

TOBIN

Galway City Council

**Proposed Social & Affordable Housing
Scheme at Cappagh Road, Galway**

Civil Works Design Report



**Comhairle Cathrach
na Gaillimhe**
Galway City Council

BUILT ON KNOWLEDGE

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1. INTRODUCTION

TOBIN were appointed by Galway City Council to provide engineering consultancy services for the development of a Proposed Social and Affordable Housing Scheme and associated Siteworks at Cappagh Road, Galway City Co. Galway (Figure 1.1 – Site Location & Figure 1.2 -Proposed Site Layout).

This report has been prepared to detail the civil works planning submission element of the proposed development. This report details the foul & storm drainage design and connection details, SuDS design and details, watermain design and connection details and the roads design for the development. It should be read in conjunction with the watermain, roads, foul, storm design drawings and SuDS details drawings as outlined and noted herein.

Planning permission is sought by Galway City Council for the proposed in respect of a proposed social and affordable housing scheme providing approximately 38 dwellings and public open spaces at Cappagh, Galway City.

For Planning purposes, the overall site has been split into two sites namely **site A** and **Site B** to clearly distinguish the design inputs of each. **Site A** is located approximately 65m South-East of **Site B**. It is proposed that all sites will run under a single phase.

The proposed development will consist of:

- a. The construction of 38 no. new residential units comprising of:
 - i. 12 no. Terraced houses (6 no. 2 bedroom houses & 6 no. 3 bedroom houses)
 - ii. 1 no. 2 bedroom townhouse
 - iii. 5 no. 2 bedroom 2 storey duplex units
 - iv. 4 no. 2 bedroom 4 person own door Apartments
 - v. 11 no. 2 bedroom 3 person own door Apartments
 - vi. 5 no. 1 bedroom own door apartments
- b. The construction of vehicular and pedestrian access points to the Proposals via the An Címín Mór/ Garrai Dhónaill access road,
- c. Renewable energy design measures for each unit and
- d. Supporting development works including:
 - i. Access Roads
 - ii. Grouped Parking spaces
 - iii. Landscaping and boundary treatments
 - iv. Ground level alterations to accommodate the development
 - v. Bicycle storage and bin storage
 - vi. Surface water management including SUDS measures
 - vii. Temporary construction signage
 - viii. Estate signage and
 - ix. All associated site works.

Figure 1.1-Site Location



Figure 1.2-Proposed Site Layout



1.1 ENGINEERING INFORMATION

As part of the planning submission for the above proposed development, TOBIN have prepared this Engineering Report to address the following design aspects of the proposed development.

- Storm Water Drainage
- Waste Water Drainage
- Water Supply
- Road Layout
- Traffic Engineering

1.2 WASTEWATER DRAINAGE SYSTEM OVERVIEW

It is proposed that all wastewater generated from the development will flow by gravity new manholes that will be constructed on the existing Uisce Eireann-owned 225mm diameter, concrete foul sewer which runs along the An Cimín Mór Road.

The foul sewer network was designed using Site 3D modelling software. The proposed foul sewer network is presented graphically on drawing no. 12031-2002 and 12031-2003.

It is proposed that all gravity foul sewer pipes within the network will be thermoplastic structured wall pipes. The proposed foul pipe diameters are 150mm and 225mm. The gradients used were between 1/39-1/200. All flow velocities within the proposed gravity foul drainage network fall within the limits of 1 and 2.5m/sec as set out in Uisce Eireann Code of Practice for Wastewater Infrastructure.

A pre-connection enquiry has been submitted to Uisce Eireann, and the subsequent Confirmation of Feasibility is in Appendix D of this report.

1.3 STORMWATER DRAINAGE SYSTEM OVERVIEW

The proposed stormwater drainage system has been designed to cater for all surface water runoff from all hardened surfaces in the proposed development including roadways, roofs, parking areas, etc. and includes an integrated SuDS approach wherein permeable paving, drainable kerbs, underground attenuation, and controlled outflow, with failsafe measures, are integrated to achieve greenfields discharge rates.

Stormwater generated across each development site will be managed through a combination of nature-based drainage features, Sustainable Urban Drainage Systems (SuDS) including attenuation infrastructure, and conventional pipework, ultimately discharging into the existing stormwater network located within An Cimín Mór Road at controlled rates.

Prior to final discharge, all stormwater that has passed over a road surface will pass through an Oil/Petrol Interceptor. Additionally, a Storm Infiltration Tree Pit with modular storage will be provided on Site A on the eastern corner of the site, along with a high-strength polymer concrete channel drain that connects to the proposed drainage network.

The storm water network was designed using Causeway Flow Drainage modelling software and outputs can be found in Appendix B of this document. The proposed storm water network is presented graphically on drawing no. 12031-2002 & 12031-2003.

All velocities at fall within the limits of 1m/sec and 3m/sec as set out in 'Recommendations for Site Development Works' as published by the Department of Environment.

1.4 WATERMAIN OVERVIEW

It is proposed to connect each site with a ø100mm watermain to an existing ø100mm Uisce Eireann-owned watermain that is located along An Cimín Mór Road, east of the proposed development. All watermain designs will be fully vetted by Uisce Eireann prior to receiving an offer to connect.

Details of the watermain arrangement for the proposed development are presented in this report and in drawing no. 12031-2001.

A pre-connection enquiry has been submitted to Uisce Eireann, and the subsequent Confirmation of Feasibility is appended.

1.5 ROADS OVERVIEW

Vehicular access to the proposed development will be via two proposed site entrances from the An Cimín Mór Road on the Eastern boundary of the site. The main access road width is 5.5m with the maximum speed for the development set at 20kph, although in reality, the contained nature of the sites is highly self-regulating, and speeds close to this threshold will be difficult to achieve.

All internal roads have been designed in accordance with the requirements of Design Manual for Urban Roads and Streets and the Recommendations for Site Development Works for Housing Areas.

2. WASTEWATER DRAINAGE DESIGN

2.1 INTRODUCTION

The wastewater drainage services have been designed to take account of the requirements of the Civil Engineering Specification for the Water Industry (CESWI), subject to the particular requirements applied to it by Uisce Éireann, as outlined in the Uisce Éireann Code of Practice for Wastewater Infrastructure. Other design guidelines adhered to include the Department of Environment 'Recommendations for Site Development Works for Housing Areas', 1998, and 'Sewers for Adoption' published by WRC, UK. The drainage systems including all pipe sizes and gradients have been designed in accordance with the Uisce Éireann Code of Practice for Wastewater Infrastructure. Refer to drawing 12031-2002 (for Site A) and 12031-2003 (for Site B) which outlines the details of the existing and proposed wastewater network.

2.2 SITE A WASTEWATER DRAINAGE SYSTEM

2.2.1 Existing Wastewater Drainage

It is proposed to discharge wastewater generated by the proposed development via gravity to the existing Uisce Éireann wastewater network which runs north to south along An Cimín Mór Road.

Refer to drawing 12031-2002 which outlines the details of the existing wastewater network.

2.2.2 Proposed Wastewater Drainage

Wastewater generated From Site A development will be discharged into the existing public sewer drainage through two new foul manholes as indicated on the proposed services layout drawing 12031-2002. The proposed foul network discharging to the north of site A will service the building located on the northern boundary of the site and provide drainage access for future developments adjacent to the site. For the remainder of the site, all wastewater generated from the development will flow by gravity to a new manhole on the existing Uisce Eireann-owned 225mm diameter concrete foul sewer which runs along the An Cimín Mór Road on east of the Site.

A pre-connection enquiry application has been submitted to Uisce Éireann and a confirmation of feasibility has been received without any further upgrades to the existing infrastructure. A copy of the pre-connection enquiry application form and confirmation of feasibility is appended in Appendix D of this report

The drainage design has been carried out in accordance with the Uisce Éireann Code of Practice for Wastewater Infrastructure. The proposed foul sewer network is graphically represented on drawing no. 12031-2002. The pipework for the wastewater drainage system has been designed to provide six times the dry weather flow in accordance with the Uisce Eireann code of practice and standard details- Appendix B – Gravity Sewer Design Requirements, section 2.2.5 Domestic Wastewater Peaking Factors. All pipes installed shall be thermoplastic structured wall pipes. All velocities will fall within the limits of 1 and 3m/sec as set out in 'Recommendations for Site Development Works' as published by the Department of Environment.

2.3 SITE B WASTEWATER DRAINAGE SYSTEM

2.3.1 Existing Wastewater Drainage

It is proposed to discharge wastewater generated by the proposed development via gravity to the existing Uisce Éireann-owned wastewater network along An Cimín Mór Road which runs along the boundary of the site.

Refer to drawing 12031-2003 which outlines the details of the existing wastewater network.

2.3.2 Proposed Wastewater Drainage

A new foul network connection is proposed from the development to the existing sewer located along An Cimín Mór Road as indicated on the proposed services layout drawing 12031-2003. The proposed foul network will collect all wastewater generated within the site using two main lines which converge east of the site into a new foul line that runs on An Cimín Mór Road and connects into the existing Uisce Éireann-owned 225mm diameter concrete foul sewer within An Cimín Mór Road. All wastewater generated from the development will flow under gravity.

A pre-connection enquiry application has been submitted to Uisce Éireann and a confirmation of feasibility has been received without any further upgrades to the existing infrastructure. A copy of the pre-connection enquiry application form and confirmation of feasibility is appended in Appendix D of this report

The drainage systems including all pipe sizes and gradients have been designed in accordance with the Uisce Éireann Code of Practice for Wastewater Infrastructure. Output details can be found in Appendix A of this report and is graphically represented on drawing no. 12031-2003. The pipework for the wastewater drainage system has been designed to provide six times the dry weather flow in accordance with the Uisce Éireann Code of Practice, Appendix B – Gravity Sewer Design Requirements, section 2.2.5 Domestic Wastewater Peaking Factors. All pipes installed shall be thermoplastic structured wall pipes. All velocities will need to fall within the limits of 1 and 3m/sec as set out in 'Recommendations for Site Development Works' as published by the Department of Environment.

2.4 LOADING RATES

An average loading rate of 2.7 P.E. per dwelling has been considered for the development to account for the varying unit occupancies. The sewer network has been designed to cater for 6 times the dry weather flow rate. Occupancy per dwelling and peak flow rate figures have been obtained from the Uisce Éireann Code of Practice for Wastewater, Appendix C – Gravity Sewer Design Requirements, section 2.2.1 Housing Density & Occupancy.

The Uisce Éireann Code of Practice for Wastewater Infrastructure - Section 3.6 Hydraulic Design for Gravity Sewers calls for 150 litres per head per day plus an additional 10% allowance to account for infiltration within a new development.

The total hydraulic load for the full development is as follows:

Site A

Nº of Units = 16

2.7 persons/house - 150l/person/house (Section 3.7.2 of IW Code of Practice)



Calculated Base Flow = $16 \times 2.7 \times 150 \times 110\% = 7,128 \text{ l/day}$

Average Demand = $7,128 \times 1.25 = 8,910 \text{ l/day}$ (or 0.103 l/second)

Peak Demand = $8,910 \times 6 = 53,460 \text{ l/day}$ (or 0.619 l/second)

Site B

N° of Units = 22

2.7 persons/house - 150l/person/house (Section 3.7.2 of IW Code of Practice)

Calculated Base Flow = $22 \times 2.7 \times 150 \times 110\% = 9,801 \text{ l/day}$

Average Demand = $9,801 \times 1.25 = 12,251.25 \text{ l/day}$ (or 0.14 l/second)

Peak Demand = $12,251.25 \times 6 = 73,507.5 \text{ l/day}$ (or 0.85 l/second)

2.5 WASTEWATER DESIGN

The proposed sewer network has been designed to serve 38 no. residential units (16 for Site A and 22 for Site B) and will connect into new manholes that will be constructed in the existing wastewater system which run on the An Cimín Mór Road.

The foul sewer drainage services have been designed to take account of the requirements of the Civil Engineering Specification for the Water Industry (CESWI), subject to the requirements applied to it by Uisce Eireann, as outlined in the Uisce Eireann Code of Practice for Wastewater Infrastructure. Other design guidelines adhered to include the Department of Environment 'Recommendations for Site Development Works for Housing Areas', 1998, and 'Sewers for Adoption' published by WRC, UK.

The proposed foul sewer networks have been designed using Causeway Flow Drainage modelling software. The results and outputs from the modelling can be found in Appendix A.

3. STORM WATER DRAINAGE DESIGN

3.1 INTRODUCTION

The stormwater drainage has been designed to cater for all surface water runoff from all hard surfaces in the proposed development including roadways, carparks and roofs.

The storm drainage infrastructure has been designed to incorporate run off throughout the proposed development and will also incorporate a hydrobrake on each network (flow restricted to 2l/s on storm manhole S16 on Site A downstream and S10 on Site B upstream of the proposed petrol interceptor respectively).

Both sites contain permeable paving in the shared surface and parking areas. This allows for direct infiltration of surface water to ground at source. However, since this infiltration capacity has a limit, runoff from these surfaces is picked up by downstream measures as per the following.

Site A

Stormwater collected on the roads and parking on Site A will flow by gravity and will discharge via an Oil/Petrol Interceptor into a proposed stone attenuation tank as shown on drawing no. 12031-2002. A total volume of 16.128m³ of attenuation storage with a porosity of 43% will be provided for on site for Site A (based on a storage requirement for a 100-year storm event). Refer to drawing 12031- 2002 for details of the proposed storm drainage network.

In addition, a sunken garden above the attenuation tank performs the duties of a dry swale during exceedance events when the capacity of the tank may be exceeded. During such events, the water level in the tank rises to ground level above the tank but remains contained within this depressed grassed area. As water levels then drop, this flow reverses and water drains back into the tank.

Site B

A total volume of 114.69m³ of attenuation storage with a porosity of 100% will be provided on site for Site B (based on a storage requirement for a 100-year storm event). Refer to drawing 12031 - 2003 for details of the proposed storm drainage network.

The stormwater system will be made up of 2 stormwater networks, one running by gravity and the other as a pumped system.

- The first storm water network will cater for all surface water runoff from all hard surfaces, roadways, carparks, roofs servicing units along the northern boundary of the site and discharges into an existing storm water manhole on the 450mm diameter storm water drainage line along the An Cimín Mór Road.
- The second storm water network will cater for all surface water runoff from all hard surfaces, roadways, carparks, roofs servicing units to the south and western side of the site. Runoff from the dwellings along the western boundary discharge into a series of sunken rain gardens followed by smaller urban swales constructed in steps along the western boundary.
Along the southern boundary, runoff generated from the southern dwellings and the entrance road and parking drains via rain gardens and permeable paving to the southern corner.

Surface water accumulating at the south of the site passes through a Class 1 bypass petrol interceptor which removes oil and grease from vehicles that uses the site before draining into a proposed attenuation tank capable of storing 114.69m³. From the tank, water is then pumped to a discharge manhole designed in accordance with Uisce Eireann standard IW-COS-5030-01 STD-WW-28B, from whence it discharges into an existing 450mm diameter storm water drainage line along the An Cimín Mór Road.

The first network serving Site B is linked to the second network through an overflow pipe. In the event that exceedance of the piped network occurs, the generated storm water from the first network will drain down to the attenuation tank where it is then pumped at 1l/s designed to meet the required runoff rates for Site B as shown on drawing no. 12031-2003.

The storm water drainage was designed using Causeway Flow design software and the following parameters formed the basis of the design:

- The surface water run-off is calculated using the Modified Rational Method (Wallingford Procedure),

$$Q = 2.78 \times C_v \times C_r \times I \times A$$

Where

Q	=	rate of run-off, l/s
C _v	=	Volumetric run-off coefficient
C _r	=	Routing coefficient
I	=	Intensity of rainfall, mm/hr
A	=	Impermeable Area, ha

- A design return period of 1 year has been adopted for the sewer network in accordance with good design practice.
- The rainfall intensity is based on rainfall data for Knocknacarra, Galway.
- Minimum self-cleansing velocity of 1 l/s
- An allowable discharge of 2l/s/ha for the site
- M5-60 = 15mm
- Ratio R = 0.242

A dedicated storm water drainage system will be provided for the development and will pick up surface water run-off from impermeable surfaces such as roadways, carparks, footways, and roofs. Precast concrete gullies including lockable cast iron grating and frame connected to a piped system will be provided to collect run-off from these areas.

All velocities within said gradients fall within the limits of 0.75 and 3m/sec as set out in 'Recommendations for Site Development Works' as published by the Department for the Environment.

The details of the Causeway Flow Outputs and associated long sections for each network are outlined at Appendix B of this report and the proposed storm water network can be found presented graphically on Drawing No. 12031-2002 & 12031-2003.

3.2 SUSTAINABLE URBAN DRAINAGE SYSTEMS

Site A and Site B primarily consists of a greenfield sites with no existing drainage or SuDS measures in place. In order to maintain surface water runoff from the site to those of the current state, the surface water drainage for the proposed development has been designed in alignment with the principles of Sustainable Urban Drainage Systems (SuDS) as embodied in the CIRIA SuDS Manual and the Greater Dublin Strategic Drainage Study (GDSDS). The GDSDS addresses the issue of sustainability by requiring designs to comply with a set of drainage criteria which aim to minimise the impact of urbanisation by replicating the runoff characteristics of the greenfield site. These criteria form the structure of the concept of SuDs.

The requirements of SuDS are typically addressed by provision of the following:

- Interception storage
- Treatment storage (not required if interception storage is provided)
- Attenuation storage
- Long term storage (if this is not required growth rates should not be applied to Q_{Bar})

In the case of the subject site, interception and attenuation storage can be achieved by implementing infiltration/attenuation storage tanks. Growth factors will not be applied to the allowable discharge for the 100-year event. This means that both treatment storage and long-term storage (neither of which would be practical on this site) are not required. All SuDS measures will be designed in accordance with the recommendation set out in the EPA's document entitled 'Guidance on Authorisation of Discharges to Groundwater 2011'.

SuDS measures proposed would be a combination of rain gardens, tree pits, permeable paving, and filter strips, swales. These measures would seek to achieve interception storage. Storage capacity has been calculated and provided in the soakaways as though no interception storage were provided at source. Thereby is mitigated any seasonal performance of interception storage measures.

The four objectives of SuDS are:

1. Water Quality
2. Water Quantity
3. Amenity
4. Biodiversity

3.2.1 Water Quality

Spatial constraints limit the use of nature-based SuDS measures for water treatment. However, where the opportunity for nature-based solutions exists, surface water treatment is provided in the form of rain gardens, dry swales, tree pits. Treatment measures include the judicious selection of physical materials and of vegetation for planting. In addition, water quality of surface water discharged via the attenuation tank is managed in the form of the proposed petrol interceptors.

3.2.2 Water Quantity

Spatial restraints limit the use of large-scale SuDS measures but the employment of interception storage measures at source (as mentioned above) and attenuation within the attenuation tanks achieves this requirement.

As is mentioned above, **Site A** includes overflow storage above the attenuation tank in the form of a depressed grassed area, thus providing additional surface storage capacity for short periods during critical exceedance events.

3.2.3 Amenity

In Site A, grass play areas adjacent the play equipment integrates with exceedance measures which operate only under the most severe circumstances.

In Site B, landscaped areas offering pleasing cascading spaces integrate with SuDS measures to offer pleasing visual and spatial amenity.

On both sites, permeable paving is applied to differentiate vehicles spaces in a visually pleasing manner.

In addition, there remains scope for further small-scale SuDS features to be developed during the detailed design stage towards the provision of further public amenity.

3.2.4 Biodiversity

On the east of Site A, the bio-retention tree pit provides a green 'book end' to both blocks in keeping with the semi-urban/residential context of the site. The nature and scale of the proposed tree pit lends itself to the support of a substantial element of green infrastructure.

On the west of Site B, the sunken garden areas, supported by the discharge of surface water, offer a green corridor that compliments the established neighbouring gardens and potentially offers a significant extension of the local arboreal environment.

Further development of the integrated landscaping/SuDS design in the detailed design stage will leverage further opportunities for biodiversity.

3.3 ATTENUATION DESIGN

It should be noted that the Attenuation tank on **Site B** has been sized to contain 100% of the stormwater volume generated, with no infiltration rate applied in their design. It is proposed to install the stormwater attenuation tank on site as shown on drawing 12031-2003 and allow for a controlled discharge to the existing network. The discharge from the pipework will be restricted using a Hydro-Brake flow control device to limit outflow to the allowable discharge rate of 2 l/s/Ha. in accordance with the guidance offered in the Greater Dublin Strategic Drainage Study.

The pipe carrying the discharge water from the tank will be connected at the invert level of the tank to allow the tank to fully empty.

The storm drainage infrastructure has been designed to incorporate run off throughout the proposed development and will also incorporate a hydrobrake on each network (flow restricted to 2l/s on storm manhole S17 on **Site A** downstream and S10 on **Site B** upstream of the proposed petrol interceptor respectively. A total volume of 16.128m³ of attenuation

storage with a porosity of 43% will be provided on site for **Site A** (based on a storage requirement for a 100-year storm event). Refer to drawing 12031- 2002 for details of the proposed storm drainage network.

A total volume of 114.69m³ of attenuation storage with a porosity of 100% will be provided on site for **Site B** (based on a storage requirement for a 100-year storm event). Refer to drawing 12031 - 2003 for details of the proposed storm drainage network.

Run-off from the proposed hard standing areas will discharge to a combination of rain gardens, swales, sunken basin and designed attenuation tanks. These elements are designed to intercept water from areas contributing to 0.352ha (**0.241ha for Site B and 0.111ha for Site A**) for the largest storage required over a 48-hour storm period with rainfall depths taken for the 100-year return period (+20% climate change) for sliding durations obtained from Met Eireann.

3.4 KINGSPAN KLARGESTER BYPASS SEPARATOR

It is proposed to install a bypass Petrol Interceptor upstream of the proposed attenuation tank in **site A** and downstream of the proposed attenuation tank in **site B**, the locations of which is indicated on drawing no. 12031-2002 and 2003.

A class 1 bypass petrol interceptor suitable for an impermeable area of 2410m²/, Kingspan Klargest NSBP004 or similar approved unit will be installed in accordance with the manufacturer's recommendation and with all necessary accessories as required for **Site B** as indicated on drawing no. 12031-2003.

A class 1 bypass petrol interceptor suitable for an impermeable area of 830m²/, Kingspan Klargest NSBP003 or similar approved unit will be installed in accordance with the manufacturer's recommendation and with all necessary accessories as required for **Site A** as indicated on drawing no. 12031-2002.

Storm water entering in the attenuation tank will include run-off from the roadways and parking areas throughout the site and therefore may contain hydrocarbons. These hydrocarbon pollutants require removal and are not to be discharged back into the environment. The separator has been sized to cater for roads, footways, and driveway areas of the hardened surface catchment area.

In addition, the eastern network on Site B, which potentially does not pass through an attenuation tank, includes a separator for the same reason.

The selection tables in the Separator Product Brochure can be found in Appendix C

4. WATERMAIN LAYOUT

4.1 EXISTING WATER SUPPLY INFRASTRUCTURE

According to Uisce Éireann information there is an existing 100mm uPVC watermain running along the An Cimín Mór Road. Neither site is currently serviced.

4.2 PROPOSED WATER DESIGN

The watermain layout is presented on the proposed services drawings no. 12031-2002 & 12031-2003. The watermain layout has been designed in accordance with Uisce Eireann Code of Practice for Watermain Infrastructure IW-CDS-5020-03.

It is proposed to provide a 100mm diameter uPVC feed to each site from this main. A 25mm PE80 SDR17 domestic connection is also proposed all dwellings. No common service connection will be installed. Refer to Drawing No. 12031-2002 & 12031-2003 for the existing and proposed watermain layout.

In accordance with Local authority standards, a water meter and logging device (Larson Type) are proposed at the connection into the buildings. A sluice valve, strainer and $\varnothing$ 100mm by-pass arrangement is also proposed to allow for possible disconnection of water meters by the Local Authority/Uisce Eireann.

All watermains are to be commissioned and pressure tested. The typical construction details and the meter details are shown on Drawing No. 12031-2017.

A pre-connection enquiry application was submitted to Uisce Éireann and was deemed feasible without infrastructure upgrade by Uisce Éireann. A copy of the pre-connection enquiry application form the Confirmation of Feasibility are appended in Appendix D of this report.

5. FIRE FIGHTING FLOWS

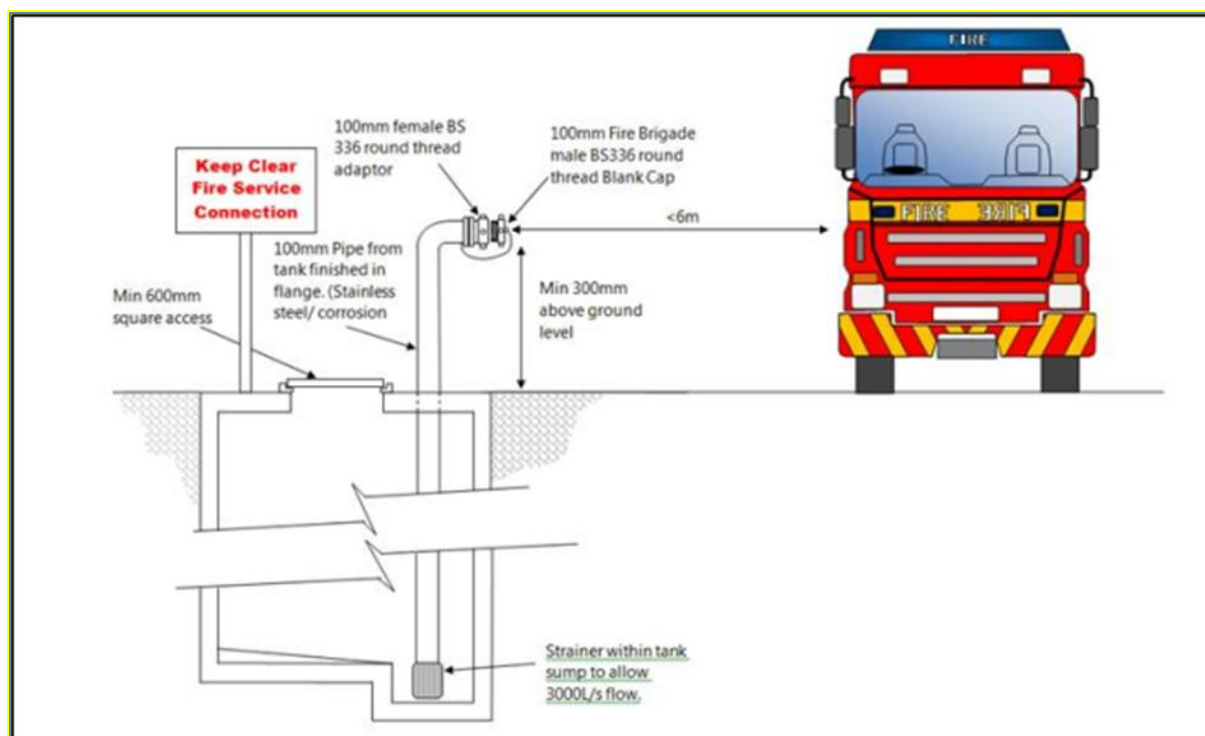
As outlined in Section 4.2, it is proposed to supply water to this development from the existing water supply network in the vicinity of the proposed site. In accordance Uisce Éireann and Local Authority standards a metering point will be located inside the proposed development site. All water mains are to be commissioned, and pressure tested to Uisce Éireann Standards.

The estimated water consumption for the development will need to be evaluated in accordance with the Uisce Éireann Code of Practice for Water Supply. According to the 'National Guidance Document on the Provision of Water for Fire Fighting 4th Edition-May 2024', Residential (dwellings) to three storey townhouse (ADB Group) should have a water supply capable of delivering a minimum of 10 litres per second through any single hydrant.

A flow test will be undertaken at a hydrant located adjacent to the site to establish the achievable flow. If the achievable flow is below the minimum flow requirement, the fire officer may potentially seek that the shortfall is made up by on-site static water storage equivalent to 60 minutes of flow. For firefighting purposes, fire hydrants are to be provided within the site to the spacing required by Part B of the Building Regulations including the requirement that hydrants will be provided such each building is within 46 meters of a hydrant.

Refer to drawing 12031-2003 and 12031-2002 which outlines the details of the proposed water supply network.

Figure 5.1-Typical Detail of a below ground static storage tank



6. ROADS

All internal roads of the development have been designed in accordance with the requirements of Design Manual for Urban Roads and Streets and the Recommendations for Site Development Works.

Road levels for the site have been derived taking cognisance of the existing topography and ground conditions. All roads shall be constructed on a suitable bearing stratum with a typical road construction makeup as per detail shown on drawing 12031-2019. All roads will include a 1:40 camber or cross-fall. The longitudinal gradients of all roads lie between 2.5% and 1% to ensure adequate surface water drainage is achieved.

Gullies are located, at a minimum, every 200m² with local low points allowing for double gullies as per Recommendations for Site Development Works for Housing Areas to ensure surface water drainage will not be blocked.

Site A

Vehicular access to **Site A** will be via an entrance to the north of the site from An Cimín Mór Road. The main access road within the site is proposed to be 4m wide. Refer to drawing 12031-2005 for roads layout.

Tactile paving is proposed to be installed at pedestrian crossings within the development and at the main site entrance to provide safe pedestrian movements. A shared active track is proposed on the western side of the site to provide future linkage between **Site B** and **Site A**, in line with Galway City Council development plans for the site. Drop kerbs and tactile paving at the entrance will allow for full linkage for visually impaired and less-able pedestrians and ease of access across the entrance and into the site. Provision for connection to future neighbouring developments has been allowed for within the layout.

All footways are interconnected within the site, with links to each residential unit. Footpaths have been designed to connect with the proposed active track that will link **Site A** and **Site B** into the existing An Cimín Mór Road.

A visibility splay of 23m was achieved at the proposed entrance of the site and in the entrance junction as per Design Manual for Urban Roads and Streets section 4.4.5. The 23m sightlines is required for a 30kph design speed of An Cimín Mór Road. This is for the Stopping Site Distances for forward visibility, as per section 4.4.4 of the Design Manual for Urban Roads.

Extension of the footpath along the external public road has been provided for within the design to allow for connectivity into the existing footpaths. This will regularise the pedestrian provision along the entire length of the road frontage boundary.

Site B

Vehicular access to **site B** will be via an entrance to the north of the site from An Cimín Mór Road. The main access road within the site is proposed to be 5.5m wide. Refer to drawing 12031-2004 for roads layout.

Tactile paving is proposed to be installed at pedestrian crossings within the development and at the main site entrance to provide safe pedestrian movements. A shared active track is proposed on the southern side of the site to provide future linkage between **Site B** and **Site A**, in line with Galway City Council development plans for the site. The use of shared surfaces and a pedestrian crossing point along with strategically positioned drop kerbs and tactile paving will allow for full

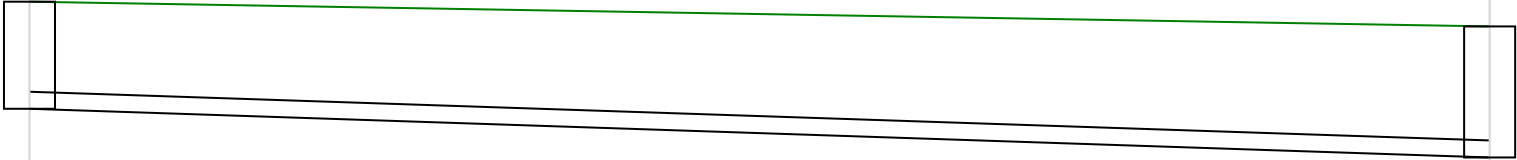
linkage for visually impaired and less-able pedestrians while also prioritising pedestrian movements over vehicular movements on the southernmost area of the site. Provision for connection to future neighbouring developments has been allowed for within the layout.

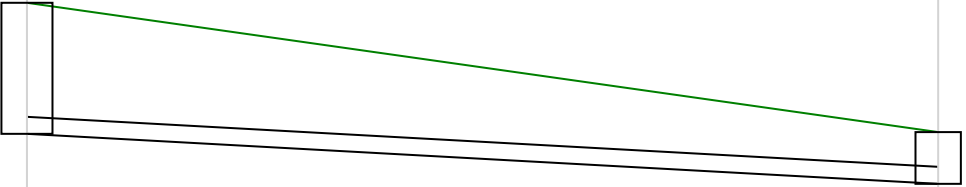
All footways are interconnected within the site, with links to each block of residential units. A cul-de-sac with a shared surface will provide access and turning space for refuse vehicle and fire tender vehicle.

A visibility splay of 23m was achieved at the proposed entrance of the site and in the entrance junction as per Design Manual for Urban Roads and Streets section 4.4.5. The 23m sightlines is required from a 30kph design speed of An Cimín Mór Road. This is for the Stopping Site Distances for forward visibility, as per section 4.4.4 of the Design Manual for Urban Roads.

Extension of the footpath along the external public road has been provided for within the design to allow for connectivity into the existing footpaths. This will regularise the pedestrian provision along the entire length of the road frontage boundary.

Appendix A – FOUL NETWORK DESIGN AND CALCULATIONS

Node Name	F09	F10
A4 drawing Hor Scale 200 Ver Scale 100 Datum (m) 14.000		
	Link Name	1.000
	Section Type	225mm
	Slope (1:X)	60.0
	Cover Level (m)	20.826
Invert Level (m)	19.410	18.766
Length (m)	38.617	

Node Name	F10	F11
A4 drawing Hor Scale 200 Ver Scale 100 Datum (m) 13.000		
Link Name	1.001	
Section Type	225mm	
Slope (1:X)	36.5	
Cover Level (m)	20.499	18.789
Invert Level (m)	18.766	18.105
Length (m)	24.099	

Design Settings

Frequency of use (kDU)	0.50	Minimum Velocity (m/s)	1.00
Flow per dwelling per day (l/day)	450	Connection Type	Level Soffits
Domestic Flow (l/s/ha)	0.0	Minimum Backdrop Height (m)	1.000
Industrial Flow (l/s/ha)	0.0	Preferred Cover Depth (m)	1.200
Additional Flow (%)	0	Include Intermediate Ground	✓

Nodes

Name	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
F09	20.826	1350	524885.242	724344.782	1.416
F10	20.499	1350	524857.593	724317.823	1.733
F11	18.789	1200	524874.721	724300.870	0.684

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)
1.000	F09	F10	38.617	1.500	19.410	18.766	0.644	60.0	225
1.001	F10	F11	24.099	1.500	18.766	18.105	0.661	36.5	225

Name	Pro Vel @ 1/3 Q (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Dwellings (ha)	Σ Units (ha)	Σ Add Inflow (ha)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.000	1.484	59.0	0.0	1.191	1.508	0.000	0	0.0	0.0	0	0.000
1.001	0.000	1.904	75.7	0.0	1.508	0.459	0.000	0	0.0	0.0	0	0.000

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	38.617	60.0	225	Circular	20.826	19.410	1.191	20.499	18.766	1.508
1.001	24.099	36.5	225	Circular	20.499	18.766	1.508	18.789	18.105	0.459

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	F09	1350	Manhole	Adoptable	F10	1350	Manhole	Adoptable
1.001	F10	1350	Manhole	Adoptable	F11	1200	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
F09	524885.242	724344.782	20.826	1.416	1350		0	1.000	19.410	225
F10	524857.593	724317.823	20.499	1.733	1350		1	1.000	18.766	225
							0	1.001	18.766	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
F11	524874.721	724300.870	18.789	0.684	1200	1 	1	1.001	18.105	225

Simulation Settings

Analysis Speed	Normal	Drain Down Time (mins)	60
Skip Steady State	x	Foul Event Duration (mins)	15

Storm Durations

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

Results for Foul Event Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
Foul Event	F09	1	19.410	0.000	0.0	0.0000	0.0000	OK
Foul Event	F10	1	18.766	0.000	0.0	0.0000	0.0000	OK
Foul Event	F11	1	18.105	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Foul Event	F09	1.000	F10	0.0	0.000	0.000	0.0000	
Foul Event	F10	1.001	F11	0.0	0.000	0.000	0.0000	0.0

Design Settings

Frequency of use (kDU)	0.50	Minimum Velocity (m/s)	1.00
Flow per dwelling per day (l/day)	450	Connection Type	Level Soffits
Domestic Flow (l/s/ha)	0.0	Minimum Backdrop Height (m)	1.000
Industrial Flow (l/s/ha)	0.0	Preferred Cover Depth (m)	1.200
Additional Flow (%)	0	Include Intermediate Ground	✓

Nodes

Name	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
F12	21.965	1350	524885.008	724360.499	1.817
F42	22.320	1350	524890.433	724370.161	1.350
F13	22.128	1200	524893.864	724365.111	2.229
F41	20.660	1350	524909.528	724338.290	1.625

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)
1.000	F12	F13	9.985	1.500	20.148	19.899	0.249	40.1	225
2.000	F42	F13	6.105	1.500	20.970	19.974	0.996	6.1	150
1.001	F13	F41	31.060	1.500	19.899	19.035	0.864	35.9	150

Name	Pro Vel @ 1/3 Q (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Dwellings (ha)	Σ Units (ha)	Σ Add Inflow (ha)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.000	1.815	72.2	0.0	1.592	2.004	0.000	0	0.0	0.0	0	0.000
2.000	0.000	3.553	62.8	0.0	1.200	2.004	0.000	0	0.0	0.0	0	0.000
1.001	0.000	1.464	25.9	0.0	2.079	1.475	0.000	0	0.0	0.0	0	0.000

Pipeline Schedule

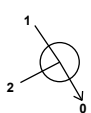
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	9.985	40.1	225	Circular	21.965	20.148	1.592	22.128	19.899	2.004
2.000	6.105	6.1	150	Circular	22.320	20.970	1.200	22.128	19.974	2.004
1.001	31.060	35.9	150	Circular	22.128	19.899	2.079	20.660	19.035	1.475

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	F12	1350	Manhole	Adoptable	F13	1200	Manhole	Adoptable
2.000	F42	1350	Manhole	Adoptable	F13	1200	Manhole	Adoptable
1.001	F13	1200	Manhole	Adoptable	F41	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
F12	524885.008	724360.499	21.965	1.817	1350		0	1.000	20.148	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
F42	524890.433	724370.161	22.320	1.350	1350	 0	2.000	20.970	150
F13	524893.864	724365.111	22.128	2.229	1200	 1 2 0	2.000 1.000	19.974 19.899	150 225
						0	1.001	19.899	150
F41	524909.528	724338.290	20.660	1.625	1350	 1	1.001	19.035	150

Simulation Settings

Analysis Speed	Normal	Drain Down Time (mins)	60
Skip Steady State	x	Foul Event Duration (mins)	15

Storm Durations

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

Node S55 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	0.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	53.9	0.0	0.350	54.3	0.0

Node S08 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	0.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	86.1	0.0	1.280	86.5	0.0

Results for Foul Event Critical Storm Duration. Lowest mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
Foul Event	F12	1	20.148	0.000	0.0	0.0000	0.0000	OK
Foul Event	F42	1	20.970	0.000	0.0	0.0000	0.0000	OK
Foul Event	F13	1	19.899	0.000	0.0	0.0000	0.0000	OK
Foul Event	F41	1	19.035	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Foul Event	F12	1.000	F13	0.0	0.000	0.000	0.0000	
Foul Event	F42	2.000	F13	0.0	0.000	0.000	0.0000	
Foul Event	F13	1.001	F41	0.0	0.000	0.000	0.0000	0.0

Design Settings

Frequency of use (kDU)	0.50	Minimum Velocity (m/s)	1.00
Flow per dwelling per day (l/day)	450	Connection Type	Level Soffits
Domestic Flow (l/s/ha)	0.0	Minimum Backdrop Height (m)	1.000
Industrial Flow (l/s/ha)	0.0	Preferred Cover Depth (m)	1.200
Additional Flow (%)	0	Include Intermediate Ground	✓

Nodes

Name	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
F12	21.965	1350	524885.008	724360.499	1.817
F42	22.320	1350	524890.433	724370.161	1.350
F13	22.128	1200	524893.864	724365.111	2.229
F41	20.660	1350	524909.528	724338.290	1.625

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)
1.000	F12	F13	9.985	1.500	20.148	19.899	0.249	40.1	225
2.000	F42	F13	6.105	1.500	20.970	19.974	0.996	6.1	150
1.001	F13	F41	31.060	1.500	19.899	19.035	0.864	35.9	150

Name	Pro Vel @ 1/3 Q (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Dwellings (ha)	Σ Units (ha)	Σ Add Inflow (ha)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.000	1.815	72.2	0.0	1.592	2.004	0.000	0	0.0	0.0	0	0.000
2.000	0.000	3.553	62.8	0.0	1.200	2.004	0.000	0	0.0	0.0	0	0.000
1.001	0.000	1.464	25.9	0.0	2.079	1.475	0.000	0	0.0	0.0	0	0.000

Pipeline Schedule

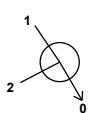
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	9.985	40.1	225	Circular	21.965	20.148	1.592	22.128	19.899	2.004
2.000	6.105	6.1	150	Circular	22.320	20.970	1.200	22.128	19.974	2.004
1.001	31.060	35.9	150	Circular	22.128	19.899	2.079	20.660	19.035	1.475

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	F12	1350	Manhole	Adoptable	F13	1200	Manhole	Adoptable
2.000	F42	1350	Manhole	Adoptable	F13	1200	Manhole	Adoptable
1.001	F13	1200	Manhole	Adoptable	F41	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
F12	524885.008	724360.499	21.965	1.817	1350		0	1.000	20.148	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
F42	524890.433	724370.161	22.320	1.350	1350	 0	2.000	20.970	150
F13	524893.864	724365.111	22.128	2.229	1200	 1 2 0	2.000 1.000	19.974 19.899	150 225
						0	1.001	19.899	150
F41	524909.528	724338.290	20.660	1.625	1350	 1	1.001	19.035	150

Simulation Settings

Analysis Speed	Normal	Drain Down Time (mins)	60
Skip Steady State	x	Foul Event Duration (mins)	15

Storm Durations

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

Node S55 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	0.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	53.9	0.0	0.350	54.3	0.0

Node S08 Depth/Area Storage Structure

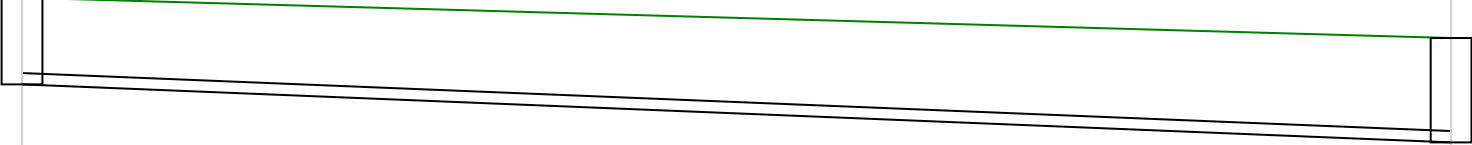
Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	0.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

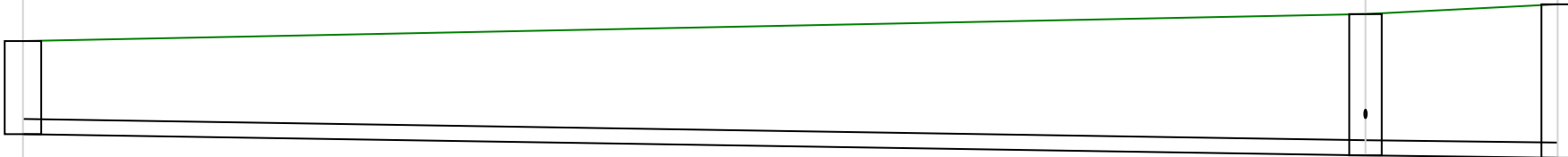
Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	86.1	0.0	1.280	86.5	0.0

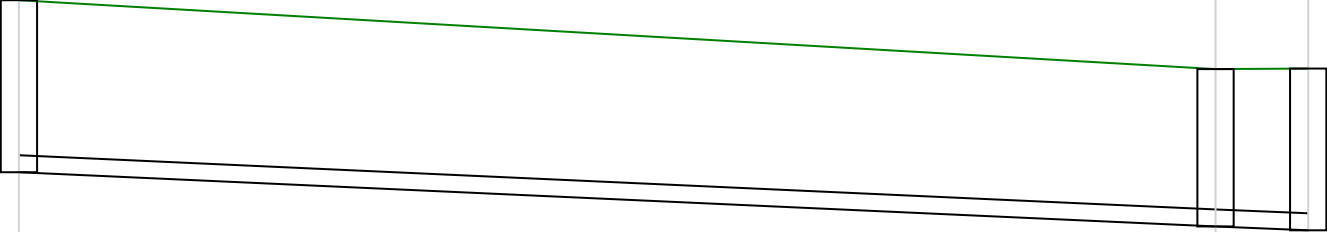
Results for Foul Event Critical Storm Duration. Lowest mass balance: 100.00%

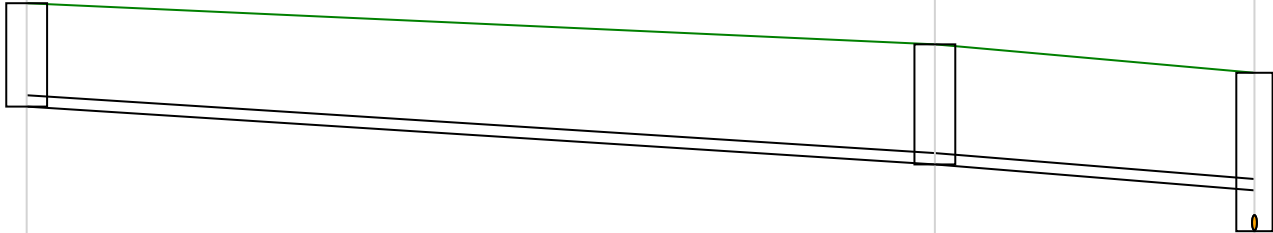
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
Foul Event	F12	1	20.148	0.000	0.0	0.0000	0.0000	OK
Foul Event	F42	1	20.970	0.000	0.0	0.0000	0.0000	OK
Foul Event	F13	1	19.899	0.000	0.0	0.0000	0.0000	OK
Foul Event	F41	1	19.035	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Foul Event	F12	1.000	F13	0.0	0.000	0.000	0.0000	
Foul Event	F42	2.000	F13	0.0	0.000	0.000	0.0000	
Foul Event	F13	1.001	F41	0.0	0.000	0.000	0.0000	0.0

Node Name	F04	F05
A4 drawing Hor Scale 250 Ver Scale 100 Datum (m) 17.000		
	Link Name	1.000
	Section Type	150mm
	Slope (1:X)	61.6
	Cover Level (m)	23.733
Invert Level (m)	22.587	21.820
Length (m)	47.244	

Node Name	F05			F03	F06
A4 drawing Hor Scale 250 Ver Scale 100 Datum (m) 17.000					
	Link Name			1.001	1.002
	Section Type			225mm	225mm
	Slope (1:X)			157.5	202.9
	Cover Level (m)	23.200			23.745
	Invert Level (m)	21.820	21.505	21.505	21.470
	Length (m)	49.619			7.102

Node Name	F06			F07	F08
A4 drawing Hor Scale 250 Ver Scale 100 Datum (m) 16.000					
	Link Name			1.003	1.004
	Section Type			225mm	225mm
	Slope (1:X)			55.2	60.1
	Cover Level (m)			23.745	22.841
Invert Level (m)	21.470				20.753
					20.753
					20.702
Length (m)	39.558			3.064	

Node Name	F01	F02	F03
A4 drawing Hor Scale 250 Ver Scale 100 Datum (m) 17.000			
Link Name	2.000		2.001
Section Type	150mm		150mm
Slope (1:X)	39.2		30.8
Cover Level (m)	24.520	23.976	23.600
Invert Level (m)	23.153	22.388 22.388	22.045
Length (m)	30.024		10.565

Design Settings

Frequency of use (kDU)	0.50	Minimum Velocity (m/s)	1.00
Flow per dwelling per day (l/day)	450	Connection Type	Level Soffits
Domestic Flow (l/s/ha)	0.0	Minimum Backdrop Height (m)	1.000
Industrial Flow (l/s/ha)	0.0	Preferred Cover Depth (m)	1.200
Additional Flow (%)	0	Include Intermediate Ground	✓

Nodes

Name	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
F04	23.733	1350	524780.177	724431.131	1.146
F05	23.200	1350	524808.385	724393.233	1.380
F01	24.520	1350	524823.122	724458.887	1.367
F02	23.976	1350	524839.990	724434.049	1.588
F03	23.600	1200	524846.124	724425.448	2.095
F06	23.745	1200	524852.959	724423.518	2.275
F07	22.834	1200	524874.891	724390.597	2.081
F08	22.841	1200	524877.955	724390.548	2.139

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)
1.000	F04	F05	47.244	1.500	22.587	21.820	0.767	61.6	150
1.001	F05	F03	49.619	1.500	21.820	21.505	0.315	157.5	225
2.000	F01	F02	30.024	1.500	23.153	22.388	0.765	39.2	150
2.001	F02	F03	10.565	1.500	22.388	22.045	0.343	30.8	150
1.002	F03	F06	7.102	1.500	21.505	21.470	0.035	202.9	225
1.003	F06	F07	39.558	1.500	21.470	20.753	0.717	55.2	225
1.004	F07	F08	3.064	1.500	20.753	20.702	0.051	60.1	225

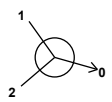
Name	Pro Vel @ 1/3 Q (m/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Dwellings (ha)	Σ Units (ha)	Σ Add Inflow (ha)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	0.000	1.117	19.7	0.0	0.996	1.230	0.000	0	0.0	0.0	0	0.000
1.001	0.000	0.913	36.3	0.0	1.155	1.870	0.000	0	0.0	0.0	0	0.000
2.000	0.000	1.401	24.8	0.0	1.217	1.438	0.000	0	0.0	0.0	0	0.000
2.001	0.000	1.582	28.0	0.0	1.438	1.405	0.000	0	0.0	0.0	0	0.000
1.002	0.000	0.804	32.0	0.0	1.870	2.050	0.000	0	0.0	0.0	0	0.000
1.003	0.000	1.547	61.5	0.0	2.050	1.856	0.000	0	0.0	0.0	0	0.000
1.004	0.000	1.482	58.9	0.0	1.856	1.914	0.000	0	0.0	0.0	0	0.000

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	47.244	61.6	150	Circular	23.733	22.587	0.996	23.200	21.820	1.230
1.001	49.619	157.5	225	Circular	23.200	21.820	1.155	23.600	21.505	1.870
2.000	30.024	39.2	150	Circular	24.520	23.153	1.217	23.976	22.388	1.438
2.001	10.565	30.8	150	Circular	23.976	22.388	1.438	23.600	22.045	1.405
1.002	7.102	202.9	225	Circular	23.600	21.505	1.870	23.745	21.470	2.050
1.003	39.558	55.2	225	Circular	23.745	21.470	2.050	22.834	20.753	1.856
1.004	3.064	60.1	225	Circular	22.834	20.753	1.856	22.841	20.702	1.914

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	F04	1350	Manhole	Adoptable	F05	1350	Manhole	Adoptable
1.001	F05	1350	Manhole	Adoptable	F03	1200	Manhole	Adoptable
2.000	F01	1350	Manhole	Adoptable	F02	1350	Manhole	Adoptable
2.001	F02	1350	Manhole	Adoptable	F03	1200	Manhole	Adoptable
1.002	F03	1200	Manhole	Adoptable	F06	1200	Manhole	Adoptable
1.003	F06	1200	Manhole	Adoptable	F07	1200	Manhole	Adoptable
1.004	F07	1200	Manhole	Adoptable	F08	1200	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
F04	524780.177	724431.131	23.733	1.146	1350				
						0	1.000	22.587	150
F05	524808.385	724393.233	23.200	1.380	1350		1	1.000	21.820
						0	1.001	21.820	225
F01	524823.122	724458.887	24.520	1.367	1350				
						0	2.000	23.153	150
F02	524839.990	724434.049	23.976	1.588	1350		1	2.000	22.388
						0	2.001	22.388	150
F03	524846.124	724425.448	23.600	2.095	1200		1	2.001	22.045
						2	1.001	21.505	225
						0	1.002	21.505	225
F06	524852.959	724423.518	23.745	2.275	1200		1	1.002	21.470
						0	1.003	21.470	225
F07	524874.891	724390.597	22.834	2.081	1200		1	1.003	20.753
						0	1.004	20.753	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
F08	524877.955	724390.548	22.841	2.139	1200	1 	1.004	20.702	225

Simulation Settings

Analysis Speed	Normal	Drain Down Time (mins)	60
Skip Steady State	x	Foul Event Duration (mins)	15

Storm Durations

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

Node S13 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	0.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.43	Time to half empty (mins)	

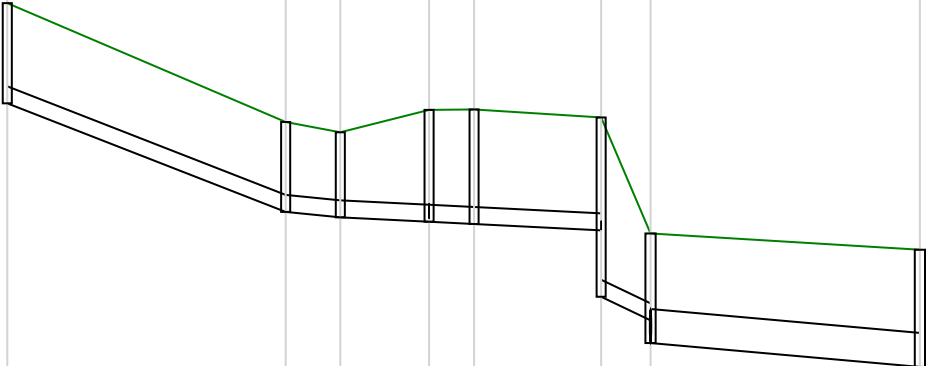
Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	42.0	0.0	0.384	42.3	0.0

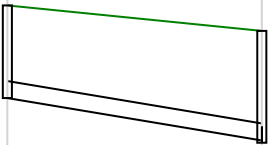
Results for Foul Event Critical Storm Duration. Lowest mass balance: 100.00%

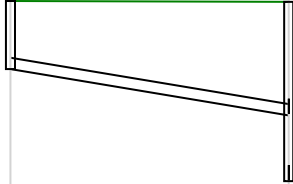
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
Foul Event	F04	1	22.587	0.000	0.0	0.0000	0.0000	OK
Foul Event	F05	1	21.820	0.000	0.0	0.0000	0.0000	OK
Foul Event	F01	1	23.153	0.000	0.0	0.0000	0.0000	OK
Foul Event	F02	1	22.388	0.000	0.0	0.0000	0.0000	OK
Foul Event	F03	1	21.505	0.000	0.0	0.0000	0.0000	OK
Foul Event	F06	1	21.470	0.000	0.0	0.0000	0.0000	OK
Foul Event	F07	1	20.753	0.000	0.0	0.0000	0.0000	OK
Foul Event	F08	1	20.702	0.000	0.0	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
Foul Event	F04	1.000	F05	0.0	0.000	0.000	0.0000	
Foul Event	F05	1.001	F03	0.0	0.000	0.000	0.0000	
Foul Event	F01	2.000	F02	0.0	0.000	0.000	0.0000	
Foul Event	F02	2.001	F03	0.0	0.000	0.000	0.0000	
Foul Event	F03	1.002	F06	0.0	0.000	0.000	0.0000	
Foul Event	F06	1.003	F07	0.0	0.000	0.000	0.0000	
Foul Event	F07	1.004	F08	0.0	0.000	0.000	0.0000	0.0

Appendix B - STORM SEWER DESIGN AND CALCULATIONS

Node Name	S11	S12	S13	S15	S78	S17	S83	S77
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 14.000 								
Link Name	1.000	1.001	1.002	1.003	1.004	1.005	1.006	
Section Type	225mm	225mm	225mm	225mm	225mm	225mm	450mm	
Slope (1:X)	25.6	100.3	202.4	198.3	200.0	20.9	112.7	
Cover Level (m)	21.901	20.329	20.193	20.489	20.495	20.389	18.855	18.640
Invert Level (m)	20.576	19.140	19.140	19.068	19.010	18.918	17.406	17.090
Length (m)	36.813	7.225	11.739	5.94	16.803	6.53	35.618	

Node Name	S14	S15
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 14.000		
Link Name	2.000	
Section Type	225mm	
Slope (1:X)	60.0	
Cover Level (m)	20.826	20.489
Invert Level (m)	19.601	19.040
Length (m)	33.648	

Node Name	S85	S17
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 13.000		
Link Name	3.000	
Section Type	150mm	
Slope (1:X)	60.0	
Cover Level (m)	20.400	20.389
Invert Level (m)	19.500	18.887
Length (m)	36.795	

Node Name	58583	
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 12.000		
	Link Name	4.0
	Section Type	45
	Slope (1:X)	11
	Cover Level (m)	18.889 18.855
Invert Level (m)	17.406	
Length (m)	3.7	

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	15.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	55.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	Scotland and Ireland	Connection Type	Level Soffits
M5-60 (mm)	15.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.242	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Adoptable Manhole Type

Max Width (mm)	Diameter (mm)	Max Width (mm)	Diameter (mm)
374	1200	749	1500
499	1350	900	1800

>900 Link+900 mm

Max Depth (m)	Diameter (mm)	Max Depth (m)	Diameter (mm)
1.500	1050	99.999	1200

Circular Link Type

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

Available Diameters (mm)

100 | 150

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S11	0.002	5.00	21.901	1200	524883.493	724360.608	1.325
S12	0.014	5.00	20.329	1200	524855.176	724337.084	1.189
S13			20.193	1200	524853.391	724330.083	1.125
S14	0.027	5.00	20.826	1200	524885.242	724344.782	1.225
S15	0.004	5.00	20.489	1200	524861.160	724321.283	1.479
S78	0.025	5.00	20.495	1200	524856.903	724317.128	1.515
S85	0.011	5.00	20.400	1200	524895.155	724330.774	0.900
S17			20.389	1200	524868.718	724305.182	2.371
S81		5.00	18.889	1350	524875.587	724302.940	1.449
S83			18.855	1350	524872.971	724300.222	1.449
S77			18.640	1350	524848.272	724274.560	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	S11	S12	36.813	0.600	20.576	19.140	1.436	25.6	225	5.24	33.9
1.001	S12	S13	7.225	0.600	19.140	19.068	0.072	100.3	225	5.33	33.7
1.002	S13	S15	11.739	0.600	19.068	19.010	0.058	202.4	225	5.54	33.3
2.000	S14	S15	33.648	0.600	19.601	19.040	0.561	60.0	225	5.33	33.7
1.003	S15	S78	5.949	0.600	19.010	18.980	0.030	198.3	225	5.65	33.0
1.004	S78	S17	16.803	0.600	18.980	18.896	0.084	200.0	225	5.95	32.4
3.000	S85	S17	36.795	0.600	19.500	18.887	0.613	60.0	150	5.47	33.4
1.005	S17	S83	6.533	0.600	18.018	17.706	0.312	20.9	225	5.99	32.3
4.003	S81	S83	3.772	0.600	17.440	17.406	0.034	110.9	450	5.03	34.4
1.006	S83	S77	35.618	0.600	17.406	17.090	0.316	112.7	450	6.30	31.7

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)	Pro Depth (mm)	Pro Velocity (m/s)
1.000	2.594	103.1	0.2	1.100	0.964	0.002	0.0	7	0.455
1.001	1.305	51.9	1.4	0.964	0.900	0.015	0.0	25	0.564
1.002	0.915	36.4	1.4	0.900	1.254	0.015	0.0	30	0.445
2.000	1.692	67.3	2.4	1.000	1.224	0.027	0.0	29	0.812
1.003	0.925	36.8	4.1	1.254	1.290	0.046	0.0	51	0.613
1.004	0.921	36.6	6.3	1.290	1.268	0.072	0.0	63	0.691
3.000	1.300	23.0	1.0	0.750	1.352	0.011	0.0	21	0.639
1.005	2.872	114.2	7.2	2.146	0.924	0.083	0.0	38	1.623
4.003	1.929	306.8	0.0	0.999	0.999	0.000	0.0	0	0.000
1.006	1.914	304.4	7.1	0.999	1.100	0.083	0.0	47	0.813

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	36.813	25.6	225	Circular	21.901	20.576	1.100	20.329	19.140	0.964
1.001	7.225	100.3	225	Circular	20.329	19.140	0.964	20.193	19.068	0.900
1.002	11.739	202.4	225	Circular	20.193	19.068	0.900	20.489	19.010	1.254
2.000	33.648	60.0	225	Circular	20.826	19.601	1.000	20.489	19.040	1.224
1.003	5.949	198.3	225	Circular	20.489	19.010	1.254	20.495	18.980	1.290
1.004	16.803	200.0	225	Circular	20.495	18.980	1.290	20.389	18.896	1.268
3.000	36.795	60.0	150	Circular	20.400	19.500	0.750	20.389	18.887	1.352
1.005	6.533	20.9	225	Circular	20.389	18.018	2.146	18.855	17.706	0.924

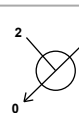
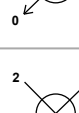
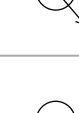
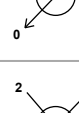
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S11	1200	Manhole	Adoptable	S12	1200	Manhole	Adoptable
1.001	S12	1200	Manhole	Adoptable	S13	1200	Manhole	Adoptable
1.002	S13	1200	Manhole	Adoptable	S15	1200	Manhole	Adoptable
2.000	S14	1200	Manhole	Adoptable	S15	1200	Manhole	Adoptable
1.003	S15	1200	Manhole	Adoptable	S78	1200	Manhole	Adoptable
1.004	S78	1200	Manhole	Adoptable	S17	1200	Manhole	Adoptable
3.000	S85	1200	Manhole	Adoptable	S17	1200	Manhole	Adoptable
1.005	S17	1200	Manhole	Adoptable	S83	1350	Manhole	Adoptable

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
4.003	3.772	110.9	450	Circular	18.889	17.440	0.999	18.855	17.406	0.999
1.006	35.618	112.7	450	Circular	18.855	17.406	0.999	18.640	17.090	1.100

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.003	S81	1350	Manhole	Adoptable	S83	1350	Manhole	Adoptable
1.006	S83	1350	Manhole	Adoptable	S77	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S11	524883.493	724360.608	21.901	1.325	1200		0	1.000	20.576	225
S12	524855.176	724337.084	20.329	1.189	1200		1	1.000	19.140	225
							0	1.001	19.140	225
S13	524853.391	724330.083	20.193	1.125	1200		1	1.001	19.068	225
							0	1.002	19.068	225
S14	524885.242	724344.782	20.826	1.225	1200		0	2.000	19.601	225
S15	524861.160	724321.283	20.489	1.479	1200		1	2.000	19.040	225
							2	1.002	19.010	225
							0	1.003	19.010	225
S78	524856.903	724317.128	20.495	1.515	1200		1	1.003	18.980	225
							0	1.004	18.980	225
S85	524895.155	724330.774	20.400	0.900	1200		0	3.000	19.500	150
S17	524868.718	724305.182	20.389	2.371	1200		1	3.000	18.887	150
							2	1.004	18.896	225
							0	1.005	18.018	225
S81	524875.587	724302.940	18.889	1.449	1350		0	4.003	17.440	450
S83	524872.971	724300.222	18.855	1.449	1350		1	4.003	17.406	450
							2	1.005	17.706	225
							0	1.006	17.406	450

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S77	524848.272	724274.560	18.640	1.550	1350	 1	1.006	17.090	450

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	Scotland and Ireland	Drain Down Time (mins)	60
M5-60 (mm)	15.000	Additional Storage (m ³ /ha)	0.0
Ratio-R	0.242	Starting Level (m)	
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
20	10	0	0
100	20	0	0

