000	16	2.5	0.610	0.048	0.1208	
720 minute winter	16	2.001	5	3.2	0.718	0.062	0.0581	
720 minute winter	5	1.004	6	12.9	1.637	0.054	0.3062	
720 minute winter	6	1.005	7	15.3	1.781	0.070	0.2733	
720 minute winter	17	3.000	7	3.7	0.780	0.030	0.0543	
720 minute winter	7	1.006	8	22.0	0.955	0.135	1.0438	
720 minute winter	8	1.007	9	22.0	0.964	0.135	0.0913	
720 minute winter	9	1.008	10	9.4	0.036	0.000	465.0299	
720 minute winter	10	1.009	11	-9.7	0.222	-0.018	3.4092	
720 minute winter	11	1.010	12	-7.1	0.211	-0.013	11.8555	
720 minute winter	12	1.011	13	-7.6	0.299	-0.014	6.9513	
720 minute winter	18	4.000	19	3.2	1.104	0.021	0.0601	
720 minute winter	19	4.001	20	7.4	1.951	0.049	0.0567	
720 minute winter	20	4.002	21	7.4	1.945	0.049	0.2700	
720 minute winter	21	4.003	22	9.0	0.769	0.099	1.1849	
720 minute winter	22	4.004	13	10.4	0.824	0.106	0.7192	
720 minute winter	13	Hydro-Brake®	23	3.0				
720 minute winter	23	1.013	14	3.0	1.476	0.020	0.0149	150.5

Results for 100 year 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 99.98%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	1	495	95.571	0.027	1.8	0.0307	0.0000	OK
960 minute summer	2	495	95.297	0.043	4.2	0.0487	0.0000	OK
960 minute summer	3	495	95.048	0.048	4.7	0.0544	0.0000	OK
960 minute summer	4	495	94.973	0.047	6.5	0.0529	0.0000	OK
960 minute summer	15	495	94.935	0.035	2.7	0.0393	0.0000	OK
960 minute summer	16	495	94.647	0.041	3.5	0.0459	0.0000	OK
960 minute summer	5	495	94.450	0.049	13.9	0.0553	0.0000	OK
960 minute summer	6	495	92.695	0.057	16.5	0.0640	0.0000	OK
960 minute summer	17	495	91.597	0.038	4.0	0.0428	0.0000	OK
960 minute summer	7	495	91.438	0.097	23.7	0.1706	0.0000	OK
960 minute summer	8	495	91.147	0.108	23.7	0.1914	0.0000	OK
960 minute summer	9	960	90.448	1.061	23.7	1.2004	0.0000	OK
960 minute summer	10	960	90.448	1.136	17.5	1.2853	0.0000	SURCHARGED
960 minute summer	11	960	90.448	1.151	10.2	2.9303	0.0000	SURCHARGED
960 minute summer	12	960	90.448	1.205	8.2	3.0677	0.0000	SURCHARGED
960 minute summer	18	495	93.987	0.023	3.4	0.0262	0.0000	OK
960 minute summer	19	495	92.231	0.036	8.0	0.0405	0.0000	OK
960 minute summer	20	495	91.005	0.036	8.0	0.0409	0.0000	OK
960 minute summer	21	960	90.448	0.595	10.0	0.6734	0.0000	SURCHARGED
960 minute summer	22	960	90.448	0.707	11.7	0.8001	0.0000	SURCHARGED
960 minute summer	13	960	90.448	1.287	11.3	5.8242	0.0000	SURCHARGED
960 minute summer	23	960	87.639	0.022	2.8	0.0247	0.0000	OK
960 minute summer	14	960	87.021	0.021	2.8	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)
960 minute summer	1	1.000	2	1.8	0.458	0.031	0.0927	
960 minute summer	2	1.001	3	4.2	0.732	0.081	0.1457	
960 minute summer	3	1.002	4	4.7	0.774	0.090	0.0452	
960 minute summer	4	1.003	5	6.5	1.108	0.092	0.1425	
960 minute summer	15	2.000	16	2.7	0.620	0.052	0.1282	
960 minute summer	16	2.001	5	3.5	0.737	0.067	0.0619	
960 minute summer	5	1.004	6	13.9	1.674	0.058	0.3231	
960 minute summer	6	1.005	7	16.5	1.821	0.075	0.2883	
960 minute summer	17	3.000	7	4.0	0.798	0.032	0.0574	
960 minute summer	7	1.006	8	23.7	0.974	0.145	1.1030	
960 minute summer	8	1.007	9	23.7	0.984	0.145	0.0964	
960 minute summer	9	1.008	10	9.0	0.081	0.000	399.3871	
960 minute summer	10	1.009	11	-9.2	0.268	-0.017	3.4092	
960 minute summer	11	1.010	12	-7.0	0.251	-0.013	11.8555	
960 minute summer	12	1.011	13	-8.2	0.185	-0.015	6.9513	
960 minute summer	18	4.000	19	3.4	1.116	0.022	0.0629	
960 minute summer	19	4.001	20	8.0	1.960	0.053	0.0600	
960 minute summer	20	4.002	21	8.0	1.988	0.053	0.2651	
960 minute summer	21	4.003	22	10.0	0.777	0.110	1.1849	
960 minute summer	22	4.004	13	11.3	0.842	0.115	0.7192	
960 minute summer	13	Hydro-Brake®	23	2.8				
960 minute summer	23	1.013	14	2.8	1.451	0.019	0.0143	182.4

Results for 100 year 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	1	480	95.567	0.023	1.3	0.0263	0.0000	OK
960 minute winter	2	480	95.291	0.037	3.0	0.0413	0.0000	OK
960 minute winter	3	480	95.041	0.041	3.4	0.0460	0.0000	OK
960 minute winter	4	480	94.966	0.040	4.7	0.0450	0.0000	OK
960 minute winter	15	480	94.930	0.030	2.0	0.0340	0.0000	OK
960 minute winter	16	480	94.641	0.035	2.6	0.0395	0.0000	OK
960 minute winter	5	495	94.443	0.042	10.2	0.0476	0.0000	OK
960 minute winter	6	495	92.686	0.048	12.1	0.0548	0.0000	OK
960 minute winter	17	480	91.591	0.032	2.9	0.0366	0.0000	OK
960 minute winter	7	495	91.423	0.082	17.4	0.1453	0.0000	OK
960 minute winter	8	495	91.131	0.092	17.4	0.1623	0.0000	OK
960 minute winter	9	930	90.631	1.244	17.4	1.4071	0.0000	OK
960 minute winter	10	930	90.631	1.319	12.3	1.4920	0.0000	SURCHARGED
960 minute winter	11	930	90.631	1.334	7.6	3.3954	0.0000	SURCHARGED
960 minute winter	12	930	90.631	1.388	5.6	3.5328	0.0000	SURCHARGED
960 minute winter	18	495	93.984	0.020	2.6	0.0231	0.0000	OK
960 minute winter	19	495	92.226	0.031	6.0	0.0353	0.0000	OK
960 minute winter	20	480	91.000	0.031	6.0	0.0354	0.0000	OK
960 minute winter	21	930	90.631	0.778	7.5	0.8801	0.0000	SURCHARGED
960 minute winter	22	930	90.631	0.890	8.6	1.0068	0.0000	SURCHARGED
960 minute winter	13	930	90.631	1.470	8.3	6.6509	0.0000	SURCHARGED
960 minute winter	23	930	87.640	0.023	3.0	0.0255	0.0000	OK
960 minute winter	14	930	87.022	0.022	3.0	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	1	1.000	2	1.3	0.418	0.022	0.0734	
960 minute winter	2	1.001	3	3.0	0.664	0.058	0.1147	
960 minute winter	3	1.002	4	3.4	0.709	0.065	0.0357	
960 minute winter	4	1.003	5	4.7	1.009	0.066	0.1132	
960 minute winter	15	2.000	16	2.0	0.568	0.038	0.1036	
960 minute winter	16	2.001	5	2.6	0.677	0.050	0.0500	
960 minute winter	5	1.004	6	10.2	1.531	0.043	0.2591	
960 minute winter	6	1.005	7	12.1	1.665	0.055	0.2311	
960 minute winter	17	3.000	7	2.9	0.726	0.023	0.0457	
960 minute winter	7	1.006	8	17.4	0.899	0.107	0.8764	
960 minute winter	8	1.007	9	17.4	0.906	0.107	0.0769	
960 minute winter	9	1.008	10	6.3	0.040	0.000	465.8038	
960 minute winter	10	1.009	11	-7.3	0.270	-0.013	3.4092	
960 minute winter	11	1.010	12	-5.2	0.272	-0.009	11.8555	
960 minute winter	12	1.011	13	-5.6	0.210	-0.010	6.9513	
960 minute winter	18	4.000	19	2.6	1.041	0.017	0.0518	
960 minute winter	19	4.001	20	6.0	1.835	0.040	0.0488	
960 minute winter	20	4.002	21	6.0	1.830	0.040	0.2668	
960 minute winter	21	4.003	22	7.3	0.721	0.080	1.1849	
960 minute winter	22	4.004	13	8.3	0.779	0.084	0.7192	
960 minute winter	13	Hydro-Brake®	23	3.0				
960 minute winter	23	1.013	14	3.0	1.477	0.020	0.0149	186.9

Results for 100 year 1440 minute summer. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	1	750	95.567	0.023	1.3	0.0263	0.0000	OK
1440 minute summer	2	750	95.291	0.037	3.0	0.0413	0.0000	OK
1440 minute summer	3	750	95.041	0.041	3.4	0.0460	0.0000	OK
1440 minute summer	4	750	94.966	0.040	4.7	0.0450	0.0000	OK
1440 minute summer	15	750	94.929	0.029	1.9	0.0332	0.0000	OK
1440 minute summer	16	750	94.640	0.034	2.5	0.0388	0.0000	OK
1440 minute summer	5	750	94.443	0.042	10.0	0.0472	0.0000	OK
1440 minute summer	6	750	92.686	0.048	11.8	0.0542	0.0000	OK
1440 minute summer	17	750	91.591	0.032	2.8	0.0360	0.0000	OK
1440 minute summer	7	750	91.422	0.081	16.9	0.1432	0.0000	OK
1440 minute summer	8	750	91.129	0.090	16.9	0.1598	0.0000	OK
1440 minute summer	9	1260	90.400	1.013	16.9	1.1455	0.0000	OK
1440 minute summer	10	1260	90.400	1.088	11.8	1.2303	0.0000	SURCHARGED
1440 minute summer	11	1260	90.400	1.103	7.0	2.8066	0.0000	SURCHARGED
1440 minute summer	12	1260	90.400	1.157	5.3	2.9441	0.0000	SURCHARGED
1440 minute summer	18	750	93.984	0.020	2.4	0.0222	0.0000	OK
1440 minute summer	19	750	92.225	0.030	5.6	0.0340	0.0000	OK
1440 minute summer	20	750	90.999	0.030	5.6	0.0343	0.0000	OK
1440 minute summer	21	1260	90.400	0.547	7.0	0.6185	0.0000	SURCHARGED
1440 minute summer	22	1260	90.400	0.659	8.2	0.7451	0.0000	SURCHARGED
1440 minute summer	13	1260	90.400	1.239	7.9	5.6044	0.0000	SURCHARGED
1440 minute summer	23	1260	87.639	0.022	2.7	0.0245	0.0000	OK
1440 minute summer	14	1260	87.021	0.021	2.7	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)
1440 minute summer	1	1.000	2	1.3	0.418	0.022	0.0734	
1440 minute summer	2	1.001	3	3.0	0.664	0.058	0.1147	
1440 minute summer	3	1.002	4	3.4	0.709	0.065	0.0357	
1440 minute summer	4	1.003	5	4.7	1.009	0.066	0.1132	
1440 minute summer	15	2.000	16	1.9	0.557	0.037	0.1003	
1440 minute summer	16	2.001	5	2.5	0.669	0.048	0.0487	
1440 minute summer	5	1.004	6	10.0	1.524	0.042	0.2549	
1440 minute summer	6	1.005	7	11.8	1.654	0.054	0.2270	
1440 minute summer	17	3.000	7	2.8	0.719	0.023	0.0446	
1440 minute summer	7	1.006	8	16.9	0.893	0.104	0.8577	
1440 minute summer	8	1.007	9	16.9	0.899	0.104	0.0753	
1440 minute summer	9	1.008	10	6.1	0.029	0.000	381.7271	
1440 minute summer	10	1.009	11	-6.3	0.271	-0.011	3.4092	
1440 minute summer	11	1.010	12	-4.7	0.280	-0.009	11.8555	
1440 minute summer	12	1.011	13	-5.3	0.290	-0.010	6.9513	
1440 minute summer	18	4.000	19	2.4	1.014	0.016	0.0489	
1440 minute summer	19	4.001	20	5.6	1.774	0.037	0.0464	
1440 minute summer	20	4.002	21	5.6	1.795	0.037	0.2613	
1440 minute summer	21	4.003	22	7.0	0.677	0.077	1.1849	
1440 minute summer	22	4.004	13	7.9	0.785	0.080	0.7192	
1440 minute summer	13	Hydro-Brake®	23	2.7				
1440 minute summer	23	1.013	14	2.7	1.444	0.018	0.0141	248.4

Results for 100 year 1440 minute winter. 1680 minute analysis at 30 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	1	750	95.565	0.021	1.0	0.0232	0.0000	OK
1440 minute winter	2	750	95.286	0.032	2.3	0.0363	0.0000	OK
1440 minute winter	3	750	95.035	0.035	2.6	0.0401	0.0000	OK
1440 minute winter	4	750	94.961	0.035	3.6	0.0394	0.0000	OK
1440 minute winter	15	750	94.926	0.026	1.5	0.0297	0.0000	OK
1440 minute winter	16	750	94.636	0.030	1.9	0.0339	0.0000	OK
1440 minute winter	5	750	94.438	0.037	7.6	0.0414	0.0000	OK
1440 minute winter	6	750	92.680	0.042	9.0	0.0474	0.0000	OK
1440 minute winter	17	750	91.587	0.028	2.1	0.0313	0.0000	OK
1440 minute winter	7	750	91.411	0.070	12.8	0.1245	0.0000	OK
1440 minute winter	8	750	91.117	0.078	12.8	0.1380	0.0000	OK
1440 minute winter	9	1380	90.597	1.210	12.8	1.3683	0.0000	OK
1440 minute winter	10	1380	90.597	1.285	8.6	1.4531	0.0000	SURCHARGED
1440 minute winter	11	1380	90.597	1.300	4.7	3.3080	0.0000	SURCHARGED
1440 minute winter	12	1380	90.597	1.354	3.3	3.4455	0.0000	SURCHARGED
1440 minute winter	18	720	93.981	0.017	1.8	0.0194	0.0000	OK
1440 minute winter	19	750	92.221	0.026	4.2	0.0297	0.0000	OK
1440 minute winter	20	720	90.995	0.026	4.2	0.0298	0.0000	OK
1440 minute winter	21	1380	90.597	0.744	5.2	0.8413	0.0000	SURCHARGED
1440 minute winter	22	1380	90.597	0.856	6.0	0.9680	0.0000	SURCHARGED
1440 minute winter	13	1380	90.597	1.436	5.8	6.4958	0.0000	SURCHARGED
1440 minute winter	23	1380	87.639	0.022	2.9	0.0253	0.0000	OK
1440 minute winter	14	1380	87.022	0.022	2.9	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)
1440 minute winter	1	1.000	2	1.0	0.387	0.017	0.0609	
1440 minute winter	2	1.001	3	2.3	0.618	0.044	0.0946	
1440 minute winter	3	1.002	4	2.6	0.659	0.050	0.0293	
1440 minute winter	4	1.003	5	3.6	0.935	0.051	0.0935	
1440 minute winter	15	2.000	16	1.5	0.527	0.029	0.0836	
1440 minute winter	16	2.001	5	1.9	0.618	0.037	0.0401	
1440 minute winter	5	1.004	6	7.6	1.406	0.032	0.2103	
1440 minute winter	6	1.005	7	9.0	1.528	0.041	0.1874	
1440 minute winter	17	3.000	7	2.1	0.662	0.017	0.0363	
1440 minute winter	7	1.006	8	12.8	0.830	0.078	0.6991	
1440 minute winter	8	1.007	9	12.8	0.834	0.078	0.0615	
1440 minute winter	9	1.008	10	4.6	0.020	0.000	453.3304	
1440 minute winter	10	1.009	11	-4.4	0.271	-0.008	3.4092	
1440 minute winter	11	1.010	12	-3.0	0.271	-0.006	11.8555	
1440 minute winter	12	1.011	13	-3.3	0.299	-0.006	6.9513	
1440 minute winter	18	4.000	19	1.8	0.938	0.012	0.0402	
1440 minute winter	19	4.001	20	4.2	1.651	0.028	0.0379	
1440 minute winter	20	4.002	21	4.2	1.647	0.028	0.2632	
1440 minute winter	21	4.003	22	5.1	0.662	0.056	1.1849	
1440 minute winter	22	4.004	13	5.8	0.726	0.059	0.7192	
1440 minute winter	13	Hydro-Brake®	23	2.9				
1440 minute winter	23	1.013	14	2.9	1.472	0.019	0.0148	256.3