Node S17 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	18.018	Product Number	CTL-SHE-0055-2000-2371-2000
Design Depth (m)	2.371	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	2.0	Min Node Diameter (mm)	1200

Node S13 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	19.068	Depth (m)	0.384
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	6.000	Number Required	1
Porosity	0.43	Pit Length (m)	7.000		

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Approval Settings

Node Size	✓	Accuracy (m)	1.000
Node Losses	✓	Crossings	✓
Link Size	✓	Cover Depth	✓
Minimum Diameter (mm)	150	Minimum Cover Depth (m)	
Link Length	✓	Maximum Cover Depth (m)	3.000
Maximum Length (m)	100.000	Backdrops	✓
Coordinates	✓	Minimum Backdrop Height (m)	

Approval Settings

Maximum Backdrop Height (m)	1.500	Return Period (years)	
Full Bore Velocity	✓	Maximum Surcharged Depth (m)	0.100
Minimum Full Bore Velocity (m/s)		Flooding	✓
Maximum Full Bore Velocity (m/s)	3.000	Return Period (years)	30
Proportional Velocity	✓	Time to Half Empty	x
Return Period (years)		Discharge Rates	✓
Minimum Proportional Velocity (m/s)	0.750	Discharge Volume	✓
Maximum Proportional Velocity (m/s)	3.000	100 year 360 minute (m³)	
Surcharged Depth	✓		

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	76.905	21.762	20 year +10% CC 360 minute summer	28.889	7.434
1 year 15 minute winter	53.969	21.762	20 year +10% CC 360 minute winter	18.779	7.434
1 year 30 minute summer	53.834	15.233	20 year +10% CC 480 minute summer	23.355	6.172
1 year 30 minute winter	37.778	15.233	20 year +10% CC 480 minute winter	15.517	6.172
1 year 60 minute summer	39.164	10.350	20 year +10% CC 600 minute summer	19.524	5.340
1 year 60 minute winter	26.020	10.350	20 year +10% CC 600 minute winter	13.340	5.340
1 year 120 minute summer	26.200	6.924	20 year +10% CC 720 minute summer	17.698	4.743
1 year 120 minute winter	17.406	6.924	20 year +10% CC 720 minute winter	11.894	4.743
1 year 180 minute summer	21.196	5.455	20 year +10% CC 960 minute summer	14.935	3.933
1 year 180 minute winter	13.778	5.455	20 year +10% CC 960 minute winter	9.893	3.933
1 year 240 minute summer	17.416	4.603	20 year +10% CC 1440 minute summer	11.265	3.019
1 year 240 minute winter	11.571	4.603	20 year +10% CC 1440 minute winter	7.571	3.019
1 year 360 minute summer	14.076	3.622	100 year +20% CC 15 minute summer	263.731	74.627
1 year 360 minute winter	9.149	3.622	100 year +20% CC 15 minute winter	185.074	74.627
1 year 480 minute summer	11.541	3.050	100 year +20% CC 30 minute summer	187.361	53.017
1 year 480 minute winter	7.667	3.050	100 year +20% CC 30 minute winter	131.482	53.017
1 year 600 minute summer	9.760	2.670	100 year +20% CC 60 minute summer	134.639	35.581
1 year 600 minute winter	6.669	2.670	100 year +20% CC 60 minute winter	89.451	35.581
1 year 720 minute summer	8.935	2.395	100 year +20% CC 120 minute summer	87.040	23.002
1 year 720 minute winter	6.005	2.395	100 year +20% CC 120 minute winter	57.827	23.002
1 year 960 minute summer	7.699	2.027	100 year +20% CC 180 minute summer	68.649	17.666
1 year 960 minute winter	5.100	2.027	100 year +20% CC 180 minute winter	44.624	17.666
1 year 1440 minute summer	5.922	1.587	100 year +20% CC 240 minute summer	55.285	14.610
1 year 1440 minute winter	3.980	1.587	100 year +20% CC 240 minute winter	36.730	14.610
20 year +10% CC 15 minute summer	171.838	48.624	100 year +20% CC 360 minute summer	43.315	11.147
20 year +10% CC 15 minute winter	120.588	48.624	100 year +20% CC 360 minute winter	28.156	11.147
20 year +10% CC 30 minute summer	120.572	34.118	100 year +20% CC 480 minute summer	34.759	9.186
20 year +10% CC 30 minute winter	84.612	34.118	100 year +20% CC 480 minute winter	23.093	9.186
20 year +10% CC 60 minute summer	86.694	22.911	100 year +20% CC 600 minute summer	28.884	7.900
20 year +10% CC 60 minute winter	57.598	22.911	100 year +20% CC 600 minute winter	19.735	7.900
20 year +10% CC 120 minute summer	56.641	14.969	100 year +20% CC 720 minute summer	26.053	6.983
20 year +10% CC 120 minute winter	37.631	14.969	100 year +20% CC 720 minute winter	17.509	6.983
20 year +10% CC 180 minute summer	45.042	11.591	100 year +20% CC 960 minute summer	21.813	5.744
20 year +10% CC 180 minute winter	29.278	11.591	100 year +20% CC 960 minute winter	14.449	5.744
20 year +10% CC 240 minute summer	36.508	9.648	100 year +20% CC 1440 minute summer	16.271	4.361
20 year +10% CC 240 minute winter	24.255	9.648	100 year +20% CC 1440 minute winter	10.935	4.361

Results for 1 year Critical Storm Duration. Lowest 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	S11	19	20.584	0.008	0.2	0.0085	0.0000	OK
15 minute winter	S12	10	19.169	0.029	1.5	0.0331	0.0000	OK
60 minute winter	S13	48	19.110	0.042	1.8	0.8112	0.0000	OK
15 minute winter	S14	11	19.631	0.030	2.6	0.0340	0.0000	OK
60 minute winter	S15	47	19.111	0.101	2.5	0.1139	0.0000	OK
60 minute winter	S78	47	19.111	0.131	4.0	0.1478	0.0000	OK
15 minute winter	S85	11	19.522	0.022	1.1	0.0246	0.0000	OK
60 minute winter	S17	49	19.110	1.092	4.6	1.2354	0.0000	SURCHARGED
15 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S83	48	17.428	0.022	1.4	0.0318	0.0000	OK
60 minute winter	S77	48	17.112	0.022	1.4	0.0000	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S11	1.000	S12	0.2	0.144	0.002	0.0574	
15 minute winter	S12	1.001	S13	1.5	0.848	0.029	0.0154	
60 minute winter	S13	1.002	S15	-1.1	0.216	-0.031	0.1309	
15 minute winter	S14	2.000	S15	2.5	0.815	0.038	0.1050	
60 minute winter	S15	1.003	S78	2.5	0.431	0.067	0.1223	
60 minute winter	S78	1.004	S17	4.0	0.576	0.108	0.5287	
15 minute winter	S85	3.000	S17	1.0	0.657	0.045	0.3424	
60 minute winter	S17	Hydro-Brake®	S83	1.4				
15 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0053	
60 minute winter	S83	1.006	S77	1.4	0.495	0.005	0.1016	7.0

Results for 20 year +10% CC Critical Storm Duration. Lowest mass balance: 98.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S11	11	20.586	0.010	0.4	0.0117	0.0000	OK
120 minute winter	S12	96	19.358	0.218	1.8	0.2466	0.0000	OK
120 minute winter	S13	98	19.358	0.290	4.6	5.5614	0.0000	SURCHARGED
15 minute winter	S14	10	19.646	0.045	5.9	0.0508	0.0000	OK
120 minute winter	S15	98	19.358	0.348	3.9	0.3934	0.0000	SURCHARGED
120 minute winter	S78	98	19.358	0.378	3.5	0.4272	0.0000	SURCHARGED
15 minute winter	S85	10	19.532	0.032	2.4	0.0363	0.0000	OK
120 minute winter	S17	96	19.358	1.340	4.0	1.5153	0.0000	SURCHARGED
15 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
120 minute winter	S83	98	17.429	0.023	1.5	0.0332	0.0000	OK
120 minute winter	S77	98	17.113	0.023	1.5	0.0000	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S11	1.000	S12	0.4	0.166	0.004	0.1882	
120 minute winter	S12	1.001	S13	1.4	0.538	0.028	0.2860	
120 minute winter	S13	1.002	S15	-3.1	0.202	-0.086	0.4669	
15 minute winter	S14	2.000	S15	5.9	0.991	0.087	0.5530	
120 minute winter	S15	1.003	S78	2.2	0.416	0.059	0.2366	
120 minute winter	S78	1.004	S17	3.5	0.534	0.095	0.6683	
15 minute winter	S85	3.000	S17	2.3	0.724	0.100	0.3745	
120 minute winter	S17	Hydro-Brake®	S83	1.5				
15 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0055	
120 minute winter	S83	1.006	S77	1.5	0.508	0.005	0.1085	14.3

Results for 100 year +20% CC Critical Storm Duration. Lowest mass balance: 96.27%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S11	11	20.588	0.012	0.6	0.0140	0.0000	OK
240 minute winter	S12	180	20.018	0.878	1.6	0.9929	0.0000	SURCHARGED
240 minute winter	S13	180	20.018	0.950	4.2	8.0183	0.0000	FLOOD RISK
240 minute winter	S14	180	20.018	0.417	2.3	0.4713	0.0000	SURCHARGED
240 minute winter	S15	180	20.018	1.008	3.7	1.1398	0.0000	SURCHARGED
240 minute winter	S78	180	20.018	1.038	3.6	1.1736	0.0000	SURCHARGED
240 minute winter	S85	180	20.018	0.518	1.5	0.5854	0.0000	SURCHARGED
240 minute winter	S17	180	20.017	1.999	3.2	2.2614	0.0000	SURCHARGED
15 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S83	184	17.431	0.025	1.9	0.0362	0.0000	OK
240 minute winter	S77	184	17.115	0.025	1.9	0.0000	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S11	1.000	S12	0.6	0.193	0.006	0.6872	
240 minute winter	S12	1.001	S13	1.1	0.498	0.021	0.2873	
240 minute winter	S13	1.002	S15	-3.1	0.198	-0.086	0.4669	
240 minute winter	S14	2.000	S15	2.3	0.631	0.034	1.3382	
240 minute winter	S15	1.003	S78	1.8	0.389	0.049	0.2366	
240 minute winter	S78	1.004	S17	3.2	0.491	0.089	0.6683	
240 minute winter	S85	3.000	S17	0.9	0.453	0.039	0.6478	
240 minute winter	S17	Hydro-Brake®	S83	1.9				
15 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0057	
240 minute winter	S83	1.006	S77	1.9	0.536	0.006	0.1234	26.5

Results for 1 year 15 minute summer. 75 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
15 minute summer	S11	11	20.583	0.007	0.2	0.0084	0.0000	OK
15 minute summer	S12	10	19.169	0.029	1.5	0.0330	0.0000	OK
15 minute summer	S13	15	19.088	0.020	1.5	0.3819	0.0000	OK
15 minute summer	S14	11	19.630	0.029	2.5	0.0333	0.0000	OK
15 minute summer	S15	11	19.056	0.046	3.1	0.0521	0.0000	OK
15 minute summer	S78	17	19.048	0.068	5.3	0.0766	0.0000	OK
15 minute summer	S85	11	19.521	0.021	1.0	0.0240	0.0000	OK
15 minute summer	S17	18	19.048	1.030	6.2	1.1644	0.0000	SURCHARGED
15 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S83	18	17.428	0.022	1.4	0.0315	0.0000	OK
15 minute summer	S77	18	17.112	0.022	1.4	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)
15 minute summer	S11	1.000	S12	0.2	0.129	0.002	0.0618	
15 minute summer	S12	1.001	S13	1.5	0.853	0.029	0.0143	
15 minute summer	S13	1.002	S15	0.6	0.237	0.016	0.0416	
15 minute summer	S14	2.000	S15	2.4	0.805	0.036	0.1020	
15 minute summer	S15	1.003	S78	3.0	0.442	0.082	0.0432	
15 minute summer	S78	1.004	S17	5.2	0.647	0.143	0.3210	
15 minute summer	S85	3.000	S17	1.0	0.647	0.043	0.3375	
15 minute summer	S17	Hydro-Brake®	S83	1.4				
15 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0053	
15 minute summer	S83	1.006	S77	1.4	0.491	0.005	0.0997	3.3

Results for 1 year 15 minute winter. 75 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
15 minute winter	S11	11	20.583	0.007	0.2	0.0084	0.0000	OK
15 minute winter	S12	10	19.169	0.029	1.5	0.0331	0.0000	OK
15 minute winter	S13	15	19.090	0.022	1.5	0.4161	0.0000	OK
15 minute winter	S14	11	19.631	0.030	2.6	0.0340	0.0000	OK
15 minute winter	S15	18	19.072	0.062	3.3	0.0702	0.0000	OK
15 minute winter	S78	17	19.076	0.096	5.6	0.1085	0.0000	OK
15 minute winter	S85	11	19.522	0.022	1.1	0.0246	0.0000	OK
15 minute winter	S17	17	19.072	1.054	6.5	1.1925	0.0000	SURCHARGED
15 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S83	19	17.428	0.022	1.4	0.0316	0.0000	OK
15 minute winter	S77	19	17.112	0.022	1.4	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)
15 minute winter	S11	1.000	S12	0.2	0.127	0.002	0.0621	
15 minute winter	S12	1.001	S13	1.5	0.848	0.029	0.0154	
15 minute winter	S13	1.002	S15	0.7	0.211	0.019	0.0619	
15 minute winter	S14	2.000	S15	2.5	0.815	0.038	0.1050	
15 minute winter	S15	1.003	S78	3.2	0.452	0.087	0.0742	
15 minute winter	S78	1.004	S17	5.6	0.656	0.152	0.4161	
15 minute winter	S85	3.000	S17	1.0	0.657	0.045	0.3424	
15 minute winter	S17	Hydro-Brake®	S83	1.4				
15 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0053	
15 minute winter	S83	1.006	S77	1.4	0.493	0.005	0.1005	3.7

Results for 1 year 30 minute summer. 90 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	S11	19	20.584	0.008	0.2	0.0085	0.0000	OK
30 minute summer	S12	18	19.167	0.027	1.4	0.0309	0.0000	OK
30 minute summer	S13	22	19.091	0.023	1.4	0.4370	0.0000	OK
30 minute summer	S14	18	19.630	0.029	2.4	0.0329	0.0000	OK
30 minute summer	S15	28	19.089	0.079	3.1	0.0890	0.0000	OK
30 minute summer	S78	26	19.089	0.109	5.3	0.1229	0.0000	OK
30 minute summer	S85	18	19.521	0.021	1.0	0.0238	0.0000	OK
30 minute summer	S17	28	19.088	1.070	6.4	1.2104	0.0000	SURCHARGED
30 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S83	28	17.428	0.022	1.4	0.0317	0.0000	OK
30 minute summer	S77	28	17.112	0.022	1.4	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)
30 minute summer	S11	1.000	S12	0.2	0.144	0.002	0.0574	
30 minute summer	S12	1.001	S13	1.4	0.737	0.027	0.0153	
30 minute summer	S13	1.002	S15	0.8	0.211	0.022	0.0817	
30 minute summer	S14	2.000	S15	2.4	0.797	0.035	0.1200	
30 minute summer	S15	1.003	S78	3.2	0.456	0.086	0.0917	
30 minute summer	S78	1.004	S17	5.4	0.643	0.148	0.4607	
30 minute summer	S85	3.000	S17	1.0	0.643	0.042	0.3444	
30 minute summer	S17	Hydro-Brake®	S83	1.4				
30 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0054	
30 minute summer	S83	1.006	S77	1.4	0.493	0.005	0.1009	4.6

Results for 1 year 30 minute winter. 90 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 winter	S11	18	20.583	0.007	0.2	0.0081	0.0000	OK
30 minute winter	S12	18	19.166	0.026	1.3	0.0293	0.0000	OK
30 minute winter	S13	30	19.100	0.032	1.3	0.6068	0.0000	OK
30 minute winter	S14	18	19.629	0.028	2.2	0.0316	0.0000	OK
30 minute winter	S15	27	19.100	0.090	3.0	0.1013	0.0000	OK
30 minute winter	S78	29	19.102	0.122	5.0	0.1375	0.0000	OK
30 minute winter	S85	18	19.520	0.020	0.9	0.0227	0.0000	OK
30 minute winter	S17	28	19.102	1.084	5.9	1.2257	0.0000	SURCHARGED
30 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S83	29	17.428	0.022	1.4	0.0318	0.0000	OK
30 minute winter	S77	29	17.112	0.022	1.4	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)
30 minute winter	S11	1.000	S12	0.2	0.137	0.002	0.0530	
30 minute winter	S12	1.001	S13	1.3	0.702	0.025	0.0155	
30 minute winter	S13	1.002	S15	0.9	0.199	0.025	0.1059	
30 minute winter	S14	2.000	S15	2.2	0.777	0.032	0.1625	
30 minute winter	S15	1.003	S78	3.0	0.451	0.082	0.1086	
30 minute winter	S78	1.004	S17	5.0	0.631	0.138	0.5002	
30 minute winter	S85	3.000	S17	0.9	0.607	0.038	0.3472	
30 minute winter	S17	Hydro-Brake®	S83	1.4				
30 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0054	
30 minute winter	S83	1.006	S77	1.4	0.494	0.005	0.1013	5.1

Results for 1 year 60 minute summer. 120 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 summer	S11	40	20.582	0.006	0.1	0.0063	0.0000	OK
60 minute summer	S12	33	19.164	0.024	1.1	0.0268	0.0000	OK
60 minute summer	S13	46	19.097	0.029	1.3	0.5643	0.0000	OK
60 minute summer	S14	33	19.628	0.027	2.0	0.0302	0.0000	OK
60 minute summer	S15	44	19.099	0.089	2.9	0.1005	0.0000	OK
60 minute summer	S78	45	19.098	0.118	4.6	0.1333	0.0000	OK
60 minute summer	S85	33	19.519	0.019	0.8	0.0215	0.0000	OK
60 minute summer	S17	44	19.098	1.080	5.4	1.2213	0.0000	SURCHARGED
60 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S83	45	17.428	0.022	1.4	0.0318	0.0000	OK
60 minute summer	S77	45	17.112	0.022	1.4	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)
60 minute summer	S11	1.000	S12	0.1	0.147	0.001	0.0453	
60 minute summer	S12	1.001	S13	1.1	0.594	0.021	0.0145	
60 minute summer	S13	1.002	S15	-0.8	0.199	-0.021	0.1023	
60 minute summer	S14	2.000	S15	2.0	0.755	0.030	0.1548	
60 minute summer	S15	1.003	S78	2.8	0.449	0.077	0.1050	
60 minute summer	S78	1.004	S17	4.7	0.621	0.128	0.4907	
60 minute summer	S85	3.000	S17	0.8	0.589	0.034	0.3449	
60 minute summer	S17	Hydro-Brake®	S83	1.4				
60 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0054	
60 minute summer	S83	1.006	S77	1.4	0.494	0.005	0.1012	6.2

Results for 1 year 60 minute winter. 120 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	S11	40	20.582	0.006	0.1	0.0063	0.0000	OK
60 minute winter	S12	31	19.161	0.021	0.9	0.0241	0.0000	OK
60 minute winter	S13	48	19.110	0.042	1.8	0.8112	0.0000	OK
60 minute winter	S14	33	19.625	0.024	1.6	0.0272	0.0000	OK
60 minute winter	S15	47	19.111	0.101	2.5	0.1139	0.0000	OK
60 minute winter	S78	47	19.111	0.131	4.0	0.1478	0.0000	OK
60 minute winter	S85	36	19.517	0.017	0.6	0.0190	0.0000	OK
60 minute winter	S17	49	19.110	1.092	4.6	1.2354	0.0000	SURCHARGED
60 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S83	48	17.428	0.022	1.4	0.0318	0.0000	OK
60 minute winter	S77	48	17.112	0.022	1.4	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)
60 minute winter	S11	1.000	S12	0.1	0.147	0.001	0.0394	
60 minute winter	S12	1.001	S13	0.9	0.551	0.017	0.0218	
60 minute winter	S13	1.002	S15	-1.1	0.216	-0.031	0.1309	
60 minute winter	S14	2.000	S15	1.6	0.706	0.024	0.1955	
60 minute winter	S15	1.003	S78	2.5	0.431	0.067	0.1223	
60 minute winter	S78	1.004	S17	4.0	0.576	0.108	0.5287	
60 minute winter	S85	3.000	S17	0.6	0.550	0.026	0.3436	
60 minute winter	S17	Hydro-Brake®	S83	1.4				
60 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0054	
60 minute winter	S83	1.006	S77	1.4	0.495	0.005	0.1016	7.0

Results for 1 year 120 minute summer. 180 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	S11	72	20.582	0.006	0.1	0.0063	0.0000	OK
120 minute summer	S12	64	19.160	0.020	0.8	0.0225	0.0000	OK
120 minute summer	S13	80	19.099	0.031	0.9	0.5930	0.0000	OK
120 minute summer	S14	64	19.624	0.023	1.4	0.0256	0.0000	OK
120 minute summer	S15	80	19.099	0.089	2.2	0.1003	0.0000	OK
120 minute summer	S78	80	19.099	0.119	3.5	0.1350	0.0000	OK
120 minute summer	S85	64	19.517	0.017	0.6	0.0189	0.0000	OK
120 minute summer	S17	78	19.099	1.081	4.0	1.2227	0.0000	SURCHARGED
120 minute summer	S81	2	17.440	0.000	0.0	0.0000	0.0000	OK
120 minute summer	S83	80	17.428	0.022	1.4	0.0318	0.0000	OK
120 minute summer	S77	80	17.112	0.022	1.4	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)
120 minute summer	S11	1.000	S12	0.1	0.144	0.001	0.0359	
120 minute summer	S12	1.001	S13	0.8	0.495	0.015	0.0145	
120 minute summer	S13	1.002	S15	0.7	0.210	0.018	0.1045	
120 minute summer	S14	2.000	S15	1.4	0.680	0.021	0.1569	
120 minute summer	S15	1.003	S78	2.3	0.418	0.061	0.1068	
120 minute summer	S78	1.004	S17	3.4	0.564	0.094	0.4965	
120 minute summer	S85	3.000	S17	0.6	0.511	0.026	0.3421	
120 minute summer	S17	Hydro-Brake®	S83	1.4				
120 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0054	
120 minute summer	S83	1.006	S77	1.4	0.494	0.005	0.1013	8.4

Results for 1 year 120 minute winter. 180 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	S11	68	20.582	0.006	0.1	0.0063	0.0000	OK
120 minute winter	S12	56	19.158	0.018	0.6	0.0198	0.0000	OK
120 minute winter	S13	86	19.107	0.039	1.0	0.7525	0.0000	OK
120 minute winter	S14	64	19.621	0.020	1.1	0.0228	0.0000	OK
120 minute winter	S15	84	19.107	0.097	1.8	0.1099	0.0000	OK
120 minute winter	S78	84	19.107	0.127	2.8	0.1436	0.0000	OK
120 minute winter	S85	58	19.514	0.014	0.4	0.0157	0.0000	OK
120 minute winter	S17	86	19.107	1.089	3.2	1.2316	0.0000	SURCHARGED
120 minute winter	S81	2	17.440	0.000	0.0	0.0000	0.0000	OK
120 minute winter	S83	88	17.428	0.022	1.4	0.0318	0.0000	OK
120 minute winter	S77	88	17.112	0.022	1.4	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)
120 minute winter	S11	1.000	S12	0.1	0.149	0.001	0.0305	
120 minute winter	S12	1.001	S13	0.6	0.456	0.012	0.0193	
120 minute winter	S13	1.002	S15	0.6	0.208	0.017	0.1230	
120 minute winter	S14	2.000	S15	1.1	0.634	0.016	0.1841	
120 minute winter	S15	1.003	S78	1.8	0.406	0.050	0.1175	
120 minute winter	S78	1.004	S17	2.8	0.534	0.077	0.5188	
120 minute winter	S85	3.000	S17	0.4	0.494	0.017	0.3387	
120 minute winter	S17	Hydro-Brake®	S83	1.4				
120 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0054	
120 minute winter	S83	1.006	S77	1.4	0.495	0.005	0.1015	9.4

Results for 1 year 180 minute summer. 240 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	S11	100	20.582	0.006	0.1	0.0063	0.0000	OK
180 minute summer	S12	96	19.159	0.019	0.7	0.0210	0.0000	OK
180 minute summer	S13	116	19.094	0.026	0.7	0.4909	0.0000	OK
180 minute summer	S14	96	19.621	0.020	1.1	0.0228	0.0000	OK
180 minute summer	S15	116	19.094	0.084	1.9	0.0947	0.0000	OK
180 minute summer	S78	116	19.094	0.114	2.9	0.1284	0.0000	OK
180 minute summer	S85	92	19.514	0.014	0.4	0.0157	0.0000	OK
180 minute summer	S17	112	19.093	1.075	3.3	1.2158	0.0000	SURCHARGED
180 minute summer	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S83	116	17.428	0.022	1.4	0.0317	0.0000	OK
180 minute summer	S77	116	17.112	0.022	1.4	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)
180 minute summer	S11	1.000	S12	0.1	0.147	0.001	0.0328	
180 minute summer	S12	1.001	S13	0.7	0.454	0.014	0.0117	
180 minute summer	S13	1.002	S15	0.6	0.210	0.017	0.0934	
180 minute summer	S14	2.000	S15	1.1	0.634	0.016	0.1373	
180 minute summer	S15	1.003	S78	1.9	0.410	0.051	0.0996	
180 minute summer	S78	1.004	S17	2.9	0.530	0.078	0.4782	
180 minute summer	S85	3.000	S17	0.4	0.494	0.017	0.3387	
180 minute summer	S17	Hydro-Brake®	S83	1.4				
180 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0054	
180 minute summer	S83	1.006	S77	1.4	0.494	0.005	0.1011	9.8

Results for 1 year 180 minute winter. 240 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	S11	100	20.582	0.006	0.1	0.0063	0.0000	OK
180 minute winter	S12	88	19.156	0.016	0.5	0.0179	0.0000	OK
180 minute winter	S13	124	19.092	0.024	0.6	0.4611	0.0000	OK
180 minute winter	S14	96	19.618	0.017	0.8	0.0196	0.0000	OK
180 minute winter	S15	124	19.092	0.082	1.4	0.0932	0.0000	OK
180 minute winter	S78	124	19.092	0.112	2.2	0.1272	0.0000	OK
180 minute winter	S85	88	19.512	0.012	0.3	0.0137	0.0000	OK
180 minute winter	S17	124	19.092	1.074	2.5	1.2152	0.0000	SURCHARGED
180 minute winter	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S83	124	17.428	0.022	1.4	0.0317	0.0000	OK
180 minute winter	S77	124	17.112	0.022	1.4	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)
180 minute winter	S11	1.000	S12	0.1	0.150	0.001	0.0267	
180 minute winter	S12	1.001	S13	0.5	0.454	0.010	0.0106	
180 minute winter	S13	1.002	S15	0.5	0.216	0.014	0.0904	
180 minute winter	S14	2.000	S15	0.8	0.574	0.012	0.1345	
180 minute winter	S15	1.003	S78	1.4	0.373	0.038	0.0981	
180 minute winter	S78	1.004	S17	2.2	0.496	0.059	0.4758	
180 minute winter	S85	3.000	S17	0.3	0.453	0.013	0.3361	
180 minute winter	S17	Hydro-Brake®	S83	1.4				
180 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0054	
180 minute winter	S83	1.006	S77	1.4	0.494	0.005	0.1011	11.1

Results for 1 year 240 minute summer. 300 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	S11	132	20.582	0.006	0.1	0.0063	0.0000	OK
240 minute summer	S12	124	19.157	0.017	0.6	0.0195	0.0000	OK
240 minute summer	S13	148	19.088	0.020	0.6	0.3755	0.0000	OK
240 minute summer	S14	124	19.620	0.019	1.0	0.0216	0.0000	OK
240 minute summer	S15	148	19.087	0.077	1.7	0.0868	0.0000	OK
240 minute summer	S78	148	19.087	0.107	2.5	0.1208	0.0000	OK
240 minute summer	S85	128	19.514	0.014	0.4	0.0156	0.0000	OK
240 minute summer	S17	148	19.086	1.068	3.0	1.2082	0.0000	SURCHARGED
240 minute summer	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
240 minute summer	S83	148	17.428	0.022	1.4	0.0317	0.0000	OK
240 minute summer	S77	148	17.112	0.022	1.4	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)
240 minute summer	S11	1.000	S12	0.1	0.147	0.001	0.0300	
240 minute summer	S12	1.001	S13	0.6	0.454	0.012	0.0108	
240 minute summer	S13	1.002	S15	0.6	0.216	0.015	0.0798	
240 minute summer	S14	2.000	S15	1.0	0.611	0.015	0.1151	
240 minute summer	S15	1.003	S78	1.6	0.389	0.044	0.0907	
240 minute summer	S78	1.004	S17	2.6	0.502	0.070	0.4568	
240 minute summer	S85	3.000	S17	0.4	0.483	0.017	0.3367	
240 minute summer	S17	Hydro-Brake®	S83	1.4				
240 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0054	
240 minute summer	S83	1.006	S77	1.4	0.493	0.005	0.1009	10.8

Results for 1 year 240 minute winter. 300 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	S11	124	20.580	0.004	0.1	0.0046	0.0000	OK
240 minute winter	S12	128	19.155	0.015	0.4	0.0170	0.0000	OK
240 minute winter	S13	128	19.085	0.017	0.5	0.3178	0.0000	OK
240 minute winter	S14	124	19.617	0.016	0.7	0.0185	0.0000	OK
240 minute winter	S15	156	19.076	0.066	1.2	0.0745	0.0000	OK
240 minute winter	S78	156	19.076	0.096	1.9	0.1083	0.0000	OK
240 minute winter	S85	120	19.512	0.012	0.3	0.0137	0.0000	OK
240 minute winter	S17	156	19.076	1.058	2.2	1.1964	0.0000	SURCHARGED
240 minute winter	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S83	156	17.428	0.022	1.4	0.0316	0.0000	OK
240 minute winter	S77	156	17.112	0.022	1.4	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)
240 minute winter	S11	1.000	S12	0.0	0.087	0.000	0.0227	
240 minute winter	S12	1.001	S13	0.5	0.454	0.009	0.0087	
240 minute winter	S13	1.002	S15	0.4	0.197	0.011	0.0624	
240 minute winter	S14	2.000	S15	0.7	0.551	0.010	0.0833	
240 minute winter	S15	1.003	S78	1.2	0.360	0.033	0.0766	
240 minute winter	S78	1.004	S17	1.9	0.478	0.051	0.4210	
240 minute winter	S85	3.000	S17	0.3	0.452	0.013	0.3361	
240 minute winter	S17	Hydro-Brake®	S83	1.4				
240 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0054	
240 minute winter	S83	1.006	S77	1.4	0.493	0.005	0.1006	12.4

Results for 1 year 360 minute summer. 424 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	S11	184	20.581	0.005	0.1	0.0058	0.0000	OK
360 minute summer	S12	184	19.155	0.015	0.5	0.0172	0.0000	OK
360 minute summer	S13	192	19.084	0.016	0.5	0.3154	0.0000	OK
360 minute summer	S14	184	19.618	0.017	0.8	0.0195	0.0000	OK
360 minute summer	S15	208	19.043	0.033	1.2	0.0372	0.0000	OK
360 minute summer	S78	208	19.043	0.063	1.9	0.0707	0.0000	OK
360 minute summer	S85	184	19.512	0.012	0.3	0.0137	0.0000	OK
360 minute summer	S17	208	19.042	1.024	2.2	1.1584	0.0000	SURCHARGED
360 minute summer	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S83	208	17.428	0.022	1.4	0.0314	0.0000	OK
360 minute summer	S77	208	17.112	0.022	1.4	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 summer	S11	1.000	S12	0.1	0.130	0.001	0.0249	
360 minute summer	S12	1.001	S13	0.5	0.407	0.009	0.0083	
360 minute summer	S13	1.002	S15	0.4	0.192	0.011	0.0271	
360 minute summer	S14	2.000	S15	0.8	0.571	0.012	0.0464	
360 minute summer	S15	1.003	S78	1.2	0.367	0.033	0.0374	
360 minute summer	S78	1.004	S17	1.9	0.484	0.051	0.3049	
360 minute summer	S85	3.000	S17	0.3	0.453	0.013	0.3331	
360 minute summer	S17	Hydro-Brake®	S83	1.4				
360 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0053	
360 minute summer	S83	1.006	S77	1.4	0.491	0.005	0.0995	12.6

Results for 1 year 360 minute winter. 424 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	S11	8	20.576	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S12	176	19.152	0.012	0.3	0.0140	0.0000	OK
360 minute winter	S13	200	19.083	0.015	0.3	0.2799	0.0000	OK
360 minute winter	S14	192	19.616	0.015	0.6	0.0173	0.0000	OK
360 minute winter	S15	192	19.035	0.025	1.0	0.0287	0.0000	OK
360 minute winter	S78	192	19.011	0.031	1.5	0.0355	0.0000	OK
360 minute winter	S85	168	19.510	0.010	0.2	0.0114	0.0000	OK
360 minute winter	S17	216	18.996	0.978	1.7	1.1062	0.0000	SURCHARGED
360 minute winter	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S83	216	17.428	0.022	1.3	0.0311	0.0000	OK
360 minute winter	S77	216	17.112	0.022	1.3	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)
360 minute winter	S11	1.000	S12	0.0	0.000	0.000	0.0155	
360 minute winter	S12	1.001	S13	0.3	0.407	0.006	0.0069	
360 minute winter	S13	1.002	S15	0.3	0.180	0.008	0.0206	
360 minute winter	S14	2.000	S15	0.6	0.526	0.009	0.0384	
360 minute winter	S15	1.003	S78	1.0	0.345	0.027	0.0172	
360 minute winter	S78	1.004	S17	1.5	0.453	0.041	0.1664	
360 minute winter	S85	3.000	S17	0.2	0.399	0.009	0.2617	
360 minute winter	S17	Hydro-Brake®	S83	1.3				
360 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0052	
360 minute winter	S83	1.006	S77	1.3	0.488	0.004	0.0980	14.3

Results for 1 year 480 minute summer. 544 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	S11	8	20.576	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S12	240	19.152	0.012	0.3	0.0140	0.0000	OK
480 minute summer	S13	256	19.083	0.015	0.3	0.2786	0.0000	OK
480 minute summer	S14	248	19.616	0.015	0.6	0.0173	0.0000	OK
480 minute summer	S15	256	19.035	0.025	1.0	0.0288	0.0000	OK
480 minute summer	S78	248	19.012	0.032	1.6	0.0365	0.0000	OK
480 minute summer	S85	248	19.512	0.012	0.3	0.0137	0.0000	OK
480 minute summer	S17	272	19.000	0.982	1.9	1.1109	0.0000	SURCHARGED
480 minute summer	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S83	272	17.428	0.022	1.3	0.0312	0.0000	OK
480 minute summer	S77	272	17.112	0.022	1.3	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	S11	1.000	S12	0.0	0.000	0.000	0.0155	
480 minute summer	S12	1.001	S13	0.3	0.407	0.006	0.0069	
480 minute summer	S13	1.002	S15	0.3	0.176	0.008	0.0207	
480 minute summer	S14	2.000	S15	0.6	0.526	0.009	0.0384	
480 minute summer	S15	1.003	S78	1.0	0.348	0.027	0.0176	
480 minute summer	S78	1.004	S17	1.6	0.461	0.043	0.1741	
480 minute summer	S85	3.000	S17	0.3	0.453	0.013	0.2716	
480 minute summer	S17	Hydro-Brake®	S83	1.3				
480 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0052	
480 minute summer	S83	1.006	S77	1.3	0.488	0.004	0.0982	14.3

Results for 1 year 480 minute winter. 544 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	S11	8	20.576	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S12	192	19.150	0.010	0.2	0.0117	0.0000	OK
480 minute winter	S13	304	19.080	0.012	0.2	0.2312	0.0000	OK
480 minute winter	S14	248	19.615	0.014	0.5	0.0158	0.0000	OK
480 minute winter	S15	256	19.033	0.023	0.8	0.0259	0.0000	OK
480 minute winter	S78	248	19.009	0.029	1.3	0.0332	0.0000	OK
480 minute winter	S85	232	19.510	0.010	0.2	0.0114	0.0000	OK
480 minute winter	S17	280	18.851	0.833	1.5	0.9422	0.0000	SURCHARGED
480 minute winter	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S83	280	17.427	0.021	1.3	0.0301	0.0000	OK
480 minute winter	S77	280	17.111	0.021	1.2	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)
480 minute winter	S11	1.000	S12	0.0	0.000	0.000	0.0117	
480 minute winter	S12	1.001	S13	0.2	0.407	0.004	0.0052	
480 minute winter	S13	1.002	S15	0.2	0.174	0.005	0.0171	
480 minute winter	S14	2.000	S15	0.5	0.497	0.007	0.0339	
480 minute winter	S15	1.003	S78	0.8	0.323	0.022	0.0153	
480 minute winter	S78	1.004	S17	1.3	0.436	0.036	0.0501	
480 minute winter	S85	3.000	S17	0.2	0.399	0.009	0.0184	
480 minute winter	S17	Hydro-Brake®	S83	1.3				
480 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0050	
480 minute winter	S83	1.006	S77	1.2	0.478	0.004	0.0931	15.9

Results for 1 year 600 minute summer. 660 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	S11	15	20.576	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S12	315	19.152	0.012	0.3	0.0140	0.0000	OK
600 minute summer	S13	315	19.082	0.014	0.3	0.2762	0.0000	OK
600 minute summer	S14	315	19.615	0.014	0.5	0.0158	0.0000	OK
600 minute summer	S15	315	19.034	0.024	0.9	0.0272	0.0000	OK
600 minute summer	S78	315	19.010	0.030	1.4	0.0342	0.0000	OK
600 minute summer	S85	315	19.510	0.010	0.2	0.0114	0.0000	OK
600 minute summer	S17	330	18.884	0.866	1.6	0.9800	0.0000	SURCHARGED
600 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S83	330	17.427	0.021	1.3	0.0304	0.0000	OK
600 minute summer	S77	330	17.111	0.021	1.3	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	S11	1.000	S12	0.0	0.000	0.000	0.0155	
600 minute summer	S12	1.001	S13	0.3	0.432	0.006	0.0068	
600 minute summer	S13	1.002	S15	0.3	0.179	0.008	0.0195	
600 minute summer	S14	2.000	S15	0.5	0.497	0.007	0.0339	
600 minute summer	S15	1.003	S78	0.9	0.328	0.024	0.0162	
600 minute summer	S78	1.004	S17	1.4	0.443	0.038	0.0527	
600 minute summer	S85	3.000	S17	0.2	0.399	0.009	0.0184	
600 minute summer	S17	Hydro-Brake®	S83	1.3				
600 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0050	
600 minute summer	S83	1.006	S77	1.3	0.480	0.004	0.0942	15.3

Results for 1 year 600 minute winter. 660 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	S11	15	20.576	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S12	270	19.150	0.010	0.2	0.0116	0.0000	OK
600 minute winter	S13	360	19.080	0.012	0.2	0.2312	0.0000	OK
600 minute winter	S14	285	19.614	0.013	0.4	0.0142	0.0000	OK
600 minute winter	S15	345	19.031	0.021	0.7	0.0243	0.0000	OK
600 minute winter	S78	330	19.007	0.027	1.1	0.0307	0.0000	OK
600 minute winter	S85	315	19.510	0.010	0.2	0.0114	0.0000	OK
600 minute winter	S17	360	18.561	0.543	1.3	0.6140	0.0000	SURCHARGED
600 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S83	300	17.427	0.021	1.2	0.0297	0.0000	OK
600 minute winter	S77	300	17.111	0.021	1.2	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)
600 minute winter	S11	1.000	S12	0.0	0.000	0.000	0.0116	
600 minute winter	S12	1.001	S13	0.2	0.432	0.004	0.0052	
600 minute winter	S13	1.002	S15	0.2	0.160	0.005	0.0160	
600 minute winter	S14	2.000	S15	0.4	0.464	0.006	0.0290	
600 minute winter	S15	1.003	S78	0.7	0.316	0.019	0.0137	
600 minute winter	S78	1.004	S17	1.1	0.419	0.030	0.0442	
600 minute winter	S85	3.000	S17	0.2	0.399	0.009	0.0184	
600 minute winter	S17	Hydro-Brake®	S83	1.2				
600 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0048	
600 minute winter	S83	1.006	S77	1.2	0.474	0.004	0.0910	17.3

Results for 1 year 720 minute summer. 780 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	S11	15	20.576	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S12	375	19.152	0.012	0.3	0.0140	0.0000	OK
720 minute summer	S13	375	19.082	0.014	0.3	0.2762	0.0000	OK
720 minute summer	S14	375	19.615	0.014	0.5	0.0158	0.0000	OK
720 minute summer	S15	375	19.034	0.024	0.9	0.0272	0.0000	OK
720 minute summer	S78	375	19.010	0.030	1.4	0.0342	0.0000	OK
720 minute summer	S85	375	19.510	0.010	0.2	0.0114	0.0000	OK
720 minute summer	S17	390	18.885	0.867	1.6	0.9801	0.0000	SURCHARGED
720 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S83	390	17.427	0.021	1.3	0.0304	0.0000	OK
720 minute summer	S77	390	17.111	0.021	1.3	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	S11	1.000	S12	0.0	0.000	0.000	0.0155	
720 minute summer	S12	1.001	S13	0.3	0.432	0.006	0.0068	
720 minute summer	S13	1.002	S15	0.3	0.179	0.008	0.0195	
720 minute summer	S14	2.000	S15	0.5	0.497	0.007	0.0339	
720 minute summer	S15	1.003	S78	0.9	0.328	0.024	0.0162	
720 minute summer	S78	1.004	S17	1.4	0.443	0.038	0.0527	
720 minute summer	S85	3.000	S17	0.2	0.399	0.009	0.0184	
720 minute summer	S17	Hydro-Brake®	S83	1.3				
720 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0050	
720 minute summer	S83	1.006	S77	1.3	0.480	0.004	0.0942	15.5

Results for 1 year 720 minute winter. 780 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	S11	15	20.576	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S12	330	19.150	0.010	0.2	0.0116	0.0000	OK
720 minute winter	S13	420	19.080	0.012	0.2	0.2312	0.0000	OK
720 minute winter	S14	360	19.614	0.013	0.4	0.0142	0.0000	OK
720 minute winter	S15	390	19.031	0.021	0.7	0.0243	0.0000	OK
720 minute winter	S78	375	19.007	0.027	1.1	0.0306	0.0000	OK
720 minute winter	S85	375	19.510	0.010	0.2	0.0114	0.0000	OK
720 minute winter	S17	390	18.252	0.234	1.3	0.2644	0.0000	SURCHARGED
720 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S83	390	17.427	0.021	1.2	0.0297	0.0000	OK
720 minute winter	S77	390	17.111	0.021	1.2	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)
720 minute winter	S11	1.000	S12	0.0	0.000	0.000	0.0116	
720 minute winter	S12	1.001	S13	0.2	0.432	0.004	0.0052	
720 minute winter	S13	1.002	S15	0.2	0.175	0.005	0.0160	
720 minute winter	S14	2.000	S15	0.4	0.464	0.006	0.0290	
720 minute winter	S15	1.003	S78	0.7	0.316	0.019	0.0137	
720 minute winter	S78	1.004	S17	1.1	0.419	0.030	0.0442	
720 minute winter	S85	3.000	S17	0.2	0.399	0.009	0.0184	
720 minute winter	S17	Hydro-Brake®	S83	1.2				
720 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0048	
720 minute winter	S83	1.006	S77	1.2	0.474	0.004	0.0910	19.0

Results for 1 year 960 minute summer. 1020 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	S11	15	20.576	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S12	465	19.150	0.010	0.2	0.0116	0.0000	OK
960 minute summer	S13	525	19.080	0.012	0.2	0.2312	0.0000	OK
960 minute summer	S14	480	19.614	0.013	0.4	0.0142	0.0000	OK
960 minute summer	S15	510	19.031	0.021	0.7	0.0243	0.0000	OK
960 minute summer	S78	510	19.007	0.027	1.1	0.0306	0.0000	OK
960 minute summer	S85	495	19.510	0.010	0.2	0.0114	0.0000	OK
960 minute summer	S17	525	18.404	0.386	1.3	0.4361	0.0000	SURCHARGED
960 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S83	495	17.427	0.021	1.2	0.0297	0.0000	OK
960 minute summer	S77	495	17.111	0.021	1.2	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)
960 minute summer	S11	1.000	S12	0.0	0.000	0.000	0.0116	
960 minute summer	S12	1.001	S13	0.2	0.432	0.004	0.0052	
960 minute summer	S13	1.002	S15	0.2	0.160	0.005	0.0160	
960 minute summer	S14	2.000	S15	0.4	0.464	0.006	0.0290	
960 minute summer	S15	1.003	S78	0.7	0.305	0.019	0.0137	
960 minute summer	S78	1.004	S17	1.1	0.419	0.030	0.0442	
960 minute summer	S85	3.000	S17	0.2	0.399	0.009	0.0184	
960 minute summer	S17	Hydro-Brake®	S83	1.2				
960 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0048	
960 minute summer	S83	1.006	S77	1.2	0.474	0.004	0.0908	16.5

Results for 1 year 960 minute winter. 1020 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	S11	15	20.576	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S12	465	19.150	0.010	0.2	0.0116	0.0000	OK
960 minute winter	S13	525	19.080	0.012	0.2	0.2312	0.0000	OK
960 minute winter	S14	435	19.612	0.011	0.3	0.0125	0.0000	OK
960 minute winter	S15	495	19.030	0.020	0.6	0.0226	0.0000	OK
960 minute winter	S78	495	19.005	0.025	0.9	0.0279	0.0000	OK
960 minute winter	S85	345	19.507	0.007	0.1	0.0082	0.0000	OK
960 minute winter	S17	495	18.097	0.079	1.0	0.0893	0.0000	OK
960 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S83	495	17.425	0.019	1.0	0.0273	0.0000	OK
960 minute winter	S77	495	17.109	0.019	1.0	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	S11	1.000	S12	0.0	0.000	0.000	0.0116	
960 minute winter	S12	1.001	S13	0.2	0.432	0.004	0.0052	
960 minute winter	S13	1.002	S15	0.2	0.176	0.005	0.0148	
960 minute winter	S14	2.000	S15	0.3	0.426	0.004	0.0237	
960 minute winter	S15	1.003	S78	0.6	0.295	0.016	0.0121	
960 minute winter	S78	1.004	S17	0.9	0.397	0.025	0.0381	
960 minute winter	S85	3.000	S17	0.1	0.324	0.004	0.0114	
960 minute winter	S17	Hydro-Brake®	S83	1.0				
960 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0042	
960 minute winter	S83	1.006	S77	1.0	0.450	0.003	0.0792	20.9

Results for 1 year 1440 minute summer. 1500 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	S11	30	20.576	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S12	750	19.150	0.010	0.2	0.0116	0.0000	OK
1440 minute summer	S13	750	19.080	0.012	0.2	0.2303	0.0000	OK
1440 minute summer	S14	720	19.612	0.011	0.3	0.0125	0.0000	OK
1440 minute summer	S15	750	19.030	0.020	0.6	0.0226	0.0000	OK
1440 minute summer	S78	750	19.005	0.025	0.9	0.0279	0.0000	OK
1440 minute summer	S85	630	19.507	0.007	0.1	0.0082	0.0000	OK
1440 minute summer	S17	750	18.097	0.079	1.0	0.0892	0.0000	OK
1440 minute summer	S81	30	17.440	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S83	750	17.425	0.019	1.0	0.0273	0.0000	OK
1440 minute summer	S77	750	17.109	0.019	1.0	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)
1440 minute summer	S11	1.000	S12	0.0	0.000	0.000	0.0116	
1440 minute summer	S12	1.001	S13	0.2	0.362	0.004	0.0052	
1440 minute summer	S13	1.002	S15	0.2	0.161	0.005	0.0148	
1440 minute summer	S14	2.000	S15	0.3	0.426	0.004	0.0237	
1440 minute summer	S15	1.003	S78	0.6	0.295	0.016	0.0121	
1440 minute summer	S78	1.004	S17	0.9	0.396	0.025	0.0381	
1440 minute summer	S85	3.000	S17	0.1	0.324	0.004	0.0114	
1440 minute summer	S17	Hydro-Brake®	S83	1.0				
1440 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0042	
1440 minute summer	S83	1.006	S77	1.0	0.449	0.003	0.0791	17.3

Results for 1 year 1440 minute winter. 1500 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 winter	S11	30	20.576	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S12	480	19.148	0.008	0.1	0.0094	0.0000	OK
1440 minute winter	S13	720	19.077	0.009	0.1	0.1692	0.0000	OK
1440 minute winter	S14	600	19.610	0.009	0.2	0.0104	0.0000	OK
1440 minute winter	S15	720	19.025	0.015	0.3	0.0165	0.0000	OK
1440 minute winter	S78	720	18.999	0.019	0.5	0.0212	0.0000	OK
1440 minute winter	S85	540	19.507	0.007	0.1	0.0082	0.0000	OK
1440 minute winter	S17	690	18.065	0.047	0.6	0.0527	0.0000	OK
1440 minute winter	S81	30	17.440	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S83	690	17.421	0.015	0.6	0.0219	0.0000	OK
1440 minute winter	S77	720	17.104	0.014	0.6	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	S11	1.000	S12	0.0	0.000	0.000	0.0083	
1440 minute winter	S12	1.001	S13	0.1	0.362	0.002	0.0032	
1440 minute winter	S13	1.002	S15	0.1	0.155	0.003	0.0092	
1440 minute winter	S14	2.000	S15	0.2	0.381	0.003	0.0177	
1440 minute winter	S15	1.003	S78	0.3	0.229	0.008	0.0078	
1440 minute winter	S78	1.004	S17	0.5	0.337	0.014	0.0249	
1440 minute winter	S85	3.000	S17	0.1	0.324	0.004	0.0114	
1440 minute winter	S17	Hydro-Brake®	S83	0.6				
1440 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0030	
1440 minute winter	S83	1.006	S77	0.6	0.402	0.002	0.0534	20.2

Results for 20 year +10% CC 15 minute summer. 75 minute analysis at 1 minute timestep. Mass balance: 98.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	S11	11	20.586	0.010	0.4	0.0117	0.0000	OK
15 minute summer	S12	18	19.185	0.045	3.3	0.0505	0.0000	OK
15 minute summer	S13	19	19.183	0.115	10.1	2.1979	0.0000	OK
15 minute summer	S14	10	19.645	0.044	5.6	0.0498	0.0000	OK
15 minute summer	S15	18	19.181	0.171	12.8	0.1938	0.0000	OK
15 minute summer	S78	18	19.181	0.201	12.0	0.2276	0.0000	OK
15 minute summer	S85	11	19.532	0.032	2.3	0.0357	0.0000	OK
15 minute summer	S17	18	19.183	1.165	14.0	1.3181	0.0000	SURCHARGED
15 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S83	20	17.429	0.023	1.5	0.0323	0.0000	OK
15 minute summer	S77	20	17.112	0.022	1.5	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)
15 minute summer	S11	1.000	S12	0.4	0.165	0.004	0.1050	
15 minute summer	S12	1.001	S13	3.3	0.979	0.063	0.0925	
15 minute summer	S13	1.002	S15	-7.0	-0.392	-0.193	0.3093	
15 minute summer	S14	2.000	S15	5.5	1.004	0.082	0.4628	
15 minute summer	S15	1.003	S78	-7.4	0.516	-0.201	0.2080	
15 minute summer	S78	1.004	S17	11.7	0.742	0.321	0.6491	
15 minute summer	S85	3.000	S17	2.2	0.688	0.097	0.3735	
15 minute summer	S17	Hydro-Brake®	S83	1.5				
15 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0055	
15 minute summer	S83	1.006	S77	1.5	0.499	0.005	0.1037	5.8

Results for 20 year +10% CC 15 minute winter. 75 minute analysis at 1 minute timestep. Mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S11	11	20.586	0.010	0.4	0.0117	0.0000	OK
15 minute winter	S12	17	19.208	0.068	3.4	0.0764	0.0000	OK
15 minute winter	S13	18	19.206	0.138	12.1	2.6528	0.0000	OK
15 minute winter	S14	10	19.646	0.045	5.9	0.0508	0.0000	OK
15 minute winter	S15	19	19.206	0.196	9.5	0.2216	0.0000	OK
15 minute winter	S78	17	19.206	0.226	11.2	0.2554	0.0000	SURCHARGED
15 minute winter	S85	10	19.532	0.032	2.4	0.0363	0.0000	OK
15 minute winter	S17	17	19.205	1.187	12.3	1.3426	0.0000	SURCHARGED
15 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S83	19	17.429	0.023	1.5	0.0324	0.0000	OK
15 minute winter	S77	19	17.113	0.023	1.5	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)
15 minute winter	S11	1.000	S12	0.4	0.166	0.004	0.1882	
15 minute winter	S12	1.001	S13	3.4	0.962	0.065	0.1266	
15 minute winter	S13	1.002	S15	-9.1	-0.426	-0.249	0.3655	
15 minute winter	S14	2.000	S15	5.9	0.991	0.087	0.5530	
15 minute winter	S15	1.003	S78	5.8	0.482	0.158	0.2274	
15 minute winter	S78	1.004	S17	10.3	0.697	0.280	0.6681	
15 minute winter	S85	3.000	S17	2.3	0.724	0.100	0.3745	
15 minute winter	S17	Hydro-Brake®	S83	1.5				
15 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0056	
15 minute winter	S83	1.006	S77	1.5	0.500	0.005	0.1044	5.9

Results for 20 year +10% CC 30 minute summer. 90 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	S11	18	20.586	0.010	0.4	0.0115	0.0000	OK
30 minute summer	S12	31	19.237	0.097	3.2	0.1098	0.0000	OK
30 minute summer	S13	32	19.237	0.169	11.7	3.2356	0.0000	OK
30 minute summer	S14	18	19.644	0.043	5.4	0.0486	0.0000	OK
30 minute summer	S15	32	19.236	0.226	12.8	0.2561	0.0000	SURCHARGED
30 minute summer	S78	32	19.236	0.256	10.0	0.2898	0.0000	SURCHARGED
30 minute summer	S85	18	19.531	0.031	2.2	0.0354	0.0000	OK
30 minute summer	S17	31	19.236	1.218	11.2	1.3775	0.0000	SURCHARGED
30 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S83	33	17.429	0.023	1.5	0.0326	0.0000	OK
30 minute summer	S77	33	17.113	0.023	1.5	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)
30 minute summer	S11	1.000	S12	0.4	0.164	0.004	0.3052	
30 minute summer	S12	1.001	S13	3.2	0.810	0.062	0.1738	
30 minute summer	S13	1.002	S15	-8.6	-0.397	-0.237	0.4207	
30 minute summer	S14	2.000	S15	5.4	0.945	0.080	0.6377	
30 minute summer	S15	1.003	S78	-6.0	0.494	-0.162	0.2365	
30 minute summer	S78	1.004	S17	9.4	0.680	0.258	0.6683	
30 minute summer	S85	3.000	S17	2.2	0.632	0.095	0.3728	
30 minute summer	S17	Hydro-Brake®	S83	1.5				
30 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0056	
30 minute summer	S83	1.006	S77	1.5	0.502	0.005	0.1053	7.1

Results for 20 year +10% CC 30 minute winter. 90 minute analysis at 1 minute timestep. Mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S11	20	20.585	0.009	0.3	0.0103	0.0000	OK
30 minute winter	S12	33	19.275	0.135	3.8	0.1528	0.0000	OK
30 minute winter	S13	32	19.274	0.206	10.3	3.9486	0.0000	OK
30 minute winter	S14	18	19.642	0.041	4.9	0.0463	0.0000	OK
30 minute winter	S15	32	19.274	0.264	9.4	0.2983	0.0000	SURCHARGED
30 minute winter	S78	32	19.274	0.294	8.8	0.3323	0.0000	SURCHARGED
30 minute winter	S85	18	19.530	0.030	2.0	0.0338	0.0000	OK
30 minute winter	S17	32	19.274	1.256	9.3	1.4208	0.0000	SURCHARGED
30 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S83	33	17.429	0.023	1.5	0.0328	0.0000	OK
30 minute winter	S77	33	17.113	0.023	1.5	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)
30 minute winter	S11	1.000	S12	0.3	0.150	0.003	0.4606	
30 minute winter	S12	1.001	S13	2.8	0.756	0.055	0.2275	
30 minute winter	S13	1.002	S15	-7.6	-0.374	-0.209	0.4570	
30 minute winter	S14	2.000	S15	4.9	0.909	0.073	0.6987	
30 minute winter	S15	1.003	S78	4.9	0.488	0.132	0.2366	
30 minute winter	S78	1.004	S17	7.8	0.636	0.213	0.6683	
30 minute winter	S85	3.000	S17	2.0	0.638	0.087	0.3696	
30 minute winter	S17	Hydro-Brake®	S83	1.5				
30 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0057	
30 minute winter	S83	1.006	S77	1.5	0.504	0.005	0.1063	7.2

Results for 20 year +10% CC 60 minute summer. 120 minute analysis at 1 minute timestep. Mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S11	35	20.585	0.009	0.3	0.0103	0.0000	OK
60 minute summer	S12	52	19.278	0.138	3.1	0.1562	0.0000	OK
60 minute summer	S13	56	19.278	0.210	9.0	4.0317	0.0000	OK
60 minute summer	S14	33	19.639	0.038	4.3	0.0435	0.0000	OK
60 minute summer	S15	56	19.278	0.268	8.5	0.3031	0.0000	SURCHARGED
60 minute summer	S78	55	19.278	0.298	7.0	0.3370	0.0000	SURCHARGED
60 minute summer	S85	34	19.528	0.028	1.7	0.0312	0.0000	OK
60 minute summer	S17	55	19.278	1.260	6.6	1.4250	0.0000	SURCHARGED
60 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S83	57	17.429	0.023	1.5	0.0328	0.0000	OK
60 minute summer	S77	57	17.113	0.023	1.5	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)
60 minute summer	S11	1.000	S12	0.3	0.161	0.003	0.4717	
60 minute summer	S12	1.001	S13	2.5	0.663	0.048	0.2315	
60 minute summer	S13	1.002	S15	-6.5	-0.331	-0.178	0.4600	
60 minute summer	S14	2.000	S15	4.3	0.842	0.064	0.6984	
60 minute summer	S15	1.003	S78	4.0	0.452	0.108	0.2366	
60 minute summer	S78	1.004	S17	5.6	0.606	0.152	0.6683	
60 minute summer	S85	3.000	S17	1.7	0.582	0.074	0.3648	
60 minute summer	S17	Hydro-Brake®	S83	1.5				
60 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0057	
60 minute summer	S83	1.006	S77	1.5	0.504	0.005	0.1064	9.5

Results for 20 year +10% CC 60 minute winter. 120 minute analysis at 1 minute timestep. Mass balance: 99.56%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S11	39	20.584	0.008	0.2	0.0085	0.0000	OK
60 minute winter	S12	60	19.329	0.189	2.6	0.2135	0.0000	OK
60 minute winter	S13	60	19.328	0.260	6.4	4.9954	0.0000	SURCHARGED
60 minute winter	S14	33	19.636	0.035	3.5	0.0393	0.0000	OK
60 minute winter	S15	59	19.328	0.318	6.7	0.3600	0.0000	SURCHARGED
60 minute winter	S78	59	19.328	0.348	5.7	0.3939	0.0000	SURCHARGED
60 minute winter	S85	34	19.525	0.025	1.4	0.0284	0.0000	OK
60 minute winter	S17	59	19.328	1.310	5.7	1.4820	0.0000	SURCHARGED
60 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S83	60	17.429	0.023	1.5	0.0331	0.0000	OK
60 minute winter	S77	60	17.113	0.023	1.5	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)
60 minute winter	S11	1.000	S12	0.2	0.137	0.002	0.6559	
60 minute winter	S12	1.001	S13	1.9	0.610	0.038	0.2722	
60 minute winter	S13	1.002	S15	-5.2	-0.283	-0.143	0.4669	
60 minute winter	S14	2.000	S15	3.5	0.794	0.052	0.7190	
60 minute winter	S15	1.003	S78	3.4	0.446	0.091	0.2366	
60 minute winter	S78	1.004	S17	4.9	0.582	0.133	0.6683	
60 minute winter	S85	3.000	S17	1.4	0.562	0.061	0.3595	
60 minute winter	S17	Hydro-Brake®	S83	1.5				
60 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0057	
60 minute winter	S83	1.006	S77	1.5	0.507	0.005	0.1077	9.7

Results for 20 year +10% CC 120 minute summer. 180 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	S11	68	20.584	0.008	0.2	0.0085	0.0000	OK
120 minute summer	S12	90	19.300	0.160	2.0	0.1807	0.0000	OK
120 minute summer	S13	90	19.299	0.231	5.2	4.4310	0.0000	SURCHARGED
120 minute summer	S14	64	19.633	0.032	3.0	0.0365	0.0000	OK
120 minute summer	S15	90	19.299	0.289	5.4	0.3268	0.0000	SURCHARGED
120 minute summer	S78	90	19.299	0.319	4.1	0.3608	0.0000	SURCHARGED
120 minute summer	S85	64	19.523	0.023	1.2	0.0264	0.0000	OK
120 minute summer	S17	90	19.299	1.281	4.6	1.4490	0.0000	SURCHARGED
120 minute summer	S81	2	17.440	0.000	0.0	0.0000	0.0000	OK
120 minute summer	S83	90	17.429	0.023	1.5	0.0329	0.0000	OK
120 minute summer	S77	90	17.113	0.023	1.5	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)
120 minute summer	S11	1.000	S12	0.2	0.144	0.002	0.5561	
120 minute summer	S12	1.001	S13	1.7	0.524	0.032	0.2526	
120 minute summer	S13	1.002	S15	-3.6	-0.231	-0.098	0.4669	
120 minute summer	S14	2.000	S15	3.0	0.744	0.045	0.7057	
120 minute summer	S15	1.003	S78	2.4	0.424	0.066	0.2366	
120 minute summer	S78	1.004	S17	4.0	0.563	0.108	0.6683	
120 minute summer	S85	3.000	S17	1.2	0.511	0.052	0.3558	
120 minute summer	S17	Hydro-Brake®	S83	1.5				
120 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0057	
120 minute summer	S83	1.006	S77	1.5	0.505	0.005	0.1069	13.8

Results for 20 year +10% CC 120 minute winter. 180 minute analysis at 2 minute timestep. Mass balance: 99.63%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S11	68	20.584	0.008	0.2	0.0085	0.0000	OK
120 minute winter	S12	96	19.358	0.218	1.8	0.2466	0.0000	OK
120 minute winter	S13	98	19.358	0.290	4.6	5.5614	0.0000	SURCHARGED
120 minute winter	S14	66	19.629	0.028	2.3	0.0322	0.0000	OK
120 minute winter	S15	98	19.358	0.348	3.9	0.3934	0.0000	SURCHARGED
120 minute winter	S78	98	19.358	0.378	3.5	0.4272	0.0000	SURCHARGED
120 minute winter	S85	66	19.520	0.020	0.9	0.0230	0.0000	OK
120 minute winter	S17	96	19.358	1.340	4.0	1.5153	0.0000	SURCHARGED
120 minute winter	S81	2	17.440	0.000	0.0	0.0000	0.0000	OK
120 minute winter	S83	98	17.429	0.023	1.5	0.0332	0.0000	OK
120 minute winter	S77	98	17.113	0.023	1.5	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)
120 minute winter	S11	1.000	S12	0.2	0.155	0.002	0.7261	
120 minute winter	S12	1.001	S13	1.4	0.538	0.028	0.2860	
120 minute winter	S13	1.002	S15	-3.1	0.202	-0.086	0.4669	
120 minute winter	S14	2.000	S15	2.3	0.702	0.034	0.7124	
120 minute winter	S15	1.003	S78	2.2	0.416	0.059	0.2366	
120 minute winter	S78	1.004	S17	3.5	0.534	0.095	0.6683	
120 minute winter	S85	3.000	S17	0.9	0.511	0.039	0.3500	
120 minute winter	S17	Hydro-Brake®	S83	1.5				
120 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0058	
120 minute winter	S83	1.006	S77	1.5	0.508	0.005	0.1085	14.3

Results for 20 year +10% CC 180 minute summer. 240 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	S11	96	20.584	0.008	0.2	0.0085	0.0000	OK
180 minute summer	S12	128	19.303	0.163	1.4	0.1847	0.0000	OK
180 minute summer	S13	128	19.303	0.235	4.3	4.5070	0.0000	SURCHARGED
180 minute summer	S14	96	19.629	0.028	2.3	0.0322	0.0000	OK
180 minute summer	S15	128	19.303	0.293	3.7	0.3312	0.0000	SURCHARGED
180 minute summer	S78	128	19.303	0.323	3.7	0.3652	0.0000	SURCHARGED
180 minute summer	S85	96	19.520	0.020	0.9	0.0230	0.0000	OK
180 minute summer	S17	128	19.303	1.285	3.6	1.4532	0.0000	SURCHARGED
180 minute summer	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S83	128	17.429	0.023	1.5	0.0329	0.0000	OK
180 minute summer	S77	128	17.113	0.023	1.5	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)
180 minute summer	S11	1.000	S12	0.2	0.143	0.002	0.5691	
180 minute summer	S12	1.001	S13	1.5	0.474	0.028	0.2552	
180 minute summer	S13	1.002	S15	-2.8	-0.195	-0.078	0.4669	
180 minute summer	S14	2.000	S15	2.3	0.700	0.034	0.7023	
180 minute summer	S15	1.003	S78	2.2	0.399	0.060	0.2366	
180 minute summer	S78	1.004	S17	3.1	0.516	0.086	0.6683	
180 minute summer	S85	3.000	S17	0.9	0.483	0.039	0.3500	
180 minute summer	S17	Hydro-Brake®	S83	1.5				
180 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0057	
180 minute summer	S83	1.006	S77	1.5	0.505	0.005	0.1070	17.6

Results for 20 year +10% CC 180 minute winter. 240 minute analysis at 4 minute timestep. Mass balance: 99.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S11	76	20.582	0.006	0.1	0.0063	0.0000	OK
180 minute winter	S12	136	19.354	0.214	1.0	0.2425	0.0000	OK
180 minute winter	S13	136	19.355	0.287	2.8	5.4993	0.0000	SURCHARGED
180 minute winter	S14	96	19.626	0.025	1.8	0.0287	0.0000	OK
180 minute winter	S15	136	19.355	0.345	2.6	0.3897	0.0000	SURCHARGED
180 minute winter	S78	136	19.355	0.375	3.0	0.4236	0.0000	SURCHARGED
180 minute winter	S85	96	19.518	0.018	0.7	0.0204	0.0000	OK
180 minute winter	S17	136	19.354	1.336	3.4	1.5113	0.0000	SURCHARGED
180 minute winter	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S83	136	17.429	0.023	1.5	0.0332	0.0000	OK
180 minute winter	S77	136	17.113	0.023	1.5	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)
180 minute winter	S11	1.000	S12	0.1	0.146	0.001	0.7202	
180 minute winter	S12	1.001	S13	1.0	0.458	0.019	0.2848	
180 minute winter	S13	1.002	S15	-2.0	0.197	-0.055	0.4669	
180 minute winter	S14	2.000	S15	1.8	0.643	0.027	0.7055	
180 minute winter	S15	1.003	S78	1.9	0.405	0.051	0.2366	
180 minute winter	S78	1.004	S17	2.9	0.525	0.080	0.6683	
180 minute winter	S85	3.000	S17	0.7	0.483	0.030	0.3458	
180 minute winter	S17	Hydro-Brake®	S83	1.5				
180 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0058	
180 minute winter	S83	1.006	S77	1.5	0.508	0.005	0.1084	18.4

Results for 20 year +10% CC 240 minute summer. 300 minute analysis at 4 minute timestep. Mass balance: 99.57%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	S11	112	20.582	0.006	0.1	0.0063	0.0000	OK
240 minute summer	S12	160	19.300	0.160	1.3	0.1813	0.0000	OK
240 minute summer	S13	160	19.300	0.232	3.0	4.4477	0.0000	SURCHARGED
240 minute summer	S14	124	19.628	0.027	2.0	0.0300	0.0000	OK
240 minute summer	S15	160	19.300	0.290	2.8	0.3277	0.0000	SURCHARGED
240 minute summer	S78	160	19.300	0.320	3.1	0.3617	0.0000	SURCHARGED
240 minute summer	S85	128	19.519	0.019	0.8	0.0217	0.0000	OK
240 minute summer	S17	160	19.300	1.282	3.5	1.4497	0.0000	SURCHARGED
240 minute summer	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
240 minute summer	S83	164	17.429	0.023	1.5	0.0329	0.0000	OK
240 minute summer	S77	164	17.113	0.023	1.5	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)
240 minute summer	S11	1.000	S12	0.1	0.146	0.001	0.5581	
240 minute summer	S12	1.001	S13	1.1	0.454	0.021	0.2530	
240 minute summer	S13	1.002	S15	-1.9	0.197	-0.052	0.4669	
240 minute summer	S14	2.000	S15	2.0	0.643	0.030	0.6970	
240 minute summer	S15	1.003	S78	1.9	0.401	0.051	0.2366	
240 minute summer	S78	1.004	S17	3.0	0.525	0.082	0.6683	
240 minute summer	S85	3.000	S17	0.8	0.483	0.035	0.3480	
240 minute summer	S17	Hydro-Brake®	S83	1.5				
240 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0057	
240 minute summer	S83	1.006	S77	1.5	0.505	0.005	0.1070	21.4

Results for 20 year +10% CC 240 minute winter. 300 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	S11	104	20.582	0.006	0.1	0.0063	0.0000	OK
240 minute winter	S12	176	19.348	0.208	0.9	0.2356	0.0000	OK
240 minute winter	S13	176	19.348	0.280	2.4	5.3812	0.0000	SURCHARGED
240 minute winter	S14	128	19.624	0.023	1.5	0.0263	0.0000	OK
240 minute winter	S15	176	19.348	0.338	2.0	0.3827	0.0000	SURCHARGED
240 minute winter	S78	176	19.348	0.368	2.6	0.4166	0.0000	SURCHARGED
240 minute winter	S85	124	19.517	0.017	0.6	0.0190	0.0000	OK
240 minute winter	S17	176	19.348	1.330	3.0	1.5044	0.0000	SURCHARGED
240 minute winter	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S83	176	17.429	0.023	1.5	0.0332	0.0000	OK
240 minute winter	S77	176	17.113	0.023	1.5	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)
240 minute winter	S11	1.000	S12	0.1	0.135	0.001	0.7077	
240 minute winter	S12	1.001	S13	0.9	0.454	0.018	0.2824	
240 minute winter	S13	1.002	S15	-1.5	0.199	-0.042	0.4669	
240 minute winter	S14	2.000	S15	1.5	0.631	0.022	0.7016	
240 minute winter	S15	1.003	S78	1.6	0.391	0.045	0.2366	
240 minute winter	S78	1.004	S17	2.6	0.506	0.071	0.6683	
240 minute winter	S85	3.000	S17	0.6	0.453	0.026	0.3436	
240 minute winter	S17	Hydro-Brake®	S83	1.5				
240 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0058	
240 minute winter	S83	1.006	S77	1.5	0.508	0.005	0.1083	22.4

Results for 20 year +10% CC 360 minute summer. 424 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	S11	168	20.582	0.006	0.1	0.0063	0.0000	OK
360 minute summer	S12	232	19.288	0.148	0.9	0.1678	0.0000	OK
360 minute summer	S13	232	19.289	0.221	2.3	4.2362	0.0000	OK
360 minute summer	S14	184	19.625	0.024	1.6	0.0270	0.0000	OK
360 minute summer	S15	232	19.289	0.279	2.0	0.3152	0.0000	SURCHARGED
360 minute summer	S78	232	19.289	0.309	2.3	0.3491	0.0000	SURCHARGED
360 minute summer	S85	192	19.517	0.017	0.6	0.0190	0.0000	OK
360 minute summer	S17	232	19.288	1.270	2.7	1.4368	0.0000	SURCHARGED
360 minute summer	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S83	232	17.429	0.023	1.5	0.0328	0.0000	OK
360 minute summer	S77	232	17.113	0.023	1.5	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)
360 minute summer	S11	1.000	S12	0.1	0.136	0.001	0.5118	
360 minute summer	S12	1.001	S13	0.9	0.450	0.017	0.2433	
360 minute summer	S13	1.002	S15	-1.4	0.207	-0.039	0.4657	
360 minute summer	S14	2.000	S15	1.6	0.593	0.024	0.6927	
360 minute summer	S15	1.003	S78	1.5	0.378	0.039	0.2366	
360 minute summer	S78	1.004	S17	2.3	0.480	0.064	0.6683	
360 minute summer	S85	3.000	S17	0.6	0.444	0.026	0.3436	
360 minute summer	S17	Hydro-Brake®	S83	1.5				
360 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0057	
360 minute summer	S83	1.006	S77	1.5	0.505	0.005	0.1067	27.5

Results for 20 year +10% CC 360 minute winter. 424 minute analysis at 8 minute timestep. Mass balance: 99.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S11	160	20.582	0.006	0.1	0.0063	0.0000	OK
360 minute winter	S12	248	19.320	0.180	0.7	0.2035	0.0000	OK
360 minute winter	S13	248	19.320	0.252	1.7	4.8340	0.0000	SURCHARGED
360 minute winter	S14	184	19.622	0.021	1.2	0.0236	0.0000	OK
360 minute winter	S15	248	19.320	0.310	1.5	0.3505	0.0000	SURCHARGED
360 minute winter	S78	248	19.320	0.340	2.1	0.3844	0.0000	SURCHARGED
360 minute winter	S85	192	19.515	0.015	0.5	0.0174	0.0000	OK
360 minute winter	S17	248	19.320	1.302	2.4	1.4723	0.0000	SURCHARGED
360 minute winter	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S83	248	17.429	0.023	1.5	0.0330	0.0000	OK
360 minute winter	S77	248	17.113	0.023	1.5	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)
360 minute winter	S11	1.000	S12	0.1	0.136	0.001	0.6271	
360 minute winter	S12	1.001	S13	0.7	0.407	0.014	0.2667	
360 minute winter	S13	1.002	S15	1.0	0.199	0.026	0.4669	
360 minute winter	S14	2.000	S15	1.2	0.593	0.018	0.6946	
360 minute winter	S15	1.003	S78	1.3	0.363	0.034	0.2366	
360 minute winter	S78	1.004	S17	2.1	0.476	0.056	0.6683	
360 minute winter	S85	3.000	S17	0.5	0.444	0.022	0.3412	
360 minute winter	S17	Hydro-Brake®	S83	1.5				
360 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0057	
360 minute winter	S83	1.006	S77	1.5	0.506	0.005	0.1075	30.1

Results for 20 year +10% CC 480 minute summer. 544 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	S11	224	20.582	0.006	0.1	0.0063	0.0000	OK
480 minute summer	S12	296	19.269	0.129	0.8	0.1460	0.0000	OK
480 minute summer	S13	296	19.269	0.201	1.6	3.8585	0.0000	OK
480 minute summer	S14	248	19.623	0.022	1.3	0.0245	0.0000	OK
480 minute summer	S15	296	19.269	0.259	1.7	0.2930	0.0000	SURCHARGED
480 minute summer	S78	296	19.269	0.289	2.1	0.3269	0.0000	SURCHARGED
480 minute summer	S85	248	19.515	0.015	0.5	0.0174	0.0000	OK
480 minute summer	S17	296	19.269	1.251	2.4	1.4148	0.0000	SURCHARGED
480 minute summer	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S83	296	17.429	0.023	1.5	0.0327	0.0000	OK
480 minute summer	S77	296	17.113	0.023	1.5	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)
480 minute summer	S11	1.000	S12	0.1	0.150	0.001	0.4341	
480 minute summer	S12	1.001	S13	0.8	0.450	0.015	0.2204	
480 minute summer	S13	1.002	S15	-0.8	0.206	-0.022	0.4533	
480 minute summer	S14	2.000	S15	1.3	0.611	0.019	0.6880	
480 minute summer	S15	1.003	S78	1.3	0.370	0.036	0.2366	
480 minute summer	S78	1.004	S17	2.1	0.476	0.058	0.6683	
480 minute summer	S85	3.000	S17	0.5	0.444	0.022	0.3412	
480 minute summer	S17	Hydro-Brake®	S83	1.5				
480 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0056	
480 minute summer	S83	1.006	S77	1.5	0.504	0.005	0.1061	30.2

Results for 20 year +10% CC 480 minute winter. 544 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	S11	216	20.582	0.006	0.1	0.0063	0.0000	OK
480 minute winter	S12	320	19.270	0.130	0.6	0.1470	0.0000	OK
480 minute winter	S13	320	19.270	0.202	1.3	3.8746	0.0000	OK
480 minute winter	S14	248	19.620	0.019	1.0	0.0217	0.0000	OK
480 minute winter	S15	320	19.270	0.260	1.4	0.2940	0.0000	SURCHARGED
480 minute winter	S78	320	19.270	0.290	2.0	0.3279	0.0000	SURCHARGED
480 minute winter	S85	240	19.514	0.014	0.4	0.0156	0.0000	OK
480 minute winter	S17	320	19.270	1.252	2.1	1.4158	0.0000	SURCHARGED
480 minute winter	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S83	320	17.429	0.023	1.5	0.0327	0.0000	OK
480 minute winter	S77	320	17.113	0.023	1.5	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)
480 minute winter	S11	1.000	S12	0.1	0.150	0.001	0.4376	
480 minute winter	S12	1.001	S13	0.8	0.407	0.015	0.2216	
480 minute winter	S13	1.002	S15	0.8	0.205	0.021	0.4540	
480 minute winter	S14	2.000	S15	1.0	0.571	0.015	0.6881	
480 minute winter	S15	1.003	S78	1.2	0.354	0.033	0.2366	
480 minute winter	S78	1.004	S17	1.8	0.467	0.050	0.6683	
480 minute winter	S85	3.000	S17	0.4	0.444	0.017	0.3387	
480 minute winter	S17	Hydro-Brake®	S83	1.5				
480 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0056	
480 minute winter	S83	1.006	S77	1.5	0.504	0.005	0.1062	34.3

Results for 20 year +10% CC 600 minute summer. 660 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	S11	300	20.582	0.006	0.1	0.0063	0.0000	OK
600 minute summer	S12	360	19.241	0.101	0.7	0.1139	0.0000	OK
600 minute summer	S13	360	19.241	0.173	1.2	3.3271	0.0000	OK
600 minute summer	S14	315	19.621	0.020	1.1	0.0227	0.0000	OK
600 minute summer	S15	360	19.241	0.231	1.4	0.2616	0.0000	SURCHARGED
600 minute summer	S78	360	19.241	0.261	1.9	0.2954	0.0000	SURCHARGED
600 minute summer	S85	300	19.514	0.014	0.4	0.0156	0.0000	OK
600 minute summer	S17	360	19.241	1.223	2.1	1.3830	0.0000	SURCHARGED
600 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S83	360	17.429	0.023	1.5	0.0326	0.0000	OK
600 minute summer	S77	360	17.113	0.023	1.5	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 summer	S11	1.000	S12	0.1	0.142	0.001	0.3168	
600 minute summer	S12	1.001	S13	0.7	0.432	0.013	0.1807	
600 minute summer	S13	1.002	S15	0.7	0.186	0.020	0.4262	
600 minute summer	S14	2.000	S15	1.1	0.593	0.016	0.6479	
600 minute summer	S15	1.003	S78	1.1	0.348	0.031	0.2366	
600 minute summer	S78	1.004	S17	1.8	0.478	0.049	0.6683	
600 minute summer	S85	3.000	S17	0.4	0.448	0.017	0.3387	
600 minute summer	S17	Hydro-Brake®	S83	1.5				
600 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0056	
600 minute summer	S83	1.006	S77	1.5	0.502	0.005	0.1054	32.1

Results for 20 year +10% CC 600 minute winter. 660 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	S11	285	20.582	0.006	0.1	0.0063	0.0000	OK
600 minute winter	S12	390	19.229	0.089	0.5	0.1005	0.0000	OK
600 minute winter	S13	390	19.229	0.161	0.7	3.0817	0.0000	OK
600 minute winter	S14	300	19.618	0.017	0.8	0.0196	0.0000	OK
600 minute winter	S15	390	19.229	0.219	1.2	0.2473	0.0000	OK
600 minute winter	S78	390	19.229	0.249	1.6	0.2813	0.0000	SURCHARGED
600 minute winter	S85	270	19.512	0.012	0.3	0.0137	0.0000	OK
600 minute winter	S17	390	19.229	1.211	1.9	1.3692	0.0000	SURCHARGED
600 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S83	390	17.429	0.023	1.5	0.0325	0.0000	OK
600 minute winter	S77	390	17.113	0.023	1.5	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	S11	1.000	S12	0.1	0.150	0.001	0.2684	
600 minute winter	S12	1.001	S13	0.5	0.432	0.010	0.1622	
600 minute winter	S13	1.002	S15	0.7	0.187	0.019	0.4094	
600 minute winter	S14	2.000	S15	0.8	0.549	0.012	0.6154	
600 minute winter	S15	1.003	S78	1.1	0.340	0.029	0.2356	
600 minute winter	S78	1.004	S17	1.6	0.446	0.043	0.6683	
600 minute winter	S85	3.000	S17	0.3	0.399	0.013	0.3361	
600 minute winter	S17	Hydro-Brake®	S83	1.5				
600 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0056	
600 minute winter	S83	1.006	S77	1.5	0.501	0.005	0.1050	35.6

Results for 20 year +10% CC 720 minute summer. 780 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	S11	360	20.582	0.006	0.1	0.0063	0.0000	OK
720 minute summer	S12	435	19.215	0.075	0.6	0.0843	0.0000	OK
720 minute summer	S13	435	19.215	0.147	1.0	2.8258	0.0000	OK
720 minute summer	S14	375	19.620	0.019	1.0	0.0217	0.0000	OK
720 minute summer	S15	435	19.215	0.205	1.3	0.2320	0.0000	OK
720 minute summer	S78	435	19.215	0.235	1.9	0.2658	0.0000	SURCHARGED
720 minute summer	S85	375	19.514	0.014	0.4	0.0156	0.0000	OK
720 minute summer	S17	435	19.215	1.197	2.0	1.3536	0.0000	SURCHARGED
720 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S83	435	17.429	0.023	1.5	0.0324	0.0000	OK
720 minute summer	S77	435	17.113	0.023	1.5	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 summer	S11	1.000	S12	0.1	0.142	0.001	0.2113	
720 minute summer	S12	1.001	S13	0.6	0.432	0.012	0.1409	
720 minute summer	S13	1.002	S15	0.7	0.187	0.019	0.3847	
720 minute summer	S14	2.000	S15	1.0	0.572	0.015	0.5750	
720 minute summer	S15	1.003	S78	1.1	0.350	0.031	0.2314	
720 minute summer	S78	1.004	S17	1.7	0.468	0.046	0.6683	
720 minute summer	S85	3.000	S17	0.4	0.399	0.017	0.3387	
720 minute summer	S17	Hydro-Brake®	S83	1.5				
720 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0056	
720 minute summer	S83	1.006	S77	1.5	0.501	0.005	0.1047	33.6

Results for 20 year +10% CC 720 minute winter. 780 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	S11	360	20.582	0.006	0.1	0.0063	0.0000	OK
720 minute winter	S12	450	19.198	0.057	0.5	0.0650	0.0000	OK
720 minute winter	S13	465	19.197	0.129	0.7	2.4675	0.0000	OK
720 minute winter	S14	345	19.617	0.016	0.7	0.0184	0.0000	OK
720 minute winter	S15	450	19.197	0.187	1.1	0.2109	0.0000	OK
720 minute winter	S78	450	19.197	0.217	1.6	0.2450	0.0000	OK
720 minute winter	S85	345	19.512	0.012	0.3	0.0137	0.0000	OK
720 minute winter	S17	450	19.197	1.179	1.8	1.3332	0.0000	SURCHARGED
720 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S83	450	17.429	0.023	1.5	0.0323	0.0000	OK
720 minute winter	S77	465	17.112	0.022	1.5	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	S11	1.000	S12	0.1	0.150	0.001	0.1471	
720 minute winter	S12	1.001	S13	0.7	0.432	0.013	0.1131	
720 minute winter	S13	1.002	S15	0.7	0.174	0.019	0.3440	
720 minute winter	S14	2.000	S15	0.7	0.549	0.010	0.5130	
720 minute winter	S15	1.003	S78	1.1	0.343	0.029	0.2215	
720 minute winter	S78	1.004	S17	1.6	0.451	0.044	0.6640	
720 minute winter	S85	3.000	S17	0.3	0.399	0.013	0.3361	
720 minute winter	S17	Hydro-Brake®	S83	1.5				
720 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0055	
720 minute winter	S83	1.006	S77	1.5	0.500	0.005	0.1041	38.9

Results for 20 year +10% CC 960 minute summer. 1020 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	S11	480	20.582	0.006	0.1	0.0063	0.0000	OK
960 minute summer	S12	555	19.177	0.037	0.5	0.0414	0.0000	OK
960 minute summer	S13	555	19.175	0.107	0.7	2.0482	0.0000	OK
960 minute summer	S14	495	19.618	0.017	0.8	0.0196	0.0000	OK
960 minute summer	S15	555	19.175	0.165	1.2	0.1869	0.0000	OK
960 minute summer	S78	555	19.175	0.195	1.9	0.2209	0.0000	OK
960 minute summer	S85	465	19.512	0.012	0.3	0.0137	0.0000	OK
960 minute summer	S17	555	19.175	1.157	2.0	1.3091	0.0000	SURCHARGED
960 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S83	555	17.429	0.023	1.4	0.0322	0.0000	OK
960 minute summer	S77	555	17.112	0.022	1.4	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)
960 minute summer	S11	1.000	S12	0.1	0.150	0.001	0.0771	
960 minute summer	S12	1.001	S13	0.6	0.432	0.011	0.0821	
960 minute summer	S13	1.002	S15	0.6	0.199	0.016	0.2922	
960 minute summer	S14	2.000	S15	0.8	0.549	0.012	0.4360	
960 minute summer	S15	1.003	S78	1.2	0.335	0.032	0.2019	
960 minute summer	S78	1.004	S17	1.7	0.442	0.047	0.6418	
960 minute summer	S85	3.000	S17	0.3	0.399	0.013	0.3361	
960 minute summer	S17	Hydro-Brake®	S83	1.4				
960 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0055	
960 minute summer	S83	1.006	S77	1.4	0.498	0.005	0.1035	36.4

Results for 20 year +10% CC 960 minute winter. 1020 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	S11	15	20.576	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S12	435	19.152	0.012	0.3	0.0140	0.0000	OK
960 minute winter	S13	570	19.127	0.059	0.4	1.1393	0.0000	OK
960 minute winter	S14	465	19.616	0.015	0.6	0.0173	0.0000	OK
960 minute winter	S15	570	19.127	0.117	1.0	0.1328	0.0000	OK
960 minute winter	S78	570	19.127	0.147	1.6	0.1667	0.0000	OK
960 minute winter	S85	405	19.510	0.010	0.2	0.0114	0.0000	OK
960 minute winter	S17	570	19.127	1.109	1.8	1.2546	0.0000	SURCHARGED
960 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S83	570	17.428	0.022	1.4	0.0319	0.0000	OK
960 minute winter	S77	570	17.112	0.022	1.4	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)
960 minute winter	S11	1.000	S12	0.0	0.000	0.000	0.0155	
960 minute winter	S12	1.001	S13	0.3	0.432	0.006	0.0325	
960 minute winter	S13	1.002	S15	0.5	0.179	0.014	0.1719	
960 minute winter	S14	2.000	S15	0.6	0.526	0.009	0.2565	
960 minute winter	S15	1.003	S78	1.0	0.340	0.027	0.1442	
960 minute winter	S78	1.004	S17	1.6	0.439	0.043	0.5656	
960 minute winter	S85	3.000	S17	0.2	0.399	0.009	0.3331	
960 minute winter	S17	Hydro-Brake®	S83	1.4				
960 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0054	
960 minute winter	S83	1.006	S77	1.4	0.496	0.005	0.1021	41.6

Results for 20 year +10% CC 1440 minute summer. 1500 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	S11	30	20.576	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S12	720	19.152	0.012	0.3	0.0140	0.0000	OK
1440 minute summer	S13	810	19.108	0.040	0.3	0.7650	0.0000	OK
1440 minute summer	S14	720	19.616	0.015	0.6	0.0172	0.0000	OK
1440 minute summer	S15	810	19.108	0.098	1.0	0.1107	0.0000	OK
1440 minute summer	S78	810	19.108	0.128	1.6	0.1445	0.0000	OK
1440 minute summer	S85	750	19.512	0.012	0.3	0.0137	0.0000	OK
1440 minute summer	S17	810	19.108	1.090	1.9	1.2325	0.0000	SURCHARGED
1440 minute summer	S81	30	17.440	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S83	810	17.428	0.022	1.4	0.0318	0.0000	OK
1440 minute summer	S77	810	17.112	0.022	1.4	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)
1440 minute summer	S11	1.000	S12	0.0	0.000	0.000	0.0155	
1440 minute summer	S12	1.001	S13	0.3	0.362	0.006	0.0194	
1440 minute summer	S13	1.002	S15	0.4	0.174	0.010	0.1249	
1440 minute summer	S14	2.000	S15	0.6	0.525	0.009	0.1839	
1440 minute summer	S15	1.003	S78	1.0	0.341	0.027	0.1184	
1440 minute summer	S78	1.004	S17	1.6	0.440	0.043	0.5214	
1440 minute summer	S85	3.000	S17	0.3	0.399	0.013	0.3361	
1440 minute summer	S17	Hydro-Brake®	S83	1.4				
1440 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0054	
1440 minute summer	S83	1.006	S77	1.4	0.495	0.005	0.1015	43.0

Results for 20 year +10% CC 1440 minute winter. 1500 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 winter	S11	30	20.576	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S12	600	19.150	0.010	0.2	0.0116	0.0000	OK
1440 minute winter	S13	720	19.080	0.012	0.2	0.2312	0.0000	OK
1440 minute winter	S14	720	19.615	0.014	0.5	0.0158	0.0000	OK
1440 minute winter	S15	720	19.033	0.023	0.8	0.0259	0.0000	OK
1440 minute winter	S78	780	19.022	0.042	1.3	0.0474	0.0000	OK
1440 minute winter	S85	660	19.510	0.010	0.2	0.0114	0.0000	OK
1440 minute winter	S17	780	19.022	1.004	1.5	1.1352	0.0000	SURCHARGED
1440 minute winter	S81	30	17.440	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S83	780	17.428	0.022	1.4	0.0313	0.0000	OK
1440 minute winter	S77	780	17.112	0.022	1.4	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)
1440 minute winter	S11	1.000	S12	0.0	0.000	0.000	0.0116	
1440 minute winter	S12	1.001	S13	0.2	0.362	0.004	0.0052	
1440 minute winter	S13	1.002	S15	0.2	0.161	0.005	0.0171	
1440 minute winter	S14	2.000	S15	0.5	0.497	0.007	0.0339	
1440 minute winter	S15	1.003	S78	0.8	0.323	0.022	0.0214	
1440 minute winter	S78	1.004	S17	1.3	0.427	0.036	0.2343	
1440 minute winter	S85	3.000	S17	0.2	0.399	0.009	0.3159	
1440 minute winter	S17	Hydro-Brake®	S83	1.4				
1440 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0053	
1440 minute winter	S83	1.006	S77	1.4	0.489	0.004	0.0989	46.8

Results for 100 year +20% CC 15 minute summer. 75 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
15 minute summer	S11	11	20.588	0.012	0.6	0.0140	0.0000	OK
15 minute summer	S12	19	19.295	0.155	8.1	0.1756	0.0000	OK
15 minute summer	S13	19	19.295	0.227	21.7	4.3599	0.0000	SURCHARGED
15 minute summer	S14	10	19.655	0.054	8.6	0.0608	0.0000	OK
15 minute summer	S15	19	19.295	0.285	18.3	0.3225	0.0000	SURCHARGED
15 minute summer	S78	19	19.295	0.315	16.0	0.3563	0.0000	SURCHARGED
15 minute summer	S85	10	19.539	0.039	3.5	0.0442	0.0000	OK
15 minute summer	S17	19	19.295	1.277	15.2	1.4439	0.0000	SURCHARGED
15 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S83	19	17.429	0.023	1.5	0.0329	0.0000	OK
15 minute summer	S77	19	17.113	0.023	1.5	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)
15 minute summer	S11	1.000	S12	0.6	0.193	0.006	0.5404	
15 minute summer	S12	1.001	S13	5.1	1.024	0.098	0.2492	
15 minute summer	S13	1.002	S15	-16.6	-0.572	-0.457	0.4668	
15 minute summer	S14	2.000	S15	8.5	1.069	0.126	0.7367	
15 minute summer	S15	1.003	S78	-8.7	0.508	-0.236	0.2366	
15 minute summer	S78	1.004	S17	12.1	0.749	0.332	0.6683	
15 minute summer	S85	3.000	S17	3.4	0.677	0.149	0.3909	
15 minute summer	S17	Hydro-Brake®	S83	1.5				
15 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0057	
15 minute summer	S83	1.006	S77	1.5	0.505	0.005	0.1069	6.1

Results for 100 year +20% CC 15 minute winter. 75 minute analysis at 1 minute timestep. Mass balance: 99.62%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S11	11	20.588	0.012	0.6	0.0140	0.0000	OK
15 minute winter	S12	18	19.339	0.199	5.6	0.2245	0.0000	OK
15 minute winter	S13	19	19.337	0.269	22.0	5.1625	0.0000	SURCHARGED
15 minute winter	S14	10	19.656	0.055	9.1	0.0624	0.0000	OK
15 minute winter	S15	19	19.336	0.326	18.7	0.3689	0.0000	SURCHARGED
15 minute winter	S78	19	19.336	0.356	13.4	0.4026	0.0000	SURCHARGED
15 minute winter	S85	10	19.540	0.040	3.6	0.0449	0.0000	OK
15 minute winter	S17	18	19.337	1.319	14.7	1.4916	0.0000	SURCHARGED
15 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S83	19	17.429	0.023	1.5	0.0331	0.0000	OK
15 minute winter	S77	19	17.113	0.023	1.5	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)
15 minute winter	S11	1.000	S12	0.6	0.193	0.006	0.6872	
15 minute winter	S12	1.001	S13	5.1	1.026	0.097	0.2777	
15 minute winter	S13	1.002	S15	-17.0	-0.531	-0.467	0.4669	
15 minute winter	S14	2.000	S15	8.9	1.041	0.133	0.7617	
15 minute winter	S15	1.003	S78	-9.2	0.483	-0.250	0.2366	
15 minute winter	S78	1.004	S17	12.3	0.711	0.336	0.6683	
15 minute winter	S85	3.000	S17	3.5	0.744	0.153	0.3923	
15 minute winter	S17	Hydro-Brake®	S83	1.5				
15 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0057	
15 minute winter	S83	1.006	S77	1.5	0.507	0.005	0.1079	6.2

Results for 100 year +20% CC 30 minute summer. 90 minute analysis at 1 minute timestep. Mass balance: 99.17%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	S11	18	20.588	0.012	0.6	0.0139	0.0000	OK
30 minute summer	S12	33	19.418	0.278	5.7	0.3139	0.0000	SURCHARGED
30 minute summer	S13	33	19.417	0.349	18.3	6.6975	0.0000	SURCHARGED
30 minute summer	S14	18	19.654	0.053	8.4	0.0605	0.0000	OK
30 minute summer	S15	33	19.417	0.407	17.9	0.4598	0.0000	SURCHARGED
30 minute summer	S78	33	19.417	0.437	9.0	0.4938	0.0000	SURCHARGED
30 minute summer	S85	18	19.539	0.039	3.4	0.0441	0.0000	OK
30 minute summer	S17	33	19.417	1.399	9.7	1.5823	0.0000	SURCHARGED
30 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S83	34	17.429	0.023	1.6	0.0335	0.0000	OK
30 minute summer	S77	34	17.113	0.023	1.6	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	S11	1.000	S12	0.6	0.181	0.006	0.7388	
30 minute summer	S12	1.001	S13	4.8	0.819	0.092	0.2873	
30 minute summer	S13	1.002	S15	-15.2	-0.511	-0.418	0.4669	
30 minute summer	S14	2.000	S15	8.4	0.910	0.125	0.7831	
30 minute summer	S15	1.003	S78	-8.4	0.479	-0.227	0.2366	
30 minute summer	S78	1.004	S17	8.1	0.612	0.222	0.6683	
30 minute summer	S85	3.000	S17	3.4	0.615	0.148	0.3906	
30 minute summer	S17	Hydro-Brake®	S83	1.6				
30 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0059	
30 minute summer	S83	1.006	S77	1.6	0.511	0.005	0.1100	7.6

Results for 100 year +20% CC 30 minute winter. 90 minute analysis at 1 minute timestep. Mass balance: 98.31%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	S11	20	20.587	0.011	0.5	0.0129	0.0000	OK
30 minute winter	S12	33	19.537	0.397	4.4	0.4487	0.0000	SURCHARGED
30 minute winter	S13	33	19.537	0.469	17.5	7.4740	0.0000	SURCHARGED
30 minute winter	S14	18	19.652	0.051	7.6	0.0575	0.0000	OK
30 minute winter	S15	33	19.536	0.526	16.3	0.5949	0.0000	SURCHARGED
30 minute winter	S78	33	19.536	0.556	9.3	0.6285	0.0000	SURCHARGED
30 minute winter	S85	32	19.538	0.038	3.1	0.0434	0.0000	OK
30 minute winter	S17	32	19.536	1.518	8.5	1.7170	0.0000	SURCHARGED
30 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S83	33	17.430	0.024	1.6	0.0341	0.0000	OK
30 minute winter	S77	34	17.114	0.024	1.6	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	S11	1.000	S12	0.5	0.184	0.005	0.7432	
30 minute winter	S12	1.001	S13	4.0	0.774	0.078	0.2873	
30 minute winter	S13	1.002	S15	-13.6	-0.450	-0.373	0.4669	
30 minute winter	S14	2.000	S15	7.6	0.924	0.113	0.7788	
30 minute winter	S15	1.003	S78	-7.7	0.469	-0.210	0.2366	
30 minute winter	S78	1.004	S17	7.2	0.638	0.196	0.6683	
30 minute winter	S85	3.000	S17	3.1	0.624	0.135	0.3892	
30 minute winter	S17	Hydro-Brake®	S83	1.6				
30 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0060	
30 minute winter	S83	1.006	S77	1.6	0.517	0.005	0.1129	7.8

Results for 100 year +20% CC 60 minute summer. 120 minute analysis at 1 minute timestep. Mass balance: 98.07%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	S11	33	20.587	0.011	0.5	0.0128	0.0000	OK
60 minute summer	S12	61	19.612	0.472	3.9	0.5340	0.0000	SURCHARGED
60 minute summer	S13	61	19.612	0.544	14.4	7.5596	0.0000	SURCHARGED
60 minute summer	S14	33	19.649	0.048	6.7	0.0540	0.0000	OK
60 minute summer	S15	61	19.612	0.602	13.7	0.6813	0.0000	SURCHARGED
60 minute summer	S78	61	19.612	0.632	6.6	0.7152	0.0000	SURCHARGED
60 minute summer	S85	60	19.613	0.113	2.7	0.1274	0.0000	OK
60 minute summer	S17	61	19.612	1.594	5.1	1.8029	0.0000	SURCHARGED
60 minute summer	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S83	62	17.430	0.024	1.7	0.0344	0.0000	OK
60 minute summer	S77	62	17.114	0.024	1.7	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	S11	1.000	S12	0.5	0.158	0.005	0.7420	
60 minute summer	S12	1.001	S13	3.1	0.644	0.060	0.2873	
60 minute summer	S13	1.002	S15	-11.7	-0.341	-0.323	0.4669	
60 minute summer	S14	2.000	S15	6.7	0.780	0.100	0.7723	
60 minute summer	S15	1.003	S78	-6.0	0.435	-0.162	0.2366	
60 minute summer	S78	1.004	S17	4.3	0.556	0.118	0.6683	
60 minute summer	S85	3.000	S17	2.7	0.519	0.117	0.5848	
60 minute summer	S17	Hydro-Brake®	S83	1.7				
60 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0061	
60 minute summer	S83	1.006	S77	1.7	0.520	0.006	0.1147	10.4

Results for 100 year +20% CC 60 minute winter. 120 minute analysis at 1 minute timestep. Mass balance: 96.83%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	S11	35	20.586	0.010	0.4	0.0117	0.0000	OK
60 minute winter	S12	60	19.796	0.656	3.7	0.7417	0.0000	SURCHARGED
60 minute winter	S13	60	19.795	0.727	11.3	7.7666	0.0000	SURCHARGED
60 minute winter	S14	61	19.795	0.194	5.4	0.2192	0.0000	OK
60 minute winter	S15	60	19.794	0.784	10.7	0.8869	0.0000	SURCHARGED
60 minute winter	S78	60	19.794	0.814	5.2	0.9205	0.0000	SURCHARGED
60 minute winter	S85	61	19.797	0.297	3.9	0.3358	0.0000	SURCHARGED
60 minute winter	S17	61	19.793	1.775	5.4	2.0080	0.0000	SURCHARGED
60 minute winter	S81	1	17.440	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S83	61	17.431	0.025	1.8	0.0352	0.0000	OK
60 minute winter	S77	61	17.114	0.024	1.8	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)
60 minute winter	S11	1.000	S12	0.4	0.159	0.004	0.7429	
60 minute winter	S12	1.001	S13	2.5	0.690	0.048	0.2873	
60 minute winter	S13	1.002	S15	-9.1	-0.295	-0.250	0.4669	
60 minute winter	S14	2.000	S15	5.4	0.772	0.080	1.2813	
60 minute winter	S15	1.003	S78	-4.4	0.436	-0.121	0.2366	
60 minute winter	S78	1.004	S17	4.8	0.558	0.131	0.6683	
60 minute winter	S85	3.000	S17	-2.6	0.525	-0.114	0.6478	
60 minute winter	S17	Hydro-Brake®	S83	1.8				
60 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0063	
60 minute winter	S83	1.006	S77	1.8	0.528	0.006	0.1188	10.7

Results for 100 year +20% CC 120 minute summer. 180 minute analysis at 2 minute timestep. Mass balance: 97.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	S11	68	20.585	0.009	0.3	0.0103	0.0000	OK
120 minute summer	S12	100	19.719	0.579	3.8	0.6548	0.0000	SURCHARGED
120 minute summer	S13	100	19.719	0.651	7.6	7.6804	0.0000	SURCHARGED
120 minute summer	S14	98	19.720	0.119	4.6	0.1344	0.0000	OK
120 minute summer	S15	100	19.719	0.709	8.4	0.8020	0.0000	SURCHARGED
120 minute summer	S78	100	19.719	0.739	4.8	0.8357	0.0000	SURCHARGED
120 minute summer	S85	102	19.717	0.217	2.3	0.2456	0.0000	SURCHARGED
120 minute summer	S17	100	19.719	1.700	4.3	1.9233	0.0000	SURCHARGED
120 minute summer	S81	2	17.440	0.000	0.0	0.0000	0.0000	OK
120 minute summer	S83	100	17.430	0.024	1.7	0.0349	0.0000	OK
120 minute summer	S77	100	17.114	0.024	1.7	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 summer	S11	1.000	S12	0.3	0.145	0.003	0.7416	
120 minute summer	S12	1.001	S13	1.7	0.538	0.034	0.2873	
120 minute summer	S13	1.002	S15	-7.3	-0.210	-0.201	0.4669	
120 minute summer	S14	2.000	S15	4.6	0.691	0.068	1.0268	
120 minute summer	S15	1.003	S78	-3.2	0.401	-0.088	0.2366	
120 minute summer	S78	1.004	S17	4.3	0.517	0.117	0.6683	
120 minute summer	S85	3.000	S17	1.9	0.474	0.083	0.6478	
120 minute summer	S17	Hydro-Brake®	S83	1.7				
120 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0062	
120 minute summer	S83	1.006	S77	1.7	0.524	0.006	0.1171	15.7

Results for 100 year +20% CC 120 minute winter. 180 minute analysis at 2 minute timestep. Mass balance: 96.27%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	S11	64	20.585	0.009	0.3	0.0102	0.0000	OK
120 minute winter	S12	112	19.978	0.838	2.4	0.9475	0.0000	SURCHARGED
120 minute winter	S13	112	19.978	0.910	6.7	7.9731	0.0000	FLOOD RISK
120 minute winter	S14	110	19.978	0.377	3.6	0.4267	0.0000	SURCHARGED
120 minute winter	S15	112	19.978	0.968	6.4	1.0947	0.0000	SURCHARGED
120 minute winter	S78	112	19.978	0.998	4.3	1.1286	0.0000	SURCHARGED
120 minute winter	S85	112	19.978	0.478	2.9	0.5401	0.0000	SURCHARGED
120 minute winter	S17	112	19.978	1.960	4.5	2.2164	0.0000	SURCHARGED
120 minute winter	S81	2	17.440	0.000	0.0	0.0000	0.0000	OK
120 minute winter	S83	112	17.431	0.025	1.8	0.0360	0.0000	OK
120 minute winter	S77	112	17.115	0.025	1.8	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)
120 minute winter	S11	1.000	S12	0.3	0.149	0.003	0.7403	
120 minute winter	S12	1.001	S13	1.6	0.582	0.030	0.2873	
120 minute winter	S13	1.002	S15	-5.4	0.197	-0.149	0.4669	
120 minute winter	S14	2.000	S15	3.6	0.668	0.054	1.3382	
120 minute winter	S15	1.003	S78	-2.2	0.400	-0.060	0.2366	
120 minute winter	S78	1.004	S17	4.0	0.507	0.108	0.6683	
120 minute winter	S85	3.000	S17	-1.7	0.474	-0.075	0.6478	
120 minute winter	S17	Hydro-Brake®	S83	1.8				
120 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0065	
120 minute winter	S83	1.006	S77	1.8	0.535	0.006	0.1226	16.3

Results for 100 year +20% CC 180 minute summer. 240 minute analysis at 4 minute timestep. Mass balance: 98.46%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	S11	96	20.585	0.009	0.3	0.0103	0.0000	OK
180 minute summer	S12	136	19.745	0.605	2.1	0.6845	0.0000	SURCHARGED
180 minute summer	S13	136	19.745	0.677	6.8	7.7099	0.0000	SURCHARGED
180 minute summer	S14	136	19.744	0.143	3.6	0.1617	0.0000	OK
180 minute summer	S15	136	19.745	0.735	6.6	0.8312	0.0000	SURCHARGED
180 minute summer	S78	136	19.745	0.765	3.5	0.8651	0.0000	SURCHARGED
180 minute summer	S85	132	19.746	0.246	1.4	0.2787	0.0000	SURCHARGED
180 minute summer	S17	136	19.745	1.727	3.7	1.9531	0.0000	SURCHARGED
180 minute summer	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S83	136	17.430	0.024	1.7	0.0350	0.0000	OK
180 minute summer	S77	136	17.114	0.024	1.7	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)
180 minute summer	S11	1.000	S12	0.3	0.138	0.003	0.7399	
180 minute summer	S12	1.001	S13	1.4	0.527	0.027	0.2873	
180 minute summer	S13	1.002	S15	-5.5	0.194	-0.150	0.4669	
180 minute summer	S14	2.000	S15	3.6	0.643	0.054	1.1168	
180 minute summer	S15	1.003	S78	-2.4	0.396	-0.066	0.2366	
180 minute summer	S78	1.004	S17	3.1	0.489	0.083	0.6683	
180 minute summer	S85	3.000	S17	1.4	0.452	0.061	0.6478	
180 minute summer	S17	Hydro-Brake®	S83	1.7				
180 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0063	
180 minute summer	S83	1.006	S77	1.7	0.526	0.006	0.1177	20.5

Results for 100 year +20% CC 180 minute winter. 240 minute analysis at 4 minute timestep. Mass balance: 97.26%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	S11	96	20.584	0.008	0.2	0.0085	0.0000	OK
180 minute winter	S12	144	20.016	0.876	1.7	0.9908	0.0000	SURCHARGED
180 minute winter	S13	144	20.016	0.948	4.9	8.0163	0.0000	FLOOD RISK
180 minute winter	S14	144	20.016	0.415	2.7	0.4695	0.0000	SURCHARGED
180 minute winter	S15	144	20.016	1.006	4.5	1.1379	0.0000	SURCHARGED
180 minute winter	S78	144	20.016	1.036	3.4	1.1718	0.0000	SURCHARGED
180 minute winter	S85	144	20.016	0.516	1.9	0.5839	0.0000	SURCHARGED
180 minute winter	S17	144	20.016	1.998	3.1	2.2597	0.0000	SURCHARGED
180 minute winter	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S83	144	17.431	0.025	1.9	0.0362	0.0000	OK
180 minute winter	S77	144	17.115	0.025	1.9	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)
180 minute winter	S11	1.000	S12	0.2	0.134	0.002	0.7393	
180 minute winter	S12	1.001	S13	1.2	0.517	0.022	0.2873	
180 minute winter	S13	1.002	S15	-3.8	0.197	-0.105	0.4669	
180 minute winter	S14	2.000	S15	2.7	0.626	0.040	1.3382	
180 minute winter	S15	1.003	S78	1.7	0.393	0.047	0.2366	
180 minute winter	S78	1.004	S17	3.0	0.493	0.083	0.6683	
180 minute winter	S85	3.000	S17	1.1	0.452	0.048	0.6478	
180 minute winter	S17	Hydro-Brake®	S83	1.9				
180 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0066	
180 minute winter	S83	1.006	S77	1.9	0.536	0.006	0.1233	21.5

Results for 100 year +20% CC 240 minute summer. 300 minute analysis at 4 minute timestep. Mass balance: 99.02%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	S11	128	20.584	0.008	0.2	0.0085	0.0000	OK
240 minute summer	S12	168	19.744	0.604	2.5	0.6831	0.0000	SURCHARGED
240 minute summer	S13	168	19.744	0.676	5.3	7.7086	0.0000	SURCHARGED
240 minute summer	S14	168	19.744	0.143	3.1	0.1614	0.0000	OK
240 minute summer	S15	168	19.744	0.734	5.1	0.8300	0.0000	SURCHARGED
240 minute summer	S78	168	19.744	0.764	3.7	0.8640	0.0000	SURCHARGED
240 minute summer	S85	168	19.744	0.244	1.4	0.2762	0.0000	SURCHARGED
240 minute summer	S17	168	19.744	1.726	3.3	1.9518	0.0000	SURCHARGED
240 minute summer	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
240 minute summer	S83	172	17.430	0.024	1.7	0.0350	0.0000	OK
240 minute summer	S77	172	17.114	0.024	1.7	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	S11	1.000	S12	0.2	0.150	0.002	0.7393	
240 minute summer	S12	1.001	S13	1.2	0.459	0.024	0.2873	
240 minute summer	S13	1.002	S15	-4.5	0.197	-0.123	0.4669	
240 minute summer	S14	2.000	S15	3.1	0.626	0.046	1.1159	
240 minute summer	S15	1.003	S78	1.9	0.397	0.053	0.2366	
240 minute summer	S78	1.004	S17	3.3	0.504	0.091	0.6683	
240 minute summer	S85	3.000	S17	1.2	0.452	0.052	0.6478	
240 minute summer	S17	Hydro-Brake®	S83	1.7				
240 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0063	
240 minute summer	S83	1.006	S77	1.7	0.525	0.006	0.1177	24.9

Results for 100 year +20% CC 240 minute winter. 300 minute analysis at 4 minute timestep. Mass balance: 97.99%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	S11	132	20.584	0.008	0.2	0.0085	0.0000	OK
240 minute winter	S12	180	20.018	0.878	1.6	0.9929	0.0000	SURCHARGED
240 minute winter	S13	180	20.018	0.950	4.2	8.0183	0.0000	FLOOD RISK
240 minute winter	S14	180	20.018	0.417	2.3	0.4713	0.0000	SURCHARGED
240 minute winter	S15	180	20.018	1.008	3.7	1.1398	0.0000	SURCHARGED
240 minute winter	S78	180	20.018	1.038	3.6	1.1736	0.0000	SURCHARGED
240 minute winter	S85	180	20.018	0.518	1.5	0.5854	0.0000	SURCHARGED
240 minute winter	S17	180	20.017	1.999	3.2	2.2614	0.0000	SURCHARGED
240 minute winter	S81	4	17.440	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S83	184	17.431	0.025	1.9	0.0362	0.0000	OK
240 minute winter	S77	184	17.115	0.025	1.9	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)
240 minute winter	S11	1.000	S12	0.2	0.146	0.002	0.7393	
240 minute winter	S12	1.001	S13	1.1	0.498	0.021	0.2873	
240 minute winter	S13	1.002	S15	-3.1	0.198	-0.086	0.4669	
240 minute winter	S14	2.000	S15	2.3	0.631	0.034	1.3382	
240 minute winter	S15	1.003	S78	1.8	0.389	0.049	0.2366	
240 minute winter	S78	1.004	S17	3.2	0.491	0.089	0.6683	
240 minute winter	S85	3.000	S17	0.9	0.453	0.039	0.6478	
240 minute winter	S17	Hydro-Brake®	S83	1.9				
240 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0066	
240 minute winter	S83	1.006	S77	1.9	0.536	0.006	0.1234	26.5

Results for 100 year +20% CC 360 minute summer. 424 minute analysis at 8 minute timestep. Mass balance: 99.79%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	S11	184	20.583	0.007	0.2	0.0083	0.0000	OK
360 minute summer	S12	240	19.723	0.583	1.4	0.6596	0.0000	SURCHARGED
360 minute summer	S13	240	19.723	0.655	4.4	7.6851	0.0000	SURCHARGED
360 minute summer	S14	240	19.723	0.122	2.4	0.1378	0.0000	OK
360 minute summer	S15	240	19.723	0.713	4.0	0.8064	0.0000	SURCHARGED
360 minute summer	S78	240	19.723	0.743	2.5	0.8403	0.0000	SURCHARGED
360 minute summer	S85	240	19.722	0.222	1.0	0.2515	0.0000	SURCHARGED
360 minute summer	S17	240	19.723	1.705	2.8	1.9280	0.0000	SURCHARGED
360 minute summer	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S83	240	17.430	0.024	1.7	0.0349	0.0000	OK
360 minute summer	S77	240	17.114	0.024	1.7	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	S11	1.000	S12	0.2	0.129	0.002	0.7370	
360 minute summer	S12	1.001	S13	1.1	0.450	0.021	0.2873	
360 minute summer	S13	1.002	S15	-3.4	0.182	-0.093	0.4669	
360 minute summer	S14	2.000	S15	2.4	0.620	0.035	1.0383	
360 minute summer	S15	1.003	S78	1.4	0.371	0.038	0.2366	
360 minute summer	S78	1.004	S17	2.3	0.473	0.062	0.6683	
360 minute summer	S85	3.000	S17	1.0	0.444	0.043	0.6478	
360 minute summer	S17	Hydro-Brake®	S83	1.7				
360 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0062	
360 minute summer	S83	1.006	S77	1.7	0.525	0.006	0.1172	33.0

Results for 100 year +20% CC 360 minute winter. 424 minute analysis at 8 minute timestep. Mass balance: 99.39%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	S11	136	20.582	0.006	0.1	0.0063	0.0000	OK
360 minute winter	S12	256	19.929	0.789	1.5	0.8919	0.0000	SURCHARGED
360 minute winter	S13	256	19.929	0.861	2.5	7.9174	0.0000	FLOOD RISK
360 minute winter	S14	256	19.929	0.328	1.8	0.3705	0.0000	SURCHARGED
360 minute winter	S15	256	19.929	0.919	2.5	1.0389	0.0000	SURCHARGED
360 minute winter	S78	256	19.929	0.949	2.4	1.0728	0.0000	SURCHARGED
360 minute winter	S85	256	19.928	0.428	0.7	0.4845	0.0000	SURCHARGED
360 minute winter	S17	256	19.928	1.910	2.7	2.1606	0.0000	SURCHARGED
360 minute winter	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S83	256	17.431	0.025	1.8	0.0358	0.0000	OK
360 minute winter	S77	256	17.115	0.025	1.8	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)
360 minute winter	S11	1.000	S12	0.1	0.136	0.001	0.7365	
360 minute winter	S12	1.001	S13	0.8	0.412	0.015	0.2873	
360 minute winter	S13	1.002	S15	-2.1	0.209	-0.058	0.4669	
360 minute winter	S14	2.000	S15	1.8	0.593	0.027	1.3382	
360 minute winter	S15	1.003	S78	1.5	0.379	0.041	0.2366	
360 minute winter	S78	1.004	S17	2.3	0.482	0.064	0.6683	
360 minute winter	S85	3.000	S17	0.7	0.453	0.030	0.6478	
360 minute winter	S17	Hydro-Brake®	S83	1.8				
360 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0065	
360 minute winter	S83	1.006	S77	1.8	0.533	0.006	0.1215	35.4

Results for 100 year +20% CC 480 minute summer. 544 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	S11	208	20.582	0.006	0.1	0.0063	0.0000	OK
480 minute summer	S12	312	19.681	0.541	1.4	0.6121	0.0000	SURCHARGED
480 minute summer	S13	312	19.681	0.613	2.6	7.6375	0.0000	SURCHARGED
480 minute summer	S14	312	19.681	0.080	1.9	0.0901	0.0000	OK
480 minute summer	S15	312	19.681	0.671	2.8	0.7590	0.0000	SURCHARGED
480 minute summer	S78	312	19.681	0.701	2.5	0.7929	0.0000	SURCHARGED
480 minute summer	S85	312	19.681	0.181	0.8	0.2046	0.0000	SURCHARGED
480 minute summer	S17	312	19.681	1.663	2.7	1.8807	0.0000	SURCHARGED
480 minute summer	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S83	312	17.430	0.024	1.7	0.0348	0.0000	OK
480 minute summer	S77	312	17.114	0.024	1.7	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)
480 minute summer	S11	1.000	S12	0.1	0.136	0.001	0.7365	
480 minute summer	S12	1.001	S13	0.8	0.450	0.015	0.2873	
480 minute summer	S13	1.002	S15	-2.3	0.210	-0.064	0.4669	
480 minute summer	S14	2.000	S15	1.9	0.590	0.028	0.8803	
480 minute summer	S15	1.003	S78	1.4	0.377	0.039	0.2366	
480 minute summer	S78	1.004	S17	2.3	0.477	0.063	0.6683	
480 minute summer	S85	3.000	S17	0.8	0.453	0.035	0.6478	
480 minute summer	S17	Hydro-Brake®	S83	1.7				
480 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0062	
480 minute summer	S83	1.006	S77	1.7	0.523	0.006	0.1163	40.9

Results for 100 year +20% CC 480 minute winter. 544 minute analysis at 8 minute timestep. Mass balance: 99.84%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	S11	184	20.582	0.006	0.1	0.0063	0.0000	OK
480 minute winter	S12	336	19.816	0.676	0.8	0.7651	0.0000	SURCHARGED
480 minute winter	S13	336	19.816	0.748	1.9	7.7905	0.0000	SURCHARGED
480 minute winter	S14	336	19.816	0.215	1.4	0.2436	0.0000	OK
480 minute winter	S15	336	19.816	0.806	1.7	0.9120	0.0000	SURCHARGED
480 minute winter	S78	336	19.816	0.836	2.3	0.9459	0.0000	SURCHARGED
480 minute winter	S85	336	19.816	0.316	0.8	0.3575	0.0000	SURCHARGED
480 minute winter	S17	336	19.816	1.798	2.4	2.0337	0.0000	SURCHARGED
480 minute winter	S81	8	17.440	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S83	336	17.431	0.025	1.8	0.0353	0.0000	OK
480 minute winter	S77	336	17.115	0.025	1.8	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 winter	S11	1.000	S12	0.1	0.150	0.001	0.7365	
480 minute winter	S12	1.001	S13	0.7	0.407	0.014	0.2873	
480 minute winter	S13	1.002	S15	-1.5	0.206	-0.041	0.4669	
480 minute winter	S14	2.000	S15	1.4	0.571	0.021	1.3278	
480 minute winter	S15	1.003	S78	1.4	0.370	0.037	0.2366	
480 minute winter	S78	1.004	S17	2.2	0.477	0.060	0.6683	
480 minute winter	S85	3.000	S17	0.6	0.444	0.026	0.6478	
480 minute winter	S17	Hydro-Brake®	S83	1.8				
480 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0063	
480 minute winter	S83	1.006	S77	1.8	0.528	0.006	0.1193	43.1

Results for 100 year +20% CC 600 minute summer. 660 minute analysis at 15 minute timestep. Mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	S11	270	20.582	0.006	0.1	0.0063	0.0000	OK
600 minute summer	S12	375	19.611	0.471	0.9	0.5325	0.0000	SURCHARGED
600 minute summer	S13	375	19.611	0.543	2.7	7.5580	0.0000	SURCHARGED
600 minute summer	S14	315	19.625	0.024	1.6	0.0271	0.0000	OK
600 minute summer	S15	375	19.611	0.601	2.3	0.6795	0.0000	SURCHARGED
600 minute summer	S78	375	19.611	0.631	2.1	0.7134	0.0000	SURCHARGED
600 minute summer	S85	375	19.611	0.111	0.6	0.1254	0.0000	OK
600 minute summer	S17	375	19.611	1.593	2.3	1.8012	0.0000	SURCHARGED
600 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S83	390	17.430	0.024	1.7	0.0344	0.0000	OK
600 minute summer	S77	390	17.114	0.024	1.7	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)
600 minute summer	S11	1.000	S12	0.1	0.142	0.001	0.7365	
600 minute summer	S12	1.001	S13	0.9	0.390	0.018	0.2873	
600 minute summer	S13	1.002	S15	-1.8	0.189	-0.049	0.4669	
600 minute summer	S14	2.000	S15	1.6	0.571	0.024	0.7069	
600 minute summer	S15	1.003	S78	1.3	0.363	0.034	0.2366	
600 minute summer	S78	1.004	S17	2.0	0.455	0.056	0.6683	
600 minute summer	S85	3.000	S17	0.6	0.399	0.026	0.5807	
600 minute summer	S17	Hydro-Brake®	S83	1.7				
600 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0061	
600 minute summer	S83	1.006	S77	1.7	0.520	0.005	0.1147	47.1

Results for 100 year +20% CC 600 minute winter. 660 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	S11	240	20.582	0.006	0.1	0.0063	0.0000	OK
600 minute winter	S12	405	19.723	0.583	0.7	0.6598	0.0000	SURCHARGED
600 minute winter	S13	405	19.723	0.655	1.6	7.6853	0.0000	SURCHARGED
600 minute winter	S14	405	19.724	0.123	1.2	0.1386	0.0000	OK
600 minute winter	S15	405	19.723	0.713	1.4	0.8068	0.0000	SURCHARGED
600 minute winter	S78	405	19.723	0.743	1.9	0.8407	0.0000	SURCHARGED
600 minute winter	S85	405	19.723	0.223	0.5	0.2523	0.0000	SURCHARGED
600 minute winter	S17	405	19.723	1.705	2.2	1.9285	0.0000	SURCHARGED
600 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S83	405	17.430	0.024	1.7	0.0349	0.0000	OK
600 minute winter	S77	405	17.114	0.024	1.7	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)
600 minute winter	S11	1.000	S12	0.1	0.150	0.001	0.7365	
600 minute winter	S12	1.001	S13	0.6	0.432	0.011	0.2873	
600 minute winter	S13	1.002	S15	-1.1	0.198	-0.031	0.4669	
600 minute winter	S14	2.000	S15	1.2	0.549	0.018	1.0409	
600 minute winter	S15	1.003	S78	1.3	0.359	0.036	0.2366	
600 minute winter	S78	1.004	S17	1.9	0.459	0.051	0.6683	
600 minute winter	S85	3.000	S17	0.5	0.399	0.022	0.6478	
600 minute winter	S17	Hydro-Brake®	S83	1.7				
600 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0062	
600 minute winter	S83	1.006	S77	1.7	0.525	0.006	0.1172	49.9

Results for 100 year +20% CC 720 minute summer. 780 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	S11	330	20.582	0.006	0.1	0.0063	0.0000	OK
720 minute summer	S12	450	19.562	0.422	0.8	0.4770	0.0000	SURCHARGED
720 minute summer	S13	450	19.562	0.494	1.8	7.5025	0.0000	SURCHARGED
720 minute summer	S14	375	19.623	0.022	1.4	0.0254	0.0000	OK
720 minute summer	S15	450	19.562	0.552	1.8	0.6240	0.0000	SURCHARGED
720 minute summer	S78	450	19.562	0.582	2.1	0.6579	0.0000	SURCHARGED
720 minute summer	S85	450	19.562	0.062	0.6	0.0697	0.0000	OK
720 minute summer	S17	450	19.562	1.544	2.2	1.7457	0.0000	SURCHARGED
720 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S83	450	17.430	0.024	1.6	0.0342	0.0000	OK
720 minute summer	S77	450	17.114	0.024	1.6	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	S11	1.000	S12	0.1	0.142	0.001	0.7365	
720 minute summer	S12	1.001	S13	0.7	0.387	0.013	0.2873	
720 minute summer	S13	1.002	S15	-1.5	0.192	-0.041	0.4669	
720 minute summer	S14	2.000	S15	1.4	0.572	0.021	0.7036	
720 minute summer	S15	1.003	S78	1.3	0.349	0.035	0.2366	
720 minute summer	S78	1.004	S17	1.9	0.467	0.051	0.6683	
720 minute summer	S85	3.000	S17	0.6	0.448	0.026	0.4492	
720 minute summer	S17	Hydro-Brake®	S83	1.6				
720 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0060	
720 minute summer	S83	1.006	S77	1.6	0.518	0.005	0.1135	51.6

Results for 100 year +20% CC 720 minute winter. 780 minute analysis at 15 minute timestep. Mass balance: 99.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	S11	300	20.582	0.006	0.1	0.0063	0.0000	OK
720 minute winter	S12	480	19.622	0.482	0.7	0.5449	0.0000	SURCHARGED
720 minute winter	S13	480	19.622	0.554	1.2	7.5704	0.0000	SURCHARGED
720 minute winter	S14	480	19.622	0.021	1.1	0.0236	0.0000	OK
720 minute winter	S15	480	19.622	0.612	1.3	0.6919	0.0000	SURCHARGED
720 minute winter	S78	480	19.622	0.642	1.7	0.7258	0.0000	SURCHARGED
720 minute winter	S85	480	19.622	0.122	0.4	0.1375	0.0000	OK
720 minute winter	S17	480	19.622	1.604	2.0	1.8136	0.0000	SURCHARGED
720 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S83	480	17.430	0.024	1.7	0.0345	0.0000	OK
720 minute winter	S77	480	17.114	0.024	1.7	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)
720 minute winter	S11	1.000	S12	0.1	0.150	0.001	0.7365	
720 minute winter	S12	1.001	S13	0.6	0.432	0.011	0.2873	
720 minute winter	S13	1.002	S15	0.9	0.194	0.026	0.4669	
720 minute winter	S14	2.000	S15	1.1	0.549	0.016	0.7000	
720 minute winter	S15	1.003	S78	1.2	0.340	0.033	0.2366	
720 minute winter	S78	1.004	S17	1.6	0.446	0.044	0.6683	
720 minute winter	S85	3.000	S17	0.4	0.399	0.017	0.6052	
720 minute winter	S17	Hydro-Brake®	S83	1.7				
720 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0061	
720 minute winter	S83	1.006	S77	1.7	0.520	0.006	0.1149	57.0