Results for 100 year +40% CC 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	1	12	96.463	0.919	27.7	1.0390	0.0000	SURCHARGED
15 minute summer	2	12	96.415	1.161	60.1	1.3131	0.0000	SURCHARGED
15 minute summer	3	12	96.139	1.139	56.9	1.2877	0.0000	SURCHARGED
15 minute summer	4	12	96.002	1.076	77.3	1.2174	0.0000	SURCHARGED
15 minute summer	15	12	95.652	0.752	42.4	0.8508	0.0000	SURCHARGED
15 minute summer	16	12	95.496	0.890	51.1	1.0066	0.0000	SURCHARGED
15 minute summer	5	12	95.354	0.953	176.3	1.0782	0.0000	SURCHARGED
15 minute summer	6	12	94.234	1.596	204.7	1.8047	0.0000	FLOOD RISK
15 minute summer	17	11	92.986	1.427	61.6	1.6138	0.0000	FLOOD RISK
15 minute summer	7	11	92.937	1.596	306.1	2.8206	0.0000	FLOOD RISK
15 minute summer	8	11	91.667	0.628	304.3	1.1105	0.0000	SURCHARGED
15 minute summer	9	22	89.973	0.586	336.0	0.6629	0.0000	OK
15 minute summer	10	24	89.972	0.660	468.9	0.7469	0.0000	OK
15 minute summer	11	27	89.975	0.678	206.1	1.7255	0.0000	OK
15 minute summer	12	20	89.970	0.727	166.4	1.8500	0.0000	OK
15 minute summer	18	10	94.055	0.091	53.7	0.1030	0.0000	OK
15 minute summer	19	11	92.647	0.452	124.8	0.5110	0.0000	SURCHARGED
15 minute summer	20	11	91.637	0.668	117.5	0.7553	0.0000	SURCHARGED
15 minute summer	21	11	90.758	0.905	145.7	1.0234	0.0000	SURCHARGED
15 minute summer	22	11	90.347	0.606	171.3	0.6859	0.0000	SURCHARGED
15 minute summer	13	22	89.981	0.820	171.3	3.7113	0.0000	SURCHARGED
15 minute summer	23	7	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute summer	14	7	87.021	0.021	2.6	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	1	1.000	2	25.1	0.836	0.431	0.9236	
15 minute summer	2	1.001	3	49.4	1.242	0.950	1.0092	
15 minute summer	3	1.002	4	60.5	1.521	1.164	0.2957	
15 minute summer	4	1.003	5	82.8	2.082	1.167	0.9656	
15 minute summer	15	2.000	16	39.2	1.193	0.754	1.1692	
15 minute summer	16	2.001	5	48.8	1.450	0.939	0.5181	
15 minute summer	5	1.004	6	171.9	3.031	0.723	2.7319	
15 minute summer	6	1.005	7	205.5	2.918	0.940	2.2401	
15 minute summer	17	3.000	7	57.7	0.968	0.464	0.8055	
15 minute summer	7	1.006	8	304.3	2.759	1.866	4.9941	
15 minute summer	8	1.007	9	304.0	2.756	1.864	0.4367	
15 minute summer	9	1.008	10	334.7	0.301	0.004	224.0955	
15 minute summer	10	1.009	11	-184.0	-1.504	-0.335	3.2108	
15 minute summer	11	1.010	12	-158.6	-0.680	-0.289	11.4977	
15 minute summer	12	1.011	13	-166.4	-0.595	-0.303	6.9202	
15 minute summer	18	4.000	19	53.6	2.230	0.347	0.5575	
15 minute summer	19	4.001	20	117.5	3.566	0.778	0.5850	
15 minute summer	20	4.002	21	116.6	2.932	0.772	0.4966	
15 minute summer	21	4.003	22	145.5	2.066	1.606	1.1849	
15 minute summer	22	4.004	13	171.3	2.432	1.743	0.7119	
15 minute summer	13	Hydro-Brake®	23	2.6				
15 minute summer	23	1.013	14	2.6	1.418	0.017	0.0135	33.6

Results for 100 year +40% CC 15 minute winter. 255 minute analysis at 1 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	1	12	96.726	1.182	29.1	1.3367	0.0000	FLOOD RISK
15 minute winter	2	12	96.676	1.422	58.0	1.6085	0.0000	SURCHARGED
15 minute winter	3	12	96.385	1.385	58.1	1.5663	0.0000	SURCHARGED
15 minute winter	4	12	96.244	1.318	78.9	1.4903	0.0000	SURCHARGED
15 minute winter	15	12	95.888	0.988	44.6	1.1175	0.0000	SURCHARGED
15 minute winter	16	12	95.721	1.115	53.0	1.2608	0.0000	SURCHARGED
15 minute winter	5	12	95.572	1.171	184.0	1.3239	0.0000	SURCHARGED
15 minute winter	6	12	94.394	1.756	211.5	1.9856	0.0000	FLOOD RISK
15 minute winter	17	11	93.059	1.500	64.8	1.6965	0.3054	FLOOD
15 minute winter	7	11	93.014	1.673	312.3	2.9562	0.0000	FLOOD RISK
15 minute winter	8	11	91.683	0.644	312.1	1.1385	0.0000	SURCHARGED
15 minute winter	9	21	90.054	0.667	513.3	0.7539	0.0000	OK
15 minute winter	10	22	90.055	0.743	393.0	0.8398	0.0000	OK
15 minute winter	11	20	90.051	0.754	196.4	1.9190	0.0000	SURCHARGED
15 minute winter	12	21	90.071	0.828	166.1	2.1084	0.0000	SURCHARGED
15 minute winter	18	10	94.058	0.094	56.5	0.1059	0.0000	OK
15 minute winter	19	11	92.843	0.648	131.2	0.7332	0.0000	SURCHARGED
15 minute winter	20	11	91.758	0.789	121.8	0.8928	0.0000	SURCHARGED
15 minute winter	21	11	90.817	0.964	150.9	1.0898	0.0000	SURCHARGED
15 minute winter	22	11	90.376	0.635	177.4	0.7186	0.0000	SURCHARGED
15 minute winter	13	26	90.073	0.912	177.3	4.1239	0.0000	SURCHARGED
15 minute winter	23	6	87.638	0.021	2.6	0.0238	0.0000	OK
15 minute winter	14	6	87.021	0.021	2.6	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 winter	1	1.000	2	22.9	0.833	0.393	0.9236	
15 minute winter	2	1.001	3	50.4	1.266	0.969	1.0092	
15 minute winter	3	1.002	4	63.8	1.604	1.227	0.2957	
15 minute winter	4	1.003	5	86.5	2.176	1.220	0.9656	
15 minute winter	15	2.000	16	40.7	1.199	0.784	1.1692	
15 minute winter	16	2.001	5	49.2	1.397	0.946	0.5181	
15 minute winter	5	1.004	6	176.9	2.966	0.743	2.7319	
15 minute winter	6	1.005	7	210.8	2.994	0.964	2.2401	
15 minute winter	17	3.000	7	60.8	0.961	0.489	0.8055	
15 minute winter	7	1.006	8	312.1	2.830	1.913	4.9941	
15 minute winter	8	1.007	9	312.1	2.830	1.913	0.4367	
15 minute winter	9	1.008	10	368.6	0.322	0.004	253.0510	
15 minute winter	10	1.009	11	-194.5	-1.424	-0.354	3.4054	
15 minute winter	11	1.010	12	-147.2	-0.702	-0.268	11.8531	
15 minute winter	12	1.011	13	-166.1	-0.574	-0.302	6.9513	
15 minute winter	18	4.000	19	56.3	2.148	0.365	0.5633	
15 minute winter	19	4.001	20	121.8	3.542	0.806	0.5850	
15 minute winter	20	4.002	21	120.7	3.035	0.799	0.4966	
15 minute winter	21	4.003	22	150.6	2.139	1.663	1.1849	
15 minute winter	22	4.004	13	177.3	2.519	1.805	0.7192	
15 minute winter	13	Hydro-Brake®	23	2.6				
15 minute winter	23	1.013	14	2.6	1.419	0.017	0.0135	35.0

Results for 100 year +40% CC 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	1	19	96.049	0.505	25.0	0.5717	0.0000	SURCHARGED
30 minute summer	2	19	96.004	0.750	54.1	0.8479	0.0000	SURCHARGED
30 minute summer	3	19	95.734	0.734	55.0	0.8302	0.0000	SURCHARGED
30 minute summer	4	19	95.609	0.683	76.5	0.7722	0.0000	SURCHARGED
30 minute summer	15	19	95.275	0.375	38.2	0.4236	0.0000	SURCHARGED
30 minute summer	16	19	95.133	0.527	48.8	0.5959	0.0000	SURCHARGED
30 minute summer	5	19	95.016	0.615	175.4	0.6961	0.0000	SURCHARGED
30 minute summer	6	19	94.003	1.365	203.4	1.5434	0.0000	SURCHARGED
30 minute summer	17	18	92.816	1.257	55.5	1.4220	0.0000	FLOOD RISK
30 minute summer	7	19	92.777	1.436	289.8	2.5373	0.0000	SURCHARGED
30 minute summer	8	19	91.638	0.599	289.0	1.0592	0.0000	SURCHARGED
30 minute summer	9	38	90.174	0.787	289.2	0.8902	0.0000	OK
30 minute summer	10	39	90.174	0.862	310.8	0.9750	0.0000	SURCHARGED
30 minute summer	11	39	90.174	0.877	179.3	2.2316	0.0000	SURCHARGED
30 minute summer	12	44	90.177	0.934	149.5	2.3771	0.0000	SURCHARGED
30 minute summer	18	18	94.050	0.086	48.4	0.0974	0.0000	OK
30 minute summer	19	18	92.366	0.171	112.6	0.1932	0.0000	OK
30 minute summer	20	18	91.441	0.472	111.8	0.5344	0.0000	SURCHARGED
30 minute summer	21	18	90.663	0.810	137.2	0.9156	0.0000	SURCHARGED
30 minute summer	22	18	90.300	0.559	161.0	0.6322	0.0000	SURCHARGED
30 minute summer	13	44	90.178	1.017	160.7	4.6017	0.0000	SURCHARGED
30 minute summer	23	12	87.638	0.021	2.6	0.0238	0.0000	OK
30 minute summer	14	12	87.021	0.021	2.6	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)
30 minute summer	1	1.000	2	22.0	0.824	0.379	0.9236	
30 minute summer	2	1.001	3	48.5	1.220	0.934	1.0092	
30 minute summer	3	1.002	4	57.9	1.455	1.113	0.2957	
30 minute summer	4	1.003	5	77.5	1.949	1.093	0.9656	
30 minute summer	15	2.000	16	37.7	1.176	0.724	1.1692	
30 minute summer	16	2.001	5	48.9	1.398	0.941	0.5181	
30 minute summer	5	1.004	6	172.1	3.026	0.723	2.7319	
30 minute summer	6	1.005	7	196.1	2.785	0.897	2.2401	
30 minute summer	17	3.000	7	54.2	0.920	0.436	0.8055	
30 minute summer	7	1.006	8	289.0	2.621	1.772	4.9941	
30 minute summer	8	1.007	9	289.2	2.622	1.773	0.4367	
30 minute summer	9	1.008	10	219.6	0.245	0.003	299.4117	
30 minute summer	10	1.009	11	-166.4	-0.847	-0.303	3.4092	
30 minute summer	11	1.010	12	-134.5	-0.547	-0.245	11.8555	
30 minute summer	12	1.011	13	-149.5	-0.497	-0.272	6.9513	
30 minute summer	18	4.000	19	48.4	2.236	0.314	0.4710	
30 minute summer	19	4.001	20	111.8	3.601	0.741	0.5304	
30 minute summer	20	4.002	21	109.7	2.759	0.727	0.4966	
30 minute summer	21	4.003	22	136.5	1.939	1.507	1.1849	
30 minute summer	22	4.004	13	160.7	2.282	1.635	0.7192	
30 minute summer	13	Hydro-Brake®	23	2.6				
30 minute summer	23	1.013	14	2.6	1.419	0.017	0.0135	39.3