Results for 100 year +20% CC 960 minute summer. 1020 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	S11	450	20.582	0.006	0.1	0.0063	0.0000	OK
960 minute summer	S12	585	19.452	0.312	0.7	0.3529	0.0000	SURCHARGED
960 minute summer	S13	585	19.452	0.384	1.6	7.3700	0.0000	SURCHARGED
960 minute summer	S14	495	19.622	0.021	1.2	0.0236	0.0000	OK
960 minute summer	S15	585	19.452	0.442	1.4	0.4999	0.0000	SURCHARGED
960 minute summer	S78	585	19.452	0.472	1.8	0.5338	0.0000	SURCHARGED
960 minute summer	S85	495	19.515	0.015	0.5	0.0174	0.0000	OK
960 minute summer	S17	585	19.452	1.434	2.1	1.6217	0.0000	SURCHARGED
960 minute summer	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S83	585	17.430	0.024	1.6	0.0337	0.0000	OK
960 minute summer	S77	585	17.113	0.023	1.6	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	S11	1.000	S12	0.1	0.142	0.001	0.7365	
960 minute summer	S12	1.001	S13	0.6	0.377	0.011	0.2873	
960 minute summer	S13	1.002	S15	-1.1	0.185	-0.032	0.4669	
960 minute summer	S14	2.000	S15	1.2	0.549	0.018	0.7000	
960 minute summer	S15	1.003	S78	1.1	0.354	0.031	0.2366	
960 minute summer	S78	1.004	S17	1.8	0.459	0.050	0.6683	
960 minute summer	S85	3.000	S17	0.5	0.399	0.022	0.3412	
960 minute summer	S17	Hydro-Brake®	S83	1.6				
960 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0059	
960 minute summer	S83	1.006	S77	1.6	0.513	0.005	0.1109	56.2

Results for 100 year +20% CC 960 minute winter. 1020 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	S11	435	20.582	0.006	0.1	0.0063	0.0000	OK
960 minute winter	S12	615	19.433	0.293	0.6	0.3318	0.0000	SURCHARGED
960 minute winter	S13	615	19.433	0.365	1.2	7.0118	0.0000	SURCHARGED
960 minute winter	S14	480	19.619	0.018	0.9	0.0207	0.0000	OK
960 minute winter	S15	615	19.433	0.423	1.2	0.4788	0.0000	SURCHARGED
960 minute winter	S78	615	19.433	0.453	1.7	0.5127	0.0000	SURCHARGED
960 minute winter	S85	480	19.514	0.014	0.4	0.0156	0.0000	OK
960 minute winter	S17	615	19.433	1.415	1.8	1.6006	0.0000	SURCHARGED
960 minute winter	S81	15	17.440	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S83	615	17.429	0.023	1.6	0.0336	0.0000	OK
960 minute winter	S77	615	17.113	0.023	1.6	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	S11	1.000	S12	0.1	0.150	0.001	0.7365	
960 minute winter	S12	1.001	S13	0.6	0.432	0.012	0.2873	
960 minute winter	S13	1.002	S15	0.8	0.172	0.023	0.4669	
960 minute winter	S14	2.000	S15	0.9	0.549	0.013	0.6945	
960 minute winter	S15	1.003	S78	1.1	0.339	0.031	0.2366	
960 minute winter	S78	1.004	S17	1.6	0.439	0.043	0.6683	
960 minute winter	S85	3.000	S17	0.4	0.399	0.017	0.3387	
960 minute winter	S17	Hydro-Brake®	S83	1.6				
960 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0059	
960 minute winter	S83	1.006	S77	1.6	0.512	0.005	0.1104	64.5

Results for 100 year +20% CC 1440 minute summer. 1500 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	S11	720	20.582	0.006	0.1	0.0063	0.0000	OK
1440 minute summer	S12	840	19.344	0.204	0.6	0.2312	0.0000	OK
1440 minute summer	S13	840	19.344	0.276	1.3	5.3054	0.0000	SURCHARGED
1440 minute summer	S14	750	19.619	0.018	0.9	0.0207	0.0000	OK
1440 minute summer	S15	840	19.344	0.334	1.0	0.3783	0.0000	SURCHARGED
1440 minute summer	S78	840	19.344	0.364	1.6	0.4122	0.0000	SURCHARGED
1440 minute summer	S85	750	19.514	0.014	0.4	0.0156	0.0000	OK
1440 minute summer	S17	840	19.344	1.326	1.9	1.5000	0.0000	SURCHARGED
1440 minute summer	S81	30	17.440	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S83	840	17.429	0.023	1.5	0.0331	0.0000	OK
1440 minute summer	S77	840	17.113	0.023	1.5	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 summer	S11	1.000	S12	0.1	0.147	0.001	0.6982	
1440 minute summer	S12	1.001	S13	0.8	0.362	0.015	0.2807	
1440 minute summer	S13	1.002	S15	0.8	0.186	0.021	0.4669	
1440 minute summer	S14	2.000	S15	0.9	0.525	0.013	0.6925	
1440 minute summer	S15	1.003	S78	1.1	0.341	0.030	0.2366	
1440 minute summer	S78	1.004	S17	1.6	0.440	0.043	0.6683	
1440 minute summer	S85	3.000	S17	0.4	0.399	0.017	0.3387	
1440 minute summer	S17	Hydro-Brake®	S83	1.5				
1440 minute summer	S81	4.003	S83	0.0	0.000	0.000	0.0058	
1440 minute summer	S83	1.006	S77	1.5	0.507	0.005	0.1082	63.1

Results for 100 year +20% CC 1440 minute winter. 1500 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 winter	S11	30	20.576	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S12	900	19.247	0.107	0.3	0.1210	0.0000	OK
1440 minute winter	S13	900	19.247	0.179	0.4	3.4354	0.0000	OK
1440 minute winter	S14	720	19.617	0.016	0.7	0.0184	0.0000	OK
1440 minute winter	S15	900	19.247	0.237	1.0	0.2681	0.0000	SURCHARGED
1440 minute winter	S78	900	19.247	0.267	1.5	0.3019	0.0000	SURCHARGED
1440 minute winter	S85	720	19.512	0.012	0.3	0.0137	0.0000	OK
1440 minute winter	S17	900	19.247	1.229	1.6	1.3898	0.0000	SURCHARGED
1440 minute winter	S81	30	17.440	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S83	900	17.429	0.023	1.5	0.0326	0.0000	OK
1440 minute winter	S77	900	17.113	0.023	1.5	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	S11	1.000	S12	0.0	0.000	0.000	0.3423	
1440 minute winter	S12	1.001	S13	0.3	0.362	0.006	0.1896	
1440 minute winter	S13	1.002	S15	0.6	0.174	0.017	0.4323	
1440 minute winter	S14	2.000	S15	0.7	0.525	0.010	0.6603	
1440 minute winter	S15	1.003	S78	1.0	0.325	0.028	0.2366	
1440 minute winter	S78	1.004	S17	1.4	0.441	0.037	0.6683	
1440 minute winter	S85	3.000	S17	0.3	0.399	0.013	0.3361	
1440 minute winter	S17	Hydro-Brake®	S83	1.5				
1440 minute winter	S81	4.003	S83	0.0	0.000	0.000	0.0056	
1440 minute winter	S83	1.006	S77	1.5	0.502	0.005	0.1055	69.6

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	15.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	55.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	Scotland and Ireland	Connection Type	Level Soffits
M5-60 (mm)	15.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.242	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Adoptable Manhole Type

Max Width (mm)	Diameter (mm)	Max Width (mm)	Diameter (mm)
374	1200	749	1500
499	1350	900	1800

>900 Link+900 mm

Max Depth (m)	Diameter (mm)	Max Depth (m)	Diameter (mm)
1.500	1050	99.999	1200

Circular Link Type

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

Available Diameters (mm)

100 | 150

1:3 Swale Link Type

Template	Freeform Carrier	Auto Increment (mm)	10
Shape	Trapezoidal	Follow Ground	x
Barrels	1	Velocity	Manning
Height (mm)	300	ks (mm) / n	0.030
Side Slope (1:X)	3.0		

Available Diameters (mm)

300

1:3 Swale 400 Link Type

Template	Freeform Carrier	Auto Increment (mm)	10
Shape	Trapezoidal	Follow Ground	x
Barrels	1	Velocity	Manning
Height (mm)	400	ks (mm) / n	0.030
Side Slope (1:X)	3.0		

Available Diameters (mm)

400

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
P1	0.053	5.00	23.080		524777.460	724419.791	0.414
P2			22.362		524784.883	724409.408	0.400
S52			21.669	1350	524789.656	724402.561	0.290
S53			21.514	1350	524792.527	724398.211	0.396
S54			21.141	1350	524796.264	724392.750	0.354
S55			20.900	1350	524799.918	724387.128	0.900
P3	0.011	5.00	22.078	1350	524801.861	724394.721	1.678
S62			21.279	1350	524810.401	724383.096	1.509
P5	0.069	5.00	23.419	1200	524846.663	724413.554	1.462
S56	0.005	5.00	22.936	1350	524836.846	724410.710	1.430
S57			22.895	1350	524839.705	724407.752	1.576
S58	0.005	5.00	22.096	1350	524821.573	724399.155	1.420
S59			22.023	1200	524824.987	724395.368	1.579
S60	0.002	5.00	21.663	1200	524814.818	724392.778	1.439
S61			21.596	1350	524817.774	724389.300	1.890
S25			21.587		524819.786	724387.044	1.896
P60			23.596	1200	524850.710	724413.312	1.581
P9	0.096	5.00	24.580	1350	524820.786	724460.028	1.575
P7			23.493	1200	524849.893	724415.803	1.462
S63			23.515	1200	524852.560	724415.224	1.520
S28			23.483	1350	524862.817	724412.760	1.518

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	P1	P2	12.739	0.600	22.666	21.962	0.704	18.1	100	5.12	34.2
1.001	P2	S52	8.347	0.600	21.962	21.469	0.493	16.9	100	5.19	34.0
1.002	S52	S53	5.212	0.030	21.379	21.118	0.261	20.0	300	5.23	34.0
1.003	S53	S54	6.617	0.030	21.118	20.787	0.331	20.0	400	5.27	33.9
1.004	S54	S55	6.536	0.030	20.787	20.460	0.327	20.0	400	5.31	33.8
1.005	S55	S62	11.363	0.030	20.000	19.900	0.100	113.6	225	5.72	32.9
2.000	P3	S62	14.425	0.600	20.400	19.770	0.630	22.9	225	5.09	34.3
1.006	S62	S61	9.636	0.030	19.770	19.706	0.064	150.6	300	6.06	32.2
3.000	P5	S57	11.537	0.600	21.957	21.319	0.638	18.1	225	5.09	34.3
4.000	S56	S57	4.114	0.600	21.506	21.319	0.187	22.0	150	5.03	34.4

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	1.824	14.3	4.9	0.314	0.300	0.053	0.0	40	1.651
1.001	1.886	14.8	4.8	0.300	0.100	0.053	0.0	39	1.691
1.002	2.233	804.0	4.8	-0.010	0.096	0.053	0.0	24	0.542
1.003	2.704	1730.6	4.8	-0.004	-0.046	0.053	0.0	21	0.512
1.004	2.704	1730.8	4.8	-0.046	0.040	0.053	0.0	21	0.512
1.005	0.459	18.3	4.7	0.675	1.154	0.053	0.0	78	0.384
2.000	2.746	109.2	1.1	1.453	1.284	0.011	0.0	15	0.868
1.006	0.483	34.2	5.6	1.209	1.590	0.064	0.0	82	0.355
3.000	3.091	122.9	6.5	1.237	1.351	0.069	0.0	35	1.648
4.000	2.156	38.1	0.4	1.280	1.426	0.005	0.0	11	0.718

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)
3.001	S57	S59	19.235	0.600	21.319	20.444	0.875	22.0	225	5.20	34.0
5.000	S58	S59	5.099	0.600	20.676	20.445	0.231	22.1	150	5.04	34.4
3.002	S59	S61	9.426	0.600	20.444	20.016	0.428	22.0	225	5.26	33.9
6.000	S60	S61	4.564	0.600	20.224	20.016	0.208	21.9	150	5.04	34.4
1.007	S61	S25	2.910	0.030	19.722	19.691	0.031	93.9	300	6.13	32.0
1.008	S25	P60	40.707	0.030	19.691	22.015	-2.324	-17.5	225	15.00	21.8
1.009	P60	S63	5.161	0.030	22.015	21.995	0.020	258.1	225	15.00	21.8
7.000	P9	P7	52.944	0.600	23.005	22.031	0.974	54.4	225	5.50	33.4
7.001	P7	S63	2.729	0.600	22.031	22.018	0.013	209.9	225	5.55	33.2
1.010	S63	S28	7.184	0.030	21.995	21.965	0.030	239.5	225	15.00	21.8
3.000_1	P7	P5	3.936	0.600	22.750	22.571	0.179	22.0	225	5.02	34.4

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)
3.001	2.802	111.4	6.8	1.351	1.354	0.074	0.0	37	1.562
5.000	2.153	38.0	0.4	1.270	1.428	0.005	0.0	11	0.717
3.002	2.800	111.3	7.2	1.354	1.355	0.079	0.0	38	1.583
6.000	2.159	38.2	0.1	1.289	1.430	0.002	0.0	7	0.498
1.007	0.612	43.3	12.5	1.574	1.596	0.144	0.0	110	0.529
1.008	0.005	0.2	8.5	1.671	1.356	0.144	0.0	225	0.000
1.009	0.305	12.1	8.5	1.356	1.295	0.144	0.0	139	0.330
7.000	1.777	70.7	8.7	1.350	1.237	0.096	0.0	53	1.218
7.001	0.898	35.7	8.7	1.237	1.272	0.096	0.0	75	0.742
1.010	0.316	12.6	14.2	1.295	1.293	0.241	0.0	225	0.322
3.000_1	2.802	111.4	0.0	0.518	0.623	0.000	0.0	0	0.000

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	12.739	18.1	100	Circular	23.080	22.666	0.314	22.362	21.962	0.300
1.001	8.347	16.9	100	Circular	22.362	21.962	0.300	21.669	21.469	0.100
1.002	5.212	20.0	300	1:3 Swale	21.669	21.379	-0.010	21.514	21.118	0.096
1.003	6.617	20.0	400	1:3 Swale 400	21.514	21.118	-0.004	21.141	20.787	-0.046
1.004	6.536	20.0	400	1:3 Swale 400	21.141	20.787	-0.046	20.900	20.460	0.040
1.005	11.363	113.6	225	Circular	20.900	20.000	0.675	21.279	19.900	1.154
2.000	14.425	22.9	225	Circular	22.078	20.400	1.453	21.279	19.770	1.284
1.006	9.636	150.6	300	Circular	21.279	19.770	1.209	21.596	19.706	1.590

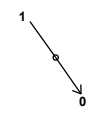
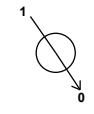
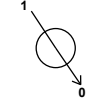
Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	P1		Junction		P2		Junction	
1.001	P2		Junction		S52	1350	Manhole	Adoptable
1.002	S52	1350	Manhole	Adoptable	S53	1350	Manhole	Adoptable
1.003	S53	1350	Manhole	Adoptable	S54	1350	Manhole	Adoptable
1.004	S54	1350	Manhole	Adoptable	S55	1350	Manhole	Adoptable
1.005	S55	1350	Manhole	Adoptable	S62	1350	Manhole	Adoptable
2.000	P3	1350	Manhole	Adoptable	S62	1350	Manhole	Adoptable
1.006	S62	1350	Manhole	Adoptable	S61	1350	Manhole	Adoptable

Pipeline Schedule

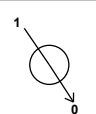
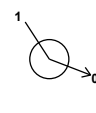
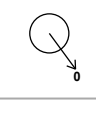
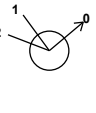
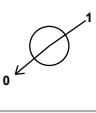
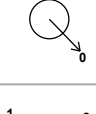
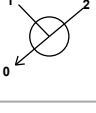
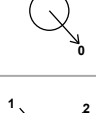
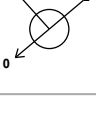
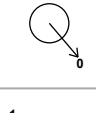
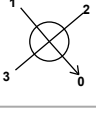
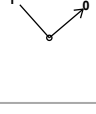
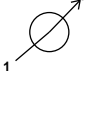
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
3.000	11.537	18.1	225	Circular	23.419	21.957	1.237	22.895	21.319	1.351
4.000	4.114	22.0	150	Circular	22.936	21.506	1.280	22.895	21.319	1.426
3.001	19.235	22.0	225	Circular	22.895	21.319	1.351	22.023	20.444	1.354
5.000	5.099	22.1	150	Circular	22.096	20.676	1.270	22.023	20.445	1.428
3.002	9.426	22.0	225	Circular	22.023	20.444	1.354	21.596	20.016	1.355
6.000	4.564	21.9	150	Circular	21.663	20.224	1.289	21.596	20.016	1.430
1.007	2.910	93.9	300	Circular	21.596	19.722	1.574	21.587	19.691	1.596
1.008	40.707	-17.5	225	Circular	21.587	19.691	1.671	23.596	22.015	1.356
1.009	5.161	258.1	225	Circular	23.596	22.015	1.356	23.515	21.995	1.295
7.000	52.944	54.4	225	Circular	24.580	23.005	1.350	23.493	22.031	1.237
7.001	2.729	209.9	225	Circular	23.493	22.031	1.237	23.515	22.018	1.272
1.010	7.184	239.5	225	Circular	23.515	21.995	1.295	23.483	21.965	1.293
3.000_1	3.936	22.0	225	Circular	23.493	22.750	0.518	23.419	22.571	0.623

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
3.000	P5	1200	Manhole	Adoptable	S57	1350	Manhole	Adoptable
4.000	S56	1350	Manhole	Adoptable	S57	1350	Manhole	Adoptable
3.001	S57	1350	Manhole	Adoptable	S59	1200	Manhole	Adoptable
5.000	S58	1350	Manhole	Adoptable	S59	1200	Manhole	Adoptable
3.002	S59	1200	Manhole	Adoptable	S61	1350	Manhole	Adoptable
6.000	S60	1200	Manhole	Adoptable	S61	1350	Manhole	Adoptable
1.007	S61	1350	Manhole	Adoptable	S25		Junction	
1.008	S25		Junction		P60	1200	Manhole	Adoptable
1.009	P60	1200	Manhole	Adoptable	S63	1200	Manhole	Adoptable
7.000	P9	1350	Manhole	Adoptable	P7	1200	Manhole	Adoptable
7.001	P7	1200	Manhole	Adoptable	S63	1200	Manhole	Adoptable
1.010	S63	1200	Manhole	Adoptable	S28	1350	Manhole	Adoptable
3.000_1	P7	1200	Manhole	Adoptable	P5	1200	Manhole	Adoptable

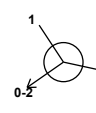
Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
P1	524777.460	724419.791	23.080	0.414			0	1.000	22.666	100
P2	524784.883	724409.408	22.362	0.400			1	1.000	21.962	100
							0	1.001	21.962	100
S52	524789.656	724402.561	21.669	0.290	1350		1	1.001	21.469	100
							0	1.002	21.379	300
S53	524792.527	724398.211	21.514	0.396	1350		1	1.002	21.118	300
							0	1.003	21.118	400

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)
S54	524796.264	724392.750	21.141	0.354	1350		1 1.003	20.787	400
						0	1.004	20.787	400
S55	524799.918	724387.128	20.900	0.900	1350		1 1.004	20.460	400
						0	1.005	20.000	225
P3	524801.861	724394.721	22.078	1.678	1350		0 2.000	20.400	225
S62	524810.401	724383.096	21.279	1.509	1350		1 2.000	19.770	225
						2	1.005	19.900	225
						0	1.006	19.770	300
P5	524846.663	724413.554	23.419	1.462	1200		1 3.000_1	22.571	225
						0	3.000	21.957	225
S56	524836.846	724410.710	22.936	1.430	1350		0 4.000	21.506	150
S57	524839.705	724407.752	22.895	1.576	1350		1 4.000	21.319	150
						2	3.000	21.319	225
						0	3.001	21.319	225
S58	524821.573	724399.155	22.096	1.420	1350		0 5.000	20.676	150
S59	524824.987	724395.368	22.023	1.579	1200		1 5.000	20.445	150
						2	3.001	20.444	225
						0	3.002	20.444	225
S60	524814.818	724392.778	21.663	1.439	1200		0 6.000	20.224	150
S61	524817.774	724389.300	21.596	1.890	1350		1 6.000	20.016	150
						2	3.002	20.016	225
						3	1.006	19.706	300
						0	1.007	19.722	300
S25	524819.786	724387.044	21.587	1.896			1 1.007	19.691	300
						0	1.008	19.691	225
P60	524850.710	724413.312	23.596	1.581	1200		1 1.008	22.015	225
						0	1.009	22.015	225

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
P9	524820.786	724460.028	24.580	1.575	1350		0	7.000	23.005	225
P7	524849.893	724415.803	23.493	1.462	1200		1 0-1 0-2	7.000 7.001 3.000_1	22.031 22.031 22.750	225 225 225
S63	524852.560	724415.224	23.515	1.520	1200		1 2	7.001 1.009	22.018 21.995	225 225
S28	524862.817	724412.760	23.483	1.518	1350		1	1.010	21.965	225

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	Scotland and Ireland	Drain Down Time (mins)	60
M5-60 (mm)	15.000	Additional Storage (m³/ha)	0.0
Ratio-R	0.242	Starting Level (m)	
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
20	10	0	0
100	20	0	0

Node P1 Online Orifice Control

Flap Valve	x	Invert Level (m)	22.666	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Diameter (m)	0.100		

Node P2 Online Orifice Control

Flap Valve	x	Invert Level (m)	21.962	Discharge Coefficient	0.600
Replaces Downstream Link	✓	Diameter (m)	0.100		

Node S63 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	22.050	Product Number	CTL-SHE-0061-2000-1508-2000
Design Depth (m)	1.508	Min Outlet Diameter (m)	0.075
Design Flow (l/s)	2.0	Min Node Diameter (mm)	1200

Node S52 Online V-Notch Weir Control

Flap Valve	x	Invert Level (m)	21.379	Angle of V (degrees)	45.000
Downstream Link	1.002	Design Depth (m)	0.290	Discharge Coefficient	0.590
Replaces Downstream Link	✓	Design Flow (l/s)	0.6		

Node S53 Online V-Notch Weir Control

Flap Valve	x	Invert Level (m)	21.118	Angle of V (degrees)	45.000
Downstream Link	1.003	Design Depth (m)	0.250	Discharge Coefficient	0.590
Replaces Downstream Link	✓	Design Flow (l/s)	0.6		

Node S54 Online V-Notch Weir Control

Flap Valve	x	Invert Level (m)	20.787	Angle of V (degrees)	45.000
Downstream Link	1.004	Design Depth (m)	0.350	Discharge Coefficient	0.590
Replaces Downstream Link	✓	Design Flow (l/s)	0.2		

Node S25 Online Pump Control

Flap Valve	x	Design Depth (m)	1.896	Switch off depth (m)	0.100
Replaces Downstream Link	✓	Design Flow (l/s)	2.0		
Invert Level (m)	19.691	Switch on depth (m)	0.600		

Depth (m)	Flow (l/s)
1.896	2.000

Node P1 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	22.666	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	14	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	8.800	Number Required	1
Porosity	0.10	Pit Length (m)	12.000		

Node P2 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	21.962	Depth (m)	0.400
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)	16	Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	8.800	Number Required	1
Porosity	0.10	Pit Length (m)	12.000		

Node S25 Soakaway Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Invert Level (m)	19.691	Depth (m)	1.280
Side Inf Coefficient (m/hr)	0.00000	Time to half empty (mins)		Inf Depth (m)	
Safety Factor	2.0	Pit Width (m)	4.800	Number Required	1
Porosity	1.00	Pit Length (m)	18.560		

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Approval Settings

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

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	76.905	21.762	20 year +10% CC 180 minute winter	29.278	11.591
1 year 15 minute winter	53.969	21.762	20 year +10% CC 240 minute summer	36.508	9.648
1 year 30 minute summer	53.834	15.233	20 year +10% CC 240 minute winter	24.255	9.648
1 year 30 minute winter	37.778	15.233	20 year +10% CC 360 minute summer	28.889	7.434
1 year 60 minute summer	39.164	10.350	20 year +10% CC 360 minute winter	18.779	7.434
1 year 60 minute winter	26.020	10.350	20 year +10% CC 480 minute summer	23.355	6.172
1 year 120 minute summer	26.200	6.924	20 year +10% CC 480 minute winter	15.517	6.172
1 year 120 minute winter	17.406	6.924	20 year +10% CC 600 minute summer	19.524	5.340
1 year 180 minute summer	21.196	5.455	20 year +10% CC 600 minute winter	13.340	5.340
1 year 180 minute winter	13.778	5.455	20 year +10% CC 720 minute summer	17.698	4.743
1 year 240 minute summer	17.416	4.603	20 year +10% CC 720 minute winter	11.894	4.743
1 year 240 minute winter	11.571	4.603	20 year +10% CC 960 minute summer	14.935	3.933
1 year 360 minute summer	14.076	3.622	20 year +10% CC 960 minute winter	9.893	3.933
1 year 360 minute winter	9.149	3.622	20 year +10% CC 1440 minute summer	11.265	3.019
1 year 480 minute summer	11.541	3.050	20 year +10% CC 1440 minute winter	7.571	3.019
1 year 480 minute winter	7.667	3.050	100 year +20% CC 15 minute summer	263.731	74.627
1 year 600 minute summer	9.760	2.670	100 year +20% CC 15 minute winter	185.074	74.627
1 year 600 minute winter	6.669	2.670	100 year +20% CC 30 minute summer	187.361	53.017
1 year 720 minute summer	8.935	2.395	100 year +20% CC 30 minute winter	131.482	53.017
1 year 720 minute winter	6.005	2.395	100 year +20% CC 60 minute summer	134.639	35.581
1 year 960 minute summer	7.699	2.027	100 year +20% CC 60 minute winter	89.451	35.581
1 year 960 minute winter	5.100	2.027	100 year +20% CC 120 minute summer	87.040	23.002
1 year 1440 minute summer	5.922	1.587	100 year +20% CC 120 minute winter	57.827	23.002
1 year 1440 minute winter	3.980	1.587	100 year +20% CC 180 minute summer	68.649	17.666
20 year +10% CC 15 minute summer	171.838	48.624	100 year +20% CC 180 minute winter	44.624	17.666
20 year +10% CC 15 minute winter	120.588	48.624	100 year +20% CC 240 minute summer	55.285	14.610
20 year +10% CC 30 minute summer	120.572	34.118	100 year +20% CC 240 minute winter	36.730	14.610
20 year +10% CC 30 minute winter	84.612	34.118	100 year +20% CC 360 minute summer	43.315	11.147
20 year +10% CC 60 minute summer	86.694	22.911	100 year +20% CC 360 minute winter	28.156	11.147
20 year +10% CC 60 minute winter	57.598	22.911	100 year +20% CC 480 minute summer	34.759	9.186
20 year +10% CC 120 minute summer	56.641	14.969	100 year +20% CC 480 minute winter	23.093	9.186
20 year +10% CC 120 minute winter	37.631	14.969	100 year +20% CC 600 minute summer	28.884	7.900
20 year +10% CC 180 minute summer	45.042	11.591	100 year +20% CC 600 minute winter	19.735	7.900

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
100 year +20% CC 720 minute summer	26.053	6.983	100 year +20% CC 960 minute winter	14.449	5.744
100 year +20% CC 720 minute winter	17.509	6.983	100 year +20% CC 1440 minute summer	16.271	4.361
100 year +20% CC 960 minute summer	21.813	5.744	100 year +20% CC 1440 minute winter	10.935	4.361

Results for 1 year Critical Storm Duration. Lowest mass balance: 99.65%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	P1	12	22.755	0.089	5.2	0.9355	0.0000	OK
30 minute winter	P2	23	22.039	0.077	3.7	0.8151	0.0000	OK
30 minute winter	S52	23	21.504	0.125	3.2	0.1783	0.0000	OK
30 minute winter	S53	23	21.242	0.124	3.2	0.1779	0.0000	OK
30 minute winter	S54	24	20.911	0.124	3.1	0.1779	0.0000	OK
1440 minute winter	S55	1500	20.118	0.118	0.5	0.1683	0.0000	OK
15 minute winter	P3	11	20.416	0.016	1.1	0.0230	0.0000	OK
1440 minute winter	S62	1500	20.118	0.348	0.6	0.4974	0.0000	SURCHARGED
15 minute winter	P5	10	21.994	0.037	6.9	0.0414	0.0000	OK
15 minute winter	S56	10	21.518	0.012	0.5	0.0168	0.0000	OK
15 minute winter	S57	10	21.358	0.039	7.3	0.0560	0.0000	OK
15 minute winter	S58	10	20.688	0.012	0.5	0.0168	0.0000	OK
15 minute winter	S59	11	20.486	0.042	7.7	0.0470	0.0000	OK
15 minute winter	S60	10	20.231	0.007	0.2	0.0080	0.0000	OK
1440 minute winter	S61	1500	20.118	0.412	1.1	0.5890	0.0000	SURCHARGED
1440 minute winter	S25	1500	20.118	0.427	1.1	38.0045	0.0000	SURCHARGED
60 minute winter	P60	49	22.682	0.667	0.8	0.7542	0.0000	SURCHARGED
15 minute winter	P9	10	23.060	0.055	9.5	0.0786	0.0000	OK
60 minute winter	P7	49	22.682	0.651	5.7	0.7361	0.0000	SURCHARGED
60 minute winter	S63	49	22.682	0.687	3.1	0.7768	0.0000	SURCHARGED
15 minute summer	S28	1	21.965	0.000	1.6	0.0000	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	P1	Orifice	P2	3.9				
30 minute winter	P2	Orifice	S52	3.2				
30 minute winter	S52	V-Notch Weir	S53	3.2				
30 minute winter	S53	V-Notch Weir	S54	3.1				
30 minute winter	S54	V-Notch Weir	S55	3.1				
1440 minute winter	S55	1.005	S62	0.5	0.207	0.027	0.3428	
15 minute winter	P3	2.000	S62	1.1	0.620	0.010	0.0612	
1440 minute winter	S62	1.006	S61	0.5	0.058	0.016	0.6786	
15 minute winter	P5	3.000	S57	6.9	1.560	0.056	0.0507	
15 minute winter	S56	4.000	S57	0.5	0.237	0.012	0.0088	
15 minute winter	S57	3.001	S59	7.2	1.505	0.065	0.0925	
15 minute winter	S58	5.000	S59	0.5	0.228	0.012	0.0114	
15 minute winter	S59	3.002	S61	7.6	1.566	0.068	0.0459	
15 minute winter	S60	6.000	S61	0.2	0.519	0.004	0.0013	
1440 minute winter	S61	1.007	S25	1.1	0.241	0.026	0.2049	
1440 minute winter	S25	Pump	P60	0.0				
60 minute winter	P60	1.009	S63	-0.8	-0.130	-0.062	0.2053	
15 minute winter	P9	7.000	P7	9.3	0.759	0.132	1.2299	
60 minute winter	P7	7.001	S63	3.1	0.349	0.086	0.1085	
60 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
60 minute winter	S63	Hydro-Brake®	S28	1.6				8.0

Results for 20 year +10% CC Critical Storm Duration. Lowest mass balance: 99.05%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	P1	13	22.855	0.189	11.6	1.9937	0.0000	FLOOD RISK
30 minute winter	P2	24	22.112	0.150	7.6	1.5853	0.0000	FLOOD RISK
30 minute winter	S52	24	21.546	0.167	6.6	0.2393	0.0000	OK
30 minute winter	S53	24	21.285	0.167	6.6	0.2392	0.0000	OK
30 minute winter	S54	25	20.954	0.167	6.6	0.2391	0.0000	OK
1440 minute winter	S55	1050	20.375	0.375	0.9	0.5364	0.0000	SURCHARGED
15 minute winter	P3	10	20.423	0.023	2.5	0.0336	0.0000	OK
1440 minute winter	S62	1050	20.374	0.604	1.0	0.8650	0.0000	SURCHARGED
30 minute summer	P5	19	22.036	0.079	29.6	0.0899	0.0000	OK
15 minute winter	S56	11	21.523	0.017	1.0	0.0241	0.0000	OK
30 minute summer	S57	19	21.402	0.083	30.6	0.1189	0.0000	OK
15 minute winter	S58	11	20.693	0.017	1.0	0.0241	0.0000	OK
30 minute summer	S59	19	20.534	0.090	31.8	0.1020	0.0000	OK
1440 minute winter	S60	1080	20.375	0.151	0.1	0.1704	0.0000	SURCHARGED
1440 minute winter	S61	1080	20.374	0.668	2.4	0.9565	0.0000	SURCHARGED
1440 minute winter	S25	1080	20.375	0.684	2.3	60.9040	0.0000	SURCHARGED
30 minute summer	P60	19	22.818	0.803	3.3	0.9085	0.0000	SURCHARGED
15 minute winter	P9	10	23.088	0.083	21.3	0.1194	0.0000	OK
30 minute summer	P7	19	22.818	0.787	19.5	0.8904	0.0000	SURCHARGED
30 minute summer	S63	19	22.818	0.823	7.9	0.9311	0.0000	SURCHARGED
15 minute summer	S28	1	21.965	0.000	1.6	0.0000	0.0000	OK
Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	P1	Orifice	P2	7.8				
30 minute winter	P2	Orifice	S52	6.6				
30 minute winter	S52	V-Notch Weir	S53	6.6				
30 minute winter	S53	V-Notch Weir	S54	6.6				
30 minute winter	S54	V-Notch Weir	S55	6.6				
1440 minute winter	S55	1.005	S62	0.9	0.224	0.049	0.4519	
15 minute winter	P3	2.000	S62	2.5	0.721	0.023	0.1560	
1440 minute winter	S62	1.006	S61	1.2	0.065	0.036	0.6786	
30 minute summer	P5	3.000	S57	29.7	2.300	0.242	0.1490	
15 minute winter	S56	4.000	S57	1.0	0.294	0.026	0.0220	
30 minute summer	S57	3.001	S59	30.9	2.194	0.277	0.2708	
15 minute winter	S58	5.000	S59	1.0	0.273	0.026	0.0286	
30 minute summer	S59	3.002	S61	31.1	2.248	0.279	0.1305	
1440 minute winter	S60	6.000	S61	0.2	0.010	0.004	0.0803	
1440 minute winter	S61	1.007	S25	2.3	0.294	0.053	0.2049	
1440 minute winter	S25	Pump	P60	0.7				
30 minute summer	P60	1.009	S63	-3.3	-0.159	-0.273	0.2053	
15 minute winter	P9	7.000	P7	20.9	0.903	0.296	1.4071	
30 minute summer	P7	7.001	S63	7.9	0.417	0.221	0.1085	
30 minute summer	P7	3.000_1	P5	16.8	1.829	0.151	0.0362	
30 minute summer	S63	Hydro-Brake®	S28	1.6				7.0

Results for 100 year +20% CC Critical Storm Duration. Lowest mass balance: 98.69%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	P1	21	22.981	0.315	15.0	3.3276	0.0000	FLOOD RISK
30 minute winter	P2	25	22.198	0.236	10.7	2.4925	0.0000	FLOOD RISK
30 minute winter	S52	26	21.568	0.189	9.0	0.2710	0.0000	OK
30 minute winter	S53	26	21.307	0.189	9.0	0.2710	0.0000	OK
30 minute winter	S54	26	20.976	0.189	9.0	0.2710	0.0000	OK
1440 minute winter	S55	1110	20.881	0.881	1.3	1.2600	0.0000	FLOOD RISK
1440 minute winter	P3	1110	20.880	0.480	0.3	0.6876	0.0000	SURCHARGED
1440 minute winter	S62	1110	20.880	1.110	1.5	1.5891	0.0000	SURCHARGED
15 minute winter	P5	11	22.069	0.112	52.4	0.1264	0.0000	OK
15 minute winter	S56	10	21.527	0.021	1.6	0.0299	0.0000	OK
15 minute winter	S57	11	21.434	0.115	54.0	0.1649	0.0000	OK
1440 minute winter	S58	1110	20.881	0.205	0.2	0.2927	0.0000	SURCHARGED
1440 minute winter	S59	1110	20.881	0.437	3.8	0.4937	0.0000	SURCHARGED
1440 minute winter	S60	1110	20.880	0.656	0.1	0.7425	0.0000	SURCHARGED
1440 minute winter	S61	1110	20.880	1.174	5.2	1.6807	0.0000	SURCHARGED
1440 minute winter	S25	1110	20.880	1.189	5.1	105.9653	0.0000	SURCHARGED
15 minute winter	P60	11	22.847	0.832	5.4	0.9413	0.0000	SURCHARGED
15 minute winter	P9	11	23.113	0.108	32.7	0.1539	0.0000	OK
15 minute winter	P7	11	22.847	0.816	31.5	0.9230	0.0000	SURCHARGED
15 minute winter	S63	11	22.847	0.852	12.1	0.9637	0.0000	SURCHARGED
15 minute summer	S28	1	21.965	0.000	1.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	P1	Orifice	P2	10.7				
30 minute winter	P2	Orifice	S52	9.0				
30 minute winter	S52	V-Notch Weir	S53	9.0				
30 minute winter	S53	V-Notch Weir	S54	9.0				
30 minute winter	S54	V-Notch Weir	S55	9.0				
1440 minute winter	S55	1.005	S62	1.2	0.226	0.068	0.4519	
1440 minute winter	P3	2.000	S62	0.3	0.112	0.003	0.5737	
1440 minute winter	S62	1.006	S61	1.4	0.080	0.042	0.6786	
15 minute winter	P5	3.000	S57	52.5	2.618	0.427	0.2314	
15 minute winter	S56	4.000	S57	1.6	0.325	0.041	0.0328	
15 minute winter	S57	3.001	S59	54.2	2.462	0.487	0.4244	
1440 minute winter	S58	5.000	S59	-0.2	0.195	-0.006	0.0898	
1440 minute winter	S59	3.002	S61	3.8	0.956	0.034	0.3749	
1440 minute winter	S60	6.000	S61	0.1	-0.005	0.002	0.0803	
1440 minute winter	S61	1.007	S25	5.1	0.314	0.117	0.2049	
1440 minute winter	S25	Pump	P60	1.3				
15 minute winter	P60	1.009	S63	-5.4	-0.205	-0.442	0.2053	
15 minute winter	P9	7.000	P7	31.5	0.979	0.446	1.5483	
15 minute winter	P7	7.001	S63	12.1	0.447	0.338	0.1085	
15 minute winter	P7	3.000_1	P5	30.1	2.086	0.271	0.0569	
15 minute winter	S63	Hydro-Brake®	S28	1.6				6.0

Results for 1 year 15 minute summer. 75 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
15 minute summer	P1	12	22.750	0.084	5.0	0.8896	0.0000	OK
15 minute summer	P2	15	22.029	0.067	3.6	0.7049	0.0000	OK
15 minute summer	S52	15	21.493	0.114	2.5	0.1626	0.0000	OK
15 minute summer	S53	16	21.232	0.114	2.5	0.1626	0.0000	OK
15 minute summer	S54	17	20.900	0.113	2.5	0.1617	0.0000	OK
15 minute summer	S55	18	20.065	0.065	2.5	0.0925	0.0000	OK
15 minute summer	P3	10	20.416	0.016	1.1	0.0227	0.0000	OK
15 minute summer	S62	19	19.824	0.054	2.5	0.0778	0.0000	OK
15 minute summer	P5	10	21.993	0.036	6.5	0.0402	0.0000	OK
15 minute summer	S56	11	21.517	0.011	0.4	0.0157	0.0000	OK
15 minute summer	S57	10	21.357	0.038	6.9	0.0543	0.0000	OK
15 minute summer	S58	11	20.687	0.011	0.4	0.0157	0.0000	OK
15 minute summer	S59	11	20.484	0.040	7.2	0.0455	0.0000	OK
15 minute summer	S60	13	20.230	0.006	0.1	0.0066	0.0000	OK
15 minute summer	S61	11	19.803	0.097	8.3	0.1393	0.0000	OK
15 minute summer	S25	75	19.753	0.062	8.3	5.4819	0.0000	OK
15 minute summer	P60	17	22.366	0.351	1.2	0.3966	0.0000	SURCHARGED
15 minute summer	P9	10	23.059	0.054	9.1	0.0768	0.0000	OK
15 minute summer	P7	17	22.366	0.335	8.9	0.3784	0.0000	SURCHARGED
15 minute summer	S63	17	22.366	0.371	3.9	0.4191	0.0000	SURCHARGED
15 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	3.6				
15 minute summer	P2	Orifice	S52	2.5				
15 minute summer	S52	V-Notch Weir	S53	2.5				
15 minute summer	S53	V-Notch Weir	S54	2.5				
15 minute summer	S54	V-Notch Weir	S55	2.5				
15 minute summer	S55	1.005	S62	2.4	0.345	0.131	0.0798	
15 minute summer	P3	2.000	S62	1.1	0.618	0.010	0.0545	
15 minute summer	S62	1.006	S61	2.4	0.224	0.071	0.1197	
15 minute summer	P5	3.000	S57	6.5	1.537	0.053	0.0485	
15 minute summer	S56	4.000	S57	0.4	0.218	0.010	0.0084	
15 minute summer	S57	3.001	S59	6.8	1.481	0.061	0.0885	
15 minute summer	S58	5.000	S59	0.4	0.207	0.011	0.0108	
15 minute summer	S59	3.002	S61	7.2	1.539	0.064	0.0439	
15 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0010	
15 minute summer	S61	1.007	S25	8.3	1.154	0.192	0.0250	
15 minute summer	S25	Pump	P60	0.0				
15 minute summer	P60	1.009	S63	-1.2	-0.171	-0.101	0.2053	
15 minute summer	P9	7.000	P7	8.9	0.748	0.126	1.2247	
15 minute summer	P7	7.001	S63	3.9	0.378	0.109	0.1085	
15 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
15 minute summer	S63	Hydro-Brake®	S28	1.6				3.6

Results for 1 year 15 minute winter. 75 minute analysis at 1 minute timestep. Mass balance: 99.71%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	P1	12	22.755	0.089	5.2	0.9355	0.0000	OK
15 minute winter	P2	15	22.035	0.073	3.9	0.7700	0.0000	OK
15 minute winter	S52	15	21.499	0.120	2.9	0.1716	0.0000	OK
15 minute winter	S53	16	21.238	0.120	2.9	0.1717	0.0000	OK
15 minute winter	S54	16	20.906	0.119	2.9	0.1709	0.0000	OK
15 minute winter	S55	18	20.069	0.069	2.8	0.0989	0.0000	OK
15 minute winter	P3	11	20.416	0.016	1.1	0.0230	0.0000	OK
15 minute winter	S62	18	19.829	0.059	2.9	0.0841	0.0000	OK
15 minute winter	P5	10	21.994	0.037	6.9	0.0414	0.0000	OK
15 minute winter	S56	10	21.518	0.012	0.5	0.0168	0.0000	OK
15 minute winter	S57	10	21.358	0.039	7.3	0.0560	0.0000	OK
15 minute winter	S58	10	20.688	0.012	0.5	0.0168	0.0000	OK
15 minute winter	S59	11	20.486	0.042	7.7	0.0470	0.0000	OK
15 minute winter	S60	10	20.231	0.007	0.2	0.0080	0.0000	OK
15 minute winter	S61	11	19.806	0.100	8.8	0.1425	0.0000	OK
15 minute winter	S25	75	19.761	0.070	8.9	6.2780	0.0000	OK
15 minute winter	P60	17	22.437	0.422	1.2	0.4769	0.0000	SURCHARGED
15 minute winter	P9	10	23.060	0.055	9.5	0.0786	0.0000	OK
15 minute winter	P7	17	22.437	0.406	9.3	0.4588	0.0000	SURCHARGED
15 minute winter	S63	17	22.437	0.442	4.1	0.4995	0.0000	SURCHARGED
15 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	3.9				
15 minute winter	P2	Orifice	S52	2.9				
15 minute winter	S52	V-Notch Weir	S53	2.9				
15 minute winter	S53	V-Notch Weir	S54	2.9				
15 minute winter	S54	V-Notch Weir	S55	2.8				
15 minute winter	S55	1.005	S62	2.8	0.362	0.151	0.0877	
15 minute winter	P3	2.000	S62	1.1	0.620	0.010	0.0612	
15 minute winter	S62	1.006	S61	2.8	0.236	0.083	0.1248	
15 minute winter	P5	3.000	S57	6.9	1.560	0.056	0.0507	
15 minute winter	S56	4.000	S57	0.5	0.237	0.012	0.0088	
15 minute winter	S57	3.001	S59	7.2	1.505	0.065	0.0925	
15 minute winter	S58	5.000	S59	0.5	0.228	0.012	0.0114	
15 minute winter	S59	3.002	S61	7.6	1.566	0.068	0.0459	
15 minute winter	S60	6.000	S61	0.2	0.519	0.004	0.0013	
15 minute winter	S61	1.007	S25	8.9	1.146	0.205	0.0266	
15 minute winter	S25	Pump	P60	0.0				
15 minute winter	P60	1.009	S63	-1.2	-0.191	-0.101	0.2053	
15 minute winter	P9	7.000	P7	9.3	0.759	0.132	1.2299	
15 minute winter	P7	7.001	S63	4.1	0.400	0.113	0.1085	
15 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
15 minute winter	S63	Hydro-Brake®	S28	1.6				4.1

Results for 1 year 30 minute summer. 90 minute analysis at 1 minute timestep. Mass balance: 99.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	P1	20	22.753	0.087	4.8	0.9204	0.0000	OK
30 minute summer	P2	22	22.037	0.075	3.8	0.7902	0.0000	OK
30 minute summer	S52	23	21.501	0.122	3.0	0.1748	0.0000	OK
30 minute summer	S53	23	21.240	0.122	3.0	0.1747	0.0000	OK
30 minute summer	S54	24	20.909	0.122	3.0	0.1741	0.0000	OK
30 minute summer	S55	24	20.071	0.071	3.0	0.1019	0.0000	OK
30 minute summer	P3	18	20.415	0.015	1.0	0.0220	0.0000	OK
30 minute summer	S62	25	19.832	0.062	3.2	0.0883	0.0000	OK
30 minute summer	P5	18	21.992	0.035	6.3	0.0396	0.0000	OK
30 minute summer	S56	19	21.517	0.011	0.4	0.0157	0.0000	OK
30 minute summer	S57	18	21.357	0.038	6.7	0.0538	0.0000	OK
30 minute summer	S58	19	20.687	0.011	0.4	0.0157	0.0000	OK
30 minute summer	S59	18	20.484	0.040	7.1	0.0454	0.0000	OK
30 minute summer	S60	22	20.230	0.006	0.1	0.0066	0.0000	OK
30 minute summer	S61	18	19.802	0.096	8.1	0.1373	0.0000	OK
30 minute summer	S25	90	19.779	0.088	8.0	7.8121	0.0000	OK
30 minute summer	P60	27	22.489	0.474	1.1	0.5356	0.0000	SURCHARGED
30 minute summer	P9	18	23.058	0.053	8.7	0.0759	0.0000	OK
30 minute summer	P7	27	22.489	0.458	8.7	0.5176	0.0000	SURCHARGED
30 minute summer	S63	27	22.489	0.494	3.9	0.5582	0.0000	SURCHARGED
30 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	3.8				
30 minute summer	P2	Orifice	S52	3.0				
30 minute summer	S52	V-Notch Weir	S53	3.0				
30 minute summer	S53	V-Notch Weir	S54	3.0				
30 minute summer	S54	V-Notch Weir	S55	3.0				
30 minute summer	S55	1.005	S62	2.9	0.369	0.160	0.0914	
30 minute summer	P3	2.000	S62	1.0	0.541	0.009	0.0664	
30 minute summer	S62	1.006	S61	3.1	0.235	0.092	0.1299	
30 minute summer	P5	3.000	S57	6.3	1.524	0.051	0.0477	
30 minute summer	S56	4.000	S57	0.4	0.226	0.010	0.0083	
30 minute summer	S57	3.001	S59	6.7	1.471	0.060	0.0877	
30 minute summer	S58	5.000	S59	0.4	0.214	0.011	0.0108	
30 minute summer	S59	3.002	S61	7.1	1.534	0.064	0.0436	
30 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0010	
30 minute summer	S61	1.007	S25	8.0	1.032	0.186	0.0383	
30 minute summer	S25	Pump	P60	0.0				
30 minute summer	P60	1.009	S63	-1.1	-0.145	-0.095	0.2053	
30 minute summer	P9	7.000	P7	8.7	0.655	0.123	1.2341	
30 minute summer	P7	7.001	S63	3.9	0.361	0.109	0.1085	
30 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
30 minute summer	S63	Hydro-Brake®	S28	1.6				5.2

Results for 1 year 30 minute winter. 90 minute analysis at 1 minute timestep. Mass balance: 99.65%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	P1	20	22.752	0.086	4.3	0.9057	0.0000	OK
30 minute winter	P2	23	22.039	0.077	3.7	0.8151	0.0000	OK
30 minute winter	S52	23	21.504	0.125	3.2	0.1783	0.0000	OK
30 minute winter	S53	23	21.242	0.124	3.2	0.1779	0.0000	OK
30 minute winter	S54	24	20.911	0.124	3.1	0.1779	0.0000	OK
30 minute winter	S55	25	20.073	0.073	3.1	0.1049	0.0000	OK
30 minute winter	P3	19	20.415	0.015	0.9	0.0210	0.0000	OK
30 minute winter	S62	25	19.835	0.065	3.5	0.0929	0.0000	OK
30 minute winter	P5	18	21.990	0.033	5.7	0.0377	0.0000	OK
30 minute winter	S56	19	21.517	0.011	0.4	0.0157	0.0000	OK
30 minute winter	S57	18	21.355	0.036	6.1	0.0513	0.0000	OK
30 minute winter	S58	19	20.687	0.011	0.4	0.0157	0.0000	OK
30 minute winter	S59	18	20.482	0.038	6.5	0.0433	0.0000	OK
30 minute winter	S60	22	20.230	0.006	0.1	0.0066	0.0000	OK
30 minute winter	S61	24	19.800	0.094	7.5	0.1341	0.0000	OK
30 minute winter	S25	90	19.789	0.098	7.5	8.7532	0.0000	OK
30 minute winter	P60	30	22.589	0.574	1.2	0.6495	0.0000	SURCHARGED
30 minute winter	P9	18	23.056	0.051	7.9	0.0723	0.0000	OK
30 minute winter	P7	30	22.589	0.558	7.9	0.6314	0.0000	SURCHARGED
30 minute winter	S63	30	22.589	0.594	3.9	0.6721	0.0000	SURCHARGED
30 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	3.7				
30 minute winter	P2	Orifice	S52	3.2				
30 minute winter	S52	V-Notch Weir	S53	3.2				
30 minute winter	S53	V-Notch Weir	S54	3.1				
30 minute winter	S54	V-Notch Weir	S55	3.1				
30 minute winter	S55	1.005	S62	3.1	0.376	0.170	0.0953	
30 minute winter	P3	2.000	S62	0.9	0.538	0.008	0.0722	
30 minute winter	S62	1.006	S61	3.5	0.238	0.102	0.1439	
30 minute winter	P5	3.000	S57	5.7	1.481	0.046	0.0445	
30 minute winter	S56	4.000	S57	0.4	0.234	0.010	0.0078	
30 minute winter	S57	3.001	S59	6.1	1.431	0.055	0.0820	
30 minute winter	S58	5.000	S59	0.4	0.222	0.011	0.0102	
30 minute winter	S59	3.002	S61	6.5	1.496	0.058	0.0409	
30 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0010	
30 minute winter	S61	1.007	S25	7.5	0.962	0.172	0.0463	
30 minute winter	S25	Pump	P60	0.0				
30 minute winter	P60	1.009	S63	-1.2	-0.151	-0.096	0.2053	
30 minute winter	P9	7.000	P7	7.9	0.673	0.112	1.2288	
30 minute winter	P7	7.001	S63	3.9	0.364	0.109	0.1085	
30 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
30 minute winter	S63	Hydro-Brake®	S28	1.6				5.8

Results for 1 year 60 minute summer. 120 minute analysis at 1 minute timestep. Mass balance: 99.74%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	P1	35	22.746	0.080	3.8	0.8470	0.0000	OK
60 minute summer	P2	38	22.035	0.073	3.4	0.7731	0.0000	OK
60 minute summer	S52	38	21.500	0.121	2.9	0.1728	0.0000	OK
60 minute summer	S53	38	21.239	0.121	2.9	0.1725	0.0000	OK
60 minute summer	S54	39	20.908	0.121	2.9	0.1725	0.0000	OK
60 minute summer	S55	40	20.071	0.071	2.9	0.1012	0.0000	OK
60 minute summer	P3	34	20.414	0.014	0.8	0.0198	0.0000	OK
60 minute summer	S62	40	19.833	0.063	3.3	0.0899	0.0000	OK
60 minute summer	P5	33	21.989	0.032	5.1	0.0357	0.0000	OK
60 minute summer	S56	35	21.516	0.010	0.3	0.0138	0.0000	OK
60 minute summer	S57	33	21.353	0.034	5.4	0.0484	0.0000	OK
60 minute summer	S58	35	20.686	0.010	0.3	0.0138	0.0000	OK
60 minute summer	S59	33	20.480	0.036	5.7	0.0405	0.0000	OK
60 minute summer	S60	36	20.230	0.006	0.1	0.0066	0.0000	OK
60 minute summer	S61	120	19.809	0.103	7.7	0.1471	0.0000	OK
60 minute summer	S25	120	19.809	0.118	7.7	10.4941	0.0000	OK
60 minute summer	P60	46	22.581	0.566	1.0	0.6407	0.0000	SURCHARGED
60 minute summer	P9	33	23.053	0.048	7.0	0.0681	0.0000	OK
60 minute summer	P7	46	22.582	0.551	7.0	0.6226	0.0000	SURCHARGED
60 minute summer	S63	46	22.581	0.586	3.5	0.6633	0.0000	SURCHARGED
60 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	3.4				
60 minute summer	P2	Orifice	S52	2.9				
60 minute summer	S52	V-Notch Weir	S53	2.9				
60 minute summer	S53	V-Notch Weir	S54	2.9				
60 minute summer	S54	V-Notch Weir	S55	2.9				
60 minute summer	S55	1.005	S62	2.9	0.367	0.158	0.0906	
60 minute summer	P3	2.000	S62	0.8	0.544	0.007	0.0693	
60 minute summer	S62	1.006	S61	3.3	0.229	0.095	0.1437	
60 minute summer	P5	3.000	S57	5.1	1.437	0.041	0.0409	
60 minute summer	S56	4.000	S57	0.3	0.220	0.008	0.0071	
60 minute summer	S57	3.001	S59	5.4	1.390	0.048	0.0749	
60 minute summer	S58	5.000	S59	0.3	0.209	0.008	0.0091	
60 minute summer	S59	3.002	S61	5.7	1.444	0.051	0.0372	
60 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0010	
60 minute summer	S61	1.007	S25	7.7	0.835	0.177	0.0619	
60 minute summer	S25	Pump	P60	0.0				
60 minute summer	P60	1.009	S63	-1.0	-0.119	-0.080	0.2053	
60 minute summer	P9	7.000	P7	7.0	0.604	0.099	1.2144	
60 minute summer	P7	7.001	S63	3.5	0.335	0.098	0.1085	
60 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
60 minute summer	S63	Hydro-Brake®	S28	1.6				7.2

Results for 1 year 60 minute winter. 120 minute analysis at 1 minute timestep. Mass balance: 99.70%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	P1	35	22.739	0.073	3.1	0.7716	0.0000	OK
60 minute winter	P2	38	22.032	0.070	2.9	0.7377	0.0000	OK
60 minute winter	S52	39	21.496	0.117	2.7	0.1678	0.0000	OK
60 minute winter	S53	39	21.235	0.117	2.7	0.1678	0.0000	OK
60 minute winter	S54	39	20.904	0.117	2.7	0.1677	0.0000	OK
60 minute winter	S55	40	20.069	0.069	2.7	0.0982	0.0000	OK
60 minute winter	P3	34	20.413	0.013	0.7	0.0186	0.0000	OK
60 minute winter	S62	40	19.832	0.062	3.2	0.0887	0.0000	OK
60 minute winter	P5	33	21.985	0.028	4.1	0.0320	0.0000	OK
60 minute winter	S56	35	21.516	0.010	0.3	0.0138	0.0000	OK
60 minute winter	S57	33	21.350	0.031	4.4	0.0437	0.0000	OK
60 minute winter	S58	35	20.686	0.010	0.3	0.0138	0.0000	OK
60 minute winter	S59	33	20.477	0.033	4.7	0.0368	0.0000	OK
60 minute winter	S60	34	20.230	0.006	0.1	0.0066	0.0000	OK
60 minute winter	S61	120	19.824	0.118	7.3	0.1691	0.0000	OK
60 minute winter	S25	120	19.824	0.133	7.2	11.8631	0.0000	OK
60 minute winter	P60	49	22.682	0.667	0.8	0.7542	0.0000	SURCHARGED
60 minute winter	P9	33	23.048	0.043	5.7	0.0616	0.0000	OK
60 minute winter	P7	49	22.682	0.651	5.7	0.7361	0.0000	SURCHARGED
60 minute winter	S63	49	22.682	0.687	3.1	0.7768	0.0000	SURCHARGED
60 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	2.9				
60 minute winter	P2	Orifice	S52	2.7				
60 minute winter	S52	V-Notch Weir	S53	2.7				
60 minute winter	S53	V-Notch Weir	S54	2.7				
60 minute winter	S54	V-Notch Weir	S55	2.7				
60 minute winter	S55	1.005	S62	2.7	0.360	0.148	0.0868	
60 minute winter	P3	2.000	S62	0.7	0.538	0.006	0.0690	
60 minute winter	S62	1.006	S61	3.2	0.216	0.093	0.1657	
60 minute winter	P5	3.000	S57	4.1	1.347	0.033	0.0352	
60 minute winter	S56	4.000	S57	0.3	0.224	0.008	0.0062	
60 minute winter	S57	3.001	S59	4.4	1.306	0.039	0.0648	
60 minute winter	S58	5.000	S59	0.3	0.211	0.008	0.0080	
60 minute winter	S59	3.002	S61	4.7	1.366	0.042	0.0324	
60 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0010	
60 minute winter	S61	1.007	S25	7.2	0.748	0.167	0.0747	
60 minute winter	S25	Pump	P60	0.0				
60 minute winter	P60	1.009	S63	-0.8	-0.130	-0.062	0.2053	
60 minute winter	P9	7.000	P7	5.7	0.592	0.081	1.1927	
60 minute winter	P7	7.001	S63	3.1	0.349	0.086	0.1085	
60 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
60 minute winter	S63	Hydro-Brake®	S28	1.6				8.0

Results for 1 year 120 minute summer. 180 minute analysis at 2 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
120 minute summer	P1	66	22.732	0.066	2.7	0.7019	0.0000	OK
120 minute summer	P2	68	22.026	0.064	2.5	0.6716	0.0000	OK
120 minute summer	S52	70	21.490	0.111	2.4	0.1587	0.0000	OK
120 minute summer	S53	70	21.229	0.111	2.4	0.1588	0.0000	OK
120 minute summer	S54	70	20.898	0.111	2.4	0.1588	0.0000	OK
120 minute summer	S55	70	20.064	0.064	2.4	0.0918	0.0000	OK
120 minute summer	P3	64	20.412	0.012	0.6	0.0173	0.0000	OK
120 minute summer	S62	180	19.847	0.077	2.8	0.1099	0.0000	OK
120 minute summer	P5	64	21.984	0.027	3.6	0.0301	0.0000	OK
120 minute summer	S56	64	21.514	0.008	0.2	0.0113	0.0000	OK
120 minute summer	S57	64	21.348	0.029	3.8	0.0408	0.0000	OK
120 minute summer	S58	64	20.684	0.008	0.2	0.0114	0.0000	OK
120 minute summer	S59	64	20.474	0.030	4.0	0.0340	0.0000	OK
120 minute summer	S60	66	20.230	0.006	0.1	0.0066	0.0000	OK
120 minute summer	S61	180	19.847	0.141	6.3	0.2015	0.0000	OK
120 minute summer	S25	180	19.847	0.156	6.3	13.8805	0.0000	OK
120 minute summer	P60	82	22.609	0.594	0.6	0.6723	0.0000	SURCHARGED
120 minute summer	P9	64	23.045	0.040	5.0	0.0578	0.0000	OK
120 minute summer	P7	82	22.609	0.578	5.0	0.6542	0.0000	SURCHARGED
120 minute summer	S63	82	22.609	0.614	2.8	0.6949	0.0000	SURCHARGED
120 minute summer	S28	2	21.965	0.000	1.6	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	P1	Orifice	P2	2.5				
120 minute summer	P2	Orifice	S52	2.4				
120 minute summer	S52	V-Notch Weir	S53	2.4				
120 minute summer	S53	V-Notch Weir	S54	2.4				
120 minute summer	S54	V-Notch Weir	S55	2.4				
120 minute summer	S55	1.005	S62	2.3	0.343	0.129	0.0788	
120 minute summer	P3	2.000	S62	0.6	0.505	0.005	0.0862	
120 minute summer	S62	1.006	S61	2.8	0.200	0.081	0.2249	
120 minute summer	P5	3.000	S57	3.6	1.300	0.029	0.0319	
120 minute summer	S56	4.000	S57	0.2	0.199	0.005	0.0055	
120 minute summer	S57	3.001	S59	3.8	1.259	0.034	0.0581	
120 minute summer	S58	5.000	S59	0.2	0.193	0.005	0.0070	
120 minute summer	S59	3.002	S61	4.0	1.305	0.036	0.0289	
120 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0010	
120 minute summer	S61	1.007	S25	6.3	0.574	0.146	0.0941	
120 minute summer	S25	Pump	P60	0.0				
120 minute summer	P60	1.009	S63	-0.6	-0.101	-0.052	0.2053	
120 minute summer	P9	7.000	P7	5.0	0.544	0.071	1.1805	
120 minute summer	P7	7.001	S63	2.8	0.306	0.079	0.1085	
120 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
120 minute summer	S63	Hydro-Brake®	S28	1.6				9.8

Results for 1 year 120 minute winter. 180 minute analysis at 2 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
120 minute winter	P1	66	22.724	0.058	2.1	0.6136	0.0000	OK
120 minute winter	P2	70	22.019	0.057	2.1	0.6042	0.0000	OK
120 minute winter	S52	70	21.483	0.104	2.0	0.1490	0.0000	OK
120 minute winter	S53	70	21.222	0.104	2.0	0.1489	0.0000	OK
120 minute winter	S54	72	20.891	0.104	2.0	0.1488	0.0000	OK
120 minute winter	S55	72	20.060	0.060	2.0	0.0858	0.0000	OK
120 minute winter	P3	64	20.411	0.011	0.5	0.0159	0.0000	OK
120 minute winter	S62	180	19.867	0.097	2.4	0.1391	0.0000	OK
120 minute winter	P5	64	21.981	0.024	2.8	0.0267	0.0000	OK
120 minute winter	S56	62	21.514	0.008	0.2	0.0113	0.0000	OK
120 minute winter	S57	64	21.344	0.025	3.0	0.0364	0.0000	OK
120 minute winter	S58	62	20.684	0.008	0.2	0.0114	0.0000	OK
120 minute winter	S59	64	20.471	0.027	3.2	0.0304	0.0000	OK
120 minute winter	S60	64	20.230	0.006	0.1	0.0066	0.0000	OK
120 minute winter	S61	180	19.867	0.161	5.5	0.2307	0.0000	OK
120 minute winter	S25	180	19.867	0.176	5.5	15.7000	0.0000	OK
120 minute winter	P60	88	22.673	0.658	0.4	0.7445	0.0000	SURCHARGED
120 minute winter	P9	64	23.041	0.036	3.9	0.0512	0.0000	OK
120 minute winter	P7	88	22.673	0.642	3.9	0.7264	0.0000	SURCHARGED
120 minute winter	S63	88	22.673	0.678	2.4	0.7671	0.0000	SURCHARGED
120 minute winter	S28	2	21.965	0.000	1.6	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	P1	Orifice	P2	2.1				
120 minute winter	P2	Orifice	S52	2.0				
120 minute winter	S52	V-Notch Weir	S53	2.0				
120 minute winter	S53	V-Notch Weir	S54	2.0				
120 minute winter	S54	V-Notch Weir	S55	2.0				
120 minute winter	S55	1.005	S62	2.0	0.328	0.110	0.0710	
120 minute winter	P3	2.000	S62	0.5	0.508	0.005	0.1184	
120 minute winter	S62	1.006	S61	2.4	0.180	0.071	0.2810	
120 minute winter	P5	3.000	S57	2.8	1.206	0.023	0.0268	
120 minute winter	S56	4.000	S57	0.2	0.205	0.005	0.0048	
120 minute winter	S57	3.001	S59	3.0	1.170	0.027	0.0493	
120 minute winter	S58	5.000	S59	0.2	0.200	0.005	0.0061	
120 minute winter	S59	3.002	S61	3.2	1.221	0.029	0.0247	
120 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0010	
120 minute winter	S61	1.007	S25	5.5	0.535	0.128	0.1118	
120 minute winter	S25	Pump	P60	0.0				
120 minute winter	P60	1.009	S63	0.4	-0.105	0.035	0.2053	
120 minute winter	P9	7.000	P7	3.9	0.522	0.055	1.1599	
120 minute winter	P7	7.001	S63	2.4	0.311	0.067	0.1085	
120 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
120 minute winter	S63	Hydro-Brake®	S28	1.6				10.9

Results for 1 year 180 minute summer. 240 minute analysis at 4 minute timestep. Mass balance: 99.87%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	P1	96	22.725	0.059	2.2	0.6203	0.0000	OK
180 minute summer	P2	100	22.019	0.057	2.1	0.6030	0.0000	OK
180 minute summer	S52	100	21.483	0.104	2.0	0.1488	0.0000	OK
180 minute summer	S53	100	21.222	0.104	2.0	0.1485	0.0000	OK
180 minute summer	S54	100	20.891	0.104	2.0	0.1482	0.0000	OK
180 minute summer	S55	104	20.059	0.059	2.0	0.0851	0.0000	OK
180 minute summer	P3	96	20.411	0.011	0.5	0.0159	0.0000	OK
180 minute summer	S62	240	19.874	0.104	2.4	0.1494	0.0000	OK
180 minute summer	P5	96	21.981	0.024	2.9	0.0271	0.0000	OK
180 minute summer	S56	96	21.514	0.008	0.2	0.0113	0.0000	OK
180 minute summer	S57	96	21.345	0.026	3.1	0.0370	0.0000	OK
180 minute summer	S58	96	20.684	0.008	0.2	0.0114	0.0000	OK
180 minute summer	S59	96	20.471	0.027	3.3	0.0309	0.0000	OK
180 minute summer	S60	100	20.230	0.006	0.1	0.0066	0.0000	OK
180 minute summer	S61	240	19.874	0.168	5.5	0.2410	0.0000	OK
180 minute summer	S25	240	19.874	0.183	5.5	16.3416	0.0000	OK
180 minute summer	P60	116	22.562	0.547	0.4	0.6192	0.0000	SURCHARGED
180 minute summer	P9	96	23.041	0.036	4.0	0.0518	0.0000	OK
180 minute summer	P7	116	22.562	0.531	4.0	0.6011	0.0000	SURCHARGED
180 minute summer	S63	116	22.562	0.567	2.4	0.6418	0.0000	SURCHARGED
180 minute summer	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	2.1				
180 minute summer	P2	Orifice	S52	2.0				
180 minute summer	S52	V-Notch Weir	S53	2.0				
180 minute summer	S53	V-Notch Weir	S54	2.0				
180 minute summer	S54	V-Notch Weir	S55	2.0				
180 minute summer	S55	1.005	S62	2.0	0.326	0.108	0.0702	
180 minute summer	P3	2.000	S62	0.5	0.528	0.005	0.1300	
180 minute summer	S62	1.006	S61	2.3	0.178	0.069	0.3012	
180 minute summer	P5	3.000	S57	2.9	1.220	0.024	0.0275	
180 minute summer	S56	4.000	S57	0.2	0.201	0.005	0.0049	
180 minute summer	S57	3.001	S59	3.1	1.182	0.028	0.0505	
180 minute summer	S58	5.000	S59	0.2	0.195	0.005	0.0062	
180 minute summer	S59	3.002	S61	3.3	1.232	0.030	0.0252	
180 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0010	
180 minute summer	S61	1.007	S25	5.5	0.423	0.127	0.1180	
180 minute summer	S25	Pump	P60	0.0				
180 minute summer	P60	1.009	S63	-0.4	-0.091	-0.036	0.2053	
180 minute summer	P9	7.000	P7	4.0	0.500	0.057	1.1619	
180 minute summer	P7	7.001	S63	2.4	0.263	0.068	0.1085	
180 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
180 minute summer	S63	Hydro-Brake®	S28	1.6				11.6

Results for 1 year 180 minute winter. 240 minute analysis at 4 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
180 minute winter	P1	96	22.716	0.050	1.7	0.5320	0.0000	OK
180 minute winter	P2	100	22.012	0.050	1.7	0.5265	0.0000	OK
180 minute winter	S52	100	21.475	0.096	1.6	0.1371	0.0000	OK
180 minute winter	S53	100	21.214	0.096	1.6	0.1370	0.0000	OK
180 minute winter	S54	104	20.883	0.096	1.6	0.1369	0.0000	OK
180 minute winter	S55	104	20.055	0.055	1.6	0.0781	0.0000	OK
180 minute winter	P3	96	20.410	0.010	0.4	0.0144	0.0000	OK
180 minute winter	S62	240	19.895	0.125	1.9	0.1795	0.0000	OK
180 minute winter	P5	96	21.978	0.021	2.2	0.0237	0.0000	OK
180 minute winter	S56	68	21.512	0.006	0.1	0.0083	0.0000	OK
180 minute winter	S57	96	21.341	0.022	2.3	0.0321	0.0000	OK
180 minute winter	S58	68	20.682	0.006	0.1	0.0083	0.0000	OK
180 minute winter	S59	96	20.467	0.023	2.4	0.0265	0.0000	OK
180 minute winter	S60	96	20.230	0.006	0.1	0.0066	0.0000	OK
180 minute winter	S61	240	19.895	0.189	4.4	0.2711	0.0000	OK
180 minute winter	S25	240	19.895	0.204	4.3	18.2148	0.0000	OK
180 minute winter	P60	128	22.579	0.564	0.3	0.6379	0.0000	SURCHARGED
180 minute winter	P9	96	23.037	0.032	3.0	0.0451	0.0000	OK
180 minute winter	P7	128	22.579	0.548	3.0	0.6198	0.0000	SURCHARGED
180 minute winter	S63	128	22.579	0.584	2.1	0.6605	0.0000	SURCHARGED
180 minute winter	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	1.7				
180 minute winter	P2	Orifice	S52	1.6				
180 minute winter	S52	V-Notch Weir	S53	1.6				
180 minute winter	S53	V-Notch Weir	S54	1.6				
180 minute winter	S54	V-Notch Weir	S55	1.6				
180 minute winter	S55	1.005	S62	1.6	0.307	0.090	0.0618	
180 minute winter	P3	2.000	S62	0.4	0.527	0.004	0.1641	
180 minute winter	S62	1.006	S61	1.9	0.162	0.057	0.3603	
180 minute winter	P5	3.000	S57	2.2	1.129	0.018	0.0225	
180 minute winter	S56	4.000	S57	0.1	0.205	0.003	0.0038	
180 minute winter	S57	3.001	S59	2.3	1.091	0.021	0.0406	
180 minute winter	S58	5.000	S59	0.1	0.203	0.003	0.0047	
180 minute winter	S59	3.002	S61	2.4	1.123	0.022	0.0201	
180 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0010	
180 minute winter	S61	1.007	S25	4.3	0.441	0.100	0.1358	
180 minute winter	S25	Pump	P60	0.0				
180 minute winter	P60	1.009	S63	-0.3	-0.056	-0.021	0.2053	
180 minute winter	P9	7.000	P7	3.0	0.443	0.042	1.1419	
180 minute winter	P7	7.001	S63	2.1	0.268	0.058	0.1085	
180 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
180 minute winter	S63	Hydro-Brake®	S28	1.6				12.9

Results for 1 year 240 minute summer. 300 minute analysis at 4 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
240 minute summer	P1	128	22.719	0.053	1.9	0.5627	0.0000	OK
240 minute summer	P2	132	22.014	0.052	1.8	0.5481	0.0000	OK
240 minute summer	S52	132	21.477	0.098	1.7	0.1408	0.0000	OK
240 minute summer	S53	132	21.216	0.098	1.8	0.1409	0.0000	OK
240 minute summer	S54	132	20.885	0.098	1.8	0.1409	0.0000	OK
240 minute summer	S55	132	20.056	0.056	1.8	0.0804	0.0000	OK
240 minute summer	P3	128	20.410	0.010	0.4	0.0144	0.0000	OK
240 minute summer	S62	300	19.895	0.125	2.1	0.1788	0.0000	OK
240 minute summer	P5	124	21.979	0.022	2.5	0.0252	0.0000	OK
240 minute summer	S56	128	21.514	0.008	0.2	0.0113	0.0000	OK
240 minute summer	S57	124	21.343	0.024	2.7	0.0346	0.0000	OK
240 minute summer	S58	128	20.684	0.008	0.2	0.0114	0.0000	OK
240 minute summer	S59	124	20.470	0.026	2.9	0.0289	0.0000	OK
240 minute summer	S60	128	20.230	0.006	0.1	0.0066	0.0000	OK
240 minute summer	S61	300	19.895	0.189	4.9	0.2704	0.0000	OK
240 minute summer	S25	300	19.895	0.204	4.8	18.1685	0.0000	OK
240 minute summer	P60	148	22.516	0.501	0.3	0.5671	0.0000	SURCHARGED
240 minute summer	P9	124	23.039	0.034	3.5	0.0484	0.0000	OK
240 minute summer	P7	148	22.516	0.485	3.5	0.5491	0.0000	SURCHARGED
240 minute summer	S63	148	22.516	0.521	2.2	0.5897	0.0000	SURCHARGED
240 minute summer	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	1.8				
240 minute summer	P2	Orifice	S52	1.7				
240 minute summer	S52	V-Notch Weir	S53	1.8				
240 minute summer	S53	V-Notch Weir	S54	1.8				
240 minute summer	S54	V-Notch Weir	S55	1.8				
240 minute summer	S55	1.005	S62	1.7	0.313	0.096	0.0645	
240 minute summer	P3	2.000	S62	0.4	0.149	0.004	0.1632	
240 minute summer	S62	1.006	S61	2.1	0.158	0.060	0.3589	
240 minute summer	P5	3.000	S57	2.5	1.162	0.020	0.0248	
240 minute summer	S56	4.000	S57	0.2	0.202	0.005	0.0045	
240 minute summer	S57	3.001	S59	2.7	1.134	0.024	0.0457	
240 minute summer	S58	5.000	S59	0.2	0.198	0.005	0.0057	
240 minute summer	S59	3.002	S61	2.9	1.185	0.026	0.0229	
240 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0010	
240 minute summer	S61	1.007	S25	4.8	0.366	0.111	0.1354	
240 minute summer	S25	Pump	P60	0.0				
240 minute summer	P60	1.009	S63	-0.3	-0.051	-0.028	0.2053	
240 minute summer	P9	7.000	P7	3.5	0.487	0.049	1.1515	
240 minute summer	P7	7.001	S63	2.2	0.279	0.063	0.1085	
240 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
240 minute summer	S63	Hydro-Brake®	S28	1.6				13.0

Results for 1 year 240 minute winter. 300 minute analysis at 4 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
240 minute winter	P1	132	22.711	0.045	1.4	0.4728	0.0000	OK
240 minute winter	P2	132	22.007	0.045	1.4	0.4711	0.0000	OK
240 minute winter	S52	132	21.469	0.090	1.4	0.1283	0.0000	OK
240 minute winter	S53	136	21.208	0.090	1.4	0.1283	0.0000	OK
240 minute winter	S54	136	20.877	0.090	1.4	0.1284	0.0000	OK
240 minute winter	S55	136	20.051	0.051	1.4	0.0724	0.0000	OK
240 minute winter	P3	116	20.409	0.009	0.3	0.0127	0.0000	OK
240 minute winter	S62	300	19.921	0.151	1.7	0.2157	0.0000	OK
240 minute winter	P5	124	21.977	0.020	1.9	0.0221	0.0000	OK
240 minute winter	S56	92	21.512	0.006	0.1	0.0083	0.0000	OK
240 minute winter	S57	124	21.340	0.021	2.0	0.0300	0.0000	OK
240 minute winter	S58	92	20.682	0.006	0.1	0.0083	0.0000	OK
240 minute winter	S59	124	20.466	0.022	2.1	0.0247	0.0000	OK
240 minute winter	S60	4	20.224	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S61	300	19.921	0.215	3.7	0.3072	0.0000	OK
240 minute winter	S25	300	19.921	0.230	3.6	20.4643	0.0000	SURCHARGED
240 minute winter	P60	160	22.494	0.479	0.2	0.5415	0.0000	SURCHARGED
240 minute winter	P9	128	23.034	0.029	2.6	0.0421	0.0000	OK
240 minute winter	P7	160	22.494	0.463	2.6	0.5235	0.0000	SURCHARGED
240 minute winter	S63	160	22.494	0.499	1.9	0.5641	0.0000	SURCHARGED
240 minute winter	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	1.4				
240 minute winter	P2	Orifice	S52	1.4				
240 minute winter	S52	V-Notch Weir	S53	1.4				
240 minute winter	S53	V-Notch Weir	S54	1.4				
240 minute winter	S54	V-Notch Weir	S55	1.4				
240 minute winter	S55	1.005	S62	1.4	0.290	0.076	0.0555	
240 minute winter	P3	2.000	S62	0.3	0.528	0.003	0.2039	
240 minute winter	S62	1.006	S61	1.7	0.142	0.048	0.4307	
240 minute winter	P5	3.000	S57	1.9	1.082	0.015	0.0202	
240 minute winter	S56	4.000	S57	0.1	0.195	0.003	0.0035	
240 minute winter	S57	3.001	S59	2.0	1.045	0.018	0.0366	
240 minute winter	S58	5.000	S59	0.1	0.195	0.003	0.0043	
240 minute winter	S59	3.002	S61	2.1	1.077	0.019	0.0182	
240 minute winter	S60	6.000	S61	0.0	0.000	0.000	0.0000	
240 minute winter	S61	1.007	S25	3.6	0.395	0.083	0.1563	
240 minute winter	S25	Pump	P60	0.0				
240 minute winter	P60	1.009	S63	-0.2	-0.076	-0.016	0.2053	
240 minute winter	P9	7.000	P7	2.6	0.436	0.037	1.1334	
240 minute winter	P7	7.001	S63	1.9	0.295	0.054	0.1085	
240 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
240 minute winter	S63	Hydro-Brake®	S28	1.6				14.8

Results for 1 year 360 minute summer. 424 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	P1	184	22.711	0.045	1.5	0.4739	0.0000	OK
360 minute summer	P2	192	22.007	0.045	1.4	0.4718	0.0000	OK
360 minute summer	S52	192	21.469	0.090	1.4	0.1285	0.0000	OK
360 minute summer	S53	192	21.208	0.090	1.4	0.1286	0.0000	OK
360 minute summer	S54	192	20.877	0.090	1.4	0.1285	0.0000	OK
360 minute summer	S55	192	20.051	0.051	1.4	0.0724	0.0000	OK
360 minute summer	P3	184	20.409	0.009	0.3	0.0127	0.0000	OK
360 minute summer	S62	424	19.926	0.156	1.7	0.2232	0.0000	OK
360 minute summer	P5	184	21.977	0.020	2.0	0.0227	0.0000	OK
360 minute summer	S56	160	21.512	0.006	0.1	0.0083	0.0000	OK
360 minute summer	S57	184	21.340	0.021	2.1	0.0307	0.0000	OK
360 minute summer	S58	160	20.682	0.006	0.1	0.0083	0.0000	OK
360 minute summer	S59	184	20.466	0.022	2.2	0.0252	0.0000	OK
360 minute summer	S60	8	20.224	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S61	424	19.926	0.220	3.7	0.3148	0.0000	OK
360 minute summer	S25	424	19.926	0.235	3.6	20.9346	0.0000	SURCHARGED
360 minute summer	P60	208	22.390	0.375	0.2	0.4245	0.0000	SURCHARGED
360 minute summer	P9	184	23.035	0.030	2.8	0.0434	0.0000	OK
360 minute summer	P7	208	22.390	0.359	2.8	0.4065	0.0000	SURCHARGED
360 minute summer	S63	208	22.390	0.395	1.9	0.4471	0.0000	SURCHARGED
360 minute summer	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	1.4				
360 minute summer	P2	Orifice	S52	1.4				
360 minute summer	S52	V-Notch Weir	S53	1.4				
360 minute summer	S53	V-Notch Weir	S54	1.4				
360 minute summer	S54	V-Notch Weir	S55	1.4				
360 minute summer	S55	1.005	S62	1.4	0.290	0.076	0.0555	
360 minute summer	P3	2.000	S62	0.3	0.133	0.003	0.2119	
360 minute summer	S62	1.006	S61	1.6	0.130	0.046	0.4451	
360 minute summer	P5	3.000	S57	2.0	1.098	0.016	0.0210	
360 minute summer	S56	4.000	S57	0.1	0.206	0.003	0.0036	
360 minute summer	S57	3.001	S59	2.1	1.061	0.019	0.0379	
360 minute summer	S58	5.000	S59	0.1	0.205	0.003	0.0044	
360 minute summer	S59	3.002	S61	2.2	1.092	0.020	0.0188	
360 minute summer	S60	6.000	S61	0.0	0.000	0.000	0.0000	
360 minute summer	S61	1.007	S25	3.6	0.340	0.083	0.1604	
360 minute summer	S25	Pump	P60	0.0				
360 minute summer	P60	1.009	S63	-0.2	-0.034	-0.015	0.2053	
360 minute summer	P9	7.000	P7	2.8	0.309	0.039	1.1298	
360 minute summer	P7	7.001	S63	1.9	0.246	0.053	0.1085	
360 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
360 minute summer	S63	Hydro-Brake®	S28	1.6				15.4

Results for 1 year 360 minute winter. 424 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	P1	192	22.704	0.038	1.1	0.4026	0.0000	OK
360 minute winter	P2	192	22.000	0.038	1.1	0.4016	0.0000	OK
360 minute winter	S52	192	21.460	0.081	1.1	0.1166	0.0000	OK
360 minute winter	S53	192	21.199	0.081	1.1	0.1165	0.0000	OK
360 minute winter	S54	192	20.868	0.081	1.1	0.1165	0.0000	OK
360 minute winter	S55	192	20.046	0.046	1.1	0.0653	0.0000	OK
360 minute winter	P3	152	20.407	0.007	0.2	0.0105	0.0000	OK
360 minute winter	S62	424	19.960	0.190	1.3	0.2718	0.0000	OK
360 minute winter	P5	184	21.975	0.018	1.5	0.0198	0.0000	OK
360 minute winter	S56	144	21.512	0.006	0.1	0.0083	0.0000	OK
360 minute winter	S57	184	21.338	0.019	1.6	0.0270	0.0000	OK
360 minute winter	S58	144	20.682	0.006	0.1	0.0083	0.0000	OK
360 minute winter	S59	184	20.464	0.020	1.7	0.0223	0.0000	OK
360 minute winter	S60	8	20.224	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S61	424	19.960	0.254	2.8	0.3634	0.0000	OK
360 minute winter	S25	424	19.960	0.269	2.8	23.9576	0.0000	SURCHARGED
360 minute winter	P60	216	22.306	0.291	0.1	0.3296	0.0000	SURCHARGED
360 minute winter	P9	184	23.032	0.027	2.1	0.0380	0.0000	OK
360 minute winter	P7	216	22.307	0.275	2.1	0.3116	0.0000	SURCHARGED
360 minute winter	S63	216	22.306	0.311	1.7	0.3522	0.0000	SURCHARGED
360 minute winter	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	1.1				
360 minute winter	P2	Orifice	S52	1.1				
360 minute winter	S52	V-Notch Weir	S53	1.1				
360 minute winter	S53	V-Notch Weir	S54	1.1				
360 minute winter	S54	V-Notch Weir	S55	1.1				
360 minute winter	S55	1.005	S62	1.1	0.269	0.060	0.0517	
360 minute winter	P3	2.000	S62	0.2	0.117	0.002	0.2580	
360 minute winter	S62	1.006	S61	1.2	0.124	0.035	0.5329	
360 minute winter	P5	3.000	S57	1.5	1.000	0.012	0.0173	
360 minute winter	S56	4.000	S57	0.1	0.196	0.003	0.0031	
360 minute winter	S57	3.001	S59	1.6	0.976	0.014	0.0314	
360 minute winter	S58	5.000	S59	0.1	0.197	0.003	0.0038	
360 minute winter	S59	3.002	S61	1.7	1.015	0.015	0.0157	
360 minute winter	S60	6.000	S61	0.0	0.000	0.000	0.0000	
360 minute winter	S61	1.007	S25	2.8	0.345	0.064	0.1841	
360 minute winter	S25	Pump	P60	0.0				
360 minute winter	P60	1.009	S63	-0.1	-0.026	-0.010	0.2053	
360 minute winter	P9	7.000	P7	2.1	0.344	0.030	1.1178	
360 minute winter	P7	7.001	S63	1.7	0.235	0.047	0.1085	
360 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
360 minute winter	S63	Hydro-Brake®	S28	1.6				17.4

Results for 1 year 480 minute summer. 544 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	P1	248	22.708	0.042	1.3	0.4473	0.0000	OK
480 minute summer	P2	248	22.003	0.041	1.3	0.4379	0.0000	OK
480 minute summer	S52	256	21.465	0.086	1.2	0.1227	0.0000	OK
480 minute summer	S53	256	21.204	0.086	1.2	0.1229	0.0000	OK
480 minute summer	S54	256	20.873	0.086	1.2	0.1231	0.0000	OK
480 minute summer	S55	256	20.048	0.048	1.3	0.0694	0.0000	OK
480 minute summer	P3	248	20.409	0.009	0.3	0.0127	0.0000	OK
480 minute summer	S62	544	19.954	0.184	1.5	0.2629	0.0000	OK
480 minute summer	P5	248	21.976	0.019	1.7	0.0210	0.0000	OK
480 minute summer	S56	216	21.512	0.006	0.1	0.0083	0.0000	OK
480 minute summer	S57	248	21.339	0.020	1.8	0.0286	0.0000	OK
480 minute summer	S58	216	20.682	0.006	0.1	0.0083	0.0000	OK
480 minute summer	S59	248	20.465	0.021	1.9	0.0236	0.0000	OK
480 minute summer	S60	8	20.224	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S61	544	19.954	0.248	3.3	0.3545	0.0000	OK
480 minute summer	S25	544	19.954	0.263	3.2	23.4058	0.0000	SURCHARGED
480 minute summer	P60	272	22.309	0.294	0.1	0.3320	0.0000	SURCHARGED
480 minute summer	P9	248	23.033	0.028	2.3	0.0397	0.0000	OK
480 minute summer	P7	272	22.309	0.278	2.3	0.3139	0.0000	SURCHARGED
480 minute summer	S63	272	22.309	0.314	1.8	0.3546	0.0000	SURCHARGED
480 minute summer	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	1.3				
480 minute summer	P2	Orifice	S52	1.2				
480 minute summer	S52	V-Notch Weir	S53	1.2				
480 minute summer	S53	V-Notch Weir	S54	1.2				
480 minute summer	S54	V-Notch Weir	S55	1.3				
480 minute summer	S55	1.005	S62	1.3	0.281	0.069	0.0519	
480 minute summer	P3	2.000	S62	0.3	0.128	0.003	0.2504	
480 minute summer	S62	1.006	S61	1.4	0.112	0.041	0.5176	
480 minute summer	P5	3.000	S57	1.7	1.044	0.014	0.0188	
480 minute summer	S56	4.000	S57	0.1	0.196	0.003	0.0033	
480 minute summer	S57	3.001	S59	1.8	1.014	0.016	0.0342	
480 minute summer	S58	5.000	S59	0.1	0.197	0.003	0.0041	
480 minute summer	S59	3.002	S61	1.9	1.050	0.017	0.0171	
480 minute summer	S60	6.000	S61	0.0	0.000	0.000	0.0000	
480 minute summer	S61	1.007	S25	3.2	0.334	0.074	0.1801	
480 minute summer	S25	Pump	P60	0.0				
480 minute summer	P60	1.009	S63	-0.1	-0.034	-0.010	0.2053	
480 minute summer	P9	7.000	P7	2.3	0.309	0.033	1.1206	
480 minute summer	P7	7.001	S63	1.8	0.246	0.049	0.1085	
480 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
480 minute summer	S63	Hydro-Brake®	S28	1.6				17.3

Results for 1 year 480 minute winter. 544 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	P1	264	22.699	0.033	0.9	0.3524	0.0000	OK
480 minute winter	P2	264	21.995	0.033	0.9	0.3524	0.0000	OK
480 minute winter	S52	264	21.454	0.075	0.9	0.1078	0.0000	OK
480 minute winter	S53	264	21.193	0.075	0.9	0.1078	0.0000	OK
480 minute winter	S54	264	20.862	0.075	0.9	0.1078	0.0000	OK
480 minute winter	S55	264	20.042	0.042	0.9	0.0601	0.0000	OK
480 minute winter	P3	208	20.407	0.007	0.2	0.0105	0.0000	OK
480 minute winter	S62	544	19.990	0.220	1.1	0.3146	0.0000	OK
480 minute winter	P5	232	21.973	0.016	1.2	0.0179	0.0000	OK
480 minute winter	S56	200	21.512	0.006	0.1	0.0083	0.0000	OK
480 minute winter	S57	232	21.336	0.017	1.3	0.0246	0.0000	OK
480 minute winter	S58	200	20.682	0.006	0.1	0.0083	0.0000	OK
480 minute winter	S59	232	20.462	0.018	1.4	0.0204	0.0000	OK
480 minute winter	S60	8	20.224	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S61	544	19.990	0.284	2.4	0.4062	0.0000	OK
480 minute winter	S25	544	19.990	0.299	2.3	26.6255	0.0000	SURCHARGED
480 minute winter	P60	272	22.210	0.195	0.1	0.2204	0.0000	OK
480 minute winter	P9	240	23.029	0.024	1.7	0.0345	0.0000	OK
480 minute winter	P7	272	22.210	0.179	1.7	0.2023	0.0000	OK
480 minute winter	S63	272	22.210	0.215	1.5	0.2430	0.0000	OK
480 minute winter	S28	8	21.965	0.000	1.5	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)
480 minute winter	P1	Orifice	P2	0.9				
480 minute winter	P2	Orifice	S52	0.9				
480 minute winter	S52	V-Notch Weir	S53	0.9				
480 minute winter	S53	V-Notch Weir	S54	0.9				
480 minute winter	S54	V-Notch Weir	S55	0.9				
480 minute winter	S55	1.005	S62	0.9	0.252	0.049	0.0868	
480 minute winter	P3	2.000	S62	0.2	0.116	0.002	0.2850	
480 minute winter	S62	1.006	S61	1.0	0.107	0.029	0.5990	
480 minute winter	P5	3.000	S57	1.2	0.927	0.010	0.0149	
480 minute winter	S56	4.000	S57	0.1	0.196	0.003	0.0027	
480 minute winter	S57	3.001	S59	1.3	0.911	0.012	0.0274	
480 minute winter	S58	5.000	S59	0.1	0.197	0.003	0.0034	
480 minute winter	S59	3.002	S61	1.4	0.957	0.013	0.0138	
480 minute winter	S60	6.000	S61	0.0	0.000	0.000	0.0000	
480 minute winter	S61	1.007	S25	2.3	0.328	0.053	0.1990	
480 minute winter	S25	Pump	P60	0.0				
480 minute winter	P60	1.009	S63	-0.1	-0.044	-0.006	0.1952	
480 minute winter	P9	7.000	P7	1.7	0.345	0.024	0.9516	
480 minute winter	P7	7.001	S63	1.5	0.231	0.043	0.0954	
480 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
480 minute winter	S63	Hydro-Brake®	S28	1.5				19.6

Results for 1 year 600 minute summer. 660 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	P1	315	22.704	0.038	1.1	0.4025	0.0000	OK
600 minute summer	P2	315	22.000	0.038	1.1	0.4008	0.0000	OK
600 minute summer	S52	315	21.460	0.081	1.1	0.1164	0.0000	OK
600 minute summer	S53	315	21.199	0.081	1.1	0.1164	0.0000	OK
600 minute summer	S54	315	20.868	0.081	1.1	0.1163	0.0000	OK
600 minute summer	S55	315	20.046	0.046	1.1	0.0651	0.0000	OK
600 minute summer	P3	300	20.407	0.007	0.2	0.0105	0.0000	OK
600 minute summer	S62	660	19.968	0.198	1.3	0.2839	0.0000	OK
600 minute summer	P5	315	21.974	0.017	1.4	0.0192	0.0000	OK
600 minute summer	S56	285	21.512	0.006	0.1	0.0083	0.0000	OK
600 minute summer	S57	315	21.337	0.018	1.5	0.0262	0.0000	OK
600 minute summer	S58	285	20.682	0.006	0.1	0.0083	0.0000	OK
600 minute summer	S59	315	20.463	0.019	1.6	0.0218	0.0000	OK
600 minute summer	S60	15	20.224	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S61	660	19.968	0.262	2.8	0.3755	0.0000	OK
600 minute summer	S25	660	19.968	0.277	2.7	24.7152	0.0000	SURCHARGED
600 minute summer	P60	330	22.250	0.235	0.1	0.2662	0.0000	SURCHARGED
600 minute summer	P9	315	23.031	0.026	2.0	0.0372	0.0000	OK
600 minute summer	P7	330	22.250	0.219	2.0	0.2481	0.0000	OK
600 minute summer	S63	330	22.250	0.255	1.7	0.2888	0.0000	SURCHARGED
600 minute summer	S28	15	21.965	0.000	1.5	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 summer	P1	Orifice	P2	1.1				
600 minute summer	P2	Orifice	S52	1.1				
600 minute summer	S52	V-Notch Weir	S53	1.1				
600 minute summer	S53	V-Notch Weir	S54	1.1				
600 minute summer	S54	V-Notch Weir	S55	1.1				
600 minute summer	S55	1.005	S62	1.1	0.269	0.059	0.0605	
600 minute summer	P3	2.000	S62	0.2	0.110	0.002	0.2675	
600 minute summer	S62	1.006	S61	1.2	0.099	0.034	0.5531	
600 minute summer	P5	3.000	S57	1.4	0.977	0.011	0.0165	
600 minute summer	S56	4.000	S57	0.1	0.185	0.003	0.0030	
600 minute summer	S57	3.001	S59	1.5	0.956	0.013	0.0302	
600 minute summer	S58	5.000	S59	0.1	0.187	0.003	0.0037	
600 minute summer	S59	3.002	S61	1.6	0.998	0.014	0.0151	
600 minute summer	S60	6.000	S61	0.0	0.000	0.000	0.0000	
600 minute summer	S61	1.007	S25	2.7	0.300	0.062	0.1891	
600 minute summer	S25	Pump	P60	0.0				
600 minute summer	P60	1.009	S63	0.1	-0.008	0.008	0.2053	
600 minute summer	P9	7.000	P7	2.0	0.288	0.028	1.1032	
600 minute summer	P7	7.001	S63	1.7	0.071	0.046	0.1081	
600 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
600 minute summer	S63	Hydro-Brake®	S28	1.5				19.1

Results for 1 year 600 minute winter. 660 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	P1	330	22.697	0.031	0.8	0.3258	0.0000	OK
600 minute winter	P2	330	21.993	0.031	0.8	0.3258	0.0000	OK
600 minute winter	S52	330	21.451	0.072	0.8	0.1029	0.0000	OK
600 minute winter	S53	330	21.190	0.072	0.8	0.1029	0.0000	OK
600 minute winter	S54	330	20.859	0.072	0.8	0.1029	0.0000	OK
600 minute winter	S55	330	20.040	0.040	0.8	0.0571	0.0000	OK
600 minute winter	P3	285	20.407	0.007	0.2	0.0105	0.0000	OK
600 minute winter	S62	660	20.007	0.237	1.0	0.3389	0.0000	OK
600 minute winter	P5	315	21.972	0.015	1.1	0.0172	0.0000	OK
600 minute winter	S56	270	21.512	0.006	0.1	0.0083	0.0000	OK
600 minute winter	S57	315	21.336	0.017	1.2	0.0237	0.0000	OK
600 minute winter	S58	270	20.682	0.006	0.1	0.0083	0.0000	OK
600 minute winter	S59	315	20.461	0.017	1.3	0.0197	0.0000	OK
600 minute winter	S60	15	20.224	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S61	660	20.007	0.301	2.2	0.4305	0.0000	OK
600 minute winter	S25	660	20.007	0.316	2.1	28.1386	0.0000	SURCHARGED
600 minute winter	P60	330	22.166	0.151	0.1	0.1706	0.0000	OK
600 minute winter	P9	315	23.028	0.023	1.5	0.0325	0.0000	OK
600 minute winter	P7	330	22.166	0.135	1.5	0.1526	0.0000	OK
600 minute winter	S63	330	22.166	0.171	1.4	0.1932	0.0000	OK
600 minute winter	S28	15	21.965	0.000	1.4	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)
600 minute winter	P1	Orifice	P2	0.8				
600 minute winter	P2	Orifice	S52	0.8				
600 minute winter	S52	V-Notch Weir	S53	0.8				
600 minute winter	S53	V-Notch Weir	S54	0.8				
600 minute winter	S54	V-Notch Weir	S55	0.8				
600 minute winter	S55	1.005	S62	0.8	0.243	0.044	0.1078	
600 minute winter	P3	2.000	S62	0.2	0.117	0.002	0.2869	
600 minute winter	S62	1.006	S61	0.9	0.099	0.026	0.6266	
600 minute winter	P5	3.000	S57	1.1	0.901	0.009	0.0141	
600 minute winter	S56	4.000	S57	0.1	0.196	0.003	0.0026	
600 minute winter	S57	3.001	S59	1.2	0.887	0.011	0.0260	
600 minute winter	S58	5.000	S59	0.1	0.197	0.003	0.0032	
600 minute winter	S59	3.002	S61	1.3	0.935	0.012	0.0131	
600 minute winter	S60	6.000	S61	0.0	0.000	0.000	0.0000	
600 minute winter	S61	1.007	S25	2.1	0.327	0.049	0.2030	
600 minute winter	S25	Pump	P60	0.0				
600 minute winter	P60	1.009	S63	-0.1	-0.039	-0.009	0.1565	
600 minute winter	P9	7.000	P7	1.5	0.305	0.021	0.7103	
600 minute winter	P7	7.001	S63	1.4	0.197	0.040	0.0716	
600 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
600 minute winter	S63	Hydro-Brake®	S28	1.4				21.5

Results for 1 year 720 minute summer. 780 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	P1	375	22.702	0.036	1.0	0.3776	0.0000	OK
720 minute summer	P2	375	21.998	0.036	1.0	0.3757	0.0000	OK
720 minute summer	S52	375	21.457	0.078	1.0	0.1120	0.0000	OK
720 minute summer	S53	375	21.196	0.078	1.0	0.1119	0.0000	OK
720 minute summer	S54	375	20.865	0.078	1.0	0.1118	0.0000	OK
720 minute summer	S55	375	20.044	0.044	1.0	0.0624	0.0000	OK
720 minute summer	P3	360	20.407	0.007	0.2	0.0105	0.0000	OK
720 minute summer	S62	780	19.994	0.224	1.2	0.3212	0.0000	OK
720 minute summer	P5	375	21.973	0.016	1.3	0.0186	0.0000	OK
720 minute summer	S56	345	21.512	0.006	0.1	0.0083	0.0000	OK
720 minute summer	S57	375	21.337	0.018	1.4	0.0254	0.0000	OK
720 minute summer	S58	345	20.682	0.006	0.1	0.0083	0.0000	OK
720 minute summer	S59	375	20.463	0.019	1.5	0.0211	0.0000	OK
720 minute summer	S60	15	20.224	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S61	780	19.994	0.288	2.6	0.4128	0.0000	OK
720 minute summer	S25	780	19.994	0.303	2.5	27.0332	0.0000	SURCHARGED
720 minute summer	P60	390	22.208	0.193	0.1	0.2185	0.0000	OK
720 minute summer	P9	375	23.030	0.025	1.8	0.0355	0.0000	OK
720 minute summer	P7	390	22.208	0.177	1.8	0.2004	0.0000	OK
720 minute summer	S63	390	22.208	0.213	1.6	0.2411	0.0000	OK
720 minute summer	S28	15	21.965	0.000	1.5	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 summer	P1	Orifice	P2	1.0				
720 minute summer	P2	Orifice	S52	1.0				
720 minute summer	S52	V-Notch Weir	S53	1.0				
720 minute summer	S53	V-Notch Weir	S54	1.0				
720 minute summer	S54	V-Notch Weir	S55	1.0				
720 minute summer	S55	1.005	S62	1.0	0.260	0.054	0.0923	
720 minute summer	P3	2.000	S62	0.2	0.111	0.002	0.2866	
720 minute summer	S62	1.006	S61	1.1	0.092	0.031	0.6075	
720 minute summer	P5	3.000	S57	1.3	0.953	0.011	0.0157	
720 minute summer	S56	4.000	S57	0.1	0.185	0.003	0.0028	
720 minute summer	S57	3.001	S59	1.4	0.934	0.013	0.0288	
720 minute summer	S58	5.000	S59	0.1	0.187	0.003	0.0035	
720 minute summer	S59	3.002	S61	1.5	0.978	0.013	0.0145	
720 minute summer	S60	6.000	S61	0.0	0.000	0.000	0.0000	
720 minute summer	S61	1.007	S25	2.5	0.263	0.057	0.2003	
720 minute summer	S25	Pump	P60	0.0				
720 minute summer	P60	1.009	S63	0.1	-0.008	0.006	0.1942	
720 minute summer	P9	7.000	P7	1.8	0.288	0.025	0.9435	
720 minute summer	P7	7.001	S63	1.6	0.071	0.044	0.0946	
720 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
720 minute summer	S63	Hydro-Brake®	S28	1.5				20.6

Results for 1 year 720 minute winter. 780 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
720 minute winter	P1	405	22.694	0.028	0.7	0.2980	0.0000	OK
720 minute winter	P2	405	21.990	0.028	0.7	0.2980	0.0000	OK
720 minute winter	S52	405	21.447	0.068	0.7	0.0975	0.0000	OK
720 minute winter	S53	405	21.186	0.068	0.7	0.0975	0.0000	OK
720 minute winter	S54	405	20.855	0.068	0.7	0.0975	0.0000	OK
720 minute winter	S55	780	20.038	0.038	0.7	0.0546	0.0000	OK
720 minute winter	P3	360	20.407	0.007	0.2	0.0105	0.0000	OK
720 minute winter	S62	780	20.038	0.268	0.9	0.3837	0.0000	OK
720 minute winter	P5	375	21.972	0.015	1.0	0.0165	0.0000	OK
720 minute winter	S56	330	21.512	0.006	0.1	0.0083	0.0000	OK
720 minute winter	S57	375	21.335	0.016	1.1	0.0228	0.0000	OK
720 minute winter	S58	330	20.682	0.006	0.1	0.0083	0.0000	OK
720 minute winter	S59	375	20.461	0.017	1.2	0.0190	0.0000	OK
720 minute winter	S60	15	20.224	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S61	780	20.038	0.332	2.0	0.4753	0.0000	SURCHARGED
720 minute winter	S25	780	20.038	0.347	1.9	30.9245	0.0000	SURCHARGED
720 minute winter	P60	390	22.139	0.124	0.0	0.1400	0.0000	OK
720 minute winter	P9	360	23.026	0.021	1.3	0.0303	0.0000	OK
720 minute winter	P7	390	22.139	0.108	1.3	0.1220	0.0000	OK
720 minute winter	S63	390	22.139	0.144	1.3	0.1626	0.0000	OK
720 minute winter	S28	15	21.965	0.000	1.3	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 winter	P1	Orifice	P2	0.7				
720 minute winter	P2	Orifice	S52	0.7				
720 minute winter	S52	V-Notch Weir	S53	0.7				
720 minute winter	S53	V-Notch Weir	S54	0.7				
720 minute winter	S54	V-Notch Weir	S55	0.7				
720 minute winter	S55	1.005	S62	0.7	0.232	0.038	0.1704	
720 minute winter	P3	2.000	S62	0.2	0.111	0.002	0.2883	
720 minute winter	S62	1.006	S61	0.8	0.089	0.024	0.6594	
720 minute winter	P5	3.000	S57	1.0	0.874	0.008	0.0132	
720 minute winter	S56	4.000	S57	0.1	0.196	0.003	0.0025	
720 minute winter	S57	3.001	S59	1.1	0.862	0.010	0.0246	
720 minute winter	S58	5.000	S59	0.1	0.197	0.003	0.0031	
720 minute winter	S59	3.002	S61	1.2	0.913	0.011	0.0124	
720 minute winter	S60	6.000	S61	0.0	0.000	0.000	0.0037	
720 minute winter	S61	1.007	S25	1.9	0.305	0.045	0.2049	
720 minute winter	S25	Pump	P60	0.0				
720 minute winter	P60	1.009	S63	0.0	-0.006	-0.002	0.1268	
720 minute winter	P9	7.000	P7	1.3	0.271	0.018	0.5474	
720 minute winter	P7	7.001	S63	1.3	0.237	0.036	0.0553	
720 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
720 minute winter	S63	Hydro-Brake®	S28	1.3				22.5

Results for 1 year 960 minute summer. 1020 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	P1	495	22.697	0.031	0.8	0.3255	0.0000	OK
960 minute summer	P2	495	21.993	0.031	0.8	0.3241	0.0000	OK
960 minute summer	S52	495	21.451	0.072	0.8	0.1025	0.0000	OK
960 minute summer	S53	495	21.190	0.072	0.8	0.1024	0.0000	OK
960 minute summer	S54	495	20.859	0.072	0.8	0.1024	0.0000	OK
960 minute summer	S55	495	20.040	0.040	0.8	0.0567	0.0000	OK
960 minute summer	P3	480	20.407	0.007	0.2	0.0105	0.0000	OK
960 minute summer	S62	1020	20.032	0.261	1.0	0.3742	0.0000	OK
960 minute summer	P5	495	21.972	0.015	1.1	0.0172	0.0000	OK
960 minute summer	S56	450	21.512	0.006	0.1	0.0083	0.0000	OK
960 minute summer	S57	495	21.336	0.017	1.2	0.0237	0.0000	OK
960 minute summer	S58	465	20.682	0.006	0.1	0.0083	0.0000	OK
960 minute summer	S59	495	20.461	0.017	1.3	0.0197	0.0000	OK
960 minute summer	S60	15	20.224	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S61	1020	20.032	0.325	2.2	0.4658	0.0000	SURCHARGED
960 minute summer	S25	1020	20.032	0.340	2.1	30.3344	0.0000	SURCHARGED
960 minute summer	P60	510	22.164	0.149	0.1	0.1682	0.0000	OK
960 minute summer	P9	495	23.028	0.023	1.5	0.0325	0.0000	OK
960 minute summer	P7	510	22.164	0.133	1.5	0.1502	0.0000	OK
960 minute summer	S63	510	22.164	0.169	1.4	0.1908	0.0000	OK
960 minute summer	S28	15	21.965	0.000	1.4	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)
960 minute summer	P1	Orifice	P2	0.8				
960 minute summer	P2	Orifice	S52	0.8				
960 minute summer	S52	V-Notch Weir	S53	0.8				
960 minute summer	S53	V-Notch Weir	S54	0.8				
960 minute summer	S54	V-Notch Weir	S55	0.8				
960 minute summer	S55	1.005	S62	0.8	0.241	0.043	0.1560	
960 minute summer	P3	2.000	S62	0.2	0.109	0.002	0.2869	
960 minute summer	S62	1.006	S61	0.9	0.078	0.026	0.6532	
960 minute summer	P5	3.000	S57	1.1	0.901	0.009	0.0141	
960 minute summer	S56	4.000	S57	0.1	0.209	0.003	0.0026	
960 minute summer	S57	3.001	S59	1.2	0.887	0.011	0.0260	
960 minute summer	S58	5.000	S59	0.1	0.196	0.003	0.0032	
960 minute summer	S59	3.002	S61	1.3	0.935	0.012	0.0131	
960 minute summer	S60	6.000	S61	0.0	0.000	0.000	0.0022	
960 minute summer	S61	1.007	S25	2.1	0.263	0.049	0.2049	
960 minute summer	S25	Pump	P60	0.0				
960 minute summer	P60	1.009	S63	-0.1	-0.042	-0.005	0.1543	
960 minute summer	P9	7.000	P7	1.5	0.241	0.021	0.6978	
960 minute summer	P7	7.001	S63	1.4	0.234	0.040	0.0704	
960 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
960 minute summer	S63	Hydro-Brake®	S28	1.4				23.1

Results for 1 year 960 minute winter. 1020 minute analysis at 15 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
960 minute winter	P1	510	22.691	0.025	0.6	0.2689	0.0000	OK
960 minute winter	P2	525	21.987	0.025	0.6	0.2689	0.0000	OK
960 minute winter	S52	540	21.443	0.064	0.6	0.0917	0.0000	OK
960 minute winter	S53	540	21.182	0.064	0.6	0.0917	0.0000	OK
960 minute winter	S54	540	20.851	0.064	0.6	0.0917	0.0000	OK
960 minute winter	S55	1020	20.064	0.064	0.6	0.0916	0.0000	OK
960 minute winter	P3	315	20.405	0.005	0.1	0.0078	0.0000	OK
960 minute winter	S62	1020	20.064	0.294	0.7	0.4207	0.0000	OK
960 minute winter	P5	465	21.970	0.013	0.8	0.0148	0.0000	OK
960 minute winter	S56	450	21.512	0.006	0.1	0.0083	0.0000	OK
960 minute winter	S57	465	21.334	0.015	0.9	0.0208	0.0000	OK
960 minute winter	S58	465	20.682	0.006	0.1	0.0083	0.0000	OK
960 minute winter	S59	465	20.459	0.015	1.0	0.0175	0.0000	OK
960 minute winter	S60	15	20.224	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S61	1020	20.064	0.358	1.6	0.5123	0.0000	SURCHARGED
960 minute winter	S25	1020	20.064	0.373	1.6	33.2317	0.0000	SURCHARGED
960 minute winter	P60	525	22.121	0.106	0.0	0.1204	0.0000	OK
960 minute winter	P9	465	23.025	0.020	1.1	0.0281	0.0000	OK
960 minute winter	P7	525	22.122	0.091	1.1	0.1024	0.0000	OK
960 minute winter	S63	525	22.121	0.126	1.1	0.1430	0.0000	OK
960 minute winter	S28	15	21.965	0.000	1.1	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)
960 minute winter	P1	Orifice	P2	0.6				
960 minute winter	P2	Orifice	S52	0.6				
960 minute winter	S52	V-Notch Weir	S53	0.6				
960 minute winter	S53	V-Notch Weir	S54	0.6				
960 minute winter	S54	V-Notch Weir	S55	0.6				
960 minute winter	S55	1.005	S62	0.6	0.219	0.034	0.2289	
960 minute winter	P3	2.000	S62	0.1	0.111	0.001	0.2885	
960 minute winter	S62	1.006	S61	0.6	0.084	0.019	0.6769	
960 minute winter	P5	3.000	S57	0.8	0.807	0.007	0.0114	
960 minute winter	S56	4.000	S57	0.1	0.209	0.003	0.0022	
960 minute winter	S57	3.001	S59	0.9	0.810	0.008	0.0215	
960 minute winter	S58	5.000	S59	0.1	0.198	0.003	0.0027	
960 minute winter	S59	3.002	S61	1.0	0.864	0.009	0.0292	
960 minute winter	S60	6.000	S61	0.0	0.000	0.000	0.0111	
960 minute winter	S61	1.007	S25	1.6	0.276	0.036	0.2049	
960 minute winter	S25	Pump	P60	0.0				
960 minute winter	P60	1.009	S63	0.0	-0.013	-0.004	0.1069	
960 minute winter	P9	7.000	P7	1.1	0.263	0.016	0.4395	
960 minute winter	P7	7.001	S63	1.1	0.237	0.031	0.0447	
960 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
960 minute winter	S63	Hydro-Brake®	S28	1.1				25.9

Results for 1 year 1440 minute summer. 1500 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	P1	750	22.691	0.025	0.6	0.2689	0.0000	OK
1440 minute summer	P2	750	21.987	0.025	0.6	0.2688	0.0000	OK
1440 minute summer	S52	750	21.443	0.064	0.6	0.0917	0.0000	OK
1440 minute summer	S53	750	21.182	0.064	0.6	0.0917	0.0000	OK
1440 minute summer	S54	750	20.851	0.064	0.6	0.0917	0.0000	OK
1440 minute summer	S55	1500	20.097	0.097	0.6	0.1383	0.0000	OK
1440 minute summer	P3	600	20.405	0.005	0.1	0.0078	0.0000	OK
1440 minute summer	S62	1500	20.097	0.327	0.7	0.4675	0.0000	SURCHARGED
1440 minute summer	P5	750	21.971	0.014	0.9	0.0157	0.0000	OK
1440 minute summer	S56	750	21.512	0.006	0.1	0.0083	0.0000	OK
1440 minute summer	S57	750	21.334	0.015	1.0	0.0218	0.0000	OK
1440 minute summer	S58	750	20.682	0.006	0.1	0.0083	0.0000	OK
1440 minute summer	S59	750	20.460	0.016	1.1	0.0182	0.0000	OK
1440 minute summer	S60	30	20.224	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S61	1500	20.097	0.391	1.7	0.5590	0.0000	SURCHARGED
1440 minute summer	S25	1500	20.097	0.406	1.7	36.1394	0.0000	SURCHARGED
1440 minute summer	P60	750	22.128	0.113	0.0	0.1282	0.0000	OK
1440 minute summer	P9	750	23.025	0.020	1.2	0.0292	0.0000	OK
1440 minute summer	P7	750	22.128	0.097	1.2	0.1102	0.0000	OK
1440 minute summer	S63	750	22.128	0.133	1.2	0.1508	0.0000	OK
1440 minute summer	S28	30	21.965	0.000	1.2	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)
1440 minute summer	P1	Orifice	P2	0.6				
1440 minute summer	P2	Orifice	S52	0.6				
1440 minute summer	S52	V-Notch Weir	S53	0.6				
1440 minute summer	S53	V-Notch Weir	S54	0.6				
1440 minute summer	S54	V-Notch Weir	S55	0.6				
1440 minute summer	S55	1.005	S62	0.6	0.219	0.033	0.3018	
1440 minute summer	P3	2.000	S62	0.1	0.111	0.001	0.2885	
1440 minute summer	S62	1.006	S61	0.6	0.046	0.018	0.6786	
1440 minute summer	P5	3.000	S57	0.9	0.844	0.007	0.0124	
1440 minute summer	S56	4.000	S57	0.1	0.186	0.003	0.0024	
1440 minute summer	S57	3.001	S59	1.0	0.835	0.009	0.0230	
1440 minute summer	S58	5.000	S59	0.1	0.188	0.003	0.0029	
1440 minute summer	S59	3.002	S61	1.1	0.889	0.010	0.0603	
1440 minute summer	S60	6.000	S61	0.0	0.000	0.000	0.0220	
1440 minute summer	S61	1.007	S25	1.7	0.263	0.038	0.2049	
1440 minute summer	S25	Pump	P60	0.0				
1440 minute summer	P60	1.009	S63	0.0	-0.005	-0.002	0.1149	
1440 minute summer	P9	7.000	P7	1.2	0.157	0.017	0.4829	
1440 minute summer	P7	7.001	S63	1.2	0.069	0.033	0.0489	
1440 minute summer	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
1440 minute summer	S63	Hydro-Brake®	S28	1.2				26.3

Results for 1 year 1440 minute winter. 1500 minute analysis at 30 minute timestep. Mass balance: 99.87%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	P1	780	22.689	0.023	0.5	0.2382	0.0000	OK
1440 minute winter	P2	780	21.985	0.023	0.5	0.2382	0.0000	OK
1440 minute winter	S52	780	21.439	0.060	0.5	0.0852	0.0000	OK
1440 minute winter	S53	780	21.178	0.060	0.5	0.0852	0.0000	OK
1440 minute winter	S54	780	20.847	0.060	0.5	0.0852	0.0000	OK
1440 minute winter	S55	1500	20.118	0.118	0.5	0.1683	0.0000	OK
1440 minute winter	P3	540	20.405	0.005	0.1	0.0078	0.0000	OK
1440 minute winter	S62	1500	20.118	0.348	0.6	0.4974	0.0000	SURCHARGED
1440 minute winter	P5	690	21.968	0.011	0.6	0.0130	0.0000	OK
1440 minute winter	S56	30	21.506	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S57	690	21.331	0.012	0.6	0.0172	0.0000	OK
1440 minute winter	S58	30	20.676	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S59	690	20.456	0.012	0.6	0.0137	0.0000	OK
1440 minute winter	S60	30	20.224	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S61	1500	20.118	0.412	1.1	0.5890	0.0000	SURCHARGED
1440 minute winter	S25	1500	20.118	0.427	1.1	38.0045	0.0000	SURCHARGED
1440 minute winter	P60	780	22.108	0.093	0.1	0.1053	0.0000	OK
1440 minute winter	P9	720	23.023	0.018	0.9	0.0255	0.0000	OK
1440 minute winter	P7	780	22.108	0.077	0.9	0.0874	0.0000	OK
1440 minute winter	S63	780	22.108	0.113	0.9	0.1280	0.0000	OK
1440 minute winter	S28	30	21.965	0.000	0.9	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	P1	Orifice	P2	0.5				
1440 minute winter	P2	Orifice	S52	0.5				
1440 minute winter	S52	V-Notch Weir	S53	0.5				
1440 minute winter	S53	V-Notch Weir	S54	0.5				
1440 minute winter	S54	V-Notch Weir	S55	0.5				
1440 minute winter	S55	1.005	S62	0.5	0.207	0.027	0.3428	
1440 minute winter	P3	2.000	S62	0.1	0.111	0.001	0.2885	
1440 minute winter	S62	1.006	S61	0.5	0.058	0.016	0.6786	
1440 minute winter	P5	3.000	S57	0.6	0.770	0.005	0.0090	
1440 minute winter	S56	4.000	S57	0.0	0.000	0.000	0.0013	
1440 minute winter	S57	3.001	S59	0.6	0.739	0.005	0.0156	
1440 minute winter	S58	5.000	S59	0.0	0.000	0.000	0.0015	
1440 minute winter	S59	3.002	S61	0.6	0.740	0.005	0.0820	
1440 minute winter	S60	6.000	S61	0.0	0.000	0.000	0.0290	
1440 minute winter	S61	1.007	S25	1.1	0.241	0.026	0.2049	
1440 minute winter	S25	Pump	P60	0.0				
1440 minute winter	P60	1.009	S63	-0.1	-0.032	-0.004	0.0916	
1440 minute winter	P9	7.000	P7	0.9	0.243	0.013	0.3574	
1440 minute winter	P7	7.001	S63	0.9	0.216	0.025	0.0367	
1440 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
1440 minute winter	S63	Hydro-Brake®	S28	0.9				31.1

Results for 20 year +10% CC 15 minute summer. 75 minute analysis at 1 minute timestep. Mass balance: 99.05%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	P1	12	22.843	0.177	11.1	1.8659	0.0000	FLOOD RISK
15 minute summer	P2	15	22.092	0.130	7.4	1.3682	0.0000	FLOOD RISK
15 minute summer	S52	16	21.539	0.160	5.9	0.2286	0.0000	OK
15 minute summer	S53	16	21.278	0.160	5.9	0.2287	0.0000	OK
15 minute summer	S54	16	20.947	0.160	5.9	0.2285	0.0000	OK
15 minute summer	S55	17	20.100	0.100	5.9	0.1430	0.0000	OK
15 minute summer	P3	10	20.423	0.023	2.4	0.0329	0.0000	OK
15 minute summer	S62	14	19.868	0.098	6.2	0.1407	0.0000	OK
15 minute summer	P5	12	22.021	0.064	20.3	0.0727	0.0000	OK
15 minute summer	S56	10	21.523	0.017	1.0	0.0238	0.0000	OK
15 minute summer	S57	13	21.386	0.067	20.1	0.0958	0.0000	OK
15 minute summer	S58	10	20.693	0.017	1.0	0.0238	0.0000	OK
15 minute summer	S59	13	20.519	0.075	22.0	0.0851	0.0000	OK
15 minute summer	S60	12	20.234	0.010	0.3	0.0110	0.0000	OK
15 minute summer	S61	13	19.859	0.153	26.2	0.2183	0.0000	OK
15 minute summer	S25	75	19.854	0.163	25.5	14.5161	0.0000	OK
15 minute summer	P60	13	22.805	0.790	3.7	0.8936	0.0000	SURCHARGED
15 minute summer	P9	10	23.086	0.081	20.2	0.1164	0.0000	OK
15 minute summer	P7	13	22.805	0.774	19.9	0.8756	0.0000	SURCHARGED
15 minute summer	S63	13	22.805	0.810	8.4	0.9163	0.0000	SURCHARGED
15 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	7.4				
15 minute summer	P2	Orifice	S52	5.9				
15 minute summer	S52	V-Notch Weir	S53	5.9				
15 minute summer	S53	V-Notch Weir	S54	5.9				
15 minute summer	S54	V-Notch Weir	S55	5.9				
15 minute summer	S55	1.005	S62	5.9	0.456	0.321	0.1470	
15 minute summer	P3	2.000	S62	2.4	0.721	0.022	0.1296	
15 minute summer	S62	1.006	S61	6.4	0.277	0.188	0.2691	
15 minute summer	P5	3.000	S57	19.5	2.084	0.159	0.1085	
15 minute summer	S56	4.000	S57	1.0	0.290	0.026	0.0171	
15 minute summer	S57	3.001	S59	21.4	1.993	0.192	0.2067	
15 minute summer	S58	5.000	S59	1.0	0.270	0.026	0.0240	
15 minute summer	S59	3.002	S61	23.4	2.118	0.210	0.1040	
15 minute summer	S60	6.000	S61	0.3	0.635	0.008	0.0022	
15 minute summer	S61	1.007	S25	25.5	1.411	0.589	0.1003	
15 minute summer	S25	Pump	P60	0.0				
15 minute summer	P60	1.009	S63	-3.7	-0.209	-0.304	0.2053	
15 minute summer	P9	7.000	P7	19.9	0.866	0.282	1.3948	
15 minute summer	P7	7.001	S63	8.4	0.416	0.236	0.1085	
15 minute summer	P7	3.000_1	P5	11.7	1.687	0.105	0.0274	
15 minute summer	S63	Hydro-Brake®	S28	1.6				5.9

Results for 20 year +10% CC 15 minute winter. 75 minute analysis at 1 minute timestep. Mass balance: 99.11%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	P1	13	22.855	0.189	11.6	1.9937	0.0000	FLOOD RISK
15 minute winter	P2	16	22.103	0.141	7.8	1.4894	0.0000	FLOOD RISK
15 minute winter	S52	16	21.543	0.164	6.3	0.2348	0.0000	OK
15 minute winter	S53	16	21.282	0.164	6.3	0.2346	0.0000	OK
15 minute winter	S54	17	20.951	0.164	6.3	0.2345	0.0000	OK
15 minute winter	S55	17	20.103	0.103	6.3	0.1480	0.0000	OK
15 minute winter	P3	10	20.423	0.023	2.5	0.0336	0.0000	OK
15 minute winter	S62	13	19.884	0.113	6.7	0.1624	0.0000	OK
15 minute winter	P5	12	22.034	0.077	28.1	0.0872	0.0000	OK
15 minute winter	S56	11	21.523	0.017	1.0	0.0241	0.0000	OK
15 minute winter	S57	12	21.400	0.081	29.1	0.1165	0.0000	OK
15 minute winter	S58	11	20.693	0.017	1.0	0.0241	0.0000	OK
15 minute winter	S59	12	20.530	0.086	30.2	0.0970	0.0000	OK
15 minute winter	S60	12	20.234	0.010	0.3	0.0110	0.0000	OK
15 minute winter	S61	75	19.880	0.174	31.7	0.2490	0.0000	OK
15 minute winter	S25	75	19.880	0.189	32.1	16.8393	0.0000	OK
15 minute winter	P60	12	22.817	0.802	3.7	0.9068	0.0000	SURCHARGED
15 minute winter	P9	10	23.088	0.083	21.3	0.1194	0.0000	OK
15 minute winter	P7	12	22.817	0.786	20.9	0.8886	0.0000	SURCHARGED
15 minute winter	S63	12	22.817	0.822	8.8	0.9294	0.0000	SURCHARGED
15 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	7.8				
15 minute winter	P2	Orifice	S52	6.3				
15 minute winter	S52	V-Notch Weir	S53	6.3				
15 minute winter	S53	V-Notch Weir	S54	6.3				
15 minute winter	S54	V-Notch Weir	S55	6.3				
15 minute winter	S55	1.005	S62	6.3	0.466	0.343	0.1540	
15 minute winter	P3	2.000	S62	2.5	0.721	0.023	0.1560	
15 minute winter	S62	1.006	S61	7.1	0.258	0.207	0.3169	
15 minute winter	P5	3.000	S57	28.2	2.263	0.230	0.1439	
15 minute winter	S56	4.000	S57	1.0	0.294	0.026	0.0220	
15 minute winter	S57	3.001	S59	29.3	2.187	0.263	0.2578	
15 minute winter	S58	5.000	S59	1.0	0.273	0.026	0.0286	
15 minute winter	S59	3.002	S61	28.1	2.177	0.252	0.1216	
15 minute winter	S60	6.000	S61	0.3	0.635	0.008	0.0022	
15 minute winter	S61	1.007	S25	32.1	1.388	0.742	0.1228	
15 minute winter	S25	Pump	P60	0.0				
15 minute winter	P60	1.009	S63	-3.7	-0.216	-0.303	0.2053	
15 minute winter	P9	7.000	P7	20.9	0.903	0.296	1.4071	
15 minute winter	P7	7.001	S63	8.8	0.432	0.245	0.1085	
15 minute winter	P7	3.000_1	P5	16.1	1.808	0.144	0.0351	
15 minute winter	S63	Hydro-Brake®	S28	1.6				5.9