Results for 100 year +40% CC 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	1	20	95.751	0.207	22.6	0.2344	0.0000	OK
30 minute winter	2	19	95.709	0.455	52.4	0.5143	0.0000	SURCHARGED
30 minute winter	3	19	95.458	0.458	53.1	0.5183	0.0000	SURCHARGED
30 minute winter	4	19	95.337	0.411	75.2	0.4648	0.0000	SURCHARGED
30 minute winter	15	17	95.039	0.139	34.6	0.1571	0.0000	OK
30 minute winter	16	19	94.863	0.257	44.8	0.2912	0.0000	SURCHARGED
30 minute winter	5	19	94.758	0.357	168.4	0.4037	0.0000	SURCHARGED
30 minute winter	6	18	93.817	1.179	197.4	1.3337	0.0000	SURCHARGED
30 minute winter	17	19	92.697	1.138	50.2	1.2867	0.0000	SURCHARGED
30 minute winter	7	19	92.663	1.322	278.6	2.3354	0.0000	SURCHARGED
30 minute winter	8	19	91.617	0.578	277.2	1.0207	0.0000	SURCHARGED
30 minute winter	9	40	90.284	0.897	328.9	1.0141	0.0000	OK
30 minute winter	10	41	90.284	0.972	364.3	1.0990	0.0000	SURCHARGED
30 minute winter	11	39	90.283	0.986	153.1	2.5093	0.0000	SURCHARGED
30 minute winter	12	35	90.287	1.044	132.4	2.6576	0.0000	SURCHARGED
30 minute winter	18	18	94.046	0.082	43.8	0.0923	0.0000	OK
30 minute winter	19	17	92.340	0.145	101.9	0.1636	0.0000	OK
30 minute winter	20	18	91.158	0.189	101.9	0.2139	0.0000	OK
30 minute winter	21	18	90.559	0.706	126.8	0.7983	0.0000	SURCHARGED
30 minute winter	22	40	90.284	0.543	148.8	0.6138	0.0000	SURCHARGED
30 minute winter	13	35	90.289	1.128	148.8	5.1036	0.0000	SURCHARGED
30 minute winter	23	42	87.638	0.021	2.6	0.0240	0.0000	OK
30 minute winter	14	42	87.021	0.021	2.6	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)
30 minute winter	1	1.000	2	22.6	0.813	0.389	0.9063	
30 minute winter	2	1.001	3	48.0	1.215	0.924	1.0092	
30 minute winter	3	1.002	4	54.3	1.367	1.046	0.2957	
30 minute winter	4	1.003	5	74.9	1.926	1.056	0.9656	
30 minute winter	15	2.000	16	34.7	1.155	0.668	0.9310	
30 minute winter	16	2.001	5	43.8	1.385	0.842	0.5181	
30 minute winter	5	1.004	6	164.7	3.008	0.692	2.7319	
30 minute winter	6	1.005	7	191.8	2.724	0.877	2.2401	
30 minute winter	17	3.000	7	48.5	0.943	0.390	0.8055	
30 minute winter	7	1.006	8	277.2	2.513	1.699	4.9941	
30 minute winter	8	1.007	9	277.4	2.515	1.701	0.4367	
30 minute winter	9	1.008	10	246.4	0.270	0.003	339.1964	
30 minute winter	10	1.009	11	-148.0	-0.927	-0.269	3.4092	
30 minute winter	11	1.010	12	-113.2	-0.486	-0.206	11.8555	
30 minute winter	12	1.011	13	-132.4	-0.442	-0.241	6.9513	
30 minute winter	18	4.000	19	43.8	2.204	0.284	0.4061	
30 minute winter	19	4.001	20	101.9	3.548	0.675	0.4590	
30 minute winter	20	4.002	21	101.9	2.781	0.675	0.4708	
30 minute winter	21	4.003	22	126.7	1.799	1.399	1.1849	
30 minute winter	22	4.004	13	148.8	2.113	1.514	0.7192	
30 minute winter	13	Hydro-Brake®	23	2.6				
30 minute winter	23	1.013	14	2.6	1.426	0.017	0.0137	41.0

Results for 100 year +40% CC 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	1	33	95.631	0.087	18.6	0.0983	0.0000	OK
60 minute summer	2	33	95.420	0.166	43.3	0.1872	0.0000	OK
60 minute summer	3	33	95.224	0.224	48.7	0.2535	0.0000	OK
60 minute summer	4	33	95.119	0.193	67.0	0.2181	0.0000	OK
60 minute summer	15	33	95.022	0.122	28.5	0.1382	0.0000	OK
60 minute summer	16	33	94.760	0.154	36.9	0.1745	0.0000	OK
60 minute summer	5	33	94.568	0.167	144.7	0.1890	0.0000	OK
60 minute summer	6	34	93.221	0.583	171.6	0.6590	0.0000	SURCHARGED
60 minute summer	17	34	92.350	0.791	41.5	0.8943	0.0000	SURCHARGED
60 minute summer	7	34	92.327	0.986	238.4	1.7423	0.0000	SURCHARGED
60 minute summer	8	34	91.550	0.511	238.5	0.9026	0.0000	SURCHARGED
60 minute summer	9	69	90.391	1.004	239.4	1.1352	0.0000	OK
60 minute summer	10	67	90.391	1.079	221.3	1.2201	0.0000	SURCHARGED
60 minute summer	11	67	90.391	1.094	129.3	2.7834	0.0000	SURCHARGED
60 minute summer	12	69	90.391	1.148	111.5	2.9215	0.0000	SURCHARGED
60 minute summer	18	33	94.038	0.074	36.1	0.0834	0.0000	OK
60 minute summer	19	32	92.326	0.131	84.0	0.1477	0.0000	OK
60 minute summer	20	33	91.101	0.132	84.0	0.1497	0.0000	OK
60 minute summer	21	67	90.391	0.538	104.5	0.6085	0.0000	SURCHARGED
60 minute summer	22	69	90.391	0.650	122.8	0.7349	0.0000	SURCHARGED
60 minute summer	13	69	90.391	1.230	122.8	5.5651	0.0000	SURCHARGED
60 minute summer	23	68	87.639	0.022	2.7	0.0245	0.0000	OK
60 minute summer	14	68	87.021	0.021	2.7	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)
60 minute summer	1	1.000	2	18.6	0.812	0.320	0.5276	
60 minute summer	2	1.001	3	43.4	1.204	0.834	0.9013	
60 minute summer	3	1.002	4	48.4	1.268	0.932	0.2824	
60 minute summer	4	1.003	5	66.7	1.942	0.940	0.8336	
60 minute summer	15	2.000	16	28.5	1.116	0.548	0.7500	
60 minute summer	16	2.001	5	36.9	1.349	0.710	0.3562	
60 minute summer	5	1.004	6	144.6	3.001	0.608	2.1482	
60 minute summer	6	1.005	7	166.9	2.377	0.763	2.2401	
60 minute summer	17	3.000	7	39.7	0.900	0.319	0.8055	
60 minute summer	7	1.006	8	238.5	2.162	1.462	4.9941	
60 minute summer	8	1.007	9	238.5	2.163	1.462	0.4325	
60 minute summer	9	1.008	10	119.0	0.210	0.001	378.3706	
60 minute summer	10	1.009	11	-118.0	-0.529	-0.215	3.4092	
60 minute summer	11	1.010	12	-95.8	0.417	-0.174	11.8555	
60 minute summer	12	1.011	13	-111.5	-0.318	-0.203	6.9513	
60 minute summer	18	4.000	19	36.1	2.063	0.234	0.3576	
60 minute summer	19	4.001	20	84.0	3.543	0.556	0.3540	
60 minute summer	20	4.002	21	84.0	2.761	0.556	0.3999	
60 minute summer	21	4.003	22	104.5	1.484	1.154	1.1849	
60 minute summer	22	4.004	13	122.8	1.746	1.250	0.7192	
60 minute summer	13	Hydro-Brake®	23	2.7				
60 minute summer	23	1.013	14	2.7	1.443	0.018	0.0141	47.3

Results for 100 year +40% CC 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	1	33	95.622	0.078	15.1	0.0879	0.0000	OK
60 minute winter	2	33	95.397	0.143	35.1	0.1621	0.0000	OK
60 minute winter	3	33	95.173	0.173	39.4	0.1955	0.0000	OK
60 minute winter	4	33	95.085	0.159	54.5	0.1801	0.0000	OK
60 minute winter	15	33	95.007	0.107	23.1	0.1207	0.0000	OK
60 minute winter	16	33	94.739	0.133	29.9	0.1508	0.0000	OK
60 minute winter	5	33	94.549	0.148	117.6	0.1673	0.0000	OK
60 minute winter	6	33	92.832	0.194	139.6	0.2193	0.0000	OK
60 minute winter	17	34	92.041	0.482	33.6	0.5451	0.0000	SURCHARGED
60 minute winter	7	34	92.025	0.684	199.7	1.2082	0.0000	SURCHARGED
60 minute winter	8	34	91.483	0.444	199.3	0.7847	0.0000	SURCHARGED
60 minute winter	9	67	90.528	1.141	231.9	1.2902	0.0000	OK
60 minute winter	10	66	90.528	1.216	221.5	1.3750	0.0000	SURCHARGED
60 minute winter	11	66	90.527	1.230	113.3	3.1315	0.0000	SURCHARGED
60 minute winter	12	67	90.528	1.285	94.0	3.2697	0.0000	SURCHARGED
60 minute winter	18	33	94.030	0.066	29.2	0.0747	0.0000	OK
60 minute winter	19	33	92.311	0.116	68.0	0.1310	0.0000	OK
60 minute winter	20	33	91.074	0.105	68.0	0.1190	0.0000	OK
60 minute winter	21	69	90.528	0.675	84.6	0.7633	0.0000	SURCHARGED
60 minute winter	22	68	90.528	0.787	99.4	0.8897	0.0000	SURCHARGED
60 minute winter	13	67	90.528	1.367	99.4	6.1854	0.0000	SURCHARGED
60 minute winter	23	67	87.639	0.022	2.9	0.0251	0.0000	OK
60 minute winter	14	67	87.022	0.022	2.9	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)
60 minute winter	1	1.000	2	15.1	0.779	0.260	0.4510	
60 minute winter	2	1.001	3	35.1	1.178	0.676	0.7540	
60 minute winter	3	1.002	4	39.4	1.254	0.758	0.2334	
60 minute winter	4	1.003	5	54.4	1.897	0.768	0.6967	
60 minute winter	15	2.000	16	23.1	1.073	0.444	0.6327	
60 minute winter	16	2.001	5	29.9	1.291	0.575	0.3018	
60 minute winter	5	1.004	6	117.7	2.967	0.495	1.6050	
60 minute winter	6	1.005	7	139.1	2.376	0.636	1.8858	
60 minute winter	17	3.000	7	33.3	0.896	0.268	0.8055	
60 minute winter	7	1.006	8	199.3	1.807	1.222	4.9941	
60 minute winter	8	1.007	9	199.4	1.816	1.222	0.4231	
60 minute winter	9	1.008	10	123.3	0.214	0.001	427.9659	
60 minute winter	10	1.009	11	-107.3	-0.702	-0.195	3.4092	
60 minute winter	11	1.010	12	-86.8	0.407	-0.158	11.8555	
60 minute winter	12	1.011	13	-94.0	-0.263	-0.171	6.9513	
60 minute winter	18	4.000	19	29.2	1.944	0.189	0.3081	
60 minute winter	19	4.001	20	68.0	3.506	0.450	0.2854	
60 minute winter	20	4.002	21	68.0	2.762	0.450	0.3620	
60 minute winter	21	4.003	22	84.6	1.201	0.934	1.1849	
60 minute winter	22	4.004	13	99.4	1.475	1.012	0.7192	
60 minute winter	13	Hydro-Brake®	23	2.9				
60 minute winter	23	1.013	14	2.9	1.463	0.019	0.0146	49.2

Results for 100 year +40% CC 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	1	64	95.613	0.069	12.0	0.0780	0.0000	OK
120 minute summer	2	64	95.376	0.122	28.0	0.1384	0.0000	OK
120 minute summer	3	64	95.145	0.145	31.4	0.1645	0.0000	OK
120 minute summer	4	64	95.061	0.135	43.4	0.1528	0.0000	OK
120 minute summer	15	64	94.993	0.093	18.4	0.1053	0.0000	OK
120 minute summer	16	64	94.721	0.115	23.8	0.1304	0.0000	OK
120 minute summer	5	64	94.533	0.132	93.7	0.1495	0.0000	OK
120 minute summer	6	64	92.788	0.150	111.1	0.1696	0.0000	OK
120 minute summer	17	64	91.675	0.116	26.8	0.1313	0.0000	OK
120 minute summer	7	64	91.681	0.340	159.4	0.6006	0.0000	OK
120 minute summer	8	64	91.400	0.361	158.5	0.6380	0.0000	OK
120 minute summer	9	128	90.605	1.218	158.2	1.3770	0.0000	OK
120 minute summer	10	128	90.604	1.292	137.8	1.4616	0.0000	SURCHARGED
120 minute summer	11	128	90.604	1.307	86.2	3.3271	0.0000	SURCHARGED
120 minute summer	12	128	90.605	1.362	68.9	3.4652	0.0000	SURCHARGED
120 minute summer	18	64	94.023	0.059	23.3	0.0666	0.0000	OK
120 minute summer	19	64	92.296	0.101	54.3	0.1139	0.0000	OK
120 minute summer	20	64	91.062	0.093	54.3	0.1049	0.0000	OK
120 minute summer	21	128	90.604	0.751	67.6	0.8499	0.0000	SURCHARGED
120 minute summer	22	128	90.605	0.864	78.7	0.9768	0.0000	SURCHARGED
120 minute summer	13	128	90.605	1.444	76.5	6.5312	0.0000	SURCHARGED
120 minute summer	23	128	87.639	0.022	3.0	0.0254	0.0000	OK
120 minute summer	14	128	87.022	0.022	3.0	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	1	1.000	2	12.0	0.748	0.206	0.3756	
120 minute summer	2	1.001	3	28.0	1.137	0.539	0.6241	
120 minute summer	3	1.002	4	31.4	1.207	0.604	0.1934	
120 minute summer	4	1.003	5	43.4	1.816	0.612	0.5801	
120 minute summer	15	2.000	16	18.4	1.024	0.354	0.5288	
120 minute summer	16	2.001	5	23.8	1.225	0.458	0.2531	
120 minute summer	5	1.004	6	93.7	2.880	0.394	1.2627	
120 minute summer	6	1.005	7	111.1	2.367	0.508	1.6072	
120 minute summer	17	3.000	7	26.6	0.896	0.214	0.5205	
120 minute summer	7	1.006	8	158.5	1.488	0.972	4.8447	
120 minute summer	8	1.007	9	158.2	1.562	0.970	0.3992	
120 minute summer	9	1.008	10	60.1	0.174	0.001	456.0871	
120 minute summer	10	1.009	11	-82.3	-0.344	-0.150	3.4092	
120 minute summer	11	1.010	12	-66.5	0.374	-0.121	11.8555	
120 minute summer	12	1.011	13	-68.9	-0.172	-0.125	6.9513	
120 minute summer	18	4.000	19	23.3	1.850	0.151	0.2589	
120 minute summer	19	4.001	20	54.3	3.329	0.360	0.2400	
120 minute summer	20	4.002	21	54.3	2.748	0.360	0.3390	
120 minute summer	21	4.003	22	66.9	1.153	0.739	1.1849	
120 minute summer	22	4.004	13	76.5	1.416	0.779	0.7192	
120 minute summer	13	Hydro-Brake®	23	3.0				
120 minute summer	23	1.013	14	3.0	1.473	0.020	0.0148	59.8