Results for 20 year +10% CC 30 minute summer. 90 minute analysis at 1 minute timestep. Mass balance: 99.39%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	P1	20	22.851	0.185	10.6	1.9587	0.0000	FLOOD RISK
30 minute summer	P2	23	22.106	0.144	7.7	1.5213	0.0000	FLOOD RISK
30 minute summer	S52	24	21.544	0.165	6.4	0.2362	0.0000	OK
30 minute summer	S53	24	21.283	0.165	6.4	0.2363	0.0000	OK
30 minute summer	S54	24	20.952	0.165	6.4	0.2363	0.0000	OK
30 minute summer	S55	25	20.104	0.104	6.4	0.1493	0.0000	OK
30 minute summer	P3	18	20.423	0.023	2.3	0.0324	0.0000	OK
30 minute summer	S62	90	19.933	0.163	7.0	0.2339	0.0000	OK
30 minute summer	P5	19	22.036	0.079	29.6	0.0899	0.0000	OK
30 minute summer	S56	18	21.523	0.017	1.0	0.0241	0.0000	OK
30 minute summer	S57	19	21.402	0.083	30.6	0.1189	0.0000	OK
30 minute summer	S58	18	20.693	0.017	1.0	0.0241	0.0000	OK
30 minute summer	S59	19	20.534	0.090	31.8	0.1020	0.0000	OK
30 minute summer	S60	19	20.234	0.010	0.3	0.0110	0.0000	OK
30 minute summer	S61	90	19.933	0.227	35.4	0.3255	0.0000	OK
30 minute summer	S25	90	19.933	0.242	35.6	21.6019	0.0000	SURCHARGED
30 minute summer	P60	19	22.818	0.803	3.3	0.9085	0.0000	SURCHARGED
30 minute summer	P9	18	23.085	0.080	19.5	0.1149	0.0000	OK
30 minute summer	P7	19	22.818	0.787	19.5	0.8904	0.0000	SURCHARGED
30 minute summer	S63	19	22.818	0.823	7.9	0.9311	0.0000	SURCHARGED
30 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	7.7				
30 minute summer	P2	Orifice	S52	6.4				
30 minute summer	S52	V-Notch Weir	S53	6.4				
30 minute summer	S53	V-Notch Weir	S54	6.4				
30 minute summer	S54	V-Notch Weir	S55	6.4				
30 minute summer	S55	1.005	S62	6.4	0.468	0.349	0.1557	
30 minute summer	P3	2.000	S62	2.3	0.640	0.021	0.2229	
30 minute summer	S62	1.006	S61	7.3	0.226	0.215	0.4652	
30 minute summer	P5	3.000	S57	29.7	2.300	0.242	0.1490	
30 minute summer	S56	4.000	S57	1.0	0.300	0.026	0.0227	
30 minute summer	S57	3.001	S59	30.9	2.194	0.277	0.2708	
30 minute summer	S58	5.000	S59	1.0	0.278	0.026	0.0304	
30 minute summer	S59	3.002	S61	31.1	2.248	0.279	0.1305	
30 minute summer	S60	6.000	S61	0.3	0.635	0.008	0.0022	
30 minute summer	S61	1.007	S25	35.6	1.323	0.822	0.1660	
30 minute summer	S25	Pump	P60	0.0				
30 minute summer	P60	1.009	S63	-3.3	-0.159	-0.273	0.2053	
30 minute summer	P9	7.000	P7	19.5	0.793	0.276	1.3890	
30 minute summer	P7	7.001	S63	7.9	0.417	0.221	0.1085	
30 minute summer	P7	3.000_1	P5	16.8	1.829	0.151	0.0362	
30 minute summer	S63	Hydro-Brake®	S28	1.6				7.0

Results for 20 year +10% CC 30 minute winter. 90 minute analysis at 1 minute timestep. Mass balance: 99.56%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute winter	P1	21	22.848	0.182	9.6	1.9189	0.0000	FLOOD RISK
30 minute winter	P2	24	22.112	0.150	7.6	1.5853	0.0000	FLOOD RISK
30 minute winter	S52	24	21.546	0.167	6.6	0.2393	0.0000	OK
30 minute winter	S53	24	21.285	0.167	6.6	0.2392	0.0000	OK
30 minute winter	S54	25	20.954	0.167	6.6	0.2391	0.0000	OK
30 minute winter	S55	25	20.106	0.106	6.6	0.1519	0.0000	OK
30 minute winter	P3	18	20.422	0.022	2.1	0.0310	0.0000	OK
30 minute winter	S62	90	19.971	0.201	7.4	0.2874	0.0000	OK
30 minute winter	P5	19	22.034	0.077	27.7	0.0866	0.0000	OK
30 minute winter	S56	18	21.522	0.016	0.9	0.0229	0.0000	OK
30 minute winter	S57	19	21.399	0.080	28.6	0.1141	0.0000	OK
30 minute winter	S58	18	20.692	0.016	0.9	0.0229	0.0000	OK
30 minute winter	S59	19	20.531	0.087	29.6	0.0987	0.0000	OK
30 minute winter	S60	19	20.234	0.010	0.3	0.0110	0.0000	OK
30 minute winter	S61	90	19.971	0.265	36.0	0.3790	0.0000	OK
30 minute winter	S25	90	19.971	0.280	35.5	24.9306	0.0000	SURCHARGED
30 minute winter	P60	19	22.815	0.800	3.0	0.9053	0.0000	SURCHARGED
30 minute winter	P9	18	23.081	0.076	17.6	0.1089	0.0000	OK
30 minute winter	P7	19	22.816	0.785	17.6	0.8873	0.0000	SURCHARGED
30 minute winter	S63	19	22.815	0.820	7.3	0.9280	0.0000	SURCHARGED
30 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	7.6				
30 minute winter	P2	Orifice	S52	6.6				
30 minute winter	S52	V-Notch Weir	S53	6.6				
30 minute winter	S53	V-Notch Weir	S54	6.6				
30 minute winter	S54	V-Notch Weir	S55	6.6				
30 minute winter	S55	1.005	S62	6.6	0.473	0.361	0.1593	
30 minute winter	P3	2.000	S62	2.1	0.634	0.019	0.2700	
30 minute winter	S62	1.006	S61	7.5	0.198	0.221	0.5587	
30 minute winter	P5	3.000	S57	27.8	2.270	0.226	0.1412	
30 minute winter	S56	4.000	S57	0.9	0.286	0.024	0.0215	
30 minute winter	S57	3.001	S59	28.8	2.151	0.258	0.2576	
30 minute winter	S58	5.000	S59	0.9	0.268	0.024	0.0291	
30 minute winter	S59	3.002	S61	29.8	2.237	0.268	0.1257	
30 minute winter	S60	6.000	S61	0.3	0.635	0.008	0.0022	
30 minute winter	S61	1.007	S25	35.5	1.275	0.820	0.1904	
30 minute winter	S25	Pump	P60	0.0				
30 minute winter	P60	1.009	S63	-3.0	-0.181	-0.245	0.2053	
30 minute winter	P9	7.000	P7	17.6	0.802	0.249	1.3651	
30 minute winter	P7	7.001	S63	7.3	0.421	0.205	0.1085	
30 minute winter	P7	3.000_1	P5	15.7	1.800	0.141	0.0343	
30 minute winter	S63	Hydro-Brake®	S28	1.6				7.0

Results for 20 year +10% CC 60 minute summer. 120 minute analysis at 1 minute timestep. Mass balance: 99.80%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute summer	P1	35	22.826	0.160	8.5	1.6934	0.0000	FLOOD RISK
60 minute summer	P2	39	22.099	0.137	6.9	1.4470	0.0000	FLOOD RISK
60 minute summer	S52	39	21.542	0.163	6.2	0.2328	0.0000	OK
60 minute summer	S53	39	21.281	0.163	6.2	0.2328	0.0000	OK
60 minute summer	S54	39	20.950	0.163	6.2	0.2326	0.0000	OK
60 minute summer	S55	40	20.102	0.102	6.2	0.1466	0.0000	OK
60 minute summer	P3	33	20.421	0.021	1.9	0.0296	0.0000	OK
60 minute summer	S62	120	20.019	0.249	7.0	0.3564	0.0000	OK
60 minute summer	P5	33	22.030	0.073	25.3	0.0822	0.0000	OK
60 minute summer	S56	33	21.521	0.015	0.8	0.0216	0.0000	OK
60 minute summer	S57	33	21.395	0.076	26.0	0.1082	0.0000	OK
60 minute summer	S58	33	20.691	0.015	0.8	0.0217	0.0000	OK
60 minute summer	S59	33	20.526	0.082	26.7	0.0923	0.0000	OK
60 minute summer	S60	33	20.234	0.010	0.3	0.0110	0.0000	OK
60 minute summer	S61	120	20.019	0.313	32.7	0.4480	0.0000	OK
60 minute summer	S25	120	20.019	0.328	32.3	29.2247	0.0000	SURCHARGED
60 minute summer	P60	33	22.811	0.796	2.4	0.9007	0.0000	SURCHARGED
60 minute summer	P9	33	23.076	0.071	15.6	0.1022	0.0000	OK
60 minute summer	P7	33	22.811	0.780	15.6	0.8827	0.0000	SURCHARGED
60 minute summer	S63	33	22.811	0.816	6.1	0.9233	0.0000	SURCHARGED
60 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	6.9				
60 minute summer	P2	Orifice	S52	6.2				
60 minute summer	S52	V-Notch Weir	S53	6.2				
60 minute summer	S53	V-Notch Weir	S54	6.2				
60 minute summer	S54	V-Notch Weir	S55	6.2				
60 minute summer	S55	1.005	S62	6.1	0.463	0.337	0.1520	
60 minute summer	P3	2.000	S62	1.9	0.535	0.017	0.2896	
60 minute summer	S62	1.006	S61	7.0	0.206	0.206	0.6405	
60 minute summer	P5	3.000	S57	25.2	2.215	0.205	0.1314	
60 minute summer	S56	4.000	S57	0.8	0.256	0.021	0.0202	
60 minute summer	S57	3.001	S59	25.9	2.103	0.233	0.2373	
60 minute summer	S58	5.000	S59	0.8	0.250	0.021	0.0269	
60 minute summer	S59	3.002	S61	26.4	2.172	0.237	0.1149	
60 minute summer	S60	6.000	S61	0.3	0.633	0.008	0.0021	
60 minute summer	S61	1.007	S25	32.3	1.082	0.747	0.2048	
60 minute summer	S25	Pump	P60	0.0				
60 minute summer	P60	1.009	S63	-2.4	-0.151	-0.197	0.2053	
60 minute summer	P9	7.000	P7	15.6	0.703	0.221	1.3391	
60 minute summer	P7	7.001	S63	6.1	0.358	0.172	0.1085	
60 minute summer	P7	3.000_1	P5	14.0	1.748	0.125	0.0315	
60 minute summer	S63	Hydro-Brake®	S28	1.6				9.2

Results for 20 year +10% CC 60 minute winter. 120 minute analysis at 1 minute timestep. Mass balance: 99.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	P1	36	22.806	0.140	6.9	1.4794	0.0000	FLOOD RISK
60 minute winter	P2	39	22.091	0.129	6.3	1.3636	0.0000	FLOOD RISK
60 minute winter	S52	39	21.539	0.160	5.9	0.2283	0.0000	OK
60 minute winter	S53	40	21.278	0.160	5.9	0.2283	0.0000	OK
60 minute winter	S54	40	20.947	0.160	5.9	0.2283	0.0000	OK
60 minute winter	S55	41	20.100	0.100	5.9	0.1430	0.0000	OK
60 minute winter	P3	34	20.419	0.019	1.5	0.0265	0.0000	OK
60 minute winter	S62	120	20.070	0.300	6.9	0.4294	0.0000	SURCHARGED
60 minute winter	P5	33	22.021	0.064	20.2	0.0728	0.0000	OK
60 minute winter	S56	33	21.519	0.013	0.6	0.0189	0.0000	OK
60 minute winter	S57	33	21.386	0.067	20.8	0.0960	0.0000	OK
60 minute winter	S58	33	20.689	0.013	0.6	0.0189	0.0000	OK
60 minute winter	S59	33	20.516	0.072	21.4	0.0817	0.0000	OK
60 minute winter	S60	34	20.232	0.008	0.2	0.0091	0.0000	OK
60 minute winter	S61	120	20.070	0.364	27.5	0.5210	0.0000	SURCHARGED
60 minute winter	S25	120	20.070	0.379	27.1	33.7724	0.0000	SURCHARGED
60 minute winter	P60	33	22.804	0.789	1.8	0.8923	0.0000	SURCHARGED
60 minute winter	P9	33	23.069	0.064	12.6	0.0916	0.0000	OK
60 minute winter	P7	33	22.804	0.773	12.6	0.8742	0.0000	SURCHARGED
60 minute winter	S63	33	22.804	0.809	4.9	0.9149	0.0000	SURCHARGED
60 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	6.3				
60 minute winter	P2	Orifice	S52	5.9				
60 minute winter	S52	V-Notch Weir	S53	5.9				
60 minute winter	S53	V-Notch Weir	S54	5.9				
60 minute winter	S54	V-Notch Weir	S55	5.9				
60 minute winter	S55	1.005	S62	5.9	0.456	0.321	0.2428	
60 minute winter	P3	2.000	S62	1.5	0.621	0.014	0.2920	
60 minute winter	S62	1.006	S61	6.4	0.211	0.186	0.6783	
60 minute winter	P5	3.000	S57	20.2	2.100	0.165	0.1111	
60 minute winter	S56	4.000	S57	0.6	0.257	0.016	0.0172	
60 minute winter	S57	3.001	S59	20.8	1.994	0.187	0.2010	
60 minute winter	S58	5.000	S59	0.6	0.245	0.016	0.0229	
60 minute winter	S59	3.002	S61	21.4	2.060	0.192	0.0980	
60 minute winter	S60	6.000	S61	0.2	0.562	0.005	0.0130	
60 minute winter	S61	1.007	S25	27.1	0.918	0.627	0.2049	
60 minute winter	S25	Pump	P60	0.0				
60 minute winter	P60	1.009	S63	-1.8	-0.166	-0.147	0.2053	
60 minute winter	P9	7.000	P7	12.6	0.696	0.178	1.2984	
60 minute winter	P7	7.001	S63	4.9	0.383	0.137	0.1085	
60 minute winter	P7	3.000_1	P5	11.1	1.656	0.100	0.0265	
60 minute winter	S63	Hydro-Brake®	S28	1.6				9.2

Results for 20 year +10% CC 120 minute summer. 180 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	P1	66	22.784	0.118	5.9	1.2482	0.0000	FLOOD RISK
120 minute summer	P2	68	22.073	0.111	5.5	1.1724	0.0000	FLOOD RISK
120 minute summer	S52	70	21.530	0.151	5.2	0.2167	0.0000	OK
120 minute summer	S53	70	21.270	0.152	5.2	0.2168	0.0000	OK
120 minute summer	S54	70	20.939	0.152	5.2	0.2169	0.0000	OK
120 minute summer	S55	180	20.109	0.109	5.2	0.1560	0.0000	OK
120 minute summer	P3	64	20.417	0.017	1.3	0.0248	0.0000	OK
120 minute summer	S62	180	20.109	0.339	6.1	0.4851	0.0000	SURCHARGED
120 minute summer	P5	64	22.016	0.059	17.1	0.0666	0.0000	OK
120 minute summer	S56	64	21.518	0.012	0.5	0.0174	0.0000	OK
120 minute summer	S57	64	21.380	0.061	17.6	0.0880	0.0000	OK
120 minute summer	S58	64	20.688	0.012	0.5	0.0174	0.0000	OK
120 minute summer	S59	64	20.510	0.066	18.1	0.0745	0.0000	OK
120 minute summer	S60	66	20.232	0.008	0.2	0.0091	0.0000	OK
120 minute summer	S61	180	20.109	0.403	23.5	0.5767	0.0000	SURCHARGED
120 minute summer	S25	180	20.109	0.418	23.2	37.2396	0.0000	SURCHARGED
120 minute summer	P60	64	22.799	0.784	1.5	0.8866	0.0000	SURCHARGED
120 minute summer	P9	64	23.064	0.059	10.8	0.0847	0.0000	OK
120 minute summer	P7	64	22.799	0.768	10.8	0.8686	0.0000	SURCHARGED
120 minute summer	S63	64	22.799	0.804	4.4	0.9092	0.0000	SURCHARGED
120 minute summer	S28	2	21.965	0.000	1.6	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	P1	Orifice	P2	5.5				
120 minute summer	P2	Orifice	S52	5.2				
120 minute summer	S52	V-Notch Weir	S53	5.2				
120 minute summer	S53	V-Notch Weir	S54	5.2				
120 minute summer	S54	V-Notch Weir	S55	5.2				
120 minute summer	S55	1.005	S62	5.2	0.439	0.283	0.3269	
120 minute summer	P3	2.000	S62	1.3	0.501	0.012	0.2919	
120 minute summer	S62	1.006	S61	5.4	0.187	0.159	0.6786	
120 minute summer	P5	3.000	S57	17.1	2.013	0.139	0.0982	
120 minute summer	S56	4.000	S57	0.5	0.238	0.013	0.0153	
120 minute summer	S57	3.001	S59	17.6	1.915	0.158	0.1773	
120 minute summer	S58	5.000	S59	0.5	0.229	0.013	0.0203	
120 minute summer	S59	3.002	S61	18.1	1.975	0.163	0.0866	
120 minute summer	S60	6.000	S61	0.2	0.562	0.005	0.0262	
120 minute summer	S61	1.007	S25	23.2	0.649	0.536	0.2049	
120 minute summer	S25	Pump	P60	0.0				
120 minute summer	P60	1.009	S63	-1.5	-0.135	-0.124	0.2053	
120 minute summer	P9	7.000	P7	10.8	0.667	0.153	1.2729	
120 minute summer	P7	7.001	S63	4.4	0.324	0.124	0.1085	
120 minute summer	P7	3.000_1	P5	9.3	1.584	0.084	0.0232	
120 minute summer	S63	Hydro-Brake®	S28	1.6				13.3

Results for 20 year +10% CC 120 minute winter. 180 minute analysis at 2 minute timestep. Mass balance: 99.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	P1	66	22.764	0.098	4.6	1.0345	0.0000	OK
120 minute winter	P2	68	22.059	0.097	4.5	1.0240	0.0000	OK
120 minute winter	S52	68	21.522	0.143	4.5	0.2045	0.0000	OK
120 minute winter	S53	68	21.261	0.143	4.5	0.2044	0.0000	OK
120 minute winter	S54	68	20.930	0.143	4.5	0.2043	0.0000	OK
120 minute winter	S55	180	20.172	0.172	4.4	0.2460	0.0000	OK
120 minute winter	P3	64	20.415	0.015	1.0	0.0220	0.0000	OK
120 minute winter	S62	180	20.172	0.402	5.5	0.5751	0.0000	SURCHARGED
120 minute winter	P5	64	22.008	0.051	12.9	0.0574	0.0000	OK
120 minute winter	S56	62	21.517	0.011	0.4	0.0157	0.0000	OK
120 minute winter	S57	64	21.372	0.053	13.3	0.0762	0.0000	OK
120 minute winter	S58	62	20.687	0.011	0.4	0.0157	0.0000	OK
120 minute winter	S59	64	20.501	0.057	13.7	0.0641	0.0000	OK
120 minute winter	S60	50	20.230	0.006	0.1	0.0066	0.0000	OK
120 minute winter	S61	180	20.172	0.466	18.3	0.6667	0.0000	SURCHARGED
120 minute winter	S25	180	20.172	0.481	17.7	42.8438	0.0000	SURCHARGED
120 minute winter	P60	64	22.792	0.777	1.1	0.8784	0.0000	SURCHARGED
120 minute winter	P9	64	23.057	0.052	8.4	0.0746	0.0000	OK
120 minute winter	P7	64	22.792	0.761	8.4	0.8603	0.0000	SURCHARGED
120 minute winter	S63	64	22.792	0.797	4.5	0.9010	0.0000	SURCHARGED
120 minute winter	S28	2	21.965	0.000	1.6	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	P1	Orifice	P2	4.5				
120 minute winter	P2	Orifice	S52	4.5				
120 minute winter	S52	V-Notch Weir	S53	4.5				
120 minute winter	S53	V-Notch Weir	S54	4.5				
120 minute winter	S54	V-Notch Weir	S55	4.4				
120 minute winter	S55	1.005	S62	4.6	0.419	0.252	0.4109	
120 minute winter	P3	2.000	S62	1.0	0.508	0.009	0.2940	
120 minute winter	S62	1.006	S61	4.6	0.196	0.136	0.6786	
120 minute winter	P5	3.000	S57	12.9	1.870	0.105	0.0799	
120 minute winter	S56	4.000	S57	0.4	0.228	0.010	0.0127	
120 minute winter	S57	3.001	S59	13.3	1.783	0.120	0.1441	
120 minute winter	S58	5.000	S59	0.4	0.220	0.011	0.0166	
120 minute winter	S59	3.002	S61	13.7	1.837	0.123	0.1384	
120 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0402	
120 minute winter	S61	1.007	S25	17.7	0.640	0.410	0.2049	
120 minute winter	S25	Pump	P60	0.0				
120 minute winter	P60	1.009	S63	1.4	-0.122	0.112	0.2053	
120 minute winter	P9	7.000	P7	8.4	0.567	0.119	1.2369	
120 minute winter	P7	7.001	S63	3.5	0.328	0.099	0.1085	
120 minute winter	P7	3.000_1	P5	6.9	1.470	0.062	0.0186	
120 minute winter	S63	Hydro-Brake®	S28	1.6				13.6

Results for 20 year +10% CC 180 minute summer. 240 minute analysis at 4 minute timestep. Mass balance: 99.85%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	P1	96	22.764	0.098	4.6	1.0305	0.0000	OK
180 minute summer	P2	100	22.057	0.095	4.5	1.0080	0.0000	OK
180 minute summer	S52	100	21.521	0.142	4.4	0.2028	0.0000	OK
180 minute summer	S53	100	21.260	0.142	4.4	0.2029	0.0000	OK
180 minute summer	S54	100	20.929	0.142	4.4	0.2030	0.0000	OK
180 minute summer	S55	240	20.160	0.160	4.4	0.2294	0.0000	OK
180 minute summer	P3	96	20.415	0.015	1.0	0.0220	0.0000	OK
180 minute summer	S62	240	20.160	0.390	5.2	0.5585	0.0000	SURCHARGED
180 minute summer	P5	96	22.008	0.051	13.0	0.0576	0.0000	OK
180 minute summer	S56	96	21.517	0.011	0.4	0.0157	0.0000	OK
180 minute summer	S57	96	21.372	0.053	13.5	0.0765	0.0000	OK
180 minute summer	S58	96	20.687	0.011	0.4	0.0157	0.0000	OK
180 minute summer	S59	96	20.501	0.057	13.8	0.0643	0.0000	OK
180 minute summer	S60	88	20.230	0.006	0.1	0.0066	0.0000	OK
180 minute summer	S61	240	20.160	0.454	18.2	0.6501	0.0000	SURCHARGED
180 minute summer	S25	240	20.160	0.469	17.7	41.8101	0.0000	SURCHARGED
180 minute summer	P60	96	22.792	0.777	1.0	0.8784	0.0000	SURCHARGED
180 minute summer	P9	96	23.057	0.052	8.4	0.0746	0.0000	OK
180 minute summer	P7	96	22.792	0.761	8.4	0.8603	0.0000	SURCHARGED
180 minute summer	S63	96	22.792	0.797	3.4	0.9010	0.0000	SURCHARGED
180 minute summer	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	4.5				
180 minute summer	P2	Orifice	S52	4.4				
180 minute summer	S52	V-Notch Weir	S53	4.4				
180 minute summer	S53	V-Notch Weir	S54	4.4				
180 minute summer	S54	V-Notch Weir	S55	4.4				
180 minute summer	S55	1.005	S62	4.4	0.418	0.239	0.3979	
180 minute summer	P3	2.000	S62	1.0	0.515	0.009	0.2928	
180 minute summer	S62	1.006	S61	4.5	0.171	0.131	0.6786	
180 minute summer	P5	3.000	S57	13.1	1.874	0.106	0.0803	
180 minute summer	S56	4.000	S57	0.4	0.207	0.010	0.0127	
180 minute summer	S57	3.001	S59	13.4	1.786	0.121	0.1448	
180 minute summer	S58	5.000	S59	0.4	0.202	0.011	0.0167	
180 minute summer	S59	3.002	S61	13.8	1.841	0.124	0.1268	
180 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0397	
180 minute summer	S61	1.007	S25	17.7	0.517	0.409	0.2049	
180 minute summer	S25	Pump	P60	0.0				
180 minute summer	P60	1.009	S63	-1.0	-0.026	-0.085	0.2053	
180 minute summer	P9	7.000	P7	8.4	0.546	0.119	1.2369	
180 minute summer	P7	7.001	S63	3.4	0.314	0.094	0.1085	
180 minute summer	P7	3.000_1	P5	6.9	1.470	0.062	0.0186	
180 minute summer	S63	Hydro-Brake®	S28	1.6				16.7

Results for 20 year +10% CC 180 minute winter. 240 minute analysis at 4 minute timestep. Mass balance: 99.77%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	P1	96	22.748	0.082	3.5	0.8678	0.0000	OK
180 minute winter	P2	100	22.044	0.082	3.5	0.8639	0.0000	OK
180 minute winter	S52	100	21.508	0.129	3.5	0.1847	0.0000	OK
180 minute winter	S53	100	21.247	0.129	3.5	0.1847	0.0000	OK
180 minute winter	S54	100	20.916	0.129	3.5	0.1846	0.0000	OK
180 minute winter	S55	240	20.235	0.235	3.5	0.3368	0.0000	SURCHARGED
180 minute winter	P3	96	20.414	0.014	0.8	0.0198	0.0000	OK
180 minute winter	S62	240	20.235	0.465	4.4	0.6659	0.0000	SURCHARGED
180 minute winter	P5	96	22.001	0.044	9.8	0.0496	0.0000	OK
180 minute winter	S56	88	21.516	0.010	0.3	0.0138	0.0000	OK
180 minute winter	S57	96	21.365	0.046	10.1	0.0660	0.0000	OK
180 minute winter	S58	88	20.686	0.010	0.3	0.0138	0.0000	OK
180 minute winter	S59	96	20.493	0.049	10.4	0.0551	0.0000	OK
180 minute winter	S60	240	20.235	0.011	0.1	0.0128	0.0000	OK
180 minute winter	S61	240	20.235	0.529	14.0	0.7575	0.0000	SURCHARGED
180 minute winter	S25	240	20.235	0.544	13.5	48.4960	0.0000	SURCHARGED
180 minute winter	P60	96	22.785	0.770	0.8	0.8710	0.0000	SURCHARGED
180 minute winter	P9	96	23.051	0.046	6.5	0.0657	0.0000	OK
180 minute winter	P7	96	22.785	0.754	6.5	0.8530	0.0000	SURCHARGED
180 minute winter	S63	96	22.785	0.790	3.0	0.8937	0.0000	SURCHARGED
180 minute winter	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	3.5				
180 minute winter	P2	Orifice	S52	3.5				
180 minute winter	S52	V-Notch Weir	S53	3.5				
180 minute winter	S53	V-Notch Weir	S54	3.5				
180 minute winter	S54	V-Notch Weir	S55	3.5				
180 minute winter	S55	1.005	S62	3.6	0.385	0.200	0.4519	
180 minute winter	P3	2.000	S62	0.8	0.506	0.007	0.2934	
180 minute winter	S62	1.006	S61	3.8	0.170	0.110	0.6786	
180 minute winter	P5	3.000	S57	9.8	1.734	0.079	0.0649	
180 minute winter	S56	4.000	S57	0.3	0.217	0.008	0.0104	
180 minute winter	S57	3.001	S59	10.1	1.656	0.090	0.1168	
180 minute winter	S58	5.000	S59	0.3	0.211	0.008	0.0135	
180 minute winter	S59	3.002	S61	10.4	1.703	0.093	0.1861	
180 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0416	
180 minute winter	S61	1.007	S25	13.5	0.534	0.313	0.2049	
180 minute winter	S25	Pump	P60	0.0				
180 minute winter	P60	1.009	S63	-0.8	-0.112	-0.065	0.2053	
180 minute winter	P9	7.000	P7	6.5	0.544	0.092	1.2063	
180 minute winter	P7	7.001	S63	3.0	0.279	0.084	0.1085	
180 minute winter	P7	3.000_1	P5	5.1	1.352	0.045	0.0147	
180 minute winter	S63	Hydro-Brake®	S28	1.6				17.5

Results for 20 year +10% CC 240 minute summer. 300 minute analysis at 4 minute timestep. Mass balance: 99.79%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	P1	128	22.753	0.087	4.0	0.9212	0.0000	OK
240 minute summer	P2	128	22.048	0.086	3.8	0.9115	0.0000	OK
240 minute summer	S52	128	21.512	0.133	3.7	0.1905	0.0000	OK
240 minute summer	S53	128	21.251	0.133	3.7	0.1902	0.0000	OK
240 minute summer	S54	132	20.920	0.133	3.7	0.1899	0.0000	OK
240 minute summer	S55	300	20.203	0.203	3.7	0.2902	0.0000	OK
240 minute summer	P3	124	20.415	0.015	0.9	0.0209	0.0000	OK
240 minute summer	S62	300	20.203	0.433	4.6	0.6193	0.0000	SURCHARGED
240 minute summer	P5	124	22.004	0.047	11.0	0.0528	0.0000	OK
240 minute summer	S56	124	21.517	0.011	0.4	0.0155	0.0000	OK
240 minute summer	S57	124	21.368	0.049	11.4	0.0703	0.0000	OK
240 minute summer	S58	124	20.687	0.011	0.4	0.0155	0.0000	OK
240 minute summer	S59	124	20.496	0.052	11.8	0.0589	0.0000	OK
240 minute summer	S60	112	20.230	0.006	0.1	0.0066	0.0000	OK
240 minute summer	S61	300	20.203	0.497	15.3	0.7109	0.0000	SURCHARGED
240 minute summer	S25	300	20.203	0.512	14.8	45.5920	0.0000	SURCHARGED
240 minute summer	P60	124	22.788	0.773	0.8	0.8739	0.0000	SURCHARGED
240 minute summer	P9	124	23.053	0.048	7.3	0.0694	0.0000	OK
240 minute summer	P7	124	22.788	0.757	7.3	0.8558	0.0000	SURCHARGED
240 minute summer	S63	124	22.788	0.793	2.9	0.8965	0.0000	SURCHARGED
240 minute summer	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	3.8				
240 minute summer	P2	Orifice	S52	3.7				
240 minute summer	S52	V-Notch Weir	S53	3.7				
240 minute summer	S53	V-Notch Weir	S54	3.7				
240 minute summer	S54	V-Notch Weir	S55	3.7				
240 minute summer	S55	1.005	S62	3.9	0.395	0.215	0.4402	
240 minute summer	P3	2.000	S62	0.9	0.511	0.008	0.2928	
240 minute summer	S62	1.006	S61	4.0	0.143	0.117	0.6786	
240 minute summer	P5	3.000	S57	11.0	1.791	0.090	0.0711	
240 minute summer	S56	4.000	S57	0.4	0.207	0.010	0.0115	
240 minute summer	S57	3.001	S59	11.4	1.710	0.102	0.1280	
240 minute summer	S58	5.000	S59	0.4	0.209	0.010	0.0149	
240 minute summer	S59	3.002	S61	11.7	1.760	0.105	0.1661	
240 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0402	
240 minute summer	S61	1.007	S25	14.8	0.487	0.342	0.2049	
240 minute summer	S25	Pump	P60	0.0				
240 minute summer	P60	1.009	S63	-0.8	-0.068	-0.068	0.2053	
240 minute summer	P9	7.000	P7	7.3	0.531	0.103	1.2186	
240 minute summer	P7	7.001	S63	2.9	0.274	0.082	0.1085	
240 minute summer	P7	3.000_1	P5	5.7	1.398	0.052	0.0162	
240 minute summer	S63	Hydro-Brake®	S28	1.6				19.5

Results for 20 year +10% CC 240 minute winter. 300 minute analysis at 4 minute timestep. Mass balance: 99.69%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	P1	128	22.739	0.073	3.0	0.7751	0.0000	OK
240 minute winter	P2	128	22.035	0.073	2.9	0.7719	0.0000	OK
240 minute winter	S52	128	21.500	0.121	2.9	0.1725	0.0000	OK
240 minute winter	S53	128	21.238	0.120	2.9	0.1724	0.0000	OK
240 minute winter	S54	132	20.908	0.121	2.9	0.1725	0.0000	OK
240 minute winter	S55	300	20.277	0.277	2.9	0.3969	0.0000	SURCHARGED
240 minute winter	P3	116	20.412	0.012	0.6	0.0173	0.0000	OK
240 minute winter	S62	300	20.277	0.507	3.6	0.7261	0.0000	SURCHARGED
240 minute winter	P5	124	21.996	0.039	7.9	0.0444	0.0000	OK
240 minute winter	S56	124	21.516	0.010	0.3	0.0138	0.0000	OK
240 minute winter	S57	124	21.361	0.042	8.2	0.0594	0.0000	OK
240 minute winter	S58	124	20.686	0.010	0.3	0.0138	0.0000	OK
240 minute winter	S59	128	20.488	0.044	8.5	0.0496	0.0000	OK
240 minute winter	S60	300	20.278	0.054	0.1	0.0606	0.0000	OK
240 minute winter	S61	300	20.277	0.571	11.5	0.8177	0.0000	SURCHARGED
240 minute winter	S25	300	20.277	0.586	11.1	52.2431	0.0000	SURCHARGED
240 minute winter	P60	124	22.781	0.766	0.6	0.8663	0.0000	SURCHARGED
240 minute winter	P9	128	23.047	0.042	5.4	0.0600	0.0000	OK
240 minute winter	P7	128	22.781	0.750	5.4	0.8482	0.0000	SURCHARGED
240 minute winter	S63	124	22.781	0.786	3.0	0.8889	0.0000	SURCHARGED
240 minute winter	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	2.9				
240 minute winter	P2	Orifice	S52	2.9				
240 minute winter	S52	V-Notch Weir	S53	2.9				
240 minute winter	S53	V-Notch Weir	S54	2.9				
240 minute winter	S54	V-Notch Weir	S55	2.9				
240 minute winter	S55	1.005	S62	3.0	0.363	0.163	0.4519	
240 minute winter	P3	2.000	S62	0.6	0.522	0.005	0.2927	
240 minute winter	S62	1.006	S61	3.0	0.146	0.087	0.6786	
240 minute winter	P5	3.000	S57	7.9	1.630	0.064	0.0556	
240 minute winter	S56	4.000	S57	0.3	0.197	0.008	0.0091	
240 minute winter	S57	3.001	S59	8.2	1.562	0.073	0.1004	
240 minute winter	S58	5.000	S59	0.3	0.201	0.008	0.0118	
240 minute winter	S59	3.002	S61	8.5	1.610	0.076	0.1918	
240 minute winter	S60	6.000	S61	-0.1	0.463	-0.004	0.0531	
240 minute winter	S61	1.007	S25	11.1	0.491	0.257	0.2049	
240 minute winter	S25	Pump	P60	0.0				
240 minute winter	P60	1.009	S63	0.7	-0.064	0.062	0.2053	
240 minute winter	P9	7.000	P7	5.4	0.487	0.076	1.1876	
240 minute winter	P7	7.001	S63	2.5	0.304	0.071	0.1085	
240 minute winter	P7	3.000_1	P5	4.0	1.266	0.036	0.0123	
240 minute winter	S63	Hydro-Brake®	S28	1.6				20.8

Results for 20 year +10% CC 360 minute summer. 424 minute analysis at 8 minute timestep. Mass balance: 99.71%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	P1	184	22.741	0.075	3.2	0.7888	0.0000	OK
360 minute summer	P2	192	22.036	0.074	3.0	0.7781	0.0000	OK
360 minute summer	S52	192	21.500	0.121	3.0	0.1737	0.0000	OK
360 minute summer	S53	192	21.240	0.122	3.0	0.1739	0.0000	OK
360 minute summer	S54	192	20.909	0.122	3.0	0.1741	0.0000	OK
360 minute summer	S55	424	20.264	0.264	3.0	0.3783	0.0000	SURCHARGED
360 minute summer	P3	184	20.413	0.013	0.7	0.0185	0.0000	OK
360 minute summer	S62	424	20.264	0.494	3.6	0.7073	0.0000	SURCHARGED
360 minute summer	P5	184	21.998	0.041	8.5	0.0461	0.0000	OK
360 minute summer	S56	184	21.516	0.010	0.3	0.0136	0.0000	OK
360 minute summer	S57	184	21.362	0.043	8.7	0.0615	0.0000	OK
360 minute summer	S58	184	20.686	0.010	0.3	0.0136	0.0000	OK
360 minute summer	S59	184	20.489	0.045	9.0	0.0511	0.0000	OK
360 minute summer	S60	424	20.264	0.040	0.1	0.0457	0.0000	OK
360 minute summer	S61	424	20.264	0.558	11.9	0.7989	0.0000	SURCHARGED
360 minute summer	S25	424	20.264	0.573	11.5	51.0724	0.0000	SURCHARGED
360 minute summer	P60	184	22.782	0.767	0.6	0.8677	0.0000	SURCHARGED
360 minute summer	P9	184	23.048	0.043	5.8	0.0619	0.0000	OK
360 minute summer	P7	184	22.782	0.751	5.8	0.8496	0.0000	SURCHARGED
360 minute summer	S63	184	22.782	0.787	2.7	0.8903	0.0000	SURCHARGED
360 minute summer	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	3.0				
360 minute summer	P2	Orifice	S52	3.0				
360 minute summer	S52	V-Notch Weir	S53	3.0				
360 minute summer	S53	V-Notch Weir	S54	3.0				
360 minute summer	S54	V-Notch Weir	S55	3.0				
360 minute summer	S55	1.005	S62	3.0	0.359	0.164	0.4519	
360 minute summer	P3	2.000	S62	0.7	0.227	0.006	0.2921	
360 minute summer	S62	1.006	S61	3.0	0.110	0.088	0.6786	
360 minute summer	P5	3.000	S57	8.5	1.664	0.069	0.0586	
360 minute summer	S56	4.000	S57	0.3	0.198	0.008	0.0095	
360 minute summer	S57	3.001	S59	8.7	1.594	0.078	0.1052	
360 minute summer	S58	5.000	S59	0.3	0.198	0.008	0.0122	
360 minute summer	S59	3.002	S61	9.0	1.637	0.081	0.1903	
360 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0489	
360 minute summer	S61	1.007	S25	11.5	0.465	0.266	0.2049	
360 minute summer	S25	Pump	P60	0.0				
360 minute summer	P60	1.009	S63	-0.6	-0.048	-0.053	0.2053	
360 minute summer	P9	7.000	P7	5.8	0.394	0.081	1.1938	
360 minute summer	P7	7.001	S63	2.7	0.195	0.075	0.1085	
360 minute summer	P7	3.000_1	P5	4.3	1.291	0.038	0.0130	
360 minute summer	S63	Hydro-Brake®	S28	1.6				24.3

Results for 20 year +10% CC 360 minute winter. 424 minute analysis at 8 minute timestep. Mass balance: 99.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	P1	184	22.728	0.062	2.3	0.6510	0.0000	OK
360 minute winter	P2	192	22.023	0.061	2.3	0.6492	0.0000	OK
360 minute winter	S52	192	21.488	0.109	2.3	0.1556	0.0000	OK
360 minute winter	S53	192	21.227	0.109	2.3	0.1557	0.0000	OK
360 minute winter	S54	192	20.896	0.109	2.3	0.1557	0.0000	OK
360 minute winter	S55	360	20.309	0.309	2.3	0.4420	0.0000	SURCHARGED
360 minute winter	P3	176	20.411	0.011	0.5	0.0159	0.0000	OK
360 minute winter	S62	360	20.308	0.538	2.8	0.7696	0.0000	SURCHARGED
360 minute winter	P5	184	21.991	0.034	5.7	0.0380	0.0000	OK
360 minute winter	S56	160	21.514	0.008	0.2	0.0113	0.0000	OK
360 minute winter	S57	184	21.355	0.036	5.9	0.0508	0.0000	OK
360 minute winter	S58	160	20.684	0.008	0.2	0.0114	0.0000	OK
360 minute winter	S59	184	20.481	0.037	6.1	0.0421	0.0000	OK
360 minute winter	S60	352	20.308	0.084	0.2	0.0946	0.0000	OK
360 minute winter	S61	360	20.308	0.602	8.5	0.8610	0.0000	SURCHARGED
360 minute winter	S25	352	20.308	0.617	8.3	54.9367	0.0000	SURCHARGED
360 minute winter	P60	184	22.776	0.761	0.7	0.8604	0.0000	SURCHARGED
360 minute winter	P9	184	23.042	0.037	4.2	0.0530	0.0000	OK
360 minute winter	P7	184	22.776	0.745	4.2	0.8423	0.0000	SURCHARGED
360 minute winter	S63	184	22.776	0.781	2.6	0.8830	0.0000	SURCHARGED
360 minute winter	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	2.3				
360 minute winter	P2	Orifice	S52	2.3				
360 minute winter	S52	V-Notch Weir	S53	2.3				
360 minute winter	S53	V-Notch Weir	S54	2.3				
360 minute winter	S54	V-Notch Weir	S55	2.3				
360 minute winter	S55	1.005	S62	2.3	0.331	0.124	0.4519	
360 minute winter	P3	2.000	S62	0.5	0.349	0.005	0.2920	
360 minute winter	S62	1.006	S61	2.3	0.118	0.068	0.6786	
360 minute winter	P5	3.000	S57	5.7	1.497	0.047	0.0443	
360 minute winter	S56	4.000	S57	0.2	0.202	0.005	0.0073	
360 minute winter	S57	3.001	S59	5.9	1.434	0.053	0.0797	
360 minute winter	S58	5.000	S59	0.2	0.199	0.005	0.0092	
360 minute winter	S59	3.002	S61	6.1	1.473	0.055	0.1959	
360 minute winter	S60	6.000	S61	0.2	0.463	0.006	0.0632	
360 minute winter	S61	1.007	S25	8.3	0.448	0.193	0.2049	
360 minute winter	S25	Pump	P60	0.7				
360 minute winter	P60	1.009	S63	1.1	-0.076	0.094	0.2053	
360 minute winter	P9	7.000	P7	4.2	0.382	0.059	1.1656	
360 minute winter	P7	7.001	S63	2.3	0.297	0.064	0.1085	
360 minute winter	P7	3.000_1	P5	2.7	1.143	0.025	0.0095	
360 minute winter	S63	Hydro-Brake®	S28	1.6				30.4

Results for 20 year +10% CC 480 minute summer. 544 minute analysis at 8 minute timestep. Mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	P1	248	22.733	0.067	2.6	0.7127	0.0000	OK
480 minute summer	P2	248	22.029	0.067	2.6	0.7049	0.0000	OK
480 minute summer	S52	248	21.493	0.114	2.5	0.1633	0.0000	OK
480 minute summer	S53	248	21.232	0.114	2.5	0.1631	0.0000	OK
480 minute summer	S54	248	20.901	0.114	2.5	0.1629	0.0000	OK
480 minute summer	S55	456	20.291	0.291	2.5	0.4167	0.0000	SURCHARGED
480 minute summer	P3	248	20.412	0.012	0.6	0.0173	0.0000	OK
480 minute summer	S62	456	20.291	0.521	3.1	0.7458	0.0000	SURCHARGED
480 minute summer	P5	248	21.993	0.036	6.7	0.0408	0.0000	OK
480 minute summer	S56	232	21.514	0.008	0.2	0.0113	0.0000	OK
480 minute summer	S57	248	21.357	0.038	6.9	0.0546	0.0000	OK
480 minute summer	S58	232	20.684	0.008	0.2	0.0114	0.0000	OK
480 minute summer	S59	248	20.484	0.040	7.1	0.0452	0.0000	OK
480 minute summer	S60	456	20.291	0.067	0.1	0.0760	0.0000	OK
480 minute summer	S61	456	20.291	0.585	9.7	0.8374	0.0000	SURCHARGED
480 minute summer	S25	456	20.291	0.600	9.5	53.4677	0.0000	SURCHARGED
480 minute summer	P60	248	22.778	0.763	0.6	0.8629	0.0000	SURCHARGED
480 minute summer	P9	248	23.044	0.039	4.7	0.0561	0.0000	OK
480 minute summer	P7	248	22.778	0.747	4.7	0.8449	0.0000	SURCHARGED
480 minute summer	S63	248	22.778	0.783	2.9	0.8856	0.0000	SURCHARGED
480 minute summer	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	2.6				
480 minute summer	P2	Orifice	S52	2.5				
480 minute summer	S52	V-Notch Weir	S53	2.5				
480 minute summer	S53	V-Notch Weir	S54	2.5				
480 minute summer	S54	V-Notch Weir	S55	2.5				
480 minute summer	S55	1.005	S62	2.5	0.336	0.138	0.4519	
480 minute summer	P3	2.000	S62	0.6	0.368	0.005	0.2921	
480 minute summer	S62	1.006	S61	2.6	0.094	0.076	0.6786	
480 minute summer	P5	3.000	S57	6.7	1.559	0.054	0.0493	
480 minute summer	S56	4.000	S57	0.2	0.196	0.005	0.0080	
480 minute summer	S57	3.001	S59	6.9	1.493	0.062	0.0884	
480 minute summer	S58	5.000	S59	0.2	0.199	0.005	0.0102	
480 minute summer	S59	3.002	S61	7.1	1.531	0.063	0.1908	
480 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0576	
480 minute summer	S61	1.007	S25	9.5	0.382	0.219	0.2049	
480 minute summer	S25	Pump	P60	0.6				
480 minute summer	P60	1.009	S63	0.8	-0.077	0.068	0.2053	
480 minute summer	P9	7.000	P7	4.7	0.374	0.067	1.1750	
480 minute summer	P7	7.001	S63	2.3	0.237	0.064	0.1085	
480 minute summer	P7	3.000_1	P5	3.3	1.198	0.029	0.0107	
480 minute summer	S63	Hydro-Brake®	S28	1.6				31.7

Results for 20 year +10% CC 480 minute winter. 544 minute analysis at 8 minute timestep. Mass balance: 99.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	P1	256	22.721	0.055	1.9	0.5799	0.0000	OK
480 minute winter	P2	256	22.017	0.055	1.9	0.5799	0.0000	OK
480 minute winter	S52	256	21.481	0.102	1.9	0.1454	0.0000	OK
480 minute winter	S53	256	21.220	0.102	1.9	0.1454	0.0000	OK
480 minute winter	S54	256	20.889	0.102	1.9	0.1454	0.0000	OK
480 minute winter	S55	464	20.332	0.332	1.9	0.4756	0.0000	SURCHARGED
480 minute winter	P3	224	20.410	0.010	0.4	0.0144	0.0000	OK
480 minute winter	S62	464	20.331	0.561	2.3	0.8035	0.0000	SURCHARGED
480 minute winter	P5	248	21.987	0.030	4.6	0.0338	0.0000	OK
480 minute winter	S56	232	21.514	0.008	0.2	0.0113	0.0000	OK
480 minute winter	S57	248	21.351	0.032	4.8	0.0456	0.0000	OK
480 minute winter	S58	232	20.684	0.008	0.2	0.0114	0.0000	OK
480 minute winter	S59	248	20.477	0.033	5.0	0.0378	0.0000	OK
480 minute winter	S60	464	20.331	0.107	0.1	0.1213	0.0000	OK
480 minute winter	S61	464	20.331	0.625	7.0	0.8945	0.0000	SURCHARGED
480 minute winter	S25	464	20.331	0.640	6.9	57.0106	0.0000	SURCHARGED
480 minute winter	P60	248	22.772	0.757	0.7	0.8564	0.0000	SURCHARGED
480 minute winter	P9	248	23.039	0.034	3.5	0.0486	0.0000	OK
480 minute winter	P7	248	22.772	0.741	3.5	0.8384	0.0000	SURCHARGED
480 minute winter	S63	248	22.772	0.777	2.5	0.8791	0.0000	SURCHARGED
480 minute winter	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	1.9				
480 minute winter	P2	Orifice	S52	1.9				
480 minute winter	S52	V-Notch Weir	S53	1.9				
480 minute winter	S53	V-Notch Weir	S54	1.9				
480 minute winter	S54	V-Notch Weir	S55	1.9				
480 minute winter	S55	1.005	S62	1.9	0.309	0.104	0.4519	
480 minute winter	P3	2.000	S62	0.4	0.370	0.004	0.2913	
480 minute winter	S62	1.006	S61	2.0	0.098	0.057	0.6786	
480 minute winter	P5	3.000	S57	4.6	1.397	0.037	0.0377	
480 minute winter	S56	4.000	S57	0.2	0.202	0.005	0.0063	
480 minute winter	S57	3.001	S59	4.8	1.345	0.043	0.0681	
480 minute winter	S58	5.000	S59	0.2	0.198	0.005	0.0080	
480 minute winter	S59	3.002	S61	5.0	1.387	0.045	0.1969	
480 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0709	
480 minute winter	S61	1.007	S25	6.9	0.399	0.159	0.2049	
480 minute winter	S25	Pump	P60	0.7				
480 minute winter	P60	1.009	S63	1.5	0.037	0.123	0.2053	
480 minute winter	P9	7.000	P7	3.5	0.364	0.050	1.1521	
480 minute winter	P7	7.001	S63	2.0	0.253	0.057	0.1085	
480 minute winter	P7	3.000_1	P5	2.1	1.054	0.019	0.0077	
480 minute winter	S63	Hydro-Brake®	S28	1.6				38.1

Results for 20 year +10% CC 600 minute summer. 660 minute analysis at 15 minute timestep. Mass balance: 99.77%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	P1	315	22.725	0.059	2.1	0.6198	0.0000	OK
600 minute summer	P2	315	22.021	0.059	2.1	0.6187	0.0000	OK
600 minute summer	S52	315	21.485	0.106	2.1	0.1511	0.0000	OK
600 minute summer	S53	315	21.224	0.106	2.1	0.1511	0.0000	OK
600 minute summer	S54	315	20.893	0.106	2.1	0.1511	0.0000	OK
600 minute summer	S55	510	20.293	0.293	2.1	0.4198	0.0000	SURCHARGED
600 minute summer	P3	315	20.411	0.011	0.5	0.0159	0.0000	OK
600 minute summer	S62	510	20.293	0.523	2.6	0.7489	0.0000	SURCHARGED
600 minute summer	P5	315	21.989	0.032	5.3	0.0363	0.0000	OK
600 minute summer	S56	300	21.514	0.008	0.2	0.0113	0.0000	OK
600 minute summer	S57	315	21.353	0.034	5.5	0.0487	0.0000	OK
600 minute summer	S58	300	20.684	0.008	0.2	0.0114	0.0000	OK
600 minute summer	S59	315	20.480	0.036	5.7	0.0404	0.0000	OK
600 minute summer	S60	525	20.293	0.069	0.1	0.0783	0.0000	OK
600 minute summer	S61	510	20.293	0.587	8.0	0.8404	0.0000	SURCHARGED
600 minute summer	S25	510	20.293	0.602	7.8	53.6560	0.0000	SURCHARGED
600 minute summer	P60	315	22.774	0.759	0.6	0.8588	0.0000	SURCHARGED
600 minute summer	P9	315	23.041	0.036	3.9	0.0512	0.0000	OK
600 minute summer	P7	315	22.774	0.743	3.9	0.8408	0.0000	SURCHARGED
600 minute summer	S63	315	22.774	0.779	2.6	0.8814	0.0000	SURCHARGED
600 minute summer	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	2.1				
600 minute summer	P2	Orifice	S52	2.1				
600 minute summer	S52	V-Notch Weir	S53	2.1				
600 minute summer	S53	V-Notch Weir	S54	2.1				
600 minute summer	S54	V-Notch Weir	S55	2.1				
600 minute summer	S55	1.005	S62	2.1	0.314	0.114	0.4519	
600 minute summer	P3	2.000	S62	0.5	0.111	0.005	0.2920	
600 minute summer	S62	1.006	S61	2.2	0.092	0.064	0.6786	
600 minute summer	P5	3.000	S57	5.3	1.457	0.043	0.0417	
600 minute summer	S56	4.000	S57	0.2	0.205	0.005	0.0069	
600 minute summer	S57	3.001	S59	5.5	1.401	0.049	0.0750	
600 minute summer	S58	5.000	S59	0.2	0.201	0.005	0.0088	
600 minute summer	S59	3.002	S61	5.7	1.441	0.051	0.1918	
600 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0583	
600 minute summer	S61	1.007	S25	7.8	0.380	0.180	0.2049	
600 minute summer	S25	Pump	P60	0.6				
600 minute summer	P60	1.009	S63	0.7	0.042	0.060	0.2053	
600 minute summer	P9	7.000	P7	3.9	0.228	0.055	1.1599	
600 minute summer	P7	7.001	S63	2.3	0.072	0.064	0.1085	
600 minute summer	P7	3.000_1	P5	2.5	1.108	0.022	0.0087	
600 minute summer	S63	Hydro-Brake®	S28	1.6				38.7

Results for 20 year +10% CC 600 minute winter. 660 minute analysis at 15 minute timestep. Mass balance: 99.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	P1	330	22.715	0.049	1.6	0.5172	0.0000	OK
600 minute winter	P2	330	22.011	0.049	1.6	0.5172	0.0000	OK
600 minute winter	S52	330	21.474	0.095	1.6	0.1357	0.0000	OK
600 minute winter	S53	330	21.213	0.095	1.6	0.1357	0.0000	OK
600 minute winter	S54	330	20.882	0.095	1.6	0.1357	0.0000	OK
600 minute winter	S55	540	20.344	0.344	1.6	0.4921	0.0000	SURCHARGED
600 minute winter	P3	315	20.410	0.010	0.4	0.0144	0.0000	OK
600 minute winter	S62	555	20.344	0.574	2.0	0.8210	0.0000	SURCHARGED
600 minute winter	P5	315	21.984	0.027	3.8	0.0308	0.0000	OK
600 minute winter	S56	210	21.512	0.006	0.1	0.0083	0.0000	OK
600 minute winter	S57	315	21.348	0.029	3.9	0.0413	0.0000	OK
600 minute winter	S58	210	20.682	0.006	0.1	0.0083	0.0000	OK
600 minute winter	S59	315	20.474	0.030	4.0	0.0338	0.0000	OK
600 minute winter	S60	570	20.344	0.120	0.2	0.1355	0.0000	OK
600 minute winter	S61	555	20.345	0.639	5.6	0.9146	0.0000	SURCHARGED
600 minute winter	S25	570	20.344	0.653	5.5	58.1766	0.0000	SURCHARGED
600 minute winter	P60	315	22.769	0.754	0.7	0.8532	0.0000	SURCHARGED
600 minute winter	P9	315	23.037	0.032	3.0	0.0451	0.0000	OK
600 minute winter	P7	315	22.769	0.738	3.0	0.8352	0.0000	SURCHARGED
600 minute winter	S63	315	22.769	0.774	1.9	0.8759	0.0000	SURCHARGED
600 minute winter	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	1.6				
600 minute winter	P2	Orifice	S52	1.6				
600 minute winter	S52	V-Notch Weir	S53	1.6				
600 minute winter	S53	V-Notch Weir	S54	1.6				
600 minute winter	S54	V-Notch Weir	S55	1.6				
600 minute winter	S55	1.005	S62	1.6	0.286	0.087	0.4519	
600 minute winter	P3	2.000	S62	0.4	0.239	0.004	0.2913	
600 minute winter	S62	1.006	S61	1.7	0.092	0.050	0.6786	
600 minute winter	P5	3.000	S57	3.8	1.326	0.031	0.0328	
600 minute winter	S56	4.000	S57	0.1	0.180	0.003	0.0053	
600 minute winter	S57	3.001	S59	3.9	1.274	0.035	0.0584	
600 minute winter	S58	5.000	S59	0.1	0.183	0.003	0.0066	
600 minute winter	S59	3.002	S61	4.0	1.302	0.036	0.1959	
600 minute winter	S60	6.000	S61	-0.2	-0.009	-0.004	0.0746	
600 minute winter	S61	1.007	S25	5.5	0.403	0.127	0.2049	
600 minute winter	S25	Pump	P60	0.7				
600 minute winter	P60	1.009	S63	1.3	0.033	0.110	0.2053	
600 minute winter	P9	7.000	P7	3.0	0.345	0.042	1.1419	
600 minute winter	P7	7.001	S63	1.9	0.170	0.054	0.1085	
600 minute winter	P7	3.000_1	P5	1.6	0.976	0.014	0.0063	
600 minute winter	S63	Hydro-Brake®	S28	1.6				44.7

Results for 20 year +10% CC 720 minute summer. 780 minute analysis at 15 minute timestep. Mass balance: 99.79%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	P1	375	22.721	0.055	1.9	0.5798	0.0000	OK
720 minute summer	P2	375	22.017	0.055	1.9	0.5788	0.0000	OK
720 minute summer	S52	375	21.480	0.101	1.9	0.1452	0.0000	OK
720 minute summer	S53	375	21.219	0.101	1.9	0.1452	0.0000	OK
720 minute summer	S54	375	20.888	0.101	1.9	0.1451	0.0000	OK
720 minute summer	S55	585	20.296	0.296	1.9	0.4234	0.0000	SURCHARGED
720 minute summer	P3	360	20.410	0.010	0.4	0.0144	0.0000	OK
720 minute summer	S62	585	20.296	0.526	2.3	0.7526	0.0000	SURCHARGED
720 minute summer	P5	375	21.987	0.030	4.7	0.0342	0.0000	OK
720 minute summer	S56	375	21.514	0.008	0.2	0.0113	0.0000	OK
720 minute summer	S57	375	21.351	0.032	4.9	0.0460	0.0000	OK
720 minute summer	S58	375	20.684	0.008	0.2	0.0114	0.0000	OK
720 minute summer	S59	375	20.478	0.034	5.1	0.0382	0.0000	OK
720 minute summer	S60	585	20.296	0.072	0.2	0.0814	0.0000	OK
720 minute summer	S61	585	20.296	0.590	7.1	0.8442	0.0000	SURCHARGED
720 minute summer	S25	585	20.296	0.605	7.0	53.8888	0.0000	SURCHARGED
720 minute summer	P60	375	22.772	0.757	0.6	0.8565	0.0000	SURCHARGED
720 minute summer	P9	375	23.039	0.034	3.5	0.0486	0.0000	OK
720 minute summer	P7	375	22.772	0.741	3.5	0.8384	0.0000	SURCHARGED
720 minute summer	S63	375	22.772	0.777	2.6	0.8791	0.0000	SURCHARGED
720 minute summer	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	1.9				
720 minute summer	P2	Orifice	S52	1.9				
720 minute summer	S52	V-Notch Weir	S53	1.9				
720 minute summer	S53	V-Notch Weir	S54	1.9				
720 minute summer	S54	V-Notch Weir	S55	1.9				
720 minute summer	S55	1.005	S62	1.9	0.291	0.104	0.4519	
720 minute summer	P3	2.000	S62	0.4	0.111	0.004	0.2913	
720 minute summer	S62	1.006	S61	1.9	0.090	0.057	0.6786	
720 minute summer	P5	3.000	S57	4.7	1.406	0.038	0.0383	
720 minute summer	S56	4.000	S57	0.2	0.196	0.005	0.0064	
720 minute summer	S57	3.001	S59	4.9	1.354	0.044	0.0691	
720 minute summer	S58	5.000	S59	0.2	0.200	0.005	0.0081	
720 minute summer	S59	3.002	S61	5.1	1.396	0.045	0.1929	
720 minute summer	S60	6.000	S61	-0.2	0.463	-0.005	0.0592	
720 minute summer	S61	1.007	S25	7.0	0.343	0.161	0.2049	
720 minute summer	S25	Pump	P60	0.6				
720 minute summer	P60	1.009	S63	1.0	0.042	0.081	0.2053	
720 minute summer	P9	7.000	P7	3.5	0.219	0.050	1.1521	
720 minute summer	P7	7.001	S63	2.1	0.071	0.059	0.1085	
720 minute summer	P7	3.000_1	P5	2.1	1.054	0.018	0.0077	
720 minute summer	S63	Hydro-Brake®	S28	1.6				44.4

Results for 20 year +10% CC 720 minute winter. 780 minute analysis at 15 minute timestep. Mass balance: 99.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	P1	375	22.713	0.047	1.5	0.4953	0.0000	OK
720 minute winter	P2	375	22.009	0.047	1.5	0.4948	0.0000	OK
720 minute winter	S52	375	21.471	0.092	1.5	0.1322	0.0000	OK
720 minute winter	S53	375	21.210	0.092	1.5	0.1322	0.0000	OK
720 minute winter	S54	375	20.879	0.092	1.5	0.1321	0.0000	OK
720 minute winter	S55	675	20.353	0.353	1.5	0.5053	0.0000	SURCHARGED
720 minute winter	P3	330	20.409	0.009	0.3	0.0127	0.0000	OK
720 minute winter	S62	675	20.352	0.582	1.7	0.8332	0.0000	SURCHARGED
720 minute winter	P5	375	21.982	0.025	3.2	0.0284	0.0000	OK
720 minute winter	S56	255	21.512	0.006	0.1	0.0083	0.0000	OK
720 minute winter	S57	375	21.346	0.027	3.3	0.0383	0.0000	OK
720 minute winter	S58	255	20.682	0.006	0.1	0.0083	0.0000	OK
720 minute winter	S59	375	20.471	0.027	3.4	0.0304	0.0000	OK
720 minute winter	S60	675	20.352	0.128	0.1	0.1442	0.0000	OK
720 minute winter	S61	600	20.352	0.646	4.8	0.9251	0.0000	SURCHARGED
720 minute winter	S25	660	20.351	0.660	4.7	58.8204	0.0000	SURCHARGED
720 minute winter	P60	375	22.767	0.752	0.7	0.8510	0.0000	SURCHARGED
720 minute winter	P9	375	23.035	0.030	2.7	0.0429	0.0000	OK
720 minute winter	P7	375	22.768	0.737	2.7	0.8331	0.0000	SURCHARGED
720 minute winter	S63	375	22.767	0.772	1.9	0.8737	0.0000	SURCHARGED
720 minute winter	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	1.5				
720 minute winter	P2	Orifice	S52	1.5				
720 minute winter	S52	V-Notch Weir	S53	1.5				
720 minute winter	S53	V-Notch Weir	S54	1.5				
720 minute winter	S54	V-Notch Weir	S55	1.5				
720 minute winter	S55	1.005	S62	1.4	0.272	0.079	0.4519	
720 minute winter	P3	2.000	S62	0.3	0.239	0.003	0.2905	
720 minute winter	S62	1.006	S61	1.6	0.096	0.045	0.6786	
720 minute winter	P5	3.000	S57	3.2	1.255	0.026	0.0291	
720 minute winter	S56	4.000	S57	0.1	0.190	0.003	0.0048	
720 minute winter	S57	3.001	S59	3.3	1.231	0.029	0.0511	
720 minute winter	S58	5.000	S59	0.1	0.192	0.003	0.0057	
720 minute winter	S59	3.002	S61	3.4	1.080	0.030	0.1959	
720 minute winter	S60	6.000	S61	-0.1	-0.006	-0.003	0.0766	
720 minute winter	S61	1.007	S25	4.7	0.349	0.109	0.2049	
720 minute winter	S25	Pump	P60	0.7				
720 minute winter	P60	1.009	S63	1.4	0.039	0.116	0.2053	
720 minute winter	P9	7.000	P7	2.7	0.345	0.038	1.1356	
720 minute winter	P7	7.001	S63	1.9	0.170	0.052	0.1085	
720 minute winter	P7	3.000_1	P5	1.3	0.916	0.011	0.0055	
720 minute winter	S63	Hydro-Brake®	S28	1.6				51.9

Results for 20 year +10% CC 960 minute summer. 1020 minute analysis at 15 minute timestep. Mass balance: 99.83%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	P1	495	22.715	0.049	1.6	0.5170	0.0000	OK
960 minute summer	P2	495	22.011	0.049	1.6	0.5162	0.0000	OK
960 minute summer	S52	495	21.474	0.095	1.6	0.1356	0.0000	OK
960 minute summer	S53	495	21.213	0.095	1.6	0.1355	0.0000	OK
960 minute summer	S54	495	20.882	0.095	1.6	0.1355	0.0000	OK
960 minute summer	S55	705	20.302	0.302	1.6	0.4326	0.0000	SURCHARGED
960 minute summer	P3	495	20.410	0.010	0.4	0.0144	0.0000	OK
960 minute summer	S62	705	20.302	0.532	2.0	0.7609	0.0000	SURCHARGED
960 minute summer	P5	495	21.984	0.027	3.7	0.0308	0.0000	OK
960 minute summer	S56	390	21.512	0.006	0.1	0.0083	0.0000	OK
960 minute summer	S57	495	21.348	0.029	3.8	0.0411	0.0000	OK
960 minute summer	S58	390	20.682	0.006	0.1	0.0083	0.0000	OK
960 minute summer	S59	495	20.474	0.030	3.9	0.0336	0.0000	OK
960 minute summer	S60	720	20.301	0.077	0.1	0.0875	0.0000	OK
960 minute summer	S61	705	20.301	0.595	5.6	0.8520	0.0000	SURCHARGED
960 minute summer	S25	720	20.301	0.610	5.5	54.3481	0.0000	SURCHARGED
960 minute summer	P60	495	22.769	0.754	0.6	0.8531	0.0000	SURCHARGED
960 minute summer	P9	495	23.037	0.032	3.0	0.0451	0.0000	OK
960 minute summer	P7	495	22.769	0.738	3.0	0.8351	0.0000	SURCHARGED
960 minute summer	S63	495	22.769	0.774	2.6	0.8757	0.0000	SURCHARGED
960 minute summer	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	1.6				
960 minute summer	P2	Orifice	S52	1.6				
960 minute summer	S52	V-Notch Weir	S53	1.6				
960 minute summer	S53	V-Notch Weir	S54	1.6				
960 minute summer	S54	V-Notch Weir	S55	1.6				
960 minute summer	S55	1.005	S62	1.6	0.271	0.087	0.4519	
960 minute summer	P3	2.000	S62	0.4	0.112	0.004	0.2913	
960 minute summer	S62	1.006	S61	1.7	0.069	0.051	0.6786	
960 minute summer	P5	3.000	S57	3.7	1.324	0.030	0.0326	
960 minute summer	S56	4.000	S57	0.1	0.196	0.003	0.0053	
960 minute summer	S57	3.001	S59	3.8	1.272	0.034	0.0579	
960 minute summer	S58	5.000	S59	0.1	0.200	0.003	0.0065	
960 minute summer	S59	3.002	S61	3.9	1.295	0.035	0.1932	
960 minute summer	S60	6.000	S61	-0.1	-0.005	-0.002	0.0611	
960 minute summer	S61	1.007	S25	5.5	0.343	0.128	0.2049	
960 minute summer	S25	Pump	P60	0.6				
960 minute summer	P60	1.009	S63	1.1	0.042	0.091	0.2053	
960 minute summer	P9	7.000	P7	3.0	0.219	0.042	1.1419	
960 minute summer	P7	7.001	S63	2.0	0.071	0.055	0.1085	
960 minute summer	P7	3.000_1	P5	1.5	0.972	0.014	0.0063	
960 minute summer	S63	Hydro-Brake®	S28	1.6				55.9

Results for 20 year +10% CC 960 minute winter. 1020 minute analysis at 15 minute timestep. Mass balance: 99.77%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	P1	510	22.706	0.040	1.2	0.4269	0.0000	OK
960 minute winter	P2	510	22.002	0.040	1.2	0.4269	0.0000	OK
960 minute winter	S52	510	21.464	0.085	1.2	0.1210	0.0000	OK
960 minute winter	S53	510	21.203	0.085	1.2	0.1210	0.0000	OK
960 minute winter	S54	510	20.872	0.085	1.2	0.1210	0.0000	OK
960 minute winter	S55	735	20.373	0.373	1.2	0.5336	0.0000	SURCHARGED
960 minute winter	P3	480	20.409	0.009	0.3	0.0127	0.0000	OK
960 minute winter	S62	765	20.372	0.602	1.4	0.8612	0.0000	SURCHARGED
960 minute winter	P5	525	21.978	0.021	2.2	0.0236	0.0000	OK
960 minute winter	S56	345	21.512	0.006	0.1	0.0083	0.0000	OK
960 minute winter	S57	525	21.342	0.022	2.3	0.0322	0.0000	OK
960 minute winter	S58	345	20.682	0.006	0.1	0.0083	0.0000	OK
960 minute winter	S59	525	20.467	0.023	2.4	0.0258	0.0000	OK
960 minute winter	S60	750	20.371	0.147	0.1	0.1667	0.0000	OK
960 minute winter	S61	735	20.372	0.666	3.6	0.9530	0.0000	SURCHARGED
960 minute winter	S25	750	20.371	0.680	3.5	60.6168	0.0000	SURCHARGED
960 minute winter	P60	525	22.763	0.748	0.7	0.8459	0.0000	SURCHARGED
960 minute winter	P9	480	23.032	0.027	2.2	0.0389	0.0000	OK
960 minute winter	P7	525	22.763	0.732	2.2	0.8279	0.0000	SURCHARGED
960 minute winter	S63	525	22.763	0.768	2.4	0.8686	0.0000	SURCHARGED
960 minute winter	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	1.2				
960 minute winter	P2	Orifice	S52	1.2				
960 minute winter	S52	V-Notch Weir	S53	1.2				
960 minute winter	S53	V-Notch Weir	S54	1.2				
960 minute winter	S54	V-Notch Weir	S55	1.2				
960 minute winter	S55	1.005	S62	1.1	0.251	0.062	0.4519	
960 minute winter	P3	2.000	S62	0.3	0.111	0.003	0.2905	
960 minute winter	S62	1.006	S61	1.3	0.077	0.038	0.6786	
960 minute winter	P5	3.000	S57	2.2	1.123	0.018	0.0224	
960 minute winter	S56	4.000	S57	0.1	0.190	0.003	0.0038	
960 minute winter	S57	3.001	S59	2.3	1.103	0.021	0.0399	
960 minute winter	S58	5.000	S59	0.1	0.192	0.003	0.0046	
960 minute winter	S59	3.002	S61	2.4	1.033	0.021	0.1954	
960 minute winter	S60	6.000	S61	0.1	0.005	0.002	0.0802	
960 minute winter	S61	1.007	S25	3.5	0.327	0.080	0.2049	
960 minute winter	S25	Pump	P60	0.7				
960 minute winter	P60	1.009	S63	1.2	0.044	0.101	0.2053	
960 minute winter	P9	7.000	P7	2.2	0.305	0.031	1.1246	
960 minute winter	P7	7.001	S63	2.4	0.197	0.067	0.1085	
960 minute winter	P7	3.000_1	P5	0.7	0.762	0.006	0.0035	
960 minute winter	S63	Hydro-Brake®	S28	1.6				63.9

Results for 20 year +10% CC 1440 minute summer. 1500 minute analysis at 30 minute timestep. Mass balance: 99.87%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	P1	750	22.706	0.040	1.2	0.4269	0.0000	OK
1440 minute summer	P2	750	22.002	0.040	1.2	0.4269	0.0000	OK
1440 minute summer	S52	750	21.464	0.085	1.2	0.1210	0.0000	OK
1440 minute summer	S53	750	21.203	0.085	1.2	0.1210	0.0000	OK
1440 minute summer	S54	750	20.872	0.085	1.2	0.1210	0.0000	OK
1440 minute summer	S55	1020	20.324	0.324	1.2	0.4632	0.0000	SURCHARGED
1440 minute summer	P3	750	20.409	0.009	0.3	0.0127	0.0000	OK
1440 minute summer	S62	1020	20.323	0.553	1.4	0.7909	0.0000	SURCHARGED
1440 minute summer	P5	780	21.977	0.020	1.9	0.0221	0.0000	OK
1440 minute summer	S56	630	21.512	0.006	0.1	0.0083	0.0000	OK
1440 minute summer	S57	780	21.340	0.021	2.0	0.0302	0.0000	OK
1440 minute summer	S58	630	20.682	0.006	0.1	0.0083	0.0000	OK
1440 minute summer	S59	780	20.466	0.022	2.1	0.0243	0.0000	OK
1440 minute summer	S60	990	20.323	0.099	0.0	0.1122	0.0000	OK
1440 minute summer	S61	1020	20.323	0.617	3.2	0.8826	0.0000	SURCHARGED
1440 minute summer	S25	990	20.323	0.632	3.1	56.3064	0.0000	SURCHARGED
1440 minute summer	P60	780	22.761	0.746	0.7	0.8439	0.0000	SURCHARGED
1440 minute summer	P9	750	23.033	0.028	2.3	0.0397	0.0000	OK
1440 minute summer	P7	780	22.761	0.730	2.3	0.8258	0.0000	SURCHARGED
1440 minute summer	S63	780	22.761	0.766	2.7	0.8665	0.0000	SURCHARGED
1440 minute summer	S28	30	21.965	0.000	1.6	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	P1	Orifice	P2	1.2				
1440 minute summer	P2	Orifice	S52	1.2				
1440 minute summer	S52	V-Notch Weir	S53	1.2				
1440 minute summer	S53	V-Notch Weir	S54	1.2				
1440 minute summer	S54	V-Notch Weir	S55	1.2				
1440 minute summer	S55	1.005	S62	1.1	0.226	0.061	0.4519	
1440 minute summer	P3	2.000	S62	0.3	0.105	0.003	0.2905	
1440 minute summer	S62	1.006	S61	1.3	0.051	0.038	0.6786	
1440 minute summer	P5	3.000	S57	1.9	1.078	0.015	0.0204	
1440 minute summer	S56	4.000	S57	0.1	0.196	0.003	0.0035	
1440 minute summer	S57	3.001	S59	2.0	1.059	0.018	0.0364	
1440 minute summer	S58	5.000	S59	0.1	0.201	0.003	0.0042	
1440 minute summer	S59	3.002	S61	2.1	1.033	0.019	0.1932	
1440 minute summer	S60	6.000	S61	0.1	0.003	0.001	0.0684	
1440 minute summer	S61	1.007	S25	3.1	0.299	0.072	0.2049	
1440 minute summer	S25	Pump	P60	0.7				
1440 minute summer	P60	1.009	S63	1.5	0.040	0.120	0.2053	
1440 minute summer	P9	7.000	P7	2.3	0.158	0.033	1.1269	
1440 minute summer	P7	7.001	S63	2.2	0.069	0.062	0.1085	
1440 minute summer	P7	3.000_1	P5	0.5	0.695	0.004	0.0028	
1440 minute summer	S63	Hydro-Brake®	S28	1.6				74.2

Results for 20 year +10% CC 1440 minute winter. 1500 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	P1	750	22.699	0.033	0.9	0.3524	0.0000	OK
1440 minute winter	P2	780	21.995	0.033	0.9	0.3524	0.0000	OK
1440 minute winter	S52	780	21.454	0.075	0.9	0.1078	0.0000	OK
1440 minute winter	S53	780	21.193	0.075	0.9	0.1078	0.0000	OK
1440 minute winter	S54	780	20.862	0.075	0.9	0.1078	0.0000	OK
1440 minute winter	S55	1050	20.375	0.375	0.9	0.5364	0.0000	SURCHARGED
1440 minute winter	P3	630	20.407	0.007	0.2	0.0105	0.0000	OK
1440 minute winter	S62	1050	20.374	0.604	1.0	0.8650	0.0000	SURCHARGED
1440 minute winter	P5	720	21.973	0.016	1.2	0.0179	0.0000	OK
1440 minute winter	S56	600	21.512	0.006	0.1	0.0083	0.0000	OK
1440 minute winter	S57	720	21.336	0.017	1.3	0.0246	0.0000	OK
1440 minute winter	S58	600	20.682	0.006	0.1	0.0083	0.0000	OK
1440 minute winter	S59	720	20.462	0.018	1.4	0.0201	0.0000	OK
1440 minute winter	S60	1080	20.375	0.151	0.1	0.1704	0.0000	SURCHARGED
1440 minute winter	S61	1080	20.374	0.668	2.4	0.9565	0.0000	SURCHARGED
1440 minute winter	S25	1080	20.375	0.684	2.3	60.9040	0.0000	SURCHARGED
1440 minute winter	P60	990	22.531	0.516	0.7	0.5840	0.0000	SURCHARGED
1440 minute winter	P9	750	23.029	0.024	1.7	0.0345	0.0000	OK
1440 minute winter	P7	990	22.531	0.500	1.7	0.5656	0.0000	SURCHARGED
1440 minute winter	S63	990	22.531	0.536	4.0	0.6060	0.0000	SURCHARGED
1440 minute winter	S28	30	21.965	0.000	1.6	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	P1	Orifice	P2	0.9				
1440 minute winter	P2	Orifice	S52	0.9				
1440 minute winter	S52	V-Notch Weir	S53	0.9				
1440 minute winter	S53	V-Notch Weir	S54	0.9				
1440 minute winter	S54	V-Notch Weir	S55	0.9				
1440 minute winter	S55	1.005	S62	0.9	0.224	0.049	0.4519	
1440 minute winter	P3	2.000	S62	0.2	0.105	0.002	0.2896	
1440 minute winter	S62	1.006	S61	1.2	0.065	0.036	0.6786	
1440 minute winter	P5	3.000	S57	1.2	0.927	0.010	0.0149	
1440 minute winter	S56	4.000	S57	0.1	0.196	0.003	0.0027	
1440 minute winter	S57	3.001	S59	1.3	0.922	0.012	0.0271	
1440 minute winter	S58	5.000	S59	0.1	0.201	0.003	0.0033	
1440 minute winter	S59	3.002	S61	1.4	0.935	0.013	0.1936	
1440 minute winter	S60	6.000	S61	0.2	0.010	0.004	0.0803	
1440 minute winter	S61	1.007	S25	2.3	0.294	0.053	0.2049	
1440 minute winter	S25	Pump	P60	0.7				
1440 minute winter	P60	1.009	S63	1.6	0.043	0.130	0.2053	
1440 minute winter	P9	7.000	P7	1.7	0.156	0.024	1.1104	
1440 minute winter	P7	7.001	S63	2.7	0.068	0.076	0.1085	
1440 minute winter	P7	3.000_1	P5	0.0	0.000	0.000	0.0000	
1440 minute winter	S63	Hydro-Brake®	S28	1.6				84.4

Results for 100 year +20% CC 15 minute summer. 75 minute analysis at 1 minute timestep. Mass balance: 99.20%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute summer	P1	13	22.954	0.288	17.0	3.0416	0.0000	FLOOD RISK
15 minute summer	P2	17	22.154	0.192	10.2	2.0298	0.0000	FLOOD RISK
15 minute summer	S52	17	21.558	0.179	7.9	0.2569	0.0000	OK
15 minute summer	S53	17	21.298	0.180	7.9	0.2569	0.0000	OK
15 minute summer	S54	17	20.966	0.179	7.9	0.2568	0.0000	OK
15 minute summer	S55	18	20.116	0.116	7.9	0.1667	0.0000	OK
15 minute summer	P3	10	20.428	0.028	3.7	0.0404	0.0000	OK
15 minute summer	S62	75	19.972	0.202	8.3	0.2897	0.0000	OK
15 minute summer	P5	11	22.066	0.109	50.0	0.1229	0.0000	OK
15 minute summer	S56	11	21.526	0.020	1.5	0.0292	0.0000	OK
15 minute summer	S57	11	21.431	0.112	51.7	0.1604	0.0000	OK
15 minute summer	S58	11	20.696	0.020	1.5	0.0292	0.0000	OK
15 minute summer	S59	11	20.570	0.126	53.4	0.1426	0.0000	OK
15 minute summer	S60	11	20.236	0.012	0.5	0.0140	0.0000	OK
15 minute summer	S61	75	19.972	0.266	55.4	0.3812	0.0000	OK
15 minute summer	S25	75	19.972	0.281	55.5	25.0707	0.0000	SURCHARGED
15 minute summer	P60	11	22.844	0.829	5.1	0.9382	0.0000	SURCHARGED
15 minute summer	P9	10	23.108	0.103	31.1	0.1475	0.0000	OK
15 minute summer	P7	11	22.844	0.813	30.7	0.9195	0.0000	SURCHARGED
15 minute summer	S63	11	22.844	0.849	11.7	0.9603	0.0000	SURCHARGED
15 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	10.2				
15 minute summer	P2	Orifice	S52	7.9				
15 minute summer	S52	V-Notch Weir	S53	7.9				
15 minute summer	S53	V-Notch Weir	S54	7.9				
15 minute summer	S54	V-Notch Weir	S55	7.9				
15 minute summer	S55	1.005	S62	7.9	0.499	0.430	0.1800	
15 minute summer	P3	2.000	S62	3.7	0.758	0.034	0.2716	
15 minute summer	S62	1.006	S61	8.9	0.203	0.259	0.5622	
15 minute summer	P5	3.000	S57	50.2	2.595	0.409	0.2233	
15 minute summer	S56	4.000	S57	1.5	0.328	0.039	0.0320	
15 minute summer	S57	3.001	S59	51.9	2.436	0.466	0.4100	
15 minute summer	S58	5.000	S59	1.5	0.305	0.039	0.0437	
15 minute summer	S59	3.002	S61	53.7	2.552	0.482	0.1981	
15 minute summer	S60	6.000	S61	0.5	0.742	0.013	0.0031	
15 minute summer	S61	1.007	S25	55.5	1.676	1.282	0.1913	
15 minute summer	S25	Pump	P60	0.0				
15 minute summer	P60	1.009	S63	-5.1	-0.188	-0.423	0.2053	
15 minute summer	P9	7.000	P7	30.7	0.946	0.435	1.5221	
15 minute summer	P7	7.001	S63	11.7	0.450	0.328	0.1085	
15 minute summer	P7	3.000_1	P5	28.6	2.063	0.257	0.0547	
15 minute summer	S63	Hydro-Brake®	S28	1.6				6.0

Results for 100 year +20% CC 15 minute winter. 75 minute analysis at 1 minute timestep. Mass balance: 99.38%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	P1	13	22.981	0.315	17.8	3.3228	0.0000	FLOOD RISK
15 minute winter	P2	17	22.175	0.213	10.7	2.2451	0.0000	FLOOD RISK
15 minute winter	S52	17	21.563	0.184	8.4	0.2637	0.0000	OK
15 minute winter	S53	17	21.302	0.184	8.4	0.2635	0.0000	OK
15 minute winter	S54	18	20.971	0.184	8.4	0.2635	0.0000	OK
15 minute winter	S55	18	20.121	0.121	8.4	0.1728	0.0000	OK
15 minute winter	P3	10	20.429	0.029	3.9	0.0414	0.0000	OK
15 minute winter	S62	75	20.014	0.244	8.9	0.3485	0.0000	OK
15 minute winter	P5	11	22.069	0.112	52.4	0.1264	0.0000	OK
15 minute winter	S56	10	21.527	0.021	1.6	0.0299	0.0000	OK
15 minute winter	S57	11	21.434	0.115	54.0	0.1649	0.0000	OK
15 minute winter	S58	10	20.697	0.021	1.6	0.0299	0.0000	OK
15 minute winter	S59	11	20.574	0.130	55.8	0.1467	0.0000	OK
15 minute winter	S60	11	20.236	0.012	0.5	0.0140	0.0000	OK
15 minute winter	S61	75	20.014	0.308	61.7	0.4401	0.0000	OK
15 minute winter	S25	75	20.014	0.323	61.3	28.7352	0.0000	SURCHARGED
15 minute winter	P60	11	22.847	0.832	5.4	0.9413	0.0000	SURCHARGED
15 minute winter	P9	11	23.113	0.108	32.7	0.1539	0.0000	OK
15 minute winter	P7	11	22.847	0.816	31.5	0.9230	0.0000	SURCHARGED
15 minute winter	S63	11	22.847	0.852	12.1	0.9637	0.0000	SURCHARGED
15 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	10.7				
15 minute winter	P2	Orifice	S52	8.4				
15 minute winter	S52	V-Notch Weir	S53	8.4				
15 minute winter	S53	V-Notch Weir	S54	8.4				
15 minute winter	S54	V-Notch Weir	S55	8.4				
15 minute winter	S55	1.005	S62	8.4	0.508	0.460	0.1884	
15 minute winter	P3	2.000	S62	3.9	0.758	0.035	0.2871	
15 minute winter	S62	1.006	S61	9.4	0.183	0.275	0.6345	
15 minute winter	P5	3.000	S57	52.5	2.618	0.427	0.2314	
15 minute winter	S56	4.000	S57	1.6	0.325	0.041	0.0328	
15 minute winter	S57	3.001	S59	54.2	2.462	0.487	0.4244	
15 minute winter	S58	5.000	S59	1.6	0.298	0.042	0.0447	
15 minute winter	S59	3.002	S61	55.9	2.575	0.502	0.2048	
15 minute winter	S60	6.000	S61	0.5	0.742	0.013	0.0031	
15 minute winter	S61	1.007	S25	61.3	1.698	1.416	0.2041	
15 minute winter	S25	Pump	P60	0.0				
15 minute winter	P60	1.009	S63	-5.4	-0.205	-0.442	0.2053	
15 minute winter	P9	7.000	P7	31.5	0.979	0.446	1.5483	
15 minute winter	P7	7.001	S63	12.1	0.447	0.338	0.1085	
15 minute winter	P7	3.000_1	P5	30.1	2.086	0.271	0.0569	
15 minute winter	S63	Hydro-Brake®	S28	1.6				6.0

Results for 100 year +20% CC 30 minute summer. 90 minute analysis at 1 minute timestep. Mass balance: 99.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
30 minute summer	P1	20	22.977	0.311	16.5	3.2826	0.0000	FLOOD RISK
30 minute summer	P2	25	22.183	0.221	10.7	2.3292	0.0000	FLOOD RISK
30 minute summer	S52	25	21.565	0.186	8.6	0.2663	0.0000	OK
30 minute summer	S53	25	21.304	0.186	8.6	0.2663	0.0000	OK
30 minute summer	S54	25	20.973	0.186	8.6	0.2662	0.0000	OK
30 minute summer	S55	23	20.118	0.118	8.6	0.1684	0.0000	OK
30 minute summer	P3	18	20.428	0.028	3.6	0.0400	0.0000	OK
30 minute summer	S62	90	20.106	0.336	9.5	0.4809	0.0000	SURCHARGED
30 minute summer	P5	18	22.066	0.109	50.7	0.1238	0.0000	OK
30 minute summer	S56	18	21.526	0.020	1.5	0.0292	0.0000	OK
30 minute summer	S57	18	21.432	0.113	52.2	0.1611	0.0000	OK
30 minute summer	S58	18	20.696	0.020	1.5	0.0292	0.0000	OK
30 minute summer	S59	18	20.570	0.126	53.6	0.1426	0.0000	OK
30 minute summer	S60	19	20.236	0.012	0.5	0.0140	0.0000	OK
30 minute summer	S61	90	20.106	0.400	61.4	0.5725	0.0000	SURCHARGED
30 minute summer	S25	90	20.106	0.415	60.7	36.9785	0.0000	SURCHARGED
30 minute summer	P60	18	22.844	0.829	4.3	0.9380	0.0000	SURCHARGED
30 minute summer	P9	18	23.107	0.102	30.3	0.1463	0.0000	OK
30 minute summer	P7	18	22.844	0.813	30.3	0.9199	0.0000	SURCHARGED
30 minute summer	S63	18	22.844	0.849	9.4	0.9606	0.0000	SURCHARGED
30 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	10.7				
30 minute summer	P2	Orifice	S52	8.6				
30 minute summer	S52	V-Notch Weir	S53	8.6				
30 minute summer	S53	V-Notch Weir	S54	8.6				
30 minute summer	S54	V-Notch Weir	S55	8.6				
30 minute summer	S55	1.005	S62	8.8	0.496	0.482	0.3211	
30 minute summer	P3	2.000	S62	3.6	0.721	0.033	0.2944	
30 minute summer	S62	1.006	S61	9.7	0.166	0.284	0.6786	
30 minute summer	P5	3.000	S57	50.7	2.598	0.412	0.2250	
30 minute summer	S56	4.000	S57	1.5	0.319	0.039	0.0321	
30 minute summer	S57	3.001	S59	52.1	2.440	0.468	0.4110	
30 minute summer	S58	5.000	S59	1.5	0.287	0.039	0.0436	
30 minute summer	S59	3.002	S61	53.6	2.550	0.481	0.1980	
30 minute summer	S60	6.000	S61	0.5	0.742	0.013	0.0252	
30 minute summer	S61	1.007	S25	60.7	1.594	1.403	0.2049	
30 minute summer	S25	Pump	P60	0.0				
30 minute summer	P60	1.009	S63	-4.3	-0.205	-0.352	0.2053	
30 minute summer	P9	7.000	P7	30.3	0.914	0.429	1.5169	
30 minute summer	P7	7.001	S63	9.4	0.415	0.264	0.1085	
30 minute summer	P7	3.000_1	P5	28.8	2.064	0.258	0.0549	
30 minute summer	S63	Hydro-Brake®	S28	1.6				7.2

Results for 100 year +20% CC 30 minute winter. 90 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 winter	P1	21	22.981	0.315	15.0	3.3276	0.0000	FLOOD RISK
30 minute winter	P2	25	22.198	0.236	10.7	2.4925	0.0000	FLOOD RISK
30 minute winter	S52	26	21.568	0.189	9.0	0.2710	0.0000	OK
30 minute winter	S53	26	21.307	0.189	9.0	0.2710	0.0000	OK
30 minute winter	S54	26	20.976	0.189	9.0	0.2710	0.0000	OK
30 minute winter	S55	90	20.165	0.165	9.0	0.2363	0.0000	OK
30 minute winter	P3	18	20.427	0.027	3.3	0.0384	0.0000	OK
30 minute winter	S62	90	20.165	0.395	10.3	0.5654	0.0000	SURCHARGED
30 minute winter	P5	18	22.060	0.103	45.7	0.1161	0.0000	OK
30 minute winter	S56	19	21.525	0.019	1.3	0.0273	0.0000	OK
30 minute winter	S57	18	21.425	0.106	47.0	0.1512	0.0000	OK
30 minute winter	S58	19	20.695	0.019	1.3	0.0273	0.0000	OK
30 minute winter	S59	18	20.562	0.118	48.3	0.1329	0.0000	OK
30 minute winter	S60	18	20.236	0.012	0.5	0.0140	0.0000	OK
30 minute winter	S61	90	20.165	0.459	56.6	0.6570	0.0000	SURCHARGED
30 minute winter	S25	90	20.165	0.474	55.8	42.2375	0.0000	SURCHARGED
30 minute winter	P60	18	22.838	0.823	3.3	0.9311	0.0000	SURCHARGED
30 minute winter	P9	18	23.102	0.097	27.4	0.1382	0.0000	OK
30 minute winter	P7	18	22.838	0.807	27.4	0.9132	0.0000	SURCHARGED
30 minute winter	S63	18	22.838	0.843	7.8	0.9539	0.0000	SURCHARGED
30 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	10.7				
30 minute winter	P2	Orifice	S52	9.0				
30 minute winter	S52	V-Notch Weir	S53	9.0				
30 minute winter	S53	V-Notch Weir	S54	9.0				
30 minute winter	S54	V-Notch Weir	S55	9.0				
30 minute winter	S55	1.005	S62	8.9	0.463	0.488	0.4034	
30 minute winter	P3	2.000	S62	3.3	0.728	0.030	0.3020	
30 minute winter	S62	1.006	S61	9.6	0.157	0.280	0.6786	
30 minute winter	P5	3.000	S57	45.7	2.543	0.372	0.2072	
30 minute winter	S56	4.000	S57	1.3	0.290	0.034	0.0299	
30 minute winter	S57	3.001	S59	47.0	2.392	0.421	0.3777	
30 minute winter	S58	5.000	S59	1.3	0.276	0.034	0.0407	
30 minute winter	S59	3.002	S61	48.2	2.495	0.433	0.1822	
30 minute winter	S60	6.000	S61	0.5	0.741	0.013	0.0401	
30 minute winter	S61	1.007	S25	55.8	1.490	1.291	0.2049	
30 minute winter	S25	Pump	P60	0.0				
30 minute winter	P60	1.009	S63	-3.3	-0.210	-0.269	0.2053	
30 minute winter	P9	7.000	P7	27.4	0.871	0.388	1.4837	
30 minute winter	P7	7.001	S63	7.8	0.395	0.219	0.1085	
30 minute winter	P7	3.000_1	P5	25.9	2.016	0.232	0.0506	
30 minute winter	S63	Hydro-Brake®	S28	1.6				7.2

Results for 100 year +20% CC 60 minute summer. 120 minute analysis at 1 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
60 minute summer	P1	36	22.939	0.273	13.2	2.8857	0.0000	FLOOD RISK
60 minute summer	P2	40	22.177	0.215	9.9	2.2704	0.0000	FLOOD RISK
60 minute summer	S52	41	21.564	0.185	8.5	0.2644	0.0000	OK
60 minute summer	S53	41	21.303	0.185	8.5	0.2645	0.0000	OK
60 minute summer	S54	41	20.972	0.185	8.5	0.2645	0.0000	OK
60 minute summer	S55	119	20.250	0.250	8.5	0.3579	0.0000	SURCHARGED
60 minute summer	P3	33	20.425	0.025	2.9	0.0362	0.0000	OK
60 minute summer	S62	120	20.250	0.480	9.6	0.6869	0.0000	SURCHARGED
60 minute summer	P5	33	22.052	0.095	40.2	0.1074	0.0000	OK
60 minute summer	S56	33	21.524	0.018	1.2	0.0262	0.0000	OK
60 minute summer	S57	33	21.417	0.098	41.4	0.1403	0.0000	OK
60 minute summer	S58	33	20.694	0.018	1.2	0.0263	0.0000	OK
60 minute summer	S59	33	20.552	0.108	42.6	0.1227	0.0000	OK
60 minute summer	S60	120	20.250	0.026	0.4	0.0295	0.0000	OK
60 minute summer	S61	120	20.250	0.544	50.3	0.7785	0.0000	SURCHARGED
60 minute summer	S25	120	20.250	0.559	49.5	49.8037	0.0000	SURCHARGED
60 minute summer	P60	33	22.832	0.817	2.4	0.9235	0.0000	SURCHARGED
60 minute summer	P9	33	23.095	0.090	24.2	0.1291	0.0000	OK
60 minute summer	P7	33	22.832	0.801	24.2	0.9055	0.0000	SURCHARGED
60 minute summer	S63	33	22.832	0.837	6.2	0.9461	0.0000	SURCHARGED
60 minute summer	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	9.9				
60 minute summer	P2	Orifice	S52	8.5				
60 minute summer	S52	V-Notch Weir	S53	8.5				
60 minute summer	S53	V-Notch Weir	S54	8.5				
60 minute summer	S54	V-Notch Weir	S55	8.5				
60 minute summer	S55	1.005	S62	8.1	0.453	0.443	0.4519	
60 minute summer	P3	2.000	S62	2.9	0.640	0.027	0.3023	
60 minute summer	S62	1.006	S61	8.6	0.195	0.251	0.6786	
60 minute summer	P5	3.000	S57	40.2	2.473	0.327	0.1875	
60 minute summer	S56	4.000	S57	1.2	0.253	0.031	0.0276	
60 minute summer	S57	3.001	S59	41.4	2.330	0.371	0.3416	
60 minute summer	S58	5.000	S59	1.2	0.243	0.032	0.0375	
60 minute summer	S59	3.002	S61	42.5	2.427	0.382	0.1951	
60 minute summer	S60	6.000	S61	0.4	0.693	0.010	0.0448	
60 minute summer	S61	1.007	S25	49.5	1.160	1.144	0.2049	
60 minute summer	S25	Pump	P60	0.0				
60 minute summer	P60	1.009	S63	-2.4	-0.154	-0.198	0.2053	
60 minute summer	P9	7.000	P7	24.2	0.787	0.342	1.4462	
60 minute summer	P7	7.001	S63	6.2	0.409	0.173	0.1085	
60 minute summer	P7	3.000_1	P5	22.7	1.959	0.204	0.0457	
60 minute summer	S63	Hydro-Brake®	S28	1.6				9.5

Results for 100 year +20% CC 60 minute winter. 120 minute analysis at 1 minute timestep. Mass balance: 99.18%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
60 minute winter	P1	37	22.908	0.242	10.7	2.5606	0.0000	FLOOD RISK
60 minute winter	P2	41	22.171	0.209	9.2	2.2093	0.0000	FLOOD RISK
60 minute winter	S52	42	21.562	0.183	8.3	0.2626	0.0000	OK
60 minute winter	S53	42	21.302	0.184	8.3	0.2626	0.0000	OK
60 minute winter	S54	42	20.971	0.184	8.3	0.2626	0.0000	OK
60 minute winter	S55	71	20.323	0.323	8.3	0.4624	0.0000	SURCHARGED
60 minute winter	P3	34	20.423	0.023	2.3	0.0324	0.0000	OK
60 minute winter	S62	71	20.323	0.553	9.5	0.7914	0.0000	SURCHARGED
60 minute winter	P5	33	22.040	0.083	32.2	0.0943	0.0000	OK
60 minute winter	S56	33	21.523	0.017	1.0	0.0241	0.0000	OK
60 minute winter	S57	33	21.405	0.086	33.2	0.1237	0.0000	OK
60 minute winter	S58	33	20.693	0.017	1.0	0.0241	0.0000	OK
60 minute winter	S59	33	20.539	0.095	34.2	0.1072	0.0000	OK
60 minute winter	S60	74	20.323	0.099	0.3	0.1121	0.0000	OK
60 minute winter	S61	74	20.323	0.617	42.0	0.8830	0.0000	SURCHARGED
60 minute winter	S25	73	20.323	0.632	41.0	56.2698	0.0000	SURCHARGED
60 minute winter	P60	33	22.821	0.806	2.0	0.9119	0.0000	SURCHARGED
60 minute winter	P9	33	23.086	0.081	19.6	0.1152	0.0000	OK
60 minute winter	P7	33	22.821	0.790	19.6	0.8939	0.0000	SURCHARGED
60 minute winter	S63	33	22.821	0.826	5.3	0.9345	0.0000	SURCHARGED
60 minute winter	S28	1	21.965	0.000	1.6	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	P1	Orifice	P2	9.2				
60 minute winter	P2	Orifice	S52	8.3				
60 minute winter	S52	V-Notch Weir	S53	8.3				
60 minute winter	S53	V-Notch Weir	S54	8.3				
60 minute winter	S54	V-Notch Weir	S55	8.3				
60 minute winter	S55	1.005	S62	7.8	0.464	0.427	0.4519	
60 minute winter	P3	2.000	S62	2.3	0.615	0.021	0.3014	
60 minute winter	S62	1.006	S61	8.4	0.210	0.245	0.6786	
60 minute winter	P5	3.000	S57	32.2	2.351	0.262	0.1581	
60 minute winter	S56	4.000	S57	1.0	0.255	0.026	0.0238	
60 minute winter	S57	3.001	S59	33.2	2.221	0.298	0.2876	
60 minute winter	S58	5.000	S59	1.0	0.245	0.026	0.0323	
60 minute winter	S59	3.002	S61	34.2	2.309	0.307	0.2091	
60 minute winter	S60	6.000	S61	0.3	0.635	0.008	0.0683	
60 minute winter	S61	1.007	S25	41.0	1.037	0.947	0.2049	
60 minute winter	S25	Pump	P60	0.7				
60 minute winter	P60	1.009	S63	-2.0	-0.167	-0.164	0.2053	
60 minute winter	P9	7.000	P7	19.6	0.764	0.277	1.3903	
60 minute winter	P7	7.001	S63	5.3	0.378	0.150	0.1085	
60 minute winter	P7	3.000_1	P5	18.1	1.860	0.163	0.0384	
60 minute winter	S63	Hydro-Brake®	S28	1.6				9.5

Results for 100 year +20% CC 120 minute summer. 180 minute analysis at 2 minute timestep. Mass balance: 99.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute summer	P1	66	22.861	0.195	9.1	2.0545	0.0000	FLOOD RISK
120 minute summer	P2	70	22.135	0.173	7.9	1.8230	0.0000	FLOOD RISK
120 minute summer	S52	72	21.553	0.174	7.3	0.2493	0.0000	OK
120 minute summer	S53	72	21.292	0.174	7.3	0.2494	0.0000	OK
120 minute summer	S54	72	20.961	0.174	7.3	0.2494	0.0000	OK
120 minute summer	S55	128	20.388	0.388	7.3	0.5549	0.0000	SURCHARGED
120 minute summer	P3	64	20.421	0.021	2.0	0.0303	0.0000	OK
120 minute summer	S62	132	20.387	0.617	8.4	0.8833	0.0000	SURCHARGED
120 minute summer	P5	64	22.033	0.076	27.2	0.0858	0.0000	OK
120 minute summer	S56	64	21.521	0.015	0.8	0.0217	0.0000	OK
120 minute summer	S57	64	21.398	0.079	28.0	0.1126	0.0000	OK
120 minute summer	S58	64	20.691	0.015	0.8	0.0217	0.0000	OK
120 minute summer	S59	64	20.530	0.086	28.8	0.0968	0.0000	OK
120 minute summer	S60	132	20.386	0.162	0.3	0.1835	0.0000	SURCHARGED
120 minute summer	S61	130	20.387	0.681	35.4	0.9742	0.0000	SURCHARGED
120 minute summer	S25	130	20.386	0.695	34.5	61.9092	0.0000	SURCHARGED
120 minute summer	P60	64	22.814	0.799	1.2	0.9041	0.0000	SURCHARGED
120 minute summer	P9	64	23.079	0.074	16.7	0.1060	0.0000	OK
120 minute summer	P7	64	22.814	0.783	16.7	0.8861	0.0000	SURCHARGED
120 minute summer	S63	64	22.814	0.819	3.9	0.9268	0.0000	SURCHARGED
120 minute summer	S28	2	21.965	0.000	1.6	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	P1	Orifice	P2	7.9				
120 minute summer	P2	Orifice	S52	7.3				
120 minute summer	S52	V-Notch Weir	S53	7.3				
120 minute summer	S53	V-Notch Weir	S54	7.3				
120 minute summer	S54	V-Notch Weir	S55	7.3				
120 minute summer	S55	1.005	S62	6.7	0.444	0.370	0.4519	
120 minute summer	P3	2.000	S62	2.0	0.549	0.018	0.3004	
120 minute summer	S62	1.006	S61	7.3	0.178	0.212	0.6786	
120 minute summer	P5	3.000	S57	27.2	2.259	0.222	0.1390	
120 minute summer	S56	4.000	S57	0.8	0.242	0.021	0.0211	
120 minute summer	S57	3.001	S59	28.0	2.139	0.252	0.2521	
120 minute summer	S58	5.000	S59	0.8	0.234	0.021	0.0285	
120 minute summer	S59	3.002	S61	28.8	2.217	0.259	0.2106	
120 minute summer	S60	6.000	S61	0.3	0.635	0.008	0.0803	
120 minute summer	S61	1.007	S25	34.5	0.677	0.799	0.2049	
120 minute summer	S25	Pump	P60	0.7				
120 minute summer	P60	1.009	S63	-1.2	-0.079	-0.103	0.2053	
120 minute summer	P9	7.000	P7	16.7	0.727	0.236	1.3536	
120 minute summer	P7	7.001	S63	3.9	0.376	0.109	0.1085	
120 minute summer	P7	3.000_1	P5	15.2	1.786	0.137	0.0336	
120 minute summer	S63	Hydro-Brake®	S28	1.6				14.2

Results for 100 year +20% CC 120 minute winter. 180 minute analysis at 2 minute timestep. Mass balance: 98.75%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
120 minute winter	P1	68	22.819	0.153	7.0	1.6193	0.0000	FLOOD RISK
120 minute winter	P2	72	22.109	0.147	6.7	1.5477	0.0000	FLOOD RISK
120 minute winter	S52	72	21.545	0.166	6.5	0.2377	0.0000	OK
120 minute winter	S53	72	21.284	0.166	6.5	0.2377	0.0000	OK
120 minute winter	S54	72	20.953	0.166	6.5	0.2377	0.0000	OK
120 minute winter	S55	132	20.490	0.490	6.5	0.7012	0.0000	SURCHARGED
120 minute winter	P3	128	20.490	0.090	1.5	0.1286	0.0000	OK
120 minute winter	S62	128	20.490	0.720	7.4	1.0305	0.0000	SURCHARGED
120 minute winter	P5	64	22.022	0.065	20.7	0.0738	0.0000	OK
120 minute winter	S56	60	21.519	0.013	0.6	0.0189	0.0000	OK
120 minute winter	S57	64	21.387	0.068	21.3	0.0973	0.0000	OK
120 minute winter	S58	60	20.689	0.013	0.6	0.0189	0.0000	OK
120 minute winter	S59	64	20.517	0.073	21.9	0.0828	0.0000	OK
120 minute winter	S60	128	20.489	0.265	0.3	0.2997	0.0000	SURCHARGED
120 minute winter	S61	130	20.492	0.786	28.3	1.1250	0.0000	SURCHARGED
120 minute winter	S25	128	20.489	0.798	27.7	71.0842	0.0000	SURCHARGED
120 minute winter	P60	64	22.805	0.790	1.1	0.8932	0.0000	SURCHARGED
120 minute winter	P9	64	23.070	0.065	12.9	0.0927	0.0000	OK
120 minute winter	P7	64	22.805	0.774	12.9	0.8752	0.0000	SURCHARGED
120 minute winter	S63	64	22.805	0.810	3.4	0.9159	0.0000	SURCHARGED
120 minute winter	S28	2	21.965	0.000	1.6	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	P1	Orifice	P2	6.7				
120 minute winter	P2	Orifice	S52	6.5				
120 minute winter	S52	V-Notch Weir	S53	6.5				
120 minute winter	S53	V-Notch Weir	S54	6.5				
120 minute winter	S54	V-Notch Weir	S55	6.5				
120 minute winter	S55	1.005	S62	6.1	0.434	0.334	0.4519	
120 minute winter	P3	2.000	S62	1.5	0.494	0.014	0.3936	
120 minute winter	S62	1.006	S61	6.8	0.192	0.198	0.6786	
120 minute winter	P5	3.000	S57	20.7	2.113	0.169	0.1132	
120 minute winter	S56	4.000	S57	0.6	0.230	0.016	0.0175	
120 minute winter	S57	3.001	S59	21.3	2.067	0.191	0.2047	
120 minute winter	S58	5.000	S59	0.6	0.223	0.016	0.0233	
120 minute winter	S59	3.002	S61	21.9	2.073	0.197	0.2241	
120 minute winter	S60	6.000	S61	-0.2	0.562	-0.006	0.0803	
120 minute winter	S61	1.007	S25	27.7	0.720	0.642	0.2049	
120 minute winter	S25	Pump	P60	0.8				
120 minute winter	P60	1.009	S63	1.3	-0.132	0.107	0.2053	
120 minute winter	P9	7.000	P7	12.9	0.637	0.183	1.3026	
120 minute winter	P7	7.001	S63	3.4	0.343	0.096	0.1085	
120 minute winter	P7	3.000_1	P5	11.4	1.666	0.103	0.0270	
120 minute winter	S63	Hydro-Brake®	S28	1.6				14.2

Results for 100 year +20% CC 180 minute summer. 240 minute analysis at 4 minute timestep. Mass balance: 98.83%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute summer	P1	96	22.813	0.147	7.0	1.5564	0.0000	FLOOD RISK
180 minute summer	P2	100	22.101	0.139	6.5	1.4702	0.0000	FLOOD RISK
180 minute summer	S52	100	21.542	0.163	6.2	0.2337	0.0000	OK
180 minute summer	S53	100	21.281	0.163	6.2	0.2335	0.0000	OK
180 minute summer	S54	104	20.950	0.163	6.2	0.2336	0.0000	OK
180 minute summer	S55	192	20.468	0.468	6.2	0.6692	0.0000	SURCHARGED
180 minute summer	P3	192	20.468	0.068	1.5	0.0979	0.0000	OK
180 minute summer	S62	188	20.467	0.697	7.0	0.9979	0.0000	SURCHARGED
180 minute summer	P5	96	22.022	0.065	20.6	0.0736	0.0000	OK
180 minute summer	S56	96	21.519	0.013	0.6	0.0189	0.0000	OK
180 minute summer	S57	96	21.387	0.068	21.2	0.0970	0.0000	OK
180 minute summer	S58	96	20.689	0.013	0.6	0.0189	0.0000	OK
180 minute summer	S59	96	20.517	0.073	21.8	0.0826	0.0000	OK
180 minute summer	S60	188	20.467	0.243	0.2	0.2751	0.0000	SURCHARGED
180 minute summer	S61	188	20.467	0.761	28.0	1.0895	0.0000	SURCHARGED
180 minute summer	S25	188	20.467	0.776	27.5	69.1590	0.0000	SURCHARGED
180 minute summer	P60	96	22.804	0.789	1.0	0.8929	0.0000	SURCHARGED
180 minute summer	P9	96	23.070	0.065	12.8	0.0923	0.0000	OK
180 minute summer	P7	96	22.805	0.774	12.8	0.8749	0.0000	SURCHARGED
180 minute summer	S63	96	22.804	0.809	3.4	0.9155	0.0000	SURCHARGED
180 minute summer	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	6.5				
180 minute summer	P2	Orifice	S52	6.2				
180 minute summer	S52	V-Notch Weir	S53	6.2				
180 minute summer	S53	V-Notch Weir	S54	6.2				
180 minute summer	S54	V-Notch Weir	S55	6.2				
180 minute summer	S55	1.005	S62	5.7	0.411	0.315	0.4519	
180 minute summer	P3	2.000	S62	1.5	0.383	0.014	0.3604	
180 minute summer	S62	1.006	S61	6.3	0.150	0.186	0.6786	
180 minute summer	P5	3.000	S57	20.6	2.111	0.168	0.1128	
180 minute summer	S56	4.000	S57	0.6	0.237	0.016	0.0174	
180 minute summer	S57	3.001	S59	21.2	2.012	0.191	0.2040	
180 minute summer	S58	5.000	S59	0.6	0.229	0.016	0.0232	
180 minute summer	S59	3.002	S61	21.8	2.070	0.196	0.2185	
180 minute summer	S60	6.000	S61	0.2	0.562	0.005	0.0803	
180 minute summer	S61	1.007	S25	27.5	0.621	0.635	0.2049	
180 minute summer	S25	Pump	P60	0.8				
180 minute summer	P60	1.009	S63	1.2	-0.071	0.098	0.2053	
180 minute summer	P9	7.000	P7	12.8	0.571	0.181	1.3012	
180 minute summer	P7	7.001	S63	3.4	0.359	0.096	0.1085	
180 minute summer	P7	3.000_1	P5	11.3	1.663	0.102	0.0268	
180 minute summer	S63	Hydro-Brake®	S28	1.6				18.7

Results for 100 year +20% CC 180 minute winter. 240 minute analysis at 4 minute timestep. Mass balance: 98.69%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
180 minute winter	P1	96	22.781	0.115	5.4	1.2095	0.0000	FLOOD RISK
180 minute winter	P2	100	22.075	0.113	5.3	1.1930	0.0000	FLOOD RISK
180 minute winter	S52	100	21.531	0.152	5.2	0.2181	0.0000	OK
180 minute winter	S53	100	21.270	0.152	5.2	0.2180	0.0000	OK
180 minute winter	S54	104	20.939	0.152	5.2	0.2180	0.0000	OK
180 minute winter	S55	188	20.582	0.582	5.2	0.8334	0.0000	SURCHARGED
180 minute winter	P3	192	20.583	0.183	1.2	0.2622	0.0000	OK
180 minute winter	S62	188	20.583	0.813	6.0	1.1630	0.0000	SURCHARGED
180 minute winter	P5	92	22.013	0.056	15.5	0.0630	0.0000	OK
180 minute winter	S56	92	21.518	0.012	0.5	0.0174	0.0000	OK
180 minute winter	S57	96	21.378	0.059	16.0	0.0849	0.0000	OK
180 minute winter	S58	92	20.688	0.012	0.5	0.0174	0.0000	OK
180 minute winter	S59	184	20.582	0.138	16.5	0.1560	0.0000	OK
180 minute winter	S60	184	20.582	0.358	0.3	0.4048	0.0000	SURCHARGED
180 minute winter	S61	184	20.582	0.876	21.7	1.2535	0.0000	SURCHARGED
180 minute winter	S25	184	20.582	0.891	21.3	79.3724	0.0000	SURCHARGED
180 minute winter	P60	96	22.796	0.781	0.9	0.8836	0.0000	SURCHARGED
180 minute winter	P9	96	23.062	0.057	9.9	0.0810	0.0000	OK
180 minute winter	P7	96	22.796	0.765	9.9	0.8656	0.0000	SURCHARGED
180 minute winter	S63	96	22.796	0.801	3.1	0.9062	0.0000	SURCHARGED
180 minute winter	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	5.3				
180 minute winter	P2	Orifice	S52	5.2				
180 minute winter	S52	V-Notch Weir	S53	5.2				
180 minute winter	S53	V-Notch Weir	S54	5.2				
180 minute winter	S54	V-Notch Weir	S55	5.2				
180 minute winter	S55	1.005	S62	4.9	0.407	0.269	0.4519	
180 minute winter	P3	2.000	S62	1.2	0.508	0.011	0.5367	
180 minute winter	S62	1.006	S61	5.5	0.164	0.162	0.6786	
180 minute winter	P5	3.000	S57	15.5	1.958	0.126	0.0922	
180 minute winter	S56	4.000	S57	0.5	0.212	0.013	0.0147	
180 minute winter	S57	3.001	S59	16.0	1.944	0.144	0.2539	
180 minute winter	S58	5.000	S59	0.5	0.206	0.013	0.0431	
180 minute winter	S59	3.002	S61	16.5	1.924	0.149	0.3076	
180 minute winter	S60	6.000	S61	0.2	0.552	0.005	0.0803	
180 minute winter	S61	1.007	S25	21.3	0.637	0.492	0.2049	
180 minute winter	S25	Pump	P60	0.9				
180 minute winter	P60	1.009	S63	1.3	-0.071	0.111	0.2053	
180 minute winter	P9	7.000	P7	9.9	0.567	0.140	1.2597	
180 minute winter	P7	7.001	S63	3.1	0.267	0.085	0.1085	
180 minute winter	P7	3.000_1	P5	8.4	1.545	0.076	0.0215	
180 minute winter	S63	Hydro-Brake®	S28	1.6				18.7

Results for 100 year +20% CC 240 minute summer. 300 minute analysis at 4 minute timestep. Mass balance: 98.78%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute summer	P1	128	22.792	0.126	6.1	1.3301	0.0000	FLOOD RISK
240 minute summer	P2	132	22.083	0.121	5.8	1.2784	0.0000	FLOOD RISK
240 minute summer	S52	132	21.535	0.156	5.6	0.2236	0.0000	OK
240 minute summer	S53	132	21.274	0.156	5.6	0.2236	0.0000	OK
240 minute summer	S54	132	20.943	0.156	5.6	0.2236	0.0000	OK
240 minute summer	S55	248	20.524	0.524	5.6	0.7500	0.0000	SURCHARGED
240 minute summer	P3	252	20.524	0.124	1.3	0.1775	0.0000	OK
240 minute summer	S62	248	20.524	0.754	6.2	1.0786	0.0000	SURCHARGED
240 minute summer	P5	124	22.017	0.060	17.5	0.0673	0.0000	OK
240 minute summer	S56	124	21.518	0.012	0.5	0.0174	0.0000	OK
240 minute summer	S57	124	21.381	0.062	18.0	0.0888	0.0000	OK
240 minute summer	S58	124	20.688	0.012	0.5	0.0174	0.0000	OK
240 minute summer	S59	244	20.524	0.080	18.4	0.0900	0.0000	OK
240 minute summer	S60	248	20.524	0.300	0.2	0.3395	0.0000	SURCHARGED
240 minute summer	S61	248	20.525	0.819	23.7	1.1716	0.0000	SURCHARGED
240 minute summer	S25	248	20.524	0.833	23.3	74.2035	0.0000	SURCHARGED
240 minute summer	P60	124	22.799	0.784	0.9	0.8872	0.0000	SURCHARGED
240 minute summer	P9	124	23.065	0.060	11.1	0.0856	0.0000	OK
240 minute summer	P7	124	22.799	0.768	11.0	0.8691	0.0000	SURCHARGED
240 minute summer	S63	124	22.799	0.804	3.0	0.9098	0.0000	SURCHARGED
240 minute summer	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	5.8				
240 minute summer	P2	Orifice	S52	5.6				
240 minute summer	S52	V-Notch Weir	S53	5.6				
240 minute summer	S53	V-Notch Weir	S54	5.6				
240 minute summer	S54	V-Notch Weir	S55	5.6				
240 minute summer	S55	1.005	S62	5.1	0.398	0.280	0.4519	
240 minute summer	P3	2.000	S62	1.3	0.378	0.012	0.4486	
240 minute summer	S62	1.006	S61	5.7	0.130	0.166	0.6786	
240 minute summer	P5	3.000	S57	17.5	2.024	0.142	0.0997	
240 minute summer	S56	4.000	S57	0.5	0.209	0.013	0.0155	
240 minute summer	S57	3.001	S59	17.9	1.977	0.161	0.1794	
240 minute summer	S58	5.000	S59	0.5	0.204	0.013	0.0238	
240 minute summer	S59	3.002	S61	18.4	1.981	0.165	0.2466	
240 minute summer	S60	6.000	S61	0.2	0.552	0.005	0.0803	
240 minute summer	S61	1.007	S25	23.3	0.548	0.539	0.2049	
240 minute summer	S25	Pump	P60	0.9				
240 minute summer	P60	1.009	S63	1.4	-0.044	0.118	0.2053	
240 minute summer	P9	7.000	P7	11.0	0.560	0.156	1.2763	
240 minute summer	P7	7.001	S63	3.0	0.336	0.084	0.1085	
240 minute summer	P7	3.000_1	P5	9.5	1.591	0.085	0.0235	
240 minute summer	S63	Hydro-Brake®	S28	1.6				23.0

Results for 100 year +20% CC 240 minute winter. 300 minute analysis at 4 minute timestep. Mass balance: 98.71%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
240 minute winter	P1	128	22.763	0.097	4.5	1.0208	0.0000	OK
240 minute winter	P2	128	22.059	0.097	4.4	1.0193	0.0000	OK
240 minute winter	S52	128	21.521	0.142	4.4	0.2039	0.0000	OK
240 minute winter	S53	128	21.260	0.142	4.4	0.2039	0.0000	OK
240 minute winter	S54	128	20.929	0.142	4.4	0.2038	0.0000	OK
240 minute winter	S55	244	20.648	0.648	4.4	0.9280	0.0000	FLOOD RISK
240 minute winter	P3	244	20.648	0.248	1.0	0.3553	0.0000	SURCHARGED
240 minute winter	S62	244	20.648	0.878	5.0	1.2568	0.0000	SURCHARGED
240 minute winter	P5	124	22.007	0.050	12.7	0.0567	0.0000	OK
240 minute winter	S56	120	21.517	0.011	0.4	0.0157	0.0000	OK
240 minute winter	S57	124	21.372	0.053	13.1	0.0765	0.0000	OK
240 minute winter	S58	120	20.687	0.011	0.4	0.0157	0.0000	OK
240 minute winter	S59	244	20.648	0.204	13.5	0.2309	0.0000	OK
240 minute winter	S60	244	20.648	0.424	0.2	0.4791	0.0000	SURCHARGED
240 minute winter	S61	240	20.647	0.941	18.0	1.3470	0.0000	SURCHARGED
240 minute winter	S25	244	20.648	0.957	17.5	85.2147	0.0000	SURCHARGED
240 minute winter	P60	124	22.791	0.776	1.0	0.8776	0.0000	SURCHARGED
240 minute winter	P9	124	23.056	0.051	8.2	0.0737	0.0000	OK
240 minute winter	P7	124	22.791	0.760	8.2	0.8595	0.0000	SURCHARGED
240 minute winter	S63	124	22.791	0.796	2.8	0.9002	0.0000	SURCHARGED
240 minute winter	S28	4	21.965	0.000	1.6	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	P1	Orifice	P2	4.4				
240 minute winter	P2	Orifice	S52	4.4				
240 minute winter	S52	V-Notch Weir	S53	4.4				
240 minute winter	S53	V-Notch Weir	S54	4.4				
240 minute winter	S54	V-Notch Weir	S55	4.4				
240 minute winter	S55	1.005	S62	4.1	0.377	0.226	0.4519	
240 minute winter	P3	2.000	S62	1.0	0.506	0.009	0.5737	
240 minute winter	S62	1.006	S61	4.6	0.140	0.135	0.6786	
240 minute winter	P5	3.000	S57	12.7	1.847	0.104	0.0795	
240 minute winter	S56	4.000	S57	0.4	0.214	0.010	0.0127	
240 minute winter	S57	3.001	S59	13.1	1.839	0.118	0.3736	
240 minute winter	S58	5.000	S59	0.4	0.208	0.011	0.0454	
240 minute winter	S59	3.002	S61	13.5	1.802	0.121	0.3660	
240 minute winter	S60	6.000	S61	-0.1	0.463	-0.004	0.0803	
240 minute winter	S61	1.007	S25	17.5	0.589	0.404	0.2049	
240 minute winter	S25	Pump	P60	1.0				
240 minute winter	P60	1.009	S63	1.3	-0.112	0.111	0.2053	
240 minute winter	P9	7.000	P7	8.2	0.544	0.116	1.2336	
240 minute winter	P7	7.001	S63	2.8	0.279	0.079	0.1085	
240 minute winter	P7	3.000_1	P5	6.7	1.457	0.060	0.0182	
240 minute winter	S63	Hydro-Brake®	S28	1.6				23.4

Results for 100 year +20% CC 360 minute summer. 424 minute analysis at 8 minute timestep. Mass balance: 98.88%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute summer	P1	184	22.764	0.098	4.7	1.0310	0.0000	OK
360 minute summer	P2	192	22.058	0.096	4.5	1.0147	0.0000	OK
360 minute summer	S52	192	21.521	0.142	4.4	0.2036	0.0000	OK
360 minute summer	S53	192	21.260	0.142	4.4	0.2039	0.0000	OK
360 minute summer	S54	192	20.930	0.143	4.4	0.2041	0.0000	OK
360 minute summer	S55	368	20.584	0.584	4.4	0.8357	0.0000	SURCHARGED
360 minute summer	P3	368	20.584	0.184	1.0	0.2633	0.0000	OK
360 minute summer	S62	368	20.585	0.815	5.0	1.1656	0.0000	SURCHARGED
360 minute summer	P5	184	22.009	0.052	13.4	0.0584	0.0000	OK
360 minute summer	S56	184	21.517	0.011	0.4	0.0157	0.0000	OK
360 minute summer	S57	184	21.374	0.055	13.8	0.0785	0.0000	OK
360 minute summer	S58	184	20.687	0.011	0.4	0.0157	0.0000	OK
360 minute summer	S59	368	20.584	0.140	14.2	0.1581	0.0000	OK
360 minute summer	S60	368	20.584	0.360	0.2	0.4067	0.0000	SURCHARGED
360 minute summer	S61	368	20.584	0.878	18.3	1.2562	0.0000	SURCHARGED
360 minute summer	S25	360	20.583	0.892	17.9	79.5034	0.0000	SURCHARGED
360 minute summer	P60	184	22.792	0.777	0.9	0.8791	0.0000	SURCHARGED
360 minute summer	P9	184	23.058	0.053	8.7	0.0757	0.0000	OK
360 minute summer	P7	184	22.792	0.761	8.6	0.8610	0.0000	SURCHARGED
360 minute summer	S63	184	22.792	0.797	2.6	0.9017	0.0000	SURCHARGED
360 minute summer	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	4.5				
360 minute summer	P2	Orifice	S52	4.4				
360 minute summer	S52	V-Notch Weir	S53	4.4				
360 minute summer	S53	V-Notch Weir	S54	4.4				
360 minute summer	S54	V-Notch Weir	S55	4.4				
360 minute summer	S55	1.005	S62	4.1	0.363	0.224	0.4519	
360 minute summer	P3	2.000	S62	1.0	0.228	0.009	0.5376	
360 minute summer	S62	1.006	S61	4.6	0.112	0.134	0.6786	
360 minute summer	P5	3.000	S57	13.4	1.874	0.109	0.0826	
360 minute summer	S56	4.000	S57	0.4	0.203	0.010	0.0132	
360 minute summer	S57	3.001	S59	13.8	1.865	0.124	0.2576	
360 minute summer	S58	5.000	S59	0.4	0.199	0.011	0.0434	
360 minute summer	S59	3.002	S61	14.1	1.770	0.127	0.3096	
360 minute summer	S60	6.000	S61	-0.1	0.463	-0.003	0.0803	
360 minute summer	S61	1.007	S25	17.9	0.496	0.413	0.2049	
360 minute summer	S25	Pump	P60	0.9				
360 minute summer	P60	1.009	S63	1.2	0.031	0.102	0.2053	
360 minute summer	P9	7.000	P7	8.6	0.354	0.122	1.2407	
360 minute summer	P7	7.001	S63	2.6	0.099	0.074	0.1085	
360 minute summer	P7	3.000_1	P5	7.1	1.479	0.064	0.0190	
360 minute summer	S63	Hydro-Brake®	S28	1.6				31.5

Results for 100 year +20% CC 360 minute winter. 424 minute analysis at 8 minute timestep. Mass balance: 98.76%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
360 minute winter	P1	184	22.748	0.082	3.5	0.8653	0.0000	OK
360 minute winter	P2	192	22.044	0.082	3.5	0.8631	0.0000	OK
360 minute winter	S52	192	21.508	0.129	3.4	0.1846	0.0000	OK
360 minute winter	S53	192	21.247	0.129	3.5	0.1847	0.0000	OK
360 minute winter	S54	192	20.916	0.129	3.5	0.1847	0.0000	OK
360 minute winter	S55	360	20.735	0.735	3.5	1.0520	0.0000	FLOOD RISK
360 minute winter	P3	360	20.735	0.335	0.8	0.4799	0.0000	SURCHARGED
360 minute winter	S62	360	20.735	0.965	4.0	1.3806	0.0000	SURCHARGED
360 minute winter	P5	184	22.000	0.043	9.4	0.0486	0.0000	OK
360 minute winter	S56	168	21.516	0.010	0.3	0.0138	0.0000	OK
360 minute winter	S57	184	21.365	0.046	9.7	0.0655	0.0000	OK
360 minute winter	S58	360	20.736	0.060	0.3	0.0856	0.0000	OK
360 minute winter	S59	360	20.735	0.291	10.0	0.3295	0.0000	SURCHARGED
360 minute winter	S60	360	20.734	0.510	0.2	0.5773	0.0000	SURCHARGED
360 minute winter	S61	360	20.735	1.028	13.6	1.4718	0.0000	SURCHARGED
360 minute winter	S25	360	20.734	1.043	13.2	92.9363	0.0000	SURCHARGED
360 minute winter	P60	200	22.785	0.770	1.1	0.8711	0.0000	SURCHARGED
360 minute winter	P9	184	23.050	0.045	6.3	0.0646	0.0000	OK
360 minute winter	P7	200	22.785	0.754	6.3	0.8529	0.0000	SURCHARGED
360 minute winter	S63	200	22.785	0.790	2.4	0.8937	0.0000	SURCHARGED
360 minute winter	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	3.5				
360 minute winter	P2	Orifice	S52	3.4				
360 minute winter	S52	V-Notch Weir	S53	3.5				
360 minute winter	S53	V-Notch Weir	S54	3.5				
360 minute winter	S54	V-Notch Weir	S55	3.5				
360 minute winter	S55	1.005	S62	3.2	0.341	0.178	0.4519	
360 minute winter	P3	2.000	S62	0.8	0.360	0.007	0.5737	
360 minute winter	S62	1.006	S61	3.6	0.116	0.106	0.6786	
360 minute winter	P5	3.000	S57	9.4	1.707	0.077	0.0638	
360 minute winter	S56	4.000	S57	0.3	0.202	0.008	0.0103	
360 minute winter	S57	3.001	S59	9.7	1.691	0.087	0.4013	
360 minute winter	S58	5.000	S59	0.3	0.199	0.008	0.0616	
360 minute winter	S59	3.002	S61	10.0	1.642	0.090	0.3749	
360 minute winter	S60	6.000	S61	-0.1	0.463	-0.003	0.0803	
360 minute winter	S61	1.007	S25	13.2	0.500	0.306	0.2049	
360 minute winter	S25	Pump	P60	1.1				
360 minute winter	P60	1.009	S63	1.4	-0.099	0.116	0.2053	
360 minute winter	P9	7.000	P7	6.3	0.428	0.089	1.2027	
360 minute winter	P7	7.001	S63	2.4	0.273	0.067	0.1085	
360 minute winter	P7	3.000_1	P5	5.0	1.352	0.045	0.0147	
360 minute winter	S63	Hydro-Brake®	S28	1.6				32.4