Results for 100 year +40% CC 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	1	64	95.605	0.061	9.3	0.0684	0.0000	OK
120 minute winter	2	64	95.358	0.104	21.6	0.1173	0.0000	OK
120 minute winter	3	64	95.122	0.122	24.3	0.1385	0.0000	OK
120 minute winter	4	64	95.041	0.115	33.6	0.1296	0.0000	OK
120 minute winter	15	64	94.980	0.080	14.2	0.0908	0.0000	OK
120 minute winter	16	64	94.705	0.099	18.4	0.1117	0.0000	OK
120 minute winter	5	64	94.515	0.114	72.5	0.1290	0.0000	OK
120 minute winter	6	64	92.768	0.130	86.0	0.1465	0.0000	OK
120 minute winter	17	64	91.641	0.082	20.7	0.0928	0.0000	OK
120 minute winter	7	64	91.600	0.259	123.6	0.4584	0.0000	OK
120 minute winter	8	64	91.323	0.284	123.6	0.5023	0.0000	OK
120 minute winter	9	126	90.771	1.384	127.0	1.5656	0.0000	OK
120 minute winter	10	126	90.771	1.459	118.4	1.6499	0.0000	SURCHARGED
120 minute winter	11	126	90.771	1.474	67.9	3.7508	0.0000	SURCHARGED
120 minute winter	12	126	90.771	1.528	53.2	3.8890	0.0000	SURCHARGED
120 minute winter	18	64	94.016	0.052	18.0	0.0585	0.0000	OK
120 minute winter	19	64	92.281	0.086	41.9	0.0978	0.0000	OK
120 minute winter	20	60	91.050	0.081	41.9	0.0915	0.0000	OK
120 minute winter	21	126	90.771	0.918	52.1	1.0379	0.0000	SURCHARGED
120 minute winter	22	126	90.771	1.030	60.2	1.1650	0.0000	SURCHARGED
120 minute winter	13	126	90.771	1.610	59.1	7.2847	0.0000	SURCHARGED
120 minute winter	23	126	87.640	0.023	3.1	0.0260	0.0000	OK
120 minute winter	14	126	87.022	0.022	3.1	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	1	1.000	2	9.3	0.710	0.160	0.3071	
120 minute winter	2	1.001	3	21.6	1.082	0.416	0.5067	
120 minute winter	3	1.002	4	24.3	1.147	0.468	0.1575	
120 minute winter	4	1.003	5	33.6	1.715	0.474	0.4757	
120 minute winter	15	2.000	16	14.2	0.965	0.273	0.4331	
120 minute winter	16	2.001	5	18.4	1.151	0.354	0.2082	
120 minute winter	5	1.004	6	72.5	2.702	0.305	1.0414	
120 minute winter	6	1.005	7	86.0	2.374	0.393	1.1855	
120 minute winter	17	3.000	7	20.7	0.905	0.166	0.3490	
120 minute winter	7	1.006	8	123.6	1.445	0.758	3.8707	
120 minute winter	8	1.007	9	123.6	1.508	0.758	0.3268	
120 minute winter	9	1.008	10	64.8	0.162	0.001	516.6304	
120 minute winter	10	1.009	11	-66.0	-0.427	-0.120	3.4092	
120 minute winter	11	1.010	12	-51.2	0.352	-0.093	11.8555	
120 minute winter	12	1.011	13	-53.2	-0.134	-0.097	6.9513	
120 minute winter	18	4.000	19	18.0	1.745	0.117	0.2127	
120 minute winter	19	4.001	20	41.9	3.126	0.277	0.1972	
120 minute winter	20	4.002	21	41.9	2.774	0.277	0.3268	
120 minute winter	21	4.003	22	51.1	1.093	0.564	1.1849	
120 minute winter	22	4.004	13	59.1	1.335	0.602	0.7192	
120 minute winter	13	Hydro-Brake®	23	3.1				
120 minute winter	23	1.013	14	3.1	1.495	0.021	0.0154	62.1

Results for 100 year +40% CC 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 99.96%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	1	96	95.603	0.059	8.9	0.0669	0.0000	OK
180 minute summer	2	96	95.355	0.101	20.7	0.1144	0.0000	OK
180 minute summer	3	96	95.119	0.119	23.2	0.1344	0.0000	OK
180 minute summer	4	96	95.037	0.111	32.1	0.1260	0.0000	OK
180 minute summer	15	96	94.978	0.078	13.6	0.0887	0.0000	OK
180 minute summer	16	96	94.702	0.096	17.6	0.1089	0.0000	OK
180 minute summer	5	96	94.512	0.111	69.3	0.1258	0.0000	OK
180 minute summer	6	96	92.764	0.126	82.2	0.1429	0.0000	OK
180 minute summer	17	96	91.639	0.080	19.7	0.0905	0.0000	OK
180 minute summer	7	96	91.592	0.250	118.0	0.4426	0.0000	OK
180 minute summer	8	96	91.314	0.275	118.0	0.4851	0.0000	OK
180 minute summer	9	188	90.721	1.334	118.0	1.5090	0.0000	OK
180 minute summer	10	188	90.721	1.409	107.3	1.5940	0.0000	SURCHARGED
180 minute summer	11	188	90.721	1.424	66.6	3.6248	0.0000	SURCHARGED
180 minute summer	12	188	90.721	1.478	51.6	3.7619	0.0000	SURCHARGED
180 minute summer	18	96	94.015	0.051	17.2	0.0572	0.0000	OK
180 minute summer	19	96	92.279	0.084	40.0	0.0952	0.0000	OK
180 minute summer	20	92	91.049	0.080	40.0	0.0905	0.0000	OK
180 minute summer	21	188	90.721	0.868	49.8	0.9816	0.0000	SURCHARGED
180 minute summer	22	188	90.721	0.980	57.8	1.1084	0.0000	SURCHARGED
180 minute summer	13	188	90.721	1.560	56.1	7.0579	0.0000	SURCHARGED
180 minute summer	23	188	87.640	0.023	3.1	0.0258	0.0000	OK
180 minute summer	14	188	87.022	0.022	3.1	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	1	1.000	2	8.9	0.703	0.153	0.2972	
180 minute summer	2	1.001	3	20.7	1.074	0.398	0.4891	
180 minute summer	3	1.002	4	23.2	1.136	0.446	0.1519	
180 minute summer	4	1.003	5	32.1	1.697	0.452	0.4594	
180 minute summer	15	2.000	16	13.6	0.956	0.262	0.4188	
180 minute summer	16	2.001	5	17.6	1.139	0.339	0.2014	
180 minute summer	5	1.004	6	69.3	2.672	0.291	1.0069	
180 minute summer	6	1.005	7	82.2	2.378	0.376	1.1288	
180 minute summer	17	3.000	7	19.7	0.871	0.158	0.3309	
180 minute summer	7	1.006	8	118.0	1.432	0.723	3.7284	
180 minute summer	8	1.007	9	118.0	1.495	0.723	0.3151	
180 minute summer	9	1.008	10	44.1	0.156	0.001	498.5565	
180 minute summer	10	1.009	11	-64.3	-0.246	-0.117	3.4092	
180 minute summer	11	1.010	12	-50.7	0.296	-0.092	11.8555	
180 minute summer	12	1.011	13	-51.6	-0.119	-0.094	6.9513	
180 minute summer	18	4.000	19	17.2	1.730	0.111	0.2054	
180 minute summer	19	4.001	20	40.0	3.090	0.265	0.1917	
180 minute summer	20	4.002	21	40.0	2.783	0.265	0.3171	
180 minute summer	21	4.003	22	49.1	1.053	0.542	1.1849	
180 minute summer	22	4.004	13	56.1	1.242	0.571	0.7192	
180 minute summer	13	Hydro-Brake®	23	3.1				
180 minute summer	23	1.013	14	3.1	1.488	0.020	0.0152	71.0

Results for 100 year +40% CC 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	1	96	95.596	0.052	6.8	0.0585	0.0000	OK
180 minute winter	2	96	95.341	0.087	15.9	0.0980	0.0000	OK
180 minute winter	3	96	95.101	0.101	17.9	0.1144	0.0000	OK
180 minute winter	4	96	95.021	0.095	24.7	0.1079	0.0000	OK
180 minute winter	15	96	94.968	0.068	10.5	0.0771	0.0000	OK
180 minute winter	16	96	94.689	0.083	13.6	0.0939	0.0000	OK
180 minute winter	5	96	94.497	0.096	53.4	0.1089	0.0000	OK
180 minute winter	6	96	92.748	0.110	63.3	0.1249	0.0000	OK
180 minute winter	17	96	91.629	0.070	15.2	0.0795	0.0000	OK
180 minute winter	7	96	91.550	0.209	90.9	0.3701	0.0000	OK
180 minute winter	8	96	91.271	0.232	90.9	0.4099	0.0000	OK
180 minute winter	9	188	90.905	1.518	90.9	1.7168	0.0000	OK
180 minute winter	10	188	90.905	1.593	88.3	1.8015	0.0000	SURCHARGED
180 minute winter	11	188	90.905	1.608	52.3	4.0918	0.0000	SURCHARGED
180 minute winter	12	188	90.905	1.662	40.3	4.2294	0.0000	SURCHARGED
180 minute winter	18	96	94.009	0.045	13.3	0.0504	0.0000	OK
180 minute winter	19	96	92.268	0.073	30.9	0.0824	0.0000	OK
180 minute winter	20	88	91.040	0.071	30.9	0.0804	0.0000	OK
180 minute winter	21	188	90.905	1.052	38.4	1.1894	0.0000	SURCHARGED
180 minute winter	22	188	90.905	1.164	44.4	1.3163	0.0000	SURCHARGED
180 minute winter	13	188	90.905	1.744	43.8	7.8893	0.0000	SURCHARGED
180 minute winter	23	188	87.640	0.023	3.2	0.0265	0.0000	OK
180 minute winter	14	188	87.023	0.023	3.2	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	1	1.000	2	6.8	0.658	0.117	0.2432	
180 minute winter	2	1.001	3	15.9	1.014	0.306	0.3981	
180 minute winter	3	1.002	4	17.9	1.075	0.344	0.1238	
180 minute winter	4	1.003	5	24.7	1.591	0.348	0.3770	
180 minute winter	15	2.000	16	10.5	0.898	0.202	0.3443	
180 minute winter	16	2.001	5	13.6	1.067	0.262	0.1661	
180 minute winter	5	1.004	6	53.4	2.485	0.224	0.8344	
180 minute winter	6	1.005	7	63.3	2.375	0.289	0.8602	
180 minute winter	17	3.000	7	15.2	0.898	0.122	0.2465	
180 minute winter	7	1.006	8	90.9	1.348	0.557	3.0526	
180 minute winter	8	1.007	9	90.9	1.401	0.557	0.2595	
180 minute winter	9	1.008	10	45.5	0.114	0.001	565.2838	
180 minute winter	10	1.009	11	-50.4	-0.303	-0.092	3.4092	
180 minute winter	11	1.010	12	-40.0	0.326	-0.073	11.8555	
180 minute winter	12	1.011	13	-40.3	-0.126	-0.073	6.9513	
180 minute winter	18	4.000	19	13.3	1.618	0.086	0.1694	
180 minute winter	19	4.001	20	30.9	2.892	0.205	0.1572	
180 minute winter	20	4.002	21	30.9	2.784	0.205	0.3124	
180 minute winter	21	4.003	22	37.7	1.001	0.416	1.1849	
180 minute winter	22	4.004	13	43.8	1.184	0.446	0.7192	
180 minute winter	13	Hydro-Brake®	23	3.2				
180 minute winter	23	1.013	14	3.2	1.511	0.021	0.0158	73.5

Results for 100 year +40% CC 240 minute summer. 480 minute analysis at 4 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
240 minute summer	1	124	95.598	0.054	7.4	0.0609	0.0000	OK
240 minute summer	2	124	95.345	0.091	17.3	0.1026	0.0000	OK
240 minute summer	3	124	95.106	0.106	19.3	0.1195	0.0000	OK
240 minute summer	4	124	95.025	0.099	26.6	0.1124	0.0000	OK
240 minute summer	15	124	94.971	0.071	11.4	0.0805	0.0000	OK
240 minute summer	16	124	94.692	0.086	14.7	0.0977	0.0000	OK
240 minute summer	5	124	94.501	0.100	57.4	0.1133	0.0000	OK
240 minute summer	6	124	92.752	0.114	68.1	0.1292	0.0000	OK
240 minute summer	17	124	91.632	0.073	16.5	0.0827	0.0000	OK
240 minute summer	7	124	91.561	0.220	97.9	0.3879	0.0000	OK
240 minute summer	8	124	91.280	0.241	97.3	0.4265	0.0000	OK
240 minute summer	9	248	90.796	1.409	96.8	1.5940	0.0000	OK
240 minute summer	10	248	90.796	1.484	81.1	1.6789	0.0000	SURCHARGED
240 minute summer	11	248	90.796	1.499	55.4	3.8159	0.0000	SURCHARGED
240 minute summer	12	248	90.796	1.553	42.9	3.9532	0.0000	SURCHARGED
240 minute summer	18	124	94.010	0.046	14.4	0.0523	0.0000	OK
240 minute summer	19	124	92.271	0.076	33.5	0.0861	0.0000	OK
240 minute summer	20	120	91.041	0.072	33.4	0.0819	0.0000	OK
240 minute summer	21	248	90.796	0.943	41.6	1.0666	0.0000	SURCHARGED
240 minute summer	22	248	90.796	1.055	47.0	1.1934	0.0000	SURCHARGED
240 minute summer	13	248	90.796	1.635	46.2	7.3981	0.0000	SURCHARGED
240 minute summer	23	248	87.640	0.023	3.1	0.0261	0.0000	OK
240 minute summer	14	248	87.022	0.022	3.1	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	1	1.000	2	7.4	0.671	0.127	0.2583	
240 minute summer	2	1.001	3	17.2	1.033	0.330	0.4220	
240 minute summer	3	1.002	4	19.2	1.091	0.369	0.1308	
240 minute summer	4	1.003	5	26.5	1.618	0.373	0.3972	
240 minute summer	15	2.000	16	11.4	0.918	0.218	0.3642	
240 minute summer	16	2.001	5	14.6	1.085	0.280	0.1748	
240 minute summer	5	1.004	6	57.3	2.536	0.241	0.8773	
240 minute summer	6	1.005	7	67.9	2.372	0.311	0.9257	
240 minute summer	17	3.000	7	16.5	0.889	0.132	0.2679	
240 minute summer	7	1.006	8	97.3	1.370	0.596	3.2138	
240 minute summer	8	1.007	9	96.8	1.422	0.593	0.2719	
240 minute summer	9	1.008	10	34.0	0.133	0.000	525.8583	
240 minute summer	10	1.009	11	-53.2	-0.168	-0.097	3.4092	
240 minute summer	11	1.010	12	-42.1	0.284	-0.077	11.8555	
240 minute summer	12	1.011	13	-42.9	0.163	-0.078	6.9513	
240 minute summer	18	4.000	19	14.4	1.650	0.093	0.1797	
240 minute summer	19	4.001	20	33.4	2.952	0.221	0.1666	
240 minute summer	20	4.002	21	33.4	2.772	0.221	0.3130	
240 minute summer	21	4.003	22	39.7	0.986	0.438	1.1849	
240 minute summer	22	4.004	13	46.2	1.149	0.470	0.7192	
240 minute summer	13	Hydro-Brake®	23	3.1				
240 minute summer	23	1.013	14	3.1	1.498	0.021	0.0154	82.0

Results for 100 year +40% CC 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	1	124	95.591	0.047	5.5	0.0526	0.0000	OK
240 minute winter	2	124	95.331	0.077	12.8	0.0868	0.0000	OK
240 minute winter	3	124	95.089	0.089	14.4	0.1006	0.0000	OK
240 minute winter	4	124	95.010	0.084	19.9	0.0954	0.0000	OK
240 minute winter	15	124	94.961	0.061	8.5	0.0691	0.0000	OK
240 minute winter	16	124	94.680	0.074	11.0	0.0834	0.0000	OK
240 minute winter	5	124	94.487	0.086	43.0	0.0970	0.0000	OK
240 minute winter	6	124	92.738	0.100	51.0	0.1133	0.0000	OK
240 minute winter	17	124	91.623	0.064	12.3	0.0727	0.0000	OK
240 minute winter	7	124	91.523	0.182	73.3	0.3219	0.0000	OK
240 minute winter	8	124	91.242	0.203	73.2	0.3593	0.0000	OK
240 minute winter	9	244	90.992	1.605	73.1	1.8157	0.0000	OK
240 minute winter	10	244	90.992	1.680	64.4	1.9005	0.0000	SURCHARGED
240 minute winter	11	244	90.992	1.695	41.3	4.3147	0.0000	SURCHARGED
240 minute winter	12	244	90.992	1.749	31.9	4.4521	0.0000	SURCHARGED
240 minute winter	18	124	94.004	0.040	10.7	0.0453	0.0000	OK
240 minute winter	19	124	92.260	0.065	24.9	0.0732	0.0000	OK
240 minute winter	20	112	91.031	0.062	24.9	0.0699	0.0000	OK
240 minute winter	21	244	90.992	1.139	31.0	1.2882	0.0000	SURCHARGED
240 minute winter	22	244	90.992	1.251	35.6	1.4151	0.0000	SURCHARGED
240 minute winter	13	244	90.992	1.831	35.2	8.2850	0.0000	SURCHARGED
240 minute winter	23	244	87.641	0.024	3.3	0.0268	0.0000	OK
240 minute winter	14	244	87.023	0.023	3.3	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	1	1.000	2	5.5	0.627	0.095	0.2072	
240 minute winter	2	1.001	3	12.8	0.966	0.246	0.3364	
240 minute winter	3	1.002	4	14.4	1.022	0.277	0.1046	
240 minute winter	4	1.003	5	19.9	1.505	0.280	0.3207	
240 minute winter	15	2.000	16	8.5	0.851	0.163	0.2939	
240 minute winter	16	2.001	5	11.0	1.008	0.211	0.1416	
240 minute winter	5	1.004	6	43.0	2.318	0.181	0.7209	
240 minute winter	6	1.005	7	51.0	2.379	0.233	0.6865	
240 minute winter	17	3.000	7	12.3	0.885	0.099	0.1923	
240 minute winter	7	1.006	8	73.2	1.283	0.449	2.5825	
240 minute winter	8	1.007	9	73.1	1.324	0.448	0.2208	
240 minute winter	9	1.008	10	29.9	0.141	0.000	597.0972	
240 minute winter	10	1.009	11	-40.5	-0.242	-0.074	3.4092	
240 minute winter	11	1.010	12	-31.4	0.248	-0.057	11.8555	
240 minute winter	12	1.011	13	-31.9	0.100	-0.058	6.9513	
240 minute winter	18	4.000	19	10.7	1.528	0.069	0.1443	
240 minute winter	19	4.001	20	24.9	2.733	0.165	0.1340	
240 minute winter	20	4.002	21	24.9	2.645	0.165	0.3032	
240 minute winter	21	4.003	22	30.2	0.938	0.333	1.1849	
240 minute winter	22	4.004	13	35.2	1.120	0.359	0.7192	
240 minute winter	13	Hydro-Brake®	23	3.3				
240 minute winter	23	1.013	14	3.3	1.521	0.022	0.0160	84.7

Results for 100 year +40% CC 360 minute summer. 600 minute analysis at 8 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
360 minute summer	1	184	95.590	0.046	5.5	0.0525	0.0000	OK
360 minute summer	2	184	95.331	0.077	12.8	0.0866	0.0000	OK
360 minute summer	3	184	95.088	0.088	14.3	0.1000	0.0000	OK
360 minute summer	4	184	95.010	0.084	19.7	0.0948	0.0000	OK
360 minute summer	15	184	94.961	0.061	8.5	0.0690	0.0000	OK
360 minute summer	16	184	94.679	0.073	11.0	0.0831	0.0000	OK
360 minute summer	5	184	94.486	0.085	42.7	0.0966	0.0000	OK
360 minute summer	6	184	92.738	0.100	50.6	0.1128	0.0000	OK
360 minute summer	17	184	91.624	0.065	12.3	0.0730	0.0000	OK
360 minute summer	7	184	91.522	0.181	72.9	0.3202	0.0000	OK
360 minute summer	8	184	91.241	0.202	72.4	0.3561	0.0000	OK
360 minute summer	9	368	90.884	1.497	72.0	1.6935	0.0000	OK
360 minute summer	10	368	90.884	1.572	56.9	1.7783	0.0000	SURCHARGED
360 minute summer	11	368	90.884	1.587	39.7	4.0397	0.0000	SURCHARGED
360 minute summer	12	368	90.884	1.641	30.7	4.1770	0.0000	SURCHARGED
360 minute summer	18	184	94.004	0.040	10.7	0.0453	0.0000	OK
360 minute summer	19	184	92.260	0.065	24.9	0.0732	0.0000	OK
360 minute summer	20	184	91.030	0.061	24.8	0.0695	0.0000	OK
360 minute summer	21	368	90.884	1.031	30.9	1.1662	0.0000	SURCHARGED
360 minute summer	22	368	90.884	1.143	35.2	1.2930	0.0000	SURCHARGED
360 minute summer	13	368	90.884	1.723	34.6	7.7961	0.0000	SURCHARGED
360 minute summer	23	368	87.640	0.023	3.2	0.0264	0.0000	OK
360 minute summer	14	368	87.023	0.023	3.2	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	1	1.000	2	5.5	0.624	0.094	0.2066	
360 minute summer	2	1.001	3	12.7	0.965	0.244	0.3345	
360 minute summer	3	1.002	4	14.2	1.020	0.274	0.1038	
360 minute summer	4	1.003	5	19.6	1.500	0.277	0.3181	
360 minute summer	15	2.000	16	8.5	0.851	0.163	0.2929	
360 minute summer	16	2.001	5	10.9	1.005	0.209	0.1409	
360 minute summer	5	1.004	6	42.6	2.311	0.179	0.7168	
360 minute summer	6	1.005	7	50.5	2.379	0.231	0.6804	
360 minute summer	17	3.000	7	12.3	0.886	0.099	0.1911	
360 minute summer	7	1.006	8	72.4	1.281	0.444	2.5590	
360 minute summer	8	1.007	9	72.0	1.319	0.441	0.2183	
360 minute summer	9	1.008	10	20.0	0.118	0.000	557.8125	
360 minute summer	10	1.009	11	-38.9	0.164	-0.071	3.4092	
360 minute summer	11	1.010	12	-29.8	0.169	-0.054	11.8555	
360 minute summer	12	1.011	13	-30.7	-0.070	-0.056	6.9513	
360 minute summer	18	4.000	19	10.7	1.528	0.069	0.1442	
360 minute summer	19	4.001	20	24.8	2.732	0.165	0.1338	
360 minute summer	20	4.002	21	24.8	2.612	0.164	0.2981	
360 minute summer	21	4.003	22	29.8	0.898	0.329	1.1849	
360 minute summer	22	4.004	13	34.6	1.057	0.353	0.7192	
360 minute summer	13	Hydro-Brake®	23	3.2				
360 minute summer	23	1.013	14	3.2	1.508	0.021	0.0157	102.7

Results for 100 year +40% CC 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	1	184	95.584	0.040	4.0	0.0450	0.0000	OK
360 minute winter	2	184	95.319	0.065	9.3	0.0730	0.0000	OK
360 minute winter	3	184	95.074	0.074	10.5	0.0839	0.0000	OK
360 minute winter	4	184	94.997	0.071	14.5	0.0802	0.0000	OK
360 minute winter	15	184	94.952	0.052	6.2	0.0590	0.0000	OK
360 minute winter	16	184	94.668	0.062	8.0	0.0703	0.0000	OK
360 minute winter	5	184	94.474	0.073	31.3	0.0826	0.0000	OK
360 minute winter	6	184	92.724	0.086	37.1	0.0971	0.0000	OK
360 minute winter	17	184	91.615	0.056	9.0	0.0629	0.0000	OK
360 minute winter	7	184	91.492	0.151	53.4	0.2662	0.0000	OK
360 minute winter	8	184	91.208	0.169	53.3	0.2990	0.0000	OK
360 minute winter	9	360	91.098	1.711	53.3	1.9354	0.0000	OK
360 minute winter	10	360	91.098	1.786	42.9	2.0202	0.0000	SURCHARGED
360 minute winter	11	360	91.098	1.801	29.1	4.5841	0.0000	SURCHARGED
360 minute winter	12	360	91.098	1.855	22.4	4.7214	0.0000	SURCHARGED
360 minute winter	18	184	93.998	0.034	7.8	0.0388	0.0000	OK
360 minute winter	19	184	92.250	0.055	18.2	0.0620	0.0000	OK
360 minute winter	20	360	91.098	0.129	18.2	0.1459	0.0000	OK
360 minute winter	21	360	91.098	1.245	22.6	1.4082	0.0000	SURCHARGED
360 minute winter	22	360	91.098	1.357	26.0	1.5349	0.0000	SURCHARGED
360 minute winter	13	360	91.098	1.937	25.7	8.7638	0.0000	SURCHARGED
360 minute winter	23	360	87.641	0.024	3.4	0.0271	0.0000	OK
360 minute winter	14	360	87.023	0.023	3.4	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	1	1.000	2	4.0	0.574	0.069	0.1639	
360 minute winter	2	1.001	3	9.3	0.894	0.179	0.2638	
360 minute winter	3	1.002	4	10.5	0.948	0.202	0.0822	
360 minute winter	4	1.003	5	14.5	1.383	0.204	0.2540	
360 minute winter	15	2.000	16	6.2	0.783	0.119	0.2331	
360 minute winter	16	2.001	5	8.0	0.926	0.154	0.1123	
360 minute winter	5	1.004	6	31.3	2.101	0.132	0.5793	
360 minute winter	6	1.005	7	37.1	2.285	0.170	0.5165	
360 minute winter	17	3.000	7	9.0	0.893	0.072	0.1309	
360 minute winter	7	1.006	8	53.3	1.191	0.327	2.0286	
360 minute winter	8	1.007	9	53.3	1.219	0.327	0.1748	
360 minute winter	9	1.008	10	20.1	0.074	0.000	635.5667	
360 minute winter	10	1.009	11	-28.5	-0.149	-0.052	3.4092	
360 minute winter	11	1.010	12	-21.9	0.222	-0.040	11.8555	
360 minute winter	12	1.011	13	-22.4	0.112	-0.041	6.9513	
360 minute winter	18	4.000	19	7.8	1.404	0.051	0.1146	
360 minute winter	19	4.001	20	18.2	2.511	0.120	0.1789	
360 minute winter	20	4.002	21	18.2	2.387	0.120	0.3952	
360 minute winter	21	4.003	22	22.1	0.873	0.244	1.1849	
360 minute winter	22	4.004	13	25.7	1.014	0.262	0.7192	
360 minute winter	13	Hydro-Brake®	23	3.4				
360 minute winter	23	1.013	14	3.4	1.532	0.022	0.0163	106.3

Results for 100 year +40% CC 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	1	248	95.585	0.041	4.3	0.0466	0.0000	OK
480 minute summer	2	248	95.321	0.067	10.0	0.0760	0.0000	OK
480 minute summer	3	248	95.077	0.077	11.2	0.0871	0.0000	OK
480 minute summer	4	248	95.000	0.074	15.5	0.0832	0.0000	OK
480 minute summer	15	248	94.954	0.054	6.6	0.0609	0.0000	OK
480 minute summer	16	248	94.670	0.064	8.5	0.0726	0.0000	OK
480 minute summer	5	248	94.477	0.076	33.5	0.0854	0.0000	OK
480 minute summer	6	248	92.727	0.089	39.7	0.1007	0.0000	OK
480 minute summer	17	248	91.616	0.057	9.6	0.0650	0.0000	OK
480 minute summer	7	248	91.498	0.157	57.1	0.2769	0.0000	OK
480 minute summer	8	248	91.215	0.176	57.1	0.3111	0.0000	OK
480 minute summer	9	488	90.944	1.557	57.1	1.7614	0.0000	OK
480 minute summer	10	488	90.944	1.632	43.3	1.8462	0.0000	SURCHARGED
480 minute summer	11	488	90.944	1.647	31.1	4.1925	0.0000	SURCHARGED
480 minute summer	12	488	90.944	1.701	24.0	4.3299	0.0000	SURCHARGED
480 minute summer	18	248	93.999	0.035	8.3	0.0400	0.0000	OK
480 minute summer	19	248	92.252	0.057	19.4	0.0641	0.0000	OK
480 minute summer	20	248	91.023	0.054	19.4	0.0614	0.0000	OK
480 minute summer	21	488	90.944	1.091	24.1	1.2341	0.0000	SURCHARGED
480 minute summer	22	488	90.944	1.203	27.8	1.3609	0.0000	SURCHARGED
480 minute summer	13	488	90.944	1.783	27.5	8.0677	0.0000	SURCHARGED
480 minute summer	23	488	87.641	0.024	3.3	0.0266	0.0000	OK
480 minute summer	14	488	87.023	0.023	3.3	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	1	1.000	2	4.3	0.586	0.074	0.1730	
480 minute summer	2	1.001	3	10.0	0.913	0.192	0.2783	
480 minute summer	3	1.002	4	11.2	0.963	0.215	0.0865	
480 minute summer	4	1.003	5	15.5	1.409	0.218	0.2672	
480 minute summer	15	2.000	16	6.6	0.797	0.127	0.2440	
480 minute summer	16	2.001	5	8.5	0.942	0.164	0.1175	
480 minute summer	5	1.004	6	33.5	2.139	0.141	0.6086	
480 minute summer	6	1.005	7	39.7	2.327	0.182	0.5427	
480 minute summer	17	3.000	7	9.6	0.894	0.077	0.1426	
480 minute summer	7	1.006	8	57.1	1.210	0.350	2.1371	
480 minute summer	8	1.007	9	57.1	1.242	0.350	0.1840	
480 minute summer	9	1.008	10	15.7	0.095	0.000	579.6387	
480 minute summer	10	1.009	11	-30.5	0.228	-0.056	3.4092	
480 minute summer	11	1.010	12	-23.4	0.222	-0.043	11.8555	
480 minute summer	12	1.011	13	-24.0	0.085	-0.044	6.9513	
480 minute summer	18	4.000	19	8.3	1.426	0.054	0.1201	
480 minute summer	19	4.001	20	19.4	2.555	0.128	0.1117	
480 minute summer	20	4.002	21	19.4	2.442	0.128	0.2943	
480 minute summer	21	4.003	22	23.6	0.849	0.261	1.1849	
480 minute summer	22	4.004	13	27.5	0.977	0.280	0.7192	
480 minute summer	13	Hydro-Brake®	23	3.3				
480 minute summer	23	1.013	14	3.3	1.515	0.022	0.0159	123.9

Results for 100 year +40% CC 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	1	248	95.580	0.036	3.2	0.0404	0.0000	OK
480 minute winter	2	248	95.311	0.057	7.4	0.0649	0.0000	OK
480 minute winter	3	248	95.065	0.065	8.3	0.0738	0.0000	OK
480 minute winter	4	248	94.989	0.063	11.5	0.0710	0.0000	OK
480 minute winter	15	248	94.946	0.046	4.9	0.0525	0.0000	OK
480 minute winter	16	248	94.661	0.055	6.3	0.0620	0.0000	OK
480 minute winter	5	248	94.466	0.065	24.8	0.0735	0.0000	OK
480 minute winter	6	248	92.714	0.076	29.4	0.0860	0.0000	OK
480 minute winter	17	240	91.609	0.050	7.1	0.0562	0.0000	OK
480 minute winter	7	248	91.473	0.132	42.3	0.2332	0.0000	OK
480 minute winter	8	248	91.188	0.149	42.3	0.2627	0.0000	OK
480 minute winter	9	480	91.169	1.782	42.3	2.0153	0.0000	OK
480 minute winter	10	480	91.169	1.857	32.2	2.1001	0.0000	SURCHARGED
480 minute winter	11	480	91.169	1.872	22.3	4.7638	0.0000	SURCHARGED
480 minute winter	12	480	91.169	1.926	17.1	4.9011	0.0000	SURCHARGED
480 minute winter	18	248	93.995	0.031	6.2	0.0348	0.0000	OK
480 minute winter	19	248	92.244	0.049	14.4	0.0549	0.0000	OK
480 minute winter	20	480	91.169	0.200	14.4	0.2257	0.0000	OK
480 minute winter	21	480	91.169	1.316	17.9	1.4880	0.0000	SURCHARGED
480 minute winter	22	480	91.169	1.428	20.7	1.6148	0.0000	SURCHARGED
480 minute winter	13	480	91.169	2.008	20.5	9.0831	0.0000	SURCHARGED
480 minute winter	23	480	87.641	0.024	3.4	0.0274	0.0000	OK
480 minute winter	14	480	87.023	0.023	3.4	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	1	1.000	2	3.2	0.541	0.055	0.1392	
480 minute winter	2	1.001	3	7.4	0.847	0.142	0.2218	
480 minute winter	3	1.002	4	8.3	0.895	0.160	0.0690	
480 minute winter	4	1.003	5	11.5	1.299	0.162	0.2149	
480 minute winter	15	2.000	16	4.9	0.735	0.094	0.1963	
480 minute winter	16	2.001	5	6.3	0.869	0.121	0.0945	
480 minute winter	5	1.004	6	24.8	1.970	0.104	0.4892	
480 minute winter	6	1.005	7	29.4	2.143	0.134	0.4365	
480 minute winter	17	3.000	7	7.1	0.891	0.057	0.0967	
480 minute winter	7	1.006	8	42.3	1.125	0.259	1.7027	
480 minute winter	8	1.007	9	42.3	1.148	0.259	0.1549	
480 minute winter	9	1.008	10	18.1	0.081	0.000	661.2245	
480 minute winter	10	1.009	11	-21.9	0.161	-0.040	3.4092	
480 minute winter	11	1.010	12	-16.6	0.205	-0.030	11.8555	
480 minute winter	12	1.011	13	-17.1	0.127	-0.031	6.9513	
480 minute winter	18	4.000	19	6.2	1.323	0.040	0.0968	
480 minute winter	19	4.001	20	14.4	2.355	0.095	0.2808	
480 minute winter	20	4.002	21	14.4	2.259	0.095	0.4809	
480 minute winter	21	4.003	22	17.6	0.830	0.194	1.1849	
480 minute winter	22	4.004	13	20.5	0.938	0.208	0.7192	
480 minute winter	13	Hydro-Brake®	23	3.4				
480 minute winter	23	1.013	14	3.4	1.540	0.023	0.0165	127.8

Results for 100 year +40% CC 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	1	315	95.581	0.037	3.5	0.0422	0.0000	OK
600 minute summer	2	315	95.314	0.060	8.1	0.0680	0.0000	OK
600 minute summer	3	315	95.069	0.069	9.1	0.0776	0.0000	OK
600 minute summer	4	315	94.992	0.066	12.6	0.0745	0.0000	OK
600 minute summer	15	315	94.948	0.048	5.3	0.0546	0.0000	OK
600 minute summer	16	315	94.664	0.058	6.9	0.0651	0.0000	OK
600 minute summer	5	315	94.469	0.068	27.2	0.0770	0.0000	OK
600 minute summer	6	315	92.718	0.080	32.2	0.0902	0.0000	OK
600 minute summer	17	300	91.611	0.052	7.7	0.0583	0.0000	OK
600 minute summer	7	315	91.480	0.139	46.2	0.2450	0.0000	OK
600 minute summer	8	315	91.195	0.156	46.2	0.2759	0.0000	OK
600 minute summer	9	615	90.976	1.589	46.2	1.7973	0.0000	OK
600 minute summer	10	615	90.976	1.664	36.1	1.8822	0.0000	SURCHARGED
600 minute summer	11	615	90.976	1.679	24.6	4.2734	0.0000	SURCHARGED
600 minute summer	12	615	90.976	1.733	18.8	4.4108	0.0000	SURCHARGED
600 minute summer	18	315	93.996	0.032	6.7	0.0361	0.0000	OK
600 minute summer	19	315	92.246	0.051	15.6	0.0572	0.0000	OK
600 minute summer	20	315	91.018	0.049	15.6	0.0551	0.0000	OK
600 minute summer	21	615	90.976	1.123	19.4	1.2702	0.0000	SURCHARGED
600 minute summer	22	615	90.976	1.235	22.4	1.3969	0.0000	SURCHARGED
600 minute summer	13	615	90.976	1.815	22.2	8.2116	0.0000	SURCHARGED
600 minute summer	23	615	87.641	0.024	3.3	0.0267	0.0000	OK
600 minute summer	14	615	87.023	0.023	3.3	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	1	1.000	2	3.5	0.555	0.060	0.1486	
600 minute summer	2	1.001	3	8.1	0.866	0.156	0.2376	
600 minute summer	3	1.002	4	9.1	0.915	0.175	0.0739	
600 minute summer	4	1.003	5	12.6	1.333	0.178	0.2296	
600 minute summer	15	2.000	16	5.3	0.748	0.102	0.2089	
600 minute summer	16	2.001	5	6.9	0.890	0.133	0.1010	
600 minute summer	5	1.004	6	27.2	2.022	0.114	0.5227	
600 minute summer	6	1.005	7	32.2	2.198	0.147	0.4662	
600 minute summer	17	3.000	7	7.7	0.885	0.062	0.1082	
600 minute summer	7	1.006	8	46.2	1.150	0.283	1.8200	
600 minute summer	8	1.007	9	46.2	1.175	0.283	0.1574	
600 minute summer	9	1.008	10	12.9	0.059	0.000	591.1984	
600 minute summer	10	1.009	11	-24.2	0.239	-0.044	3.4092	
600 minute summer	11	1.010	12	-18.3	0.173	-0.033	11.8555	
600 minute summer	12	1.011	13	-18.8	-0.043	-0.034	6.9513	
600 minute summer	18	4.000	19	6.7	1.348	0.043	0.1025	
600 minute summer	19	4.001	20	15.6	2.409	0.103	0.0953	
600 minute summer	20	4.002	21	15.6	2.258	0.103	0.2877	
600 minute summer	21	4.003	22	19.0	0.824	0.210	1.1849	
600 minute summer	22	4.004	13	22.2	0.901	0.226	0.7192	
600 minute summer	13	Hydro-Brake®	23	3.3				
600 minute summer	23	1.013	14	3.3	1.519	0.022	0.0160	143.2

Results for 100 year +40% CC 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 99.93%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	1	315	95.577	0.033	2.7	0.0372	0.0000	OK
600 minute winter	2	315	95.306	0.052	6.2	0.0592	0.0000	OK
600 minute winter	3	315	95.059	0.059	7.0	0.0672	0.0000	OK
600 minute winter	4	315	94.983	0.057	9.7	0.0650	0.0000	OK
600 minute winter	15	315	94.943	0.043	4.1	0.0481	0.0000	OK
600 minute winter	16	315	94.656	0.050	5.3	0.0567	0.0000	OK
600 minute winter	5	315	94.461	0.060	20.9	0.0675	0.0000	OK
600 minute winter	6	315	92.708	0.070	24.8	0.0787	0.0000	OK
600 minute winter	17	300	91.605	0.046	5.9	0.0519	0.0000	OK
600 minute winter	7	315	91.461	0.120	35.5	0.2117	0.0000	OK
600 minute winter	8	600	91.213	0.174	35.5	0.3073	0.0000	OK
600 minute winter	9	600	91.213	1.826	35.5	2.0651	0.0000	OK
600 minute winter	10	600	91.213	1.901	26.7	2.1499	0.0000	SURCHARGED
600 minute winter	11	600	91.213	1.916	18.3	4.8760	0.0000	SURCHARGED
600 minute winter	12	600	91.213	1.970	13.8	5.0134	0.0000	SURCHARGED
600 minute winter	18	315	93.992	0.028	5.2	0.0320	0.0000	OK
600 minute winter	19	315	92.239	0.044	12.0	0.0500	0.0000	OK
600 minute winter	20	600	91.213	0.244	12.0	0.2759	0.0000	SURCHARGED
600 minute winter	21	600	91.213	1.360	14.9	1.5380	0.0000	SURCHARGED
600 minute winter	22	600	91.213	1.472	17.2	1.6647	0.0000	SURCHARGED
600 minute winter	13	600	91.213	2.052	17.1	9.2828	0.0000	SURCHARGED
600 minute winter	23	600	87.641	0.024	3.5	0.0275	0.0000	OK
600 minute winter	14	600	87.024	0.024	3.5	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	1	1.000	2	2.7	0.518	0.046	0.1227	
600 minute winter	2	1.001	3	6.2	0.808	0.119	0.1948	
600 minute winter	3	1.002	4	7.0	0.857	0.135	0.0607	
600 minute winter	4	1.003	5	9.7	1.239	0.137	0.1900	
600 minute winter	15	2.000	16	4.1	0.698	0.079	0.1729	
600 minute winter	16	2.001	5	5.3	0.828	0.102	0.0834	
600 minute winter	5	1.004	6	20.9	1.878	0.088	0.4325	
600 minute winter	6	1.005	7	24.8	2.044	0.113	0.3860	
600 minute winter	17	3.000	7	5.9	0.887	0.047	0.0763	
600 minute winter	7	1.006	8	35.5	1.078	0.218	1.4927	
600 minute winter	8	1.007	9	35.5	1.095	0.218	0.2202	
600 minute winter	9	1.008	10	15.7	0.093	0.000	677.2455	
600 minute winter	10	1.009	11	-17.9	0.207	-0.033	3.4092	
600 minute winter	11	1.010	12	-13.5	0.199	-0.024	11.8555	
600 minute winter	12	1.011	13	-13.8	0.099	-0.025	6.9513	
600 minute winter	18	4.000	19	5.2	1.262	0.034	0.0850	
600 minute winter	19	4.001	20	12.0	2.238	0.079	0.3032	
600 minute winter	20	4.002	21	12.0	2.144	0.079	0.4966	
600 minute winter	21	4.003	22	14.6	0.783	0.162	1.1849	
600 minute winter	22	4.004	13	17.1	0.874	0.174	0.7192	
600 minute winter	13	Hydro-Brake®	23	3.5				
600 minute winter	23	1.013	14	3.5	1.544	0.023	0.0166	148.0

Results for 100 year +40% CC 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	1	375	95.579	0.035	3.1	0.0398	0.0000	OK
720 minute summer	2	375	95.311	0.057	7.2	0.0639	0.0000	OK
720 minute summer	3	375	95.064	0.064	8.1	0.0728	0.0000	OK
720 minute summer	4	375	94.988	0.062	11.2	0.0700	0.0000	OK
720 minute summer	15	375	94.945	0.045	4.7	0.0514	0.0000	OK
720 minute summer	16	375	94.660	0.054	6.1	0.0610	0.0000	OK
720 minute summer	5	375	94.465	0.064	24.1	0.0724	0.0000	OK
720 minute summer	6	375	92.713	0.075	28.6	0.0848	0.0000	OK
720 minute summer	17	360	91.608	0.049	6.8	0.0551	0.0000	OK
720 minute summer	7	375	91.471	0.130	41.0	0.2292	0.0000	OK
720 minute summer	8	375	91.185	0.146	41.0	0.2582	0.0000	OK
720 minute summer	9	735	90.996	1.609	41.0	1.8195	0.0000	OK
720 minute summer	10	735	90.996	1.684	32.1	1.9043	0.0000	SURCHARGED
720 minute summer	11	735	90.996	1.699	21.5	4.3234	0.0000	SURCHARGED
720 minute summer	12	735	90.996	1.753	16.5	4.4608	0.0000	SURCHARGED
720 minute summer	18	375	93.994	0.030	6.0	0.0342	0.0000	OK
720 minute summer	19	375	92.243	0.048	13.9	0.0539	0.0000	OK
720 minute summer	20	375	91.015	0.046	13.9	0.0520	0.0000	OK
720 minute summer	21	735	90.996	1.143	17.3	1.2924	0.0000	SURCHARGED
720 minute summer	22	735	90.996	1.255	20.0	1.4192	0.0000	SURCHARGED
720 minute summer	13	735	90.996	1.835	19.8	8.3006	0.0000	SURCHARGED
720 minute summer	23	735	87.641	0.024	3.3	0.0268	0.0000	OK
720 minute summer	14	735	87.023	0.023	3.3	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	1	1.000	2	3.1	0.536	0.053	0.1363	
720 minute summer	2	1.001	3	7.2	0.841	0.139	0.2176	
720 minute summer	3	1.002	4	8.1	0.890	0.156	0.0677	
720 minute summer	4	1.003	5	11.2	1.290	0.158	0.2108	
720 minute summer	15	2.000	16	4.7	0.725	0.090	0.1912	
720 minute summer	16	2.001	5	6.1	0.861	0.117	0.0923	
720 minute summer	5	1.004	6	24.1	1.953	0.101	0.4794	
720 minute summer	6	1.005	7	28.6	2.127	0.131	0.4279	
720 minute summer	17	3.000	7	6.8	0.885	0.055	0.0923	
720 minute summer	7	1.006	8	41.0	1.117	0.251	1.6634	
720 minute summer	8	1.007	9	41.0	1.138	0.251	0.1442	
720 minute summer	9	1.008	10	12.9	0.061	0.000	598.3206	
720 minute summer	10	1.009	11	-21.1	0.223	-0.038	3.4092	
720 minute summer	11	1.010	12	-16.0	0.211	-0.029	11.8555	
720 minute summer	12	1.011	13	-16.5	0.077	-0.030	6.9513	
720 minute summer	18	4.000	19	6.0	1.312	0.039	0.0944	
720 minute summer	19	4.001	20	13.9	2.332	0.092	0.0877	
720 minute summer	20	4.002	21	13.9	2.205	0.092	0.2846	
720 minute summer	21	4.003	22	17.0	0.760	0.188	1.1849	
720 minute summer	22	4.004	13	19.8	0.851	0.202	0.7192	
720 minute summer	13	Hydro-Brake®	23	3.3				
720 minute summer	23	1.013	14	3.3	1.521	0.022	0.0160	163.8

Results for 100 year +40% CC 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	1	375	95.574	0.030	2.3	0.0345	0.0000	OK
720 minute winter	2	375	95.303	0.049	5.4	0.0551	0.0000	OK
720 minute winter	3	375	95.055	0.055	6.1	0.0625	0.0000	OK
720 minute winter	4	375	94.979	0.053	8.4	0.0603	0.0000	OK
720 minute winter	15	375	94.939	0.039	3.5	0.0446	0.0000	OK
720 minute winter	16	375	94.652	0.046	4.5	0.0521	0.0000	OK
720 minute winter	5	375	94.457	0.056	18.0	0.0628	0.0000	OK
720 minute winter	6	375	92.703	0.065	21.4	0.0730	0.0000	OK
720 minute winter	17	375	91.602	0.043	5.1	0.0483	0.0000	OK
720 minute winter	7	375	91.452	0.111	30.7	0.1956	0.0000	OK
720 minute winter	8	720	91.236	0.197	30.7	0.3475	0.0000	OK
720 minute winter	9	720	91.236	1.849	30.7	2.0908	0.0000	OK
720 minute winter	10	720	91.236	1.924	23.6	2.1757	0.0000	SURCHARGED
720 minute winter	11	720	91.236	1.939	15.6	4.9339	0.0000	SURCHARGED
720 minute winter	12	720	91.236	1.993	11.7	5.0713	0.0000	SURCHARGED
720 minute winter	18	375	93.990	0.026	4.5	0.0299	0.0000	OK
720 minute winter	19	375	92.236	0.041	10.4	0.0465	0.0000	OK
720 minute winter	20	720	91.236	0.267	10.4	0.3017	0.0000	SURCHARGED
720 minute winter	21	720	91.236	1.383	12.9	1.5638	0.0000	SURCHARGED
720 minute winter	22	720	91.236	1.495	15.0	1.6905	0.0000	SURCHARGED
720 minute winter	13	720	91.236	2.075	14.8	9.3858	0.0000	SURCHARGED
720 minute winter	23	720	87.641	0.024	3.5	0.0276	0.0000	OK
720 minute winter	14	720	87.024	0.024	3.5	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	1	1.000	2	2.3	0.491	0.040	0.1105	
720 minute winter	2	1.001	3	5.4	0.780	0.104	0.1759	
720 minute winter	3	1.002	4	6.1	0.829	0.117	0.0547	
720 minute winter	4	1.003	5	8.4	1.191	0.118	0.1713	
720 minute winter	15	2.000	16	3.5	0.669	0.067	0.1540	
720 minute winter	16	2.001	5	4.5	0.791	0.087	0.0741	
720 minute winter	5	1.004	6	18.0	1.799	0.076	0.3889	
720 minute winter	6	1.005	7	21.4	1.962	0.098	0.3471	
720 minute winter	17	3.000	7	5.1	0.856	0.041	0.0682	
720 minute winter	7	1.006	8	30.7	1.039	0.188	1.4420	
720 minute winter	8	1.007	9	30.7	1.054	0.188	0.2541	
720 minute winter	9	1.008	10	11.8	0.037	0.000	685.5080	
720 minute winter	10	1.009	11	-15.2	0.162	-0.028	3.4092	
720 minute winter	11	1.010	12	-11.4	0.201	-0.021	11.8555	
720 minute winter	12	1.011	13	-11.7	0.181	-0.021	6.9513	
720 minute winter	18	4.000	19	4.5	1.210	0.029	0.0767	
720 minute winter	19	4.001	20	10.4	2.148	0.069	0.3031	
720 minute winter	20	4.002	21	10.4	2.027	0.069	0.4966	
720 minute winter	21	4.003	22	12.7	0.767	0.140	1.1849	
720 minute winter	22	4.004	13	14.8	0.842	0.151	0.7192	
720 minute winter	13	Hydro-Brake®	23	3.5				
720 minute winter	23	1.013	14	3.5	1.547	0.023	0.0167	168.9

Results for 100 year +40% CC 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	1	495	95.576	0.032	2.5	0.0358	0.0000	OK
960 minute summer	2	495	95.305	0.051	5.8	0.0572	0.0000	OK
960 minute summer	3	495	95.057	0.057	6.5	0.0646	0.0000	OK
960 minute summer	4	495	94.981	0.055	9.0	0.0625	0.0000	OK
960 minute summer	15	495	94.941	0.041	3.8	0.0464	0.0000	OK
960 minute summer	16	495	94.654	0.048	4.9	0.0544	0.0000	OK
960 minute summer	5	495	94.459	0.058	19.4	0.0651	0.0000	OK
960 minute summer	6	495	92.705	0.067	23.0	0.0757	0.0000	OK
960 minute summer	17	495	91.603	0.044	5.5	0.0501	0.0000	OK
960 minute summer	7	495	91.456	0.115	33.0	0.2034	0.0000	OK
960 minute summer	8	495	91.169	0.130	33.0	0.2290	0.0000	OK
960 minute summer	9	960	91.014	1.627	33.0	1.8398	0.0000	OK
960 minute summer	10	960	91.014	1.702	24.8	1.9246	0.0000	SURCHARGED
960 minute summer	11	960	91.014	1.717	16.9	4.3690	0.0000	SURCHARGED
960 minute summer	12	960	91.014	1.771	12.7	4.5064	0.0000	SURCHARGED
960 minute summer	18	495	93.991	0.027	4.8	0.0308	0.0000	OK
960 minute summer	19	495	92.238	0.043	11.2	0.0483	0.0000	OK
960 minute summer	20	960	91.014	0.045	11.2	0.0506	0.0000	OK
960 minute summer	21	960	91.014	1.161	13.9	1.3128	0.0000	SURCHARGED
960 minute summer	22	960	91.014	1.273	16.1	1.4395	0.0000	SURCHARGED
960 minute summer	13	960	91.014	1.853	15.9	8.3816	0.0000	SURCHARGED
960 minute summer	23	960	87.641	0.024	3.3	0.0269	0.0000	OK
960 minute summer	14	960	87.023	0.023	3.3	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	1	1.000	2	2.5	0.505	0.043	0.1168	
960 minute summer	2	1.001	3	5.8	0.797	0.112	0.1849	
960 minute summer	3	1.002	4	6.5	0.841	0.125	0.0575	
960 minute summer	4	1.003	5	9.0	1.214	0.127	0.1801	
960 minute summer	15	2.000	16	3.8	0.685	0.073	0.1636	
960 minute summer	16	2.001	5	4.9	0.810	0.094	0.0788	
960 minute summer	5	1.004	6	19.4	1.839	0.082	0.4098	
960 minute summer	6	1.005	7	23.0	2.003	0.105	0.3655	
960 minute summer	17	3.000	7	5.5	0.874	0.044	0.0720	
960 minute summer	7	1.006	8	33.0	1.058	0.202	1.4128	
960 minute summer	8	1.007	9	33.0	1.075	0.202	0.1230	
960 minute summer	9	1.008	10	8.7	0.065	0.000	604.8427	
960 minute summer	10	1.009	11	-16.5	0.249	-0.030	3.4092	
960 minute summer	11	1.010	12	-12.4	0.246	-0.023	11.8555	
960 minute summer	12	1.011	13	-12.7	0.121	-0.023	6.9513	
960 minute summer	18	4.000	19	4.8	1.229	0.031	0.0807	
960 minute summer	19	4.001	20	11.2	2.194	0.074	0.0751	
960 minute summer	20	4.002	21	11.2	2.026	0.074	0.2832	
960 minute summer	21	4.003	22	13.7	0.749	0.151	1.1849	
960 minute summer	22	4.004	13	15.9	0.818	0.162	0.7192	
960 minute summer	13	Hydro-Brake®	23	3.3				
960 minute summer	23	1.013	14	3.3	1.523	0.022	0.0161	204.6

Results for 100 year +40% CC 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	1	480	95.571	0.027	1.8	0.0307	0.0000	OK
960 minute winter	2	480	95.297	0.043	4.2	0.0487	0.0000	OK
960 minute winter	3	480	95.048	0.048	4.7	0.0544	0.0000	OK
960 minute winter	4	480	94.973	0.047	6.5	0.0529	0.0000	OK
960 minute winter	15	480	94.935	0.035	2.8	0.0400	0.0000	OK
960 minute winter	16	480	94.647	0.041	3.6	0.0465	0.0000	OK
960 minute winter	5	495	94.450	0.049	14.2	0.0559	0.0000	OK
960 minute winter	6	495	92.695	0.057	16.9	0.0648	0.0000	OK
960 minute winter	17	495	91.597	0.038	4.1	0.0433	0.0000	OK
960 minute winter	7	495	91.439	0.098	24.4	0.1732	0.0000	OK
960 minute winter	8	945	91.269	0.230	24.4	0.4063	0.0000	OK
960 minute winter	9	945	91.269	1.882	24.4	2.1285	0.0000	OK
960 minute winter	10	945	91.269	1.957	17.9	2.2133	0.0000	SURCHARGED
960 minute winter	11	945	91.269	1.972	11.8	5.0185	0.0000	SURCHARGED
960 minute winter	12	945	91.269	2.026	8.8	5.1559	0.0000	SURCHARGED
960 minute winter	18	495	93.988	0.024	3.6	0.0269	0.0000	OK
960 minute winter	19	495	92.232	0.037	8.3	0.0415	0.0000	OK
960 minute winter	20	945	91.269	0.300	8.3	0.3391	0.0000	SURCHARGED
960 minute winter	21	945	91.269	1.416	10.3	1.6013	0.0000	FLOOD RISK
960 minute winter	22	945	91.269	1.528	11.9	1.7280	0.0000	SURCHARGED
960 minute winter	13	945	91.269	2.108	11.8	9.5361	0.0000	SURCHARGED
960 minute winter	23	945	87.641	0.024	3.5	0.0277	0.0000	OK
960 minute winter	14	945	87.024	0.024	3.5	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	1	1.000	2	1.8	0.458	0.031	0.0927	
960 minute winter	2	1.001	3	4.2	0.732	0.081	0.1457	
960 minute winter	3	1.002	4	4.7	0.774	0.090	0.0452	
960 minute winter	4	1.003	5	6.5	1.108	0.092	0.1425	
960 minute winter	15	2.000	16	2.8	0.628	0.054	0.1312	
960 minute winter	16	2.001	5	3.6	0.742	0.069	0.0632	
960 minute winter	5	1.004	6	14.2	1.682	0.060	0.3284	
960 minute winter	6	1.005	7	16.9	1.833	0.077	0.2933	
960 minute winter	17	3.000	7	4.1	0.803	0.033	0.0584	
960 minute winter	7	1.006	8	24.4	0.981	0.150	1.7103	
960 minute winter	8	1.007	9	24.4	0.992	0.150	0.3026	
960 minute winter	9	1.008	10	8.6	0.039	0.000	697.6007	
960 minute winter	10	1.009	11	-11.6	0.237	-0.021	3.4092	
960 minute winter	11	1.010	12	-8.5	0.227	-0.015	11.8555	
960 minute winter	12	1.011	13	-8.8	0.299	-0.016	6.9513	
960 minute winter	18	4.000	19	3.6	1.138	0.023	0.0653	
960 minute winter	19	4.001	20	8.3	2.015	0.055	0.3017	
960 minute winter	20	4.002	21	8.3	1.913	0.055	0.4966	
960 minute winter	21	4.003	22	10.1	0.724	0.112	1.1849	
960 minute winter	22	4.004	13	11.8	0.794	0.120	0.7192	
960 minute winter	13	Hydro-Brake®	23	3.5				
960 minute winter	23	1.013	14	3.5	1.550	0.023	0.0168	210.5

Results for 100 year +40% CC 1440 minute summer. 1680 minute analysis at 30 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	1	750	95.571	0.027	1.8	0.0307	0.0000	OK
1440 minute summer	2	750	95.297	0.043	4.1	0.0481	0.0000	OK
1440 minute summer	3	750	95.048	0.048	4.6	0.0538	0.0000	OK
1440 minute summer	4	750	94.972	0.046	6.4	0.0525	0.0000	OK
1440 minute summer	15	750	94.935	0.035	2.7	0.0393	0.0000	OK
1440 minute summer	16	750	94.647	0.041	3.5	0.0459	0.0000	OK
1440 minute summer	5	750	94.450	0.049	13.8	0.0551	0.0000	OK
1440 minute summer	6	750	92.694	0.056	16.4	0.0638	0.0000	OK
1440 minute summer	17	750	91.596	0.037	3.9	0.0423	0.0000	OK
1440 minute summer	7	750	91.437	0.096	23.5	0.1698	0.0000	OK
1440 minute summer	8	750	91.147	0.108	23.5	0.1905	0.0000	OK
1440 minute summer	9	1440	90.996	1.609	23.5	1.8198	0.0000	OK
1440 minute summer	10	1440	90.996	1.684	17.2	1.9047	0.0000	SURCHARGED
1440 minute summer	11	1440	90.996	1.699	11.2	4.3241	0.0000	SURCHARGED
1440 minute summer	12	1440	90.996	1.753	8.2	4.4615	0.0000	SURCHARGED
1440 minute summer	18	750	93.987	0.023	3.4	0.0262	0.0000	OK
1440 minute summer	19	750	92.231	0.036	7.9	0.0405	0.0000	OK
1440 minute summer	20	750	91.004	0.035	7.9	0.0395	0.0000	OK
1440 minute summer	21	1440	90.996	1.143	9.8	1.2928	0.0000	SURCHARGED
1440 minute summer	22	1440	90.996	1.255	11.3	1.4195	0.0000	SURCHARGED
1440 minute summer	13	1440	90.996	1.835	11.2	8.3017	0.0000	SURCHARGED
1440 minute summer	23	1440	87.641	0.024	3.3	0.0268	0.0000	OK
1440 minute summer	14	1440	87.023	0.023	3.3	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)
1440 minute summer	1	1.000	2	1.8	0.463	0.031	0.0917	
1440 minute summer	2	1.001	3	4.1	0.727	0.079	0.1433	
1440 minute summer	3	1.002	4	4.6	0.768	0.089	0.0446	
1440 minute summer	4	1.003	5	6.4	1.103	0.090	0.1409	
1440 minute summer	15	2.000	16	2.7	0.620	0.052	0.1282	
1440 minute summer	16	2.001	5	3.5	0.737	0.067	0.0619	
1440 minute summer	5	1.004	6	13.8	1.669	0.058	0.3216	
1440 minute summer	6	1.005	7	16.4	1.817	0.075	0.2871	
1440 minute summer	17	3.000	7	3.9	0.792	0.031	0.0564	
1440 minute summer	7	1.006	8	23.5	0.971	0.144	1.0961	
1440 minute summer	8	1.007	9	23.5	0.982	0.144	0.0958	
1440 minute summer	9	1.008	10	6.3	0.027	0.000	598.4233	
1440 minute summer	10	1.009	11	-10.9	0.247	-0.020	3.4092	
1440 minute summer	11	1.010	12	-8.0	0.241	-0.014	11.8555	
1440 minute summer	12	1.011	13	-8.2	0.174	-0.015	6.9513	
1440 minute summer	18	4.000	19	3.4	1.116	0.022	0.0629	
1440 minute summer	19	4.001	20	7.9	1.988	0.052	0.0585	
1440 minute summer	20	4.002	21	7.9	1.880	0.052	0.2727	
1440 minute summer	21	4.003	22	9.6	0.668	0.106	1.1849	
1440 minute summer	22	4.004	13	11.2	0.733	0.114	0.7192	
1440 minute summer	13	Hydro-Brake®	23	3.3				
1440 minute summer	23	1.013	14	3.3	1.521	0.022	0.0160	281.5

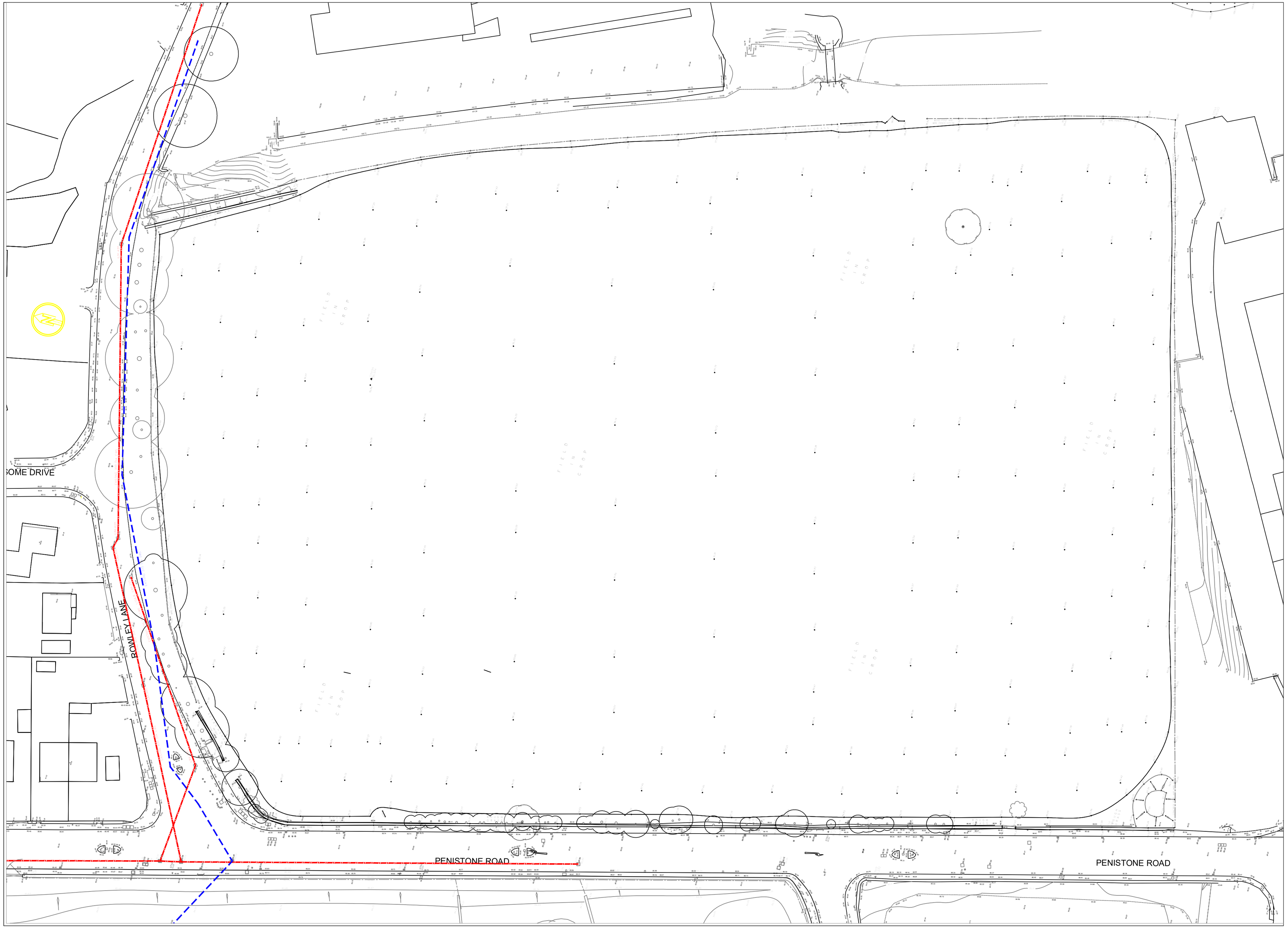
Results for 100 year +40% CC 1440 minute winter. 1680 minute analysis at 30 minute timestep. Mass balance: 99.94%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	1	720	95.567	0.023	1.3	0.0263	0.0000	OK
1440 minute winter	2	750	95.291	0.037	3.1	0.0420	0.0000	OK
1440 minute winter	3	750	95.041	0.041	3.5	0.0467	0.0000	OK
1440 minute winter	4	750	94.966	0.040	4.8	0.0455	0.0000	OK
1440 minute winter	15	720	94.930	0.030	2.0	0.0340	0.0000	OK
1440 minute winter	16	720	94.641	0.035	2.6	0.0395	0.0000	OK
1440 minute winter	5	750	94.443	0.042	10.3	0.0479	0.0000	OK
1440 minute winter	6	750	92.687	0.049	12.2	0.0551	0.0000	OK
1440 minute winter	17	750	91.592	0.033	3.0	0.0372	0.0000	OK
1440 minute winter	7	750	91.424	0.083	17.6	0.1462	0.0000	OK
1440 minute winter	8	1380	91.268	0.229	17.6	0.4051	0.0000	OK
1440 minute winter	9	1380	91.268	1.881	17.6	2.1277	0.0000	OK
1440 minute winter	10	1380	91.268	1.956	12.7	2.2125	0.0000	SURCHARGED
1440 minute winter	11	1380	91.268	1.971	7.9	5.0168	0.0000	SURCHARGED
1440 minute winter	12	1380	91.268	2.025	5.7	5.1542	0.0000	SURCHARGED
1440 minute winter	18	750	93.984	0.020	2.6	0.0231	0.0000	OK
1440 minute winter	19	750	92.226	0.031	6.0	0.0353	0.0000	OK
1440 minute winter	20	1380	91.268	0.299	6.0	0.3385	0.0000	SURCHARGED
1440 minute winter	21	1380	91.268	1.415	7.5	1.6007	0.0000	FLOOD RISK
1440 minute winter	22	1380	91.268	1.527	8.7	1.7273	0.0000	SURCHARGED
1440 minute winter	13	1380	91.268	2.107	8.6	9.5331	0.0000	SURCHARGED
1440 minute winter	23	1380	87.641	0.024	3.5	0.0277	0.0000	OK
1440 minute winter	14	1380	87.024	0.024	3.5	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)
1440 minute winter	1	1.000	2	1.3	0.418	0.022	0.0745	
1440 minute winter	2	1.001	3	3.1	0.671	0.060	0.1173	
1440 minute winter	3	1.002	4	3.5	0.716	0.067	0.0363	
1440 minute winter	4	1.003	5	4.8	1.015	0.068	0.1149	
1440 minute winter	15	2.000	16	2.0	0.568	0.038	0.1036	
1440 minute winter	16	2.001	5	2.6	0.677	0.050	0.0500	
1440 minute winter	5	1.004	6	10.3	1.536	0.043	0.2608	
1440 minute winter	6	1.005	7	12.2	1.669	0.056	0.2325	
1440 minute winter	17	3.000	7	3.0	0.734	0.024	0.0468	
1440 minute winter	7	1.006	8	17.6	0.902	0.108	1.7011	
1440 minute winter	8	1.007	9	17.6	0.909	0.108	0.3016	
1440 minute winter	9	1.008	10	5.5	0.037	0.000	697.3466	
1440 minute winter	10	1.009	11	-7.7	0.250	-0.014	3.4092	
1440 minute winter	11	1.010	12	-5.5	0.252	-0.010	11.8555	
1440 minute winter	12	1.011	13	-5.7	0.270	-0.010	6.9513	
1440 minute winter	18	4.000	19	2.6	1.036	0.017	0.0518	
1440 minute winter	19	4.001	20	6.0	1.835	0.040	0.3011	
1440 minute winter	20	4.002	21	6.0	1.724	0.040	0.4966	
1440 minute winter	21	4.003	22	7.4	0.667	0.081	1.1849	
1440 minute winter	22	4.004	13	8.6	0.726	0.088	0.7192	
1440 minute winter	13	Hydro-Brake®	23	3.5				
1440 minute winter	23	1.013	14	3.5	1.550	0.023	0.0168	289.8

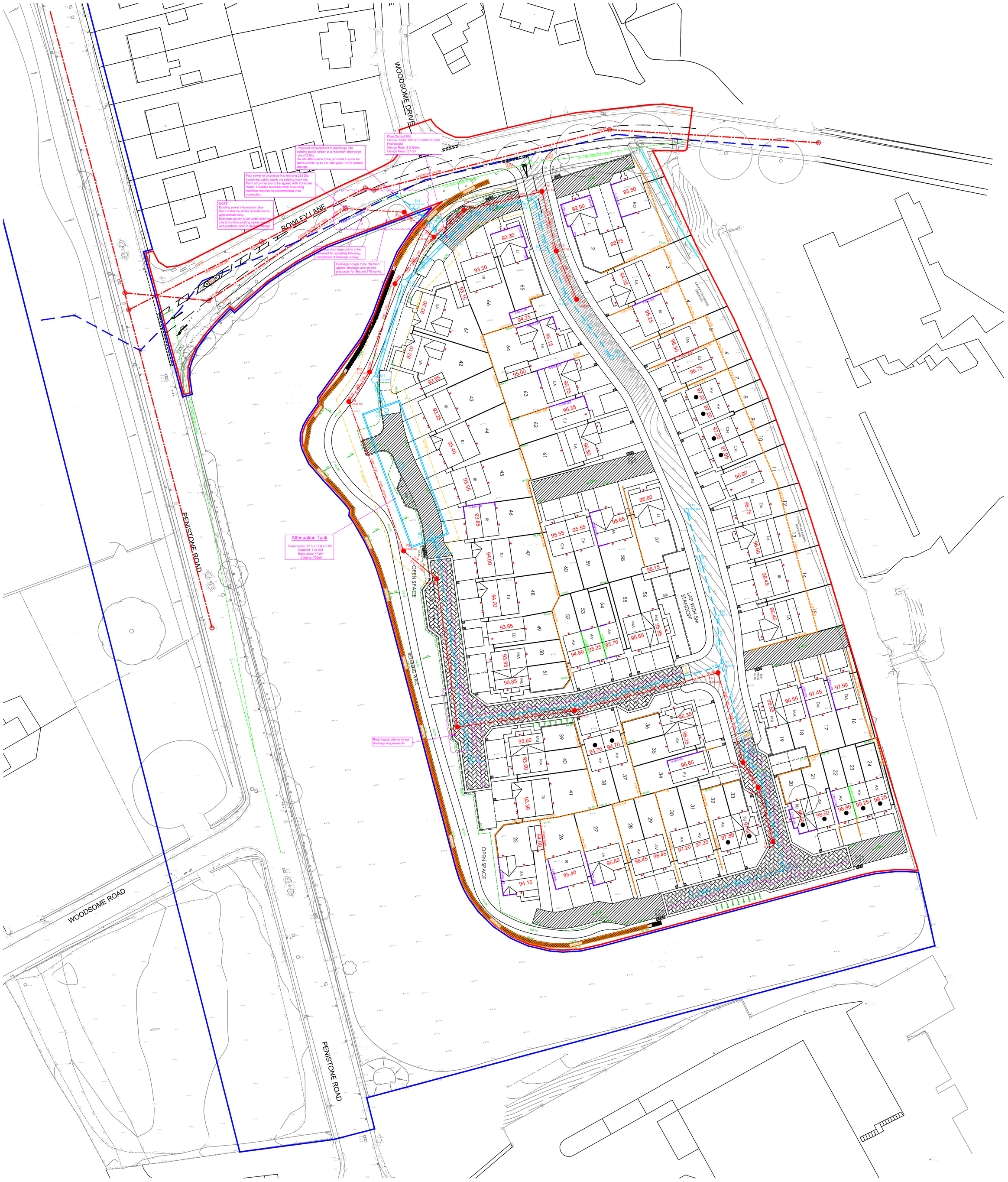
APPENDIX F

EXISTING SURVEY INFORMATION


OME DRIVE
BOWLEY LANE
PENISTONE ROAD
PENISTONE ROAD

APPENDIX G

ENGINEERING FEASIBILITY LAYOUT



Rev	Description	Date	Initials
D	Discharge rate reduced to 3.5l/s to suit YW Pre-Planning Comments.	21.12.23	JM
C	Amended to suit latest layout. Section 278 works shown on Rowley Lane.	01.12.23	JM
B	Amended to suit latest layout.	20.10.23	JM
A	Amended to suit latest layout.	08.09.23	JM/RTH

RISK ASSESSMENT:
SIGNIFICANT RISKS THAT CANNOT BE DESIGNED OUT

RISK	LEVEL OF RISK (H/M)	SUGGESTED ACTION
DEEP EXCAVATIONS ASSOCIATED WITH NEW DRAINAGE WORKS	HIGH	ENSURE ALL EXCAVATIONS HAVE ADEQUATE TRENCH SUPPORTS
HANDLING LARGE DIAMETER MANHOLE RINGS AND CIRCULAR PIPES	HIGH	USE CORRECT LIFTING EQUIPMENT AND ENSURE OPERATIVES WEAR APPROPRIATE PROTECTIVE CLOTHING/HARD HATS/CORRECT PPE.
CONTACT WITH SEWAGE	MED	OPERATIVES TO USE CORRECT BREATHING EQUIPMENT/CORRECT PPE
NOISE	MED	OPERATIVES TO USE CORRECT EAR PROTECTION/CORRECT PPE
DRAINAGE EXCAVATIONS ADJACENT EXISTING BOUNDARY STRUCTURES	HIGH	ENSURE CORRECT SUPPORTS ARE PROVIDED TO TRENCHES AND BUILDINGS WHERE REQUIRED
DRAINAGE EXCAVATION IN PUBLIC HIGHWAY	HIGH	ENSURE CORRECT USE OF TRENCH SUPPORTS IN EXCAVATION AND SCREEN BARRIERS TO PROTECT MEMBERS OF THE PUBLIC
MAINTAIN ACCESS TO ADJACENT PROPERTIES AND OCCUPIERS	HIGH	ENSURE WORKS ARE PROTECTED WITH BARRIERS AND SIGNS TO GUIDE THE PUBLIC AWAY FROM THE WORKS
DRAINAGE EXCAVATIONS NEAR TO EXISTING SERVICES	HIGH	ENSURE WORKS ARE PROTECTED WITH BARRIERS AND SIGNS TO GUIDE MEMBERS OF THE PUBLIC AWAY FROM THE AREA
WORKING IN CONFINED SPACES. WORKING IN DRAINS AND MANHOLES	HIGH	CONFINED SPACES WORKING TRAINED PERSONNEL ONLY TO CARRY OUT WORKS UNDER A PERMIT TO WORK SCHEME IMPLEMENTED BY CONTRACTOR. GAS TESTING TO TAKE PLACE BEFORE ALL ENTRIES TO CONFINED SPACES.
WORKING IN HIGHWAYS / RISKS FROM VEHICLE AND PLANT	HIGH	ALL WORKS TO BE SIGNED AND FENCED FROM NORMAL VEHICULAR TRAFFIC. ALL WORKERS TO WEAR HIGH VISIBILITY CLOTHING. ALL PLANT TO HAVE VISUAL AND AUDIBLE WARNING SYSTEMS.
ROAD AND DRAINAGE CONSTRUCTION	HIGH	ALL EXCAVATIONS TO BE ADEQUATELY FENCED OFF AND SUPPORTED DURING CONSTRUCTION. ALL OPERATIVES TO BE TRAINED IN CORRECT METHODS OF LIFTING AND WORK IN ACCORDANCE WITH LOLER REGS

IT IS ASSUMED THAT WORKS ASSOCIATED WITH THIS DESIGN WILL BE UNDERTAKEN BY A PERSON OR PERSONS WHO ARE COMPETANT AND HAVE THE REQUIRED LEVEL OF EXPERIENCE AND EXPERTISE

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Client
HOMES BY HONEY

Project
PENISTONE ROAD, FENAY BRIDGE

Detail
ENGINEERING FEASIBILITY

PRELIMINARY

Dwn	Chkd	Date	Scale	Dwg No.
JM	MH	MAR'23	1/500 @A1	E23/8060/001D