Results for 100 year +20% CC 480 minute summer. 544 minute analysis at 8 minute timestep. Mass balance: 98.90%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute summer	P1	248	22.753	0.087	3.8	0.9192	0.0000	OK
480 minute summer	P2	248	22.049	0.086	3.8	0.9134	0.0000	OK
480 minute summer	S52	248	21.512	0.133	3.8	0.1908	0.0000	OK
480 minute summer	S53	248	21.251	0.133	3.8	0.1907	0.0000	OK
480 minute summer	S54	248	20.920	0.133	3.7	0.1906	0.0000	OK
480 minute summer	S55	480	20.627	0.627	3.7	0.8970	0.0000	FLOOD RISK
480 minute summer	P3	480	20.627	0.227	0.8	0.3245	0.0000	SURCHARGED
480 minute summer	S62	480	20.626	0.856	4.2	1.2256	0.0000	SURCHARGED
480 minute summer	P5	248	22.003	0.046	10.6	0.0515	0.0000	OK
480 minute summer	S56	232	21.516	0.010	0.3	0.0138	0.0000	OK
480 minute summer	S57	248	21.367	0.048	10.9	0.0693	0.0000	OK
480 minute summer	S58	232	20.686	0.010	0.3	0.0138	0.0000	OK
480 minute summer	S59	472	20.627	0.183	11.1	0.2066	0.0000	OK
480 minute summer	S60	472	20.626	0.402	0.2	0.4552	0.0000	SURCHARGED
480 minute summer	S61	480	20.626	0.920	15.0	1.3168	0.0000	SURCHARGED
480 minute summer	S25	480	20.626	0.935	14.6	83.2967	0.0000	SURCHARGED
480 minute summer	P60	248	22.787	0.772	1.0	0.8730	0.0000	SURCHARGED
480 minute summer	P9	248	23.053	0.048	7.0	0.0681	0.0000	OK
480 minute summer	P7	248	22.787	0.756	7.0	0.8550	0.0000	SURCHARGED
480 minute summer	S63	248	22.787	0.792	2.5	0.8957	0.0000	SURCHARGED
480 minute summer	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	3.8				
480 minute summer	P2	Orifice	S52	3.8				
480 minute summer	S52	V-Notch Weir	S53	3.8				
480 minute summer	S53	V-Notch Weir	S54	3.7				
480 minute summer	S54	V-Notch Weir	S55	3.7				
480 minute summer	S55	1.005	S62	3.4	0.330	0.188	0.4519	
480 minute summer	P3	2.000	S62	0.8	0.227	0.007	0.5736	
480 minute summer	S62	1.006	S61	3.8	0.100	0.112	0.6786	
480 minute summer	P5	3.000	S57	10.6	1.760	0.086	0.0692	
480 minute summer	S56	4.000	S57	0.3	0.198	0.008	0.0111	
480 minute summer	S57	3.001	S59	10.8	1.746	0.097	0.3398	
480 minute summer	S58	5.000	S59	0.3	0.198	0.008	0.0450	
480 minute summer	S59	3.002	S61	11.2	1.658	0.100	0.3503	
480 minute summer	S60	6.000	S61	-0.1	0.463	-0.003	0.0803	
480 minute summer	S61	1.007	S25	14.6	0.465	0.337	0.2049	
480 minute summer	S25	Pump	P60	1.0				
480 minute summer	P60	1.009	S63	1.4	0.035	0.116	0.2053	
480 minute summer	P9	7.000	P7	7.0	0.375	0.099	1.2145	
480 minute summer	P7	7.001	S63	2.5	0.070	0.069	0.1085	
480 minute summer	P7	3.000_1	P5	5.6	1.386	0.050	0.0158	
480 minute summer	S63	Hydro-Brake®	S28	1.6				39.2

Results for 100 year +20% CC 480 minute winter. 544 minute analysis at 8 minute timestep. Mass balance: 98.79%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
480 minute winter	P1	256	22.737	0.071	2.8	0.7510	0.0000	OK
480 minute winter	P2	256	22.033	0.071	2.8	0.7510	0.0000	OK
480 minute winter	S52	256	21.498	0.119	2.8	0.1698	0.0000	OK
480 minute winter	S53	256	21.237	0.119	2.8	0.1698	0.0000	OK
480 minute winter	S54	256	20.906	0.119	2.8	0.1698	0.0000	OK
480 minute winter	S55	472	20.781	0.781	2.8	1.1169	0.0000	FLOOD RISK
480 minute winter	P3	472	20.780	0.380	0.6	0.5444	0.0000	SURCHARGED
480 minute winter	S62	472	20.780	1.010	3.2	1.4460	0.0000	SURCHARGED
480 minute winter	P5	256	21.996	0.039	7.8	0.0442	0.0000	OK
480 minute winter	S56	248	21.516	0.010	0.3	0.0138	0.0000	OK
480 minute winter	S57	256	21.361	0.042	8.0	0.0595	0.0000	OK
480 minute winter	S58	472	20.780	0.104	0.3	0.1495	0.0000	OK
480 minute winter	S59	472	20.780	0.336	8.2	0.3805	0.0000	SURCHARGED
480 minute winter	S60	472	20.780	0.556	0.2	0.6293	0.0000	SURCHARGED
480 minute winter	S61	472	20.780	1.074	11.2	1.5375	0.0000	SURCHARGED
480 minute winter	S25	472	20.780	1.089	10.9	97.0554	0.0000	SURCHARGED
480 minute winter	P60	256	22.782	0.767	1.1	0.8679	0.0000	SURCHARGED
480 minute winter	P9	248	23.046	0.041	5.2	0.0589	0.0000	OK
480 minute winter	P7	256	22.782	0.751	5.2	0.8491	0.0000	SURCHARGED
480 minute winter	S63	256	22.782	0.787	2.1	0.8901	0.0000	SURCHARGED
480 minute winter	S28	8	21.965	0.000	1.6	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	P1	Orifice	P2	2.8				
480 minute winter	P2	Orifice	S52	2.8				
480 minute winter	S52	V-Notch Weir	S53	2.8				
480 minute winter	S53	V-Notch Weir	S54	2.8				
480 minute winter	S54	V-Notch Weir	S55	2.8				
480 minute winter	S55	1.005	S62	2.6	0.319	0.145	0.4519	
480 minute winter	P3	2.000	S62	0.6	0.349	0.005	0.5737	
480 minute winter	S62	1.006	S61	3.0	0.108	0.088	0.6786	
480 minute winter	P5	3.000	S57	7.8	1.624	0.064	0.0556	
480 minute winter	S56	4.000	S57	0.3	0.198	0.008	0.0089	
480 minute winter	S57	3.001	S59	8.0	1.601	0.072	0.4076	
480 minute winter	S58	5.000	S59	0.3	0.199	0.008	0.0783	
480 minute winter	S59	3.002	S61	8.2	1.514	0.073	0.3749	
480 minute winter	S60	6.000	S61	0.1	0.463	0.003	0.0803	
480 minute winter	S61	1.007	S25	10.9	0.450	0.251	0.2049	
480 minute winter	S25	Pump	P60	1.1				
480 minute winter	P60	1.009	S63	1.2	-0.039	0.095	0.2053	
480 minute winter	P9	7.000	P7	5.2	0.394	0.074	1.1840	
480 minute winter	P7	7.001	S63	2.1	0.281	0.060	0.1085	
480 minute winter	P7	3.000_1	P5	4.2	1.285	0.037	0.0128	
480 minute winter	S63	Hydro-Brake®	S28	1.6				40.7

Results for 100 year +20% CC 600 minute summer. 660 minute analysis at 15 minute timestep. Mass balance: 98.92%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute summer	P1	315	22.744	0.078	3.2	0.8208	0.0000	OK
600 minute summer	P2	315	22.040	0.078	3.2	0.8202	0.0000	OK
600 minute summer	S52	315	21.504	0.125	3.2	0.1790	0.0000	OK
600 minute summer	S53	315	21.243	0.125	3.2	0.1790	0.0000	OK
600 minute summer	S54	315	20.912	0.125	3.2	0.1790	0.0000	OK
600 minute summer	S55	540	20.648	0.648	3.2	0.9274	0.0000	FLOOD RISK
600 minute summer	P3	540	20.648	0.248	0.7	0.3550	0.0000	SURCHARGED
600 minute summer	S62	540	20.648	0.878	3.7	1.2558	0.0000	SURCHARGED
600 minute summer	P5	315	21.998	0.041	8.6	0.0463	0.0000	OK
600 minute summer	S56	315	21.516	0.010	0.3	0.0138	0.0000	OK
600 minute summer	S57	315	21.363	0.044	8.9	0.0625	0.0000	OK
600 minute summer	S58	315	20.686	0.010	0.3	0.0138	0.0000	OK
600 minute summer	S59	540	20.647	0.203	9.2	0.2296	0.0000	OK
600 minute summer	S60	540	20.647	0.423	0.1	0.4779	0.0000	SURCHARGED
600 minute summer	S61	555	20.647	0.941	12.6	1.3467	0.0000	SURCHARGED
600 minute summer	S25	540	20.646	0.955	12.3	85.0881	0.0000	SURCHARGED
600 minute summer	P60	315	22.782	0.767	1.0	0.8680	0.0000	SURCHARGED
600 minute summer	P9	315	23.048	0.043	5.8	0.0621	0.0000	OK
600 minute summer	P7	315	22.783	0.752	5.8	0.8500	0.0000	SURCHARGED
600 minute summer	S63	315	22.782	0.787	2.2	0.8906	0.0000	SURCHARGED
600 minute summer	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	3.2				
600 minute summer	P2	Orifice	S52	3.2				
600 minute summer	S52	V-Notch Weir	S53	3.2				
600 minute summer	S53	V-Notch Weir	S54	3.2				
600 minute summer	S54	V-Notch Weir	S55	3.2				
600 minute summer	S55	1.005	S62	3.0	0.313	0.164	0.4519	
600 minute summer	P3	2.000	S62	0.7	0.202	0.006	0.5737	
600 minute summer	S62	1.006	S61	3.4	0.099	0.099	0.6786	
600 minute summer	P5	3.000	S57	8.6	1.659	0.070	0.0595	
600 minute summer	S56	4.000	S57	0.3	0.190	0.008	0.0097	
600 minute summer	S57	3.001	S59	8.9	1.645	0.079	0.3705	
600 minute summer	S58	5.000	S59	0.3	0.192	0.008	0.0454	
600 minute summer	S59	3.002	S61	9.2	1.523	0.082	0.3653	
600 minute summer	S60	6.000	S61	0.1	0.463	0.003	0.0803	
600 minute summer	S61	1.007	S25	12.3	0.435	0.285	0.2049	
600 minute summer	S25	Pump	P60	1.0				
600 minute summer	P60	1.009	S63	1.3	0.032	0.104	0.2053	
600 minute summer	P9	7.000	P7	5.8	0.213	0.082	1.1945	
600 minute summer	P7	7.001	S63	2.2	0.070	0.061	0.1085	
600 minute summer	P7	3.000_1	P5	4.4	1.298	0.039	0.0132	
600 minute summer	S63	Hydro-Brake®	S28	1.6				46.1

Results for 100 year +20% CC 600 minute winter. 660 minute analysis at 15 minute timestep. Mass balance: 98.81%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
600 minute winter	P1	315	22.730	0.064	2.4	0.6776	0.0000	OK
600 minute winter	P2	315	22.026	0.064	2.4	0.6774	0.0000	OK
600 minute winter	S52	315	21.491	0.112	2.4	0.1596	0.0000	OK
600 minute winter	S53	315	21.230	0.112	2.4	0.1596	0.0000	OK
600 minute winter	S54	315	20.899	0.112	2.4	0.1596	0.0000	OK
600 minute winter	S55	585	20.811	0.811	2.4	1.1611	0.0000	FLOOD RISK
600 minute winter	P3	585	20.811	0.411	0.5	0.5887	0.0000	SURCHARGED
600 minute winter	S62	585	20.811	1.041	2.8	1.4902	0.0000	SURCHARGED
600 minute winter	P5	330	21.993	0.036	6.5	0.0403	0.0000	OK
600 minute winter	S56	270	21.514	0.008	0.2	0.0113	0.0000	OK
600 minute winter	S57	330	21.357	0.038	6.7	0.0544	0.0000	OK
600 minute winter	S58	585	20.811	0.135	0.2	0.1937	0.0000	OK
600 minute winter	S59	585	20.811	0.367	6.9	0.4155	0.0000	SURCHARGED
600 minute winter	S60	585	20.811	0.587	0.1	0.6643	0.0000	SURCHARGED
600 minute winter	S61	585	20.811	1.105	9.4	1.5818	0.0000	SURCHARGED
600 minute winter	S25	585	20.811	1.120	9.2	99.8083	0.0000	SURCHARGED
600 minute winter	P60	330	22.779	0.764	1.2	0.8642	0.0000	SURCHARGED
600 minute winter	P9	315	23.043	0.038	4.4	0.0543	0.0000	OK
600 minute winter	P7	330	22.779	0.748	4.4	0.8460	0.0000	SURCHARGED
600 minute winter	S63	330	22.779	0.784	2.1	0.8867	0.0000	SURCHARGED
600 minute winter	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	2.4				
600 minute winter	P2	Orifice	S52	2.4				
600 minute winter	S52	V-Notch Weir	S53	2.4				
600 minute winter	S53	V-Notch Weir	S54	2.4				
600 minute winter	S54	V-Notch Weir	S55	2.4				
600 minute winter	S55	1.005	S62	2.3	0.295	0.124	0.4519	
600 minute winter	P3	2.000	S62	0.5	0.238	0.005	0.5737	
600 minute winter	S62	1.006	S61	2.5	0.099	0.074	0.6786	
600 minute winter	P5	3.000	S57	6.5	1.540	0.053	0.0486	
600 minute winter	S56	4.000	S57	0.2	0.196	0.005	0.0079	
600 minute winter	S57	3.001	S59	6.7	1.519	0.060	0.4091	
600 minute winter	S58	5.000	S59	0.2	0.193	0.005	0.0875	
600 minute winter	S59	3.002	S61	6.9	1.437	0.062	0.3749	
600 minute winter	S60	6.000	S61	0.1	0.457	0.003	0.0803	
600 minute winter	S61	1.007	S25	9.2	0.436	0.213	0.2049	
600 minute winter	S25	Pump	P60	1.2				
600 minute winter	P60	1.009	S63	1.3	0.033	0.108	0.2053	
600 minute winter	P9	7.000	P7	4.4	0.272	0.062	1.1695	
600 minute winter	P7	7.001	S63	2.1	0.070	0.058	0.1085	
600 minute winter	P7	3.000_1	P5	3.5	1.221	0.031	0.0112	
600 minute winter	S63	Hydro-Brake®	S28	1.6				48.3

Results for 100 year +20% CC 720 minute summer. 780 minute analysis at 15 minute timestep. Mass balance: 98.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute summer	P1	375	22.739	0.073	2.9	0.7687	0.0000	OK
720 minute summer	P2	375	22.035	0.073	2.9	0.7680	0.0000	OK
720 minute summer	S52	375	21.499	0.120	2.9	0.1721	0.0000	OK
720 minute summer	S53	375	21.238	0.120	2.9	0.1721	0.0000	OK
720 minute summer	S54	375	20.907	0.120	2.9	0.1720	0.0000	OK
720 minute summer	S55	630	20.675	0.675	2.9	0.9659	0.0000	FLOOD RISK
720 minute summer	P3	630	20.675	0.275	0.6	0.3941	0.0000	SURCHARGED
720 minute summer	S62	630	20.675	0.905	3.3	1.2948	0.0000	SURCHARGED
720 minute summer	P5	375	21.995	0.038	7.6	0.0435	0.0000	OK
720 minute summer	S56	375	21.516	0.010	0.3	0.0138	0.0000	OK
720 minute summer	S57	375	21.360	0.041	7.9	0.0589	0.0000	OK
720 minute summer	S58	375	20.686	0.010	0.3	0.0138	0.0000	OK
720 minute summer	S59	615	20.675	0.231	8.2	0.2610	0.0000	SURCHARGED
720 minute summer	S60	600	20.675	0.451	0.2	0.5101	0.0000	SURCHARGED
720 minute summer	S61	600	20.675	0.969	11.2	1.3867	0.0000	SURCHARGED
720 minute summer	S25	600	20.675	0.984	10.9	87.6673	0.0000	SURCHARGED
720 minute summer	P60	375	22.780	0.765	1.0	0.8653	0.0000	SURCHARGED
720 minute summer	P9	375	23.046	0.041	5.2	0.0589	0.0000	OK
720 minute summer	P7	375	22.780	0.749	5.2	0.8473	0.0000	SURCHARGED
720 minute summer	S63	375	22.780	0.785	2.1	0.8880	0.0000	SURCHARGED
720 minute summer	S28	15	21.965	0.000	1.5	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 summer	P1	Orifice	P2	2.9				
720 minute summer	P2	Orifice	S52	2.9				
720 minute summer	S52	V-Notch Weir	S53	2.9				
720 minute summer	S53	V-Notch Weir	S54	2.9				
720 minute summer	S54	V-Notch Weir	S55	2.9				
720 minute summer	S55	1.005	S62	2.7	0.285	0.149	0.4519	
720 minute summer	P3	2.000	S62	0.6	0.202	0.005	0.5737	
720 minute summer	S62	1.006	S61	3.1	0.092	0.090	0.6786	
720 minute summer	P5	3.000	S57	7.6	1.603	0.061	0.0544	
720 minute summer	S56	4.000	S57	0.3	0.193	0.008	0.0090	
720 minute summer	S57	3.001	S59	7.9	1.587	0.071	0.3920	
720 minute summer	S58	5.000	S59	0.3	0.192	0.008	0.0454	
720 minute summer	S59	3.002	S61	8.2	1.481	0.073	0.3749	
720 minute summer	S60	6.000	S61	-0.1	0.457	-0.003	0.0803	
720 minute summer	S61	1.007	S25	10.9	0.415	0.251	0.2049	
720 minute summer	S25	Pump	P60	1.0				
720 minute summer	P60	1.009	S63	1.2	0.031	0.102	0.2053	
720 minute summer	P9	7.000	P7	5.2	0.193	0.074	1.1840	
720 minute summer	P7	7.001	S63	2.1	0.070	0.060	0.1085	
720 minute summer	P7	3.000_1	P5	3.8	1.247	0.034	0.0119	
720 minute summer	S63	Hydro-Brake®	S28	1.5				53.2

Results for 100 year +20% CC 720 minute winter. 780 minute analysis at 15 minute timestep. Mass balance: 98.86%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
720 minute winter	P1	390	22.725	0.059	2.1	0.6200	0.0000	OK
720 minute winter	P2	390	22.021	0.059	2.1	0.6200	0.0000	OK
720 minute winter	S52	390	21.485	0.106	2.1	0.1513	0.0000	OK
720 minute winter	S53	390	21.224	0.106	2.1	0.1513	0.0000	OK
720 minute winter	S54	390	20.893	0.106	2.1	0.1513	0.0000	OK
720 minute winter	S55	690	20.832	0.832	2.1	1.1902	0.0000	FLOOD RISK
720 minute winter	P3	690	20.832	0.432	0.5	0.6178	0.0000	SURCHARGED
720 minute winter	S62	690	20.832	1.062	2.5	1.5193	0.0000	SURCHARGED
720 minute winter	P5	375	21.991	0.034	5.9	0.0384	0.0000	OK
720 minute winter	S56	330	21.514	0.008	0.2	0.0113	0.0000	OK
720 minute winter	S57	375	21.355	0.036	6.1	0.0519	0.0000	OK
720 minute winter	S58	690	20.832	0.156	0.2	0.2229	0.0000	SURCHARGED
720 minute winter	S59	690	20.832	0.388	6.3	0.4385	0.0000	SURCHARGED
720 minute winter	S60	690	20.832	0.608	0.1	0.6873	0.0000	SURCHARGED
720 minute winter	S61	720	20.832	1.126	8.6	1.6110	0.0000	SURCHARGED
720 minute winter	S25	690	20.832	1.141	8.4	101.6206	0.0000	SURCHARGED
720 minute winter	P60	375	22.778	0.763	1.2	0.8624	0.0000	SURCHARGED
720 minute winter	P9	375	23.041	0.036	3.9	0.0512	0.0000	OK
720 minute winter	P7	375	22.777	0.746	3.9	0.8441	0.0000	SURCHARGED
720 minute winter	S63	375	22.777	0.782	1.9	0.8849	0.0000	SURCHARGED
720 minute winter	S28	15	21.965	0.000	1.5	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	P1	Orifice	P2	2.1				
720 minute winter	P2	Orifice	S52	2.1				
720 minute winter	S52	V-Notch Weir	S53	2.1				
720 minute winter	S53	V-Notch Weir	S54	2.1				
720 minute winter	S54	V-Notch Weir	S55	2.1				
720 minute winter	S55	1.005	S62	2.0	0.280	0.108	0.4519	
720 minute winter	P3	2.000	S62	0.5	0.239	0.005	0.5737	
720 minute winter	S62	1.006	S61	2.3	0.102	0.067	0.6786	
720 minute winter	P5	3.000	S57	5.9	1.500	0.048	0.0454	
720 minute winter	S56	4.000	S57	0.2	0.190	0.005	0.0075	
720 minute winter	S57	3.001	S59	6.1	1.479	0.055	0.4099	
720 minute winter	S58	5.000	S59	0.2	0.192	0.005	0.0898	
720 minute winter	S59	3.002	S61	6.3	1.356	0.057	0.3749	
720 minute winter	S60	6.000	S61	0.1	0.457	0.003	0.0803	
720 minute winter	S61	1.007	S25	8.4	0.400	0.193	0.2049	
720 minute winter	S25	Pump	P60	1.2				
720 minute winter	P60	1.009	S63	1.5	0.037	0.121	0.2053	
720 minute winter	P9	7.000	P7	3.9	0.355	0.055	1.1599	
720 minute winter	P7	7.001	S63	1.9	0.070	0.054	0.1085	
720 minute winter	P7	3.000_1	P5	3.1	1.181	0.028	0.0103	
720 minute winter	S63	Hydro-Brake®	S28	1.5				55.9

Results for 100 year +20% CC 960 minute summer. 1020 minute analysis at 15 minute timestep. Mass balance: 99.06%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute summer	P1	495	22.730	0.064	2.4	0.6776	0.0000	OK
960 minute summer	P2	495	22.026	0.064	2.4	0.6770	0.0000	OK
960 minute summer	S52	495	21.490	0.111	2.4	0.1595	0.0000	OK
960 minute summer	S53	495	21.229	0.111	2.4	0.1595	0.0000	OK
960 minute summer	S54	495	20.898	0.111	2.4	0.1595	0.0000	OK
960 minute summer	S55	735	20.702	0.702	2.4	1.0041	0.0000	FLOOD RISK
960 minute summer	P3	765	20.702	0.302	0.5	0.4318	0.0000	SURCHARGED
960 minute summer	S62	765	20.702	0.932	2.8	1.3337	0.0000	SURCHARGED
960 minute summer	P5	495	21.992	0.035	6.2	0.0392	0.0000	OK
960 minute summer	S56	465	21.514	0.008	0.2	0.0113	0.0000	OK
960 minute summer	S57	495	21.356	0.037	6.4	0.0530	0.0000	OK
960 minute summer	S58	765	20.702	0.026	0.3	0.0374	0.0000	OK
960 minute summer	S59	765	20.702	0.258	6.6	0.2918	0.0000	SURCHARGED
960 minute summer	S60	750	20.702	0.478	0.2	0.5403	0.0000	SURCHARGED
960 minute summer	S61	735	20.702	0.996	9.1	1.4248	0.0000	SURCHARGED
960 minute summer	S25	735	20.702	1.011	8.8	90.0346	0.0000	SURCHARGED
960 minute summer	P60	510	22.777	0.762	1.1	0.8623	0.0000	SURCHARGED
960 minute summer	P9	495	23.043	0.038	4.4	0.0543	0.0000	OK
960 minute summer	P7	510	22.777	0.746	4.4	0.8441	0.0000	SURCHARGED
960 minute summer	S63	510	22.777	0.782	2.0	0.8848	0.0000	SURCHARGED
960 minute summer	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	2.4				
960 minute summer	P2	Orifice	S52	2.4				
960 minute summer	S52	V-Notch Weir	S53	2.4				
960 minute summer	S53	V-Notch Weir	S54	2.4				
960 minute summer	S54	V-Notch Weir	S55	2.4				
960 minute summer	S55	1.005	S62	2.3	0.261	0.123	0.4519	
960 minute summer	P3	2.000	S62	0.5	0.112	0.005	0.5737	
960 minute summer	S62	1.006	S61	2.5	0.091	0.074	0.6786	
960 minute summer	P5	3.000	S57	6.2	1.518	0.050	0.0468	
960 minute summer	S56	4.000	S57	0.2	0.200	0.005	0.0077	
960 minute summer	S57	3.001	S59	6.4	1.497	0.057	0.3975	
960 minute summer	S58	5.000	S59	-0.3	0.196	-0.007	0.0501	
960 minute summer	S59	3.002	S61	6.6	1.172	0.059	0.3749	
960 minute summer	S60	6.000	S61	-0.2	0.119	-0.004	0.0803	
960 minute summer	S61	1.007	S25	8.8	0.380	0.204	0.2049	
960 minute summer	S25	Pump	P60	1.1				
960 minute summer	P60	1.009	S63	1.3	0.032	0.106	0.2053	
960 minute summer	P9	7.000	P7	4.4	0.197	0.062	1.1695	
960 minute summer	P7	7.001	S63	2.0	0.070	0.056	0.1085	
960 minute summer	P7	3.000_1	P5	3.1	1.181	0.028	0.0103	
960 minute summer	S63	Hydro-Brake®	S28	1.6				67.4

Results for 100 year +20% CC 960 minute winter. 1020 minute analysis at 15 minute timestep. Mass balance: 98.95%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
960 minute winter	P1	495	22.719	0.053	1.8	0.5593	0.0000	OK
960 minute winter	P2	495	22.015	0.053	1.8	0.5590	0.0000	OK
960 minute winter	S52	495	21.478	0.099	1.8	0.1422	0.0000	OK
960 minute winter	S53	495	21.217	0.099	1.8	0.1422	0.0000	OK
960 minute winter	S54	495	20.886	0.099	1.8	0.1422	0.0000	OK
960 minute winter	S55	795	20.857	0.857	1.8	1.2264	0.0000	FLOOD RISK
960 minute winter	P3	795	20.857	0.457	0.4	0.6540	0.0000	SURCHARGED
960 minute winter	S62	795	20.857	1.087	2.1	1.5555	0.0000	SURCHARGED
960 minute winter	P5	510	21.988	0.031	4.8	0.0346	0.0000	OK
960 minute winter	S56	480	21.514	0.008	0.2	0.0113	0.0000	OK
960 minute winter	S57	510	21.352	0.033	5.0	0.0470	0.0000	OK
960 minute winter	S58	795	20.857	0.181	0.2	0.2591	0.0000	SURCHARGED
960 minute winter	S59	795	20.857	0.413	5.2	0.4671	0.0000	SURCHARGED
960 minute winter	S60	795	20.857	0.633	0.1	0.7159	0.0000	SURCHARGED
960 minute winter	S61	795	20.857	1.151	7.1	1.6471	0.0000	SURCHARGED
960 minute winter	S25	795	20.857	1.166	7.0	103.8744	0.0000	SURCHARGED
960 minute winter	P60	510	22.775	0.760	1.2	0.8592	0.0000	SURCHARGED
960 minute winter	P9	480	23.038	0.033	3.2	0.0465	0.0000	OK
960 minute winter	P7	510	22.775	0.744	3.2	0.8410	0.0000	SURCHARGED
960 minute winter	S63	510	22.775	0.780	1.9	0.8817	0.0000	SURCHARGED
960 minute winter	S28	15	21.965	0.000	1.6	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	P1	Orifice	P2	1.8				
960 minute winter	P2	Orifice	S52	1.8				
960 minute winter	S52	V-Notch Weir	S53	1.8				
960 minute winter	S53	V-Notch Weir	S54	1.8				
960 minute winter	S54	V-Notch Weir	S55	1.8				
960 minute winter	S55	1.005	S62	1.7	0.260	0.093	0.4519	
960 minute winter	P3	2.000	S62	0.4	0.239	0.004	0.5737	
960 minute winter	S62	1.006	S61	1.9	0.092	0.057	0.6786	
960 minute winter	P5	3.000	S57	4.8	1.412	0.039	0.0392	
960 minute winter	S56	4.000	S57	0.2	0.190	0.005	0.0066	
960 minute winter	S57	3.001	S59	5.0	1.393	0.045	0.4079	
960 minute winter	S58	5.000	S59	0.2	0.192	0.005	0.0898	
960 minute winter	S59	3.002	S61	5.2	1.064	0.047	0.3749	
960 minute winter	S60	6.000	S61	0.1	0.012	0.003	0.0803	
960 minute winter	S61	1.007	S25	7.0	0.372	0.161	0.2049	
960 minute winter	S25	Pump	P60	1.2				
960 minute winter	P60	1.009	S63	1.4	-0.039	0.112	0.2053	
960 minute winter	P9	7.000	P7	3.2	0.305	0.045	1.1461	
960 minute winter	P7	7.001	S63	1.9	0.197	0.052	0.1085	
960 minute winter	P7	3.000_1	P5	2.5	1.113	0.022	0.0088	
960 minute winter	S63	Hydro-Brake®	S28	1.6				71.3

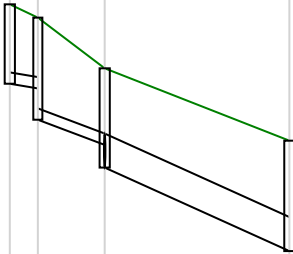
Results for 100 year +20% CC 1440 minute summer. 1500 minute analysis at 30 minute timestep. Mass balance: 99.41%

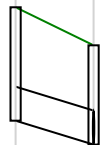
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	P1	750	22.719	0.053	1.8	0.5594	0.0000	OK
1440 minute summer	P2	750	22.015	0.053	1.8	0.5594	0.0000	OK
1440 minute summer	S52	750	21.478	0.099	1.8	0.1423	0.0000	OK
1440 minute summer	S53	750	21.217	0.099	1.8	0.1423	0.0000	OK
1440 minute summer	S54	750	20.886	0.099	1.8	0.1423	0.0000	OK
1440 minute summer	S55	1020	20.742	0.742	1.8	1.0619	0.0000	FLOOD RISK
1440 minute summer	P3	1020	20.742	0.342	0.4	0.4895	0.0000	SURCHARGED
1440 minute summer	S62	1020	20.742	0.972	2.1	1.3910	0.0000	SURCHARGED
1440 minute summer	P5	750	21.988	0.031	4.9	0.0351	0.0000	OK
1440 minute summer	S56	750	21.514	0.008	0.2	0.0113	0.0000	OK
1440 minute summer	S57	750	21.352	0.033	5.1	0.0476	0.0000	OK
1440 minute summer	S58	1020	20.742	0.066	0.2	0.0945	0.0000	OK
1440 minute summer	S59	1020	20.742	0.298	5.3	0.3371	0.0000	SURCHARGED
1440 minute summer	S60	1020	20.742	0.518	0.1	0.5859	0.0000	SURCHARGED
1440 minute summer	S61	1020	20.742	1.036	7.3	1.4826	0.0000	SURCHARGED
1440 minute summer	S25	1020	20.742	1.051	7.1	93.6315	0.0000	SURCHARGED
1440 minute summer	P60	750	22.775	0.760	1.1	0.8594	0.0000	SURCHARGED
1440 minute summer	P9	750	23.038	0.033	3.3	0.0472	0.0000	OK
1440 minute summer	P7	750	22.775	0.744	3.3	0.8412	0.0000	SURCHARGED
1440 minute summer	S63	750	22.775	0.780	2.3	0.8819	0.0000	SURCHARGED
1440 minute summer	S28	30	21.965	0.000	1.6	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	P1	Orifice	P2	1.8				
1440 minute summer	P2	Orifice	S52	1.8				
1440 minute summer	S52	V-Notch Weir	S53	1.8				
1440 minute summer	S53	V-Notch Weir	S54	1.8				
1440 minute summer	S54	V-Notch Weir	S55	1.8				
1440 minute summer	S55	1.005	S62	1.7	0.220	0.093	0.4519	
1440 minute summer	P3	2.000	S62	0.4	0.112	0.004	0.5737	
1440 minute summer	S62	1.006	S61	1.9	0.065	0.057	0.6786	
1440 minute summer	P5	3.000	S57	4.9	1.424	0.040	0.0400	
1440 minute summer	S56	4.000	S57	0.2	0.183	0.005	0.0067	
1440 minute summer	S57	3.001	S59	5.1	1.405	0.046	0.3993	
1440 minute summer	S58	5.000	S59	-0.2	0.186	-0.006	0.0639	
1440 minute summer	S59	3.002	S61	5.3	0.976	0.048	0.3749	
1440 minute summer	S60	6.000	S61	0.1	0.009	0.003	0.0803	
1440 minute summer	S61	1.007	S25	7.1	0.302	0.165	0.2049	
1440 minute summer	S25	Pump	P60	1.1				
1440 minute summer	P60	1.009	S63	1.2	0.030	0.099	0.2053	
1440 minute summer	P9	7.000	P7	3.3	0.157	0.047	1.1481	
1440 minute summer	P7	7.001	S63	2.3	0.069	0.064	0.1085	
1440 minute summer	P7	3.000_1	P5	2.5	1.118	0.023	0.0089	
1440 minute summer	S63	Hydro-Brake®	S28	1.6				93.0

Results for 100 year +20% CC 1440 minute winter. 1500 minute analysis at 30 minute timestep. Mass balance: 99.15%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	P1	750	22.709	0.043	1.3	0.4503	0.0000	OK
1440 minute winter	P2	750	22.005	0.043	1.3	0.4503	0.0000	OK
1440 minute winter	S52	750	21.466	0.087	1.3	0.1249	0.0000	OK
1440 minute winter	S53	750	21.205	0.087	1.3	0.1249	0.0000	OK
1440 minute winter	S54	1110	20.881	0.094	1.3	0.1349	0.0000	OK
1440 minute winter	S55	1110	20.881	0.881	1.3	1.2600	0.0000	FLOOD RISK
1440 minute winter	P3	1110	20.880	0.480	0.3	0.6876	0.0000	SURCHARGED
1440 minute winter	S62	1110	20.880	1.110	1.5	1.5891	0.0000	SURCHARGED
1440 minute winter	P5	750	21.984	0.027	3.6	0.0301	0.0000	OK
1440 minute winter	S56	510	21.512	0.006	0.1	0.0083	0.0000	OK
1440 minute winter	S57	750	21.347	0.028	3.7	0.0406	0.0000	OK
1440 minute winter	S58	1110	20.881	0.205	0.2	0.2927	0.0000	SURCHARGED
1440 minute winter	S59	1110	20.881	0.437	3.8	0.4937	0.0000	SURCHARGED
1440 minute winter	S60	1110	20.880	0.656	0.1	0.7425	0.0000	SURCHARGED
1440 minute winter	S61	1110	20.880	1.174	5.2	1.6807	0.0000	SURCHARGED
1440 minute winter	S25	1110	20.880	1.189	5.1	105.9653	0.0000	SURCHARGED
1440 minute winter	P60	750	22.771	0.756	1.3	0.8549	0.0000	SURCHARGED
1440 minute winter	P9	750	23.034	0.029	2.5	0.0414	0.0000	OK
1440 minute winter	P7	750	22.771	0.740	2.5	0.8367	0.0000	SURCHARGED
1440 minute winter	S63	750	22.771	0.776	3.1	0.8774	0.0000	SURCHARGED
1440 minute winter	S28	30	21.965	0.000	1.6	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	P1	Orifice	P2	1.3				
1440 minute winter	P2	Orifice	S52	1.3				
1440 minute winter	S52	V-Notch Weir	S53	1.3				
1440 minute winter	S53	V-Notch Weir	S54	1.3				
1440 minute winter	S54	V-Notch Weir	S55	1.3				
1440 minute winter	S55	1.005	S62	1.2	0.226	0.068	0.4519	
1440 minute winter	P3	2.000	S62	0.3	0.112	0.003	0.5737	
1440 minute winter	S62	1.006	S61	1.4	0.080	0.042	0.6786	
1440 minute winter	P5	3.000	S57	3.6	1.303	0.029	0.0318	
1440 minute winter	S56	4.000	S57	0.1	0.194	0.003	0.0052	
1440 minute winter	S57	3.001	S59	3.7	1.279	0.033	0.4051	
1440 minute winter	S58	5.000	S59	-0.2	0.195	-0.006	0.0898	
1440 minute winter	S59	3.002	S61	3.8	0.956	0.034	0.3749	
1440 minute winter	S60	6.000	S61	0.1	-0.005	0.002	0.0803	
1440 minute winter	S61	1.007	S25	5.1	0.314	0.117	0.2049	
1440 minute winter	S25	Pump	P60	1.3				
1440 minute winter	P60	1.009	S63	1.4	0.035	0.114	0.2053	
1440 minute winter	P9	7.000	P7	2.5	0.157	0.035	1.1313	
1440 minute winter	P7	7.001	S63	2.8	0.071	0.079	0.1085	
1440 minute winter	P7	3.000_1	P5	1.8	1.015	0.016	0.0070	
1440 minute winter	S63	Hydro-Brake®	S28	1.6				99.1

Node Name	S8519	S82	S80
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 14.000 			
Link Name	4.001	4.002	
Section Type	15150mm	450mm	
Slope (1:X)	59 26.5	22.1	
Cover Level (m)	20.933 20.757	20.087	19.130
Invert Level (m)	19.883 19.407 19.074	18.774	17.670
Length (m)	3.78	8.840	24.422

Node Name	S79	S82
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 14.000		
	5.000	
	450mm	
	32.6	
	20.590	20.087
Invert Level (m)	19.090 18.774	
Length (m)	10.312	

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	15.00
Return Period (years)	1	Maximum Rainfall (mm/hr)	55.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	Scotland and Ireland	Connection Type	Level Soffits
M5-60 (mm)	15.000	Minimum Backdrop Height (m)	1.000
Ratio-R	0.242	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	x

Adoptable Manhole Type

Max Width (mm)	Diameter (mm)	Max Width (mm)	Diameter (mm)
374	1200	749	1500
499	1350	900	1800

>900 Link+900 mm

Max Depth (m)	Diameter (mm)	Max Depth (m)	Diameter (mm)
1.500	1050	99.999	1200

Circular Link Type

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

Available Diameters (mm)

100 | 150

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
S86	0.013	5.00	20.933	1350	524897.650	724339.236	1.050
S19	0.015	5.00	20.757	1200	524894.984	724336.661	1.350
S79		5.00	20.590	1350	524908.247	724337.990	1.500
S82			20.087	1350	524901.244	724330.420	1.313
S80			19.130	1350	524884.660	724312.492	1.460

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)
4.000	S86	S19	3.707	0.600	19.883	19.821	0.062	59.8	150	5.05	34.4
4.001	S19	S82	8.840	0.600	19.407	19.074	0.333	26.5	150	5.12	34.2
5.000	S79	S82	10.312	0.600	19.090	18.774	0.316	32.6	450	5.05	34.4
4.002	S82	S80	24.422	0.600	18.774	17.670	1.104	22.1	450	5.22	34.0

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)
4.000	1.303	23.0	1.2	0.900	0.786	0.013	0.0	24	0.696
4.001	1.962	34.7	2.7	1.200	0.863	0.029	0.0	28	1.159
5.000	3.568	567.5	0.0	1.050	0.863	0.000	0.0	0	0.000
4.002	4.337	689.7	2.6	0.863	1.010	0.029	0.0	20	1.058

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)
4.000	3.707	59.8	150	Circular	20.933	19.883	0.900	20.757	19.821	0.786
4.001	8.840	26.5	150	Circular	20.757	19.407	1.200	20.087	19.074	0.863
5.000	10.312	32.6	450	Circular	20.590	19.090	1.050	20.087	18.774	0.863
4.002	24.422	22.1	450	Circular	20.087	18.774	0.863	19.130	17.670	1.010

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
4.000	S86	1350	Manhole	Adoptable	S19	1200	Manhole	Adoptable
4.001	S19	1200	Manhole	Adoptable	S82	1350	Manhole	Adoptable
5.000	S79	1350	Manhole	Adoptable	S82	1350	Manhole	Adoptable
4.002	S82	1350	Manhole	Adoptable	S80	1350	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
S86	524897.650	724339.236	20.933	1.050	1350		0	4.000	19.883	150
S19	524894.984	724336.661	20.757	1.350	1200		1 0	4.000 4.001	19.821 19.407	150 150
S79	524908.247	724337.990	20.590	1.500	1350		0	5.000	19.090	450
S82	524901.244	724330.420	20.087	1.313	1350		1 2 0	5.000 4.001 4.002	18.774 19.074 18.774	450 150 450
S80	524884.660	724312.492	19.130	1.460	1350		1	4.002	17.670	450

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	Scotland and Ireland	Drain Down Time (mins)	60
M5-60 (mm)	15.000	Additional Storage (m ³ /ha)	0.0
Ratio-R	0.242	Starting Level (m)	
Summer CV	0.750	Check Discharge Rate(s)	x
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

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

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
30	10	0	0
100	20	0	0

Node S19 Online Hydro-Brake® Control

Flap Valve	x	Objective	(HE) Minimise upstream storage
Downstream Link	4.001	Sump Available	✓
Replaces Downstream Link	x	Product Number	CTL-SHE-0063-2000-1350-2000
Invert Level (m)	19.407	Min Outlet Diameter (m)	0.075
Design Depth (m)	1.350	Min Node Diameter (mm)	1200
Design Flow (l/s)	2.0		

Node S86 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	19.883
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.30	Time to half empty (mins)	13

Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)	Depth (m)	Area (m ²)	Inf Area (m ²)
0.000	36.0	0.0	0.150	36.0	0.0	0.151	0.0	0.0

Other (defaults)

Entry Loss (manhole)	0.250	Entry Loss (junction)	0.000	Apply Recommended Losses	x
Exit Loss (manhole)	0.250	Exit Loss (junction)	0.000	Flood Risk (m)	0.300

Approval Settings

Node Size	✓	Minimum Backdrop Height (m)	
Node Losses	✓	Maximum Backdrop Height (m)	1.500
Link Size	✓	Full Bore Velocity	✓
Minimum Diameter (mm)	150	Minimum Full Bore Velocity (m/s)	
Link Length	✓	Maximum Full Bore Velocity (m/s)	3.000
Maximum Length (m)	100.000	Proportional Velocity	✓
Coordinates	✓	Return Period (years)	
Accuracy (m)	1.000	Minimum Proportional Velocity (m/s)	0.750
Crossings	✓	Maximum Proportional Velocity (m/s)	3.000
Cover Depth	✓	Surcharged Depth	✓
Minimum Cover Depth (m)		Return Period (years)	
Maximum Cover Depth (m)	3.000	Maximum Surcharged Depth (m)	0.100
Backdrops	✓	Flooding	✓

Approval Settings

Return Period (years) 30
Time to Half Empty x
Discharge Rates ✓

Discharge Volume ✓
100 year 360 minute (m³)

Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	76.905	21.762	30 year +10% CC 360 minute summer	31.299	8.054
1 year 15 minute winter	53.969	21.762	30 year +10% CC 360 minute winter	20.345	8.054
1 year 30 minute summer	53.834	15.233	30 year +10% CC 480 minute summer	25.256	6.674
1 year 30 minute winter	37.778	15.233	30 year +10% CC 480 minute winter	16.780	6.674
1 year 60 minute summer	39.164	10.350	30 year +10% CC 600 minute summer	21.081	5.766
1 year 60 minute winter	26.020	10.350	30 year +10% CC 600 minute winter	14.404	5.766
1 year 120 minute summer	26.200	6.924	30 year +10% CC 720 minute summer	19.086	5.115
1 year 120 minute winter	17.406	6.924	30 year +10% CC 720 minute winter	12.827	5.115
1 year 180 minute summer	21.196	5.455	30 year +10% CC 960 minute summer	16.074	4.233
1 year 180 minute winter	13.778	5.455	30 year +10% CC 960 minute winter	10.648	4.233
1 year 240 minute summer	17.416	4.603	30 year +10% CC 1440 minute summer	12.091	3.240
1 year 240 minute winter	11.571	4.603	30 year +10% CC 1440 minute winter	8.126	3.240
1 year 360 minute summer	14.076	3.622	100 year +20% CC 15 minute summer	263.731	74.627
1 year 360 minute winter	9.149	3.622	100 year +20% CC 15 minute winter	185.074	74.627
1 year 480 minute summer	11.541	3.050	100 year +20% CC 30 minute summer	187.361	53.017
1 year 480 minute winter	7.667	3.050	100 year +20% CC 30 minute winter	131.482	53.017
1 year 600 minute summer	9.760	2.670	100 year +20% CC 60 minute summer	134.639	35.581
1 year 600 minute winter	6.669	2.670	100 year +20% CC 60 minute winter	89.451	35.581
1 year 720 minute summer	8.935	2.395	100 year +20% CC 120 minute summer	87.040	23.002
1 year 720 minute winter	6.005	2.395	100 year +20% CC 120 minute winter	57.827	23.002
1 year 960 minute summer	7.699	2.027	100 year +20% CC 180 minute summer	68.649	17.666
1 year 960 minute winter	5.100	2.027	100 year +20% CC 180 minute winter	44.624	17.666
1 year 1440 minute summer	5.922	1.587	100 year +20% CC 240 minute summer	55.285	14.610
1 year 1440 minute winter	3.980	1.587	100 year +20% CC 240 minute winter	36.730	14.610
30 year +10% CC 15 minute summer	187.270	52.991	100 year +20% CC 360 minute summer	43.315	11.147
30 year +10% CC 15 minute winter	131.418	52.991	100 year +20% CC 360 minute winter	28.156	11.147
30 year +10% CC 30 minute summer	131.812	37.298	100 year +20% CC 480 minute summer	34.759	9.186
30 year +10% CC 30 minute winter	92.499	37.298	100 year +20% CC 480 minute winter	23.093	9.186
30 year +10% CC 60 minute summer	94.762	25.043	100 year +20% CC 600 minute summer	28.884	7.900
30 year +10% CC 60 minute winter	62.958	25.043	100 year +20% CC 600 minute winter	19.735	7.900
30 year +10% CC 120 minute summer	61.747	16.318	100 year +20% CC 720 minute summer	26.053	6.983
30 year +10% CC 120 minute winter	41.023	16.318	100 year +20% CC 720 minute winter	17.509	6.983
30 year +10% CC 180 minute summer	49.001	12.610	100 year +20% CC 960 minute summer	21.813	5.744
30 year +10% CC 180 minute winter	31.852	12.610	100 year +20% CC 960 minute winter	14.449	5.744
30 year +10% CC 240 minute summer	39.653	10.479	100 year +20% CC 1440 minute summer	16.271	4.361
30 year +10% CC 240 minute winter	26.344	10.479	100 year +20% CC 1440 minute winter	10.935	4.361

Results for 1 year Critical Storm Duration. Lowest 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	S86	20	19.905	0.022	1.2	0.2685	0.0000	OK
30 minute winter	S19	22	19.651	0.244	2.1	0.2758	0.0000	SURCHARGED
15 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S82	22	18.791	0.017	1.6	0.0237	0.0000	OK
30 minute winter	S80	22	17.686	0.016	1.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute summer	S86	4.000	S19	1.0	0.628	0.042	0.0057	
30 minute winter	S19	4.001	S82	1.6	0.993	0.047	0.0146	
15 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0091	
30 minute winter	S82	4.002	S80	1.6	0.925	0.002	0.0432	1.8

Results for 30 year +10% CC Critical Storm Duration. Lowest 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	S86	46	20.030	0.147	3.1	1.7998	0.0000	OK
60 minute winter	S19	46	20.030	0.623	3.5	0.7046	0.0000	SURCHARGED
15 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S82	92	18.791	0.017	1.7	0.0237	0.0000	OK
180 minute winter	S80	92	17.686	0.016	1.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S86	4.000	S19	1.9	0.681	0.081	0.0651	
60 minute winter	S19	4.001	S82	1.7	0.995	0.048	0.0147	
15 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
180 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0435	9.0

Results for 100 year +20% CC Critical Storm Duration. Lowest 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	S86	46	20.651	0.768	4.1	2.7248	0.0000	FLOOD RISK
60 minute winter	S19	46	20.651	1.244	3.9	1.4071	0.0000	FLOOD RISK
15 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S82	46	18.792	0.018	1.9	0.0254	0.0000	OK
60 minute winter	S80	46	17.687	0.017	1.9	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
60 minute winter	S86	4.000	S19	1.7	0.690	0.075	0.0653	
60 minute winter	S19	4.001	S82	1.9	1.038	0.055	0.0163	
15 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
60 minute winter	S82	4.002	S80	1.9	0.967	0.003	0.0483	8.5

Results for 1 year 15 minute summer. 75 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
15 minute summer	S86	12	19.904	0.021	1.2	0.2554	0.0000	OK
15 minute summer	S19	13	19.604	0.197	2.2	0.2234	0.0000	SURCHARGED
15 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S82	13	18.790	0.016	1.6	0.0234	0.0000	OK
15 minute summer	S80	13	17.686	0.016	1.6	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	S86	4.000	S19	0.9	0.609	0.038	0.0053	
15 minute summer	S19	4.001	S82	1.6	0.985	0.046	0.0143	
15 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0091	
15 minute summer	S82	4.002	S80	1.6	0.917	0.002	0.0424	1.1

Results for 1 year 15 minute winter. 75 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
15 minute winter	S86	12	19.905	0.021	1.3	0.2629	0.0000	OK
15 minute winter	S19	13	19.631	0.224	2.2	0.2530	0.0000	SURCHARGED
15 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S82	14	18.790	0.016	1.6	0.0236	0.0000	OK
15 minute winter	S80	14	17.686	0.016	1.6	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	S86	4.000	S19	0.9	0.619	0.040	0.0055	
15 minute winter	S19	4.001	S82	1.6	0.990	0.047	0.0145	
15 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0092	
15 minute winter	S82	4.002	S80	1.6	0.923	0.002	0.0430	1.3

Results for 1 year 30 minute summer. 90 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	S86	20	19.905	0.022	1.2	0.2685	0.0000	OK
30 minute summer	S19	21	19.645	0.238	2.3	0.2688	0.0000	SURCHARGED
30 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S82	21	18.791	0.017	1.6	0.0236	0.0000	OK
30 minute summer	S80	21	17.686	0.016	1.6	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	S86	4.000	S19	1.0	0.628	0.042	0.0057	
30 minute summer	S19	4.001	S82	1.6	0.992	0.047	0.0146	
30 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
30 minute summer	S82	4.002	S80	1.6	0.924	0.002	0.0431	1.6

Results for 1 year 30 minute winter. 90 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 winter	S86	20	19.904	0.021	1.1	0.2626	0.0000	OK
30 minute winter	S19	22	19.651	0.244	2.1	0.2758	0.0000	SURCHARGED
30 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S82	22	18.791	0.017	1.6	0.0237	0.0000	OK
30 minute winter	S80	22	17.686	0.016	1.6	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	S86	4.000	S19	0.9	0.620	0.040	0.0055	
30 minute winter	S19	4.001	S82	1.6	0.993	0.047	0.0146	
30 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
30 minute winter	S82	4.002	S80	1.6	0.925	0.002	0.0432	1.8

Results for 1 year 60 minute summer. 120 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 summer	S86	35	19.904	0.021	1.0	0.2513	0.0000	OK
60 minute summer	S19	36	19.603	0.196	1.9	0.2214	0.0000	SURCHARGED
60 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S82	37	18.790	0.016	1.6	0.0234	0.0000	OK
60 minute summer	S80	37	17.686	0.016	1.6	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	S86	4.000	S19	0.8	0.605	0.037	0.0052	
60 minute summer	S19	4.001	S82	1.6	0.985	0.046	0.0143	
60 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0091	
60 minute summer	S82	4.002	S80	1.6	0.918	0.002	0.0424	2.2

Results for 1 year 60 minute winter. 120 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	S86	35	19.902	0.019	0.8	0.2359	0.0000	OK
60 minute winter	S19	37	19.561	0.154	1.6	0.1740	0.0000	SURCHARGED
60 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S82	37	18.790	0.016	1.5	0.0228	0.0000	OK
60 minute winter	S80	37	17.686	0.016	1.5	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)
60 minute winter	S86	4.000	S19	0.7	0.583	0.032	0.0048	
60 minute winter	S19	4.001	S82	1.5	0.970	0.044	0.0138	
60 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0088	
60 minute winter	S82	4.002	S80	1.5	0.904	0.002	0.0409	2.5

Results for 1 year 120 minute summer. 180 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	S86	66	19.901	0.018	0.7	0.2181	0.0000	OK
120 minute summer	S19	66	19.518	0.111	1.4	0.1254	0.0000	OK
120 minute summer	S79	2	19.090	0.000	0.0	0.0000	0.0000	OK
120 minute summer	S82	66	18.789	0.015	1.4	0.0218	0.0000	OK
120 minute summer	S80	66	17.685	0.015	1.4	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)
120 minute summer	S86	4.000	S19	0.6	0.557	0.028	0.0042	
120 minute summer	S19	4.001	S82	1.4	0.942	0.039	0.0128	
120 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0082	
120 minute summer	S82	4.002	S80	1.4	0.878	0.002	0.0381	2.9

Results for 1 year 120 minute winter. 180 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	S86	70	19.899	0.016	0.5	0.1934	0.0000	OK
120 minute winter	S19	70	19.494	0.087	1.1	0.0982	0.0000	OK
120 minute winter	S79	2	19.090	0.000	0.0	0.0000	0.0000	OK
120 minute winter	S82	70	18.788	0.014	1.1	0.0198	0.0000	OK
120 minute winter	S80	70	17.683	0.013	1.1	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	S86	4.000	S19	0.5	0.518	0.022	0.0036	
120 minute winter	S19	4.001	S82	1.1	0.882	0.032	0.0110	
120 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0070	
120 minute winter	S82	4.002	S80	1.1	0.821	0.002	0.0326	3.2

Results for 1 year 180 minute summer. 240 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	S86	100	19.899	0.016	0.5	0.1932	0.0000	OK
180 minute summer	S19	96	19.493	0.086	1.1	0.0971	0.0000	OK
180 minute summer	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S82	96	18.788	0.014	1.1	0.0196	0.0000	OK
180 minute summer	S80	96	17.683	0.013	1.1	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	S86	4.000	S19	0.5	0.518	0.022	0.0036	
180 minute summer	S19	4.001	S82	1.1	0.879	0.031	0.0109	
180 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0070	
180 minute summer	S82	4.002	S80	1.1	0.817	0.002	0.0323	3.7

Results for 1 year 180 minute winter. 240 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	S86	104	19.897	0.014	0.4	0.1735	0.0000	OK
180 minute winter	S19	100	19.480	0.073	0.9	0.0829	0.0000	OK
180 minute winter	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S82	100	18.787	0.013	0.9	0.0181	0.0000	OK
180 minute winter	S80	100	17.682	0.012	0.9	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)
180 minute winter	S86	4.000	S19	0.4	0.486	0.017	0.0030	
180 minute winter	S19	4.001	S82	0.9	0.832	0.026	0.0096	
180 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0061	
180 minute winter	S82	4.002	S80	0.9	0.772	0.001	0.0284	4.0

Results for 1 year 240 minute summer. 300 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	S86	128	19.898	0.015	0.5	0.1815	0.0000	OK
240 minute summer	S19	124	19.485	0.078	1.0	0.0887	0.0000	OK
240 minute summer	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
240 minute summer	S82	128	18.787	0.013	1.0	0.0188	0.0000	OK
240 minute summer	S80	128	17.683	0.013	1.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
240 minute summer	S86	4.000	S19	0.4	0.500	0.019	0.0033	
240 minute summer	S19	4.001	S82	1.0	0.853	0.028	0.0101	
240 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0065	
240 minute summer	S82	4.002	S80	1.0	0.795	0.001	0.0303	4.0

Results for 1 year 240 minute winter. 300 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	S86	128	19.897	0.014	0.4	0.1721	0.0000	OK
240 minute winter	S19	128	19.473	0.066	0.8	0.0752	0.0000	OK
240 minute winter	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S82	128	18.786	0.012	0.8	0.0171	0.0000	OK
240 minute winter	S80	128	17.682	0.012	0.8	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	S86	4.000	S19	0.4	0.484	0.017	0.0030	
240 minute winter	S19	4.001	S82	0.8	0.800	0.023	0.0087	
240 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0056	
240 minute winter	S82	4.002	S80	0.8	0.741	0.001	0.0260	4.6

Results for 1 year 360 minute summer. 424 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	S86	184	19.896	0.013	0.4	0.1641	0.0000	OK
360 minute summer	S19	184	19.476	0.069	0.9	0.0779	0.0000	OK
360 minute summer	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S82	184	18.786	0.012	0.8	0.0173	0.0000	OK
360 minute summer	S80	184	17.682	0.012	0.8	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)
360 minute summer	S86	4.000	S19	0.4	0.471	0.015	0.0028	
360 minute summer	S19	4.001	S82	0.8	0.810	0.024	0.0090	
360 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0057	
360 minute summer	S82	4.002	S80	0.8	0.748	0.001	0.0266	4.3

Results for 1 year 360 minute winter. 424 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	S86	200	19.895	0.012	0.3	0.1511	0.0000	OK
360 minute winter	S19	200	19.463	0.056	0.6	0.0632	0.0000	OK
360 minute winter	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S82	200	18.785	0.011	0.6	0.0151	0.0000	OK
360 minute winter	S80	200	17.680	0.010	0.6	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	S86	4.000	S19	0.3	0.447	0.013	0.0025	
360 minute winter	S19	4.001	S82	0.6	0.738	0.017	0.0072	
360 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0046	
360 minute winter	S82	4.002	S80	0.6	0.679	0.001	0.0216	5.4

Results for 1 year 480 minute summer. 544 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	S86	256	19.895	0.012	0.3	0.1510	0.0000	OK
480 minute summer	S19	248	19.468	0.061	0.7	0.0694	0.0000	OK
480 minute summer	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S82	248	18.785	0.011	0.7	0.0162	0.0000	OK
480 minute summer	S80	248	17.681	0.011	0.7	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)
480 minute summer	S86	4.000	S19	0.3	0.447	0.013	0.0025	
480 minute summer	S19	4.001	S82	0.7	0.772	0.020	0.0080	
480 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0051	
480 minute summer	S82	4.002	S80	0.7	0.713	0.001	0.0239	4.4

Results for 1 year 480 minute winter. 544 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	S86	272	19.893	0.010	0.2	0.1250	0.0000	OK
480 minute winter	S19	264	19.457	0.050	0.5	0.0567	0.0000	OK
480 minute winter	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S82	264	18.784	0.010	0.5	0.0140	0.0000	OK
480 minute winter	S80	264	17.680	0.010	0.5	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)
480 minute winter	S86	4.000	S19	0.2	0.395	0.009	0.0019	
480 minute winter	S19	4.001	S82	0.5	0.700	0.014	0.0063	
480 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0040	
480 minute winter	S82	4.002	S80	0.5	0.643	0.001	0.0190	5.3

Results for 1 year 600 minute summer. 660 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	S86	315	19.895	0.012	0.3	0.1509	0.0000	OK
600 minute summer	S19	315	19.463	0.056	0.6	0.0631	0.0000	OK
600 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S82	315	18.785	0.011	0.6	0.0151	0.0000	OK
600 minute summer	S80	315	17.680	0.010	0.6	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	S86	4.000	S19	0.3	0.446	0.013	0.0025	
600 minute summer	S19	4.001	S82	0.6	0.738	0.017	0.0072	
600 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0046	
600 minute summer	S82	4.002	S80	0.6	0.678	0.001	0.0216	4.8

Results for 1 year 600 minute winter. 660 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	S86	330	19.893	0.010	0.2	0.1250	0.0000	OK
600 minute winter	S19	330	19.451	0.044	0.4	0.0500	0.0000	OK
600 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S82	330	18.783	0.009	0.4	0.0127	0.0000	OK
600 minute winter	S80	330	17.679	0.008	0.4	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)
600 minute winter	S86	4.000	S19	0.2	0.395	0.009	0.0019	
600 minute winter	S19	4.001	S82	0.4	0.652	0.012	0.0054	
600 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0035	
600 minute winter	S82	4.002	S80	0.4	0.608	0.001	0.0161	5.4

Results for 1 year 720 minute summer. 780 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	S86	405	19.893	0.010	0.2	0.1250	0.0000	OK
720 minute summer	S19	375	19.457	0.050	0.5	0.0567	0.0000	OK
720 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S82	375	18.784	0.010	0.5	0.0140	0.0000	OK
720 minute summer	S80	375	17.680	0.010	0.5	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 summer	S86	4.000	S19	0.2	0.395	0.009	0.0019	
720 minute summer	S19	4.001	S82	0.5	0.700	0.014	0.0063	
720 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0040	
720 minute summer	S82	4.002	S80	0.5	0.643	0.001	0.0190	4.8

Results for 1 year 720 minute winter. 780 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	S86	390	19.893	0.010	0.2	0.1250	0.0000	OK
720 minute winter	S19	390	19.451	0.044	0.4	0.0500	0.0000	OK
720 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S82	390	18.783	0.009	0.4	0.0127	0.0000	OK
720 minute winter	S80	390	17.679	0.008	0.4	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)
720 minute winter	S86	4.000	S19	0.2	0.395	0.009	0.0019	
720 minute winter	S19	4.001	S82	0.4	0.652	0.012	0.0054	
720 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0035	
720 minute winter	S82	4.002	S80	0.4	0.608	0.001	0.0161	5.9

Results for 1 year 960 minute summer. 1020 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	S86	525	19.893	0.010	0.2	0.1250	0.0000	OK
960 minute summer	S19	525	19.451	0.044	0.4	0.0500	0.0000	OK
960 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S82	525	18.783	0.009	0.4	0.0127	0.0000	OK
960 minute summer	S80	525	17.679	0.008	0.4	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)
960 minute summer	S86	4.000	S19	0.2	0.395	0.009	0.0019	
960 minute summer	S19	4.001	S82	0.4	0.652	0.012	0.0054	
960 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0035	
960 minute summer	S82	4.002	S80	0.4	0.608	0.001	0.0161	5.0

Results for 1 year 960 minute winter. 1020 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	S86	510	19.893	0.010	0.2	0.1250	0.0000	OK
960 minute winter	S19	510	19.451	0.044	0.4	0.0500	0.0000	OK
960 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S82	510	18.783	0.009	0.4	0.0127	0.0000	OK
960 minute winter	S80	510	17.679	0.008	0.4	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)
960 minute winter	S86	4.000	S19	0.2	0.395	0.009	0.0019	
960 minute winter	S19	4.001	S82	0.4	0.652	0.012	0.0054	
960 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0035	
960 minute winter	S82	4.002	S80	0.4	0.608	0.001	0.0161	6.5

Results for 1 year 1440 minute summer. 1500 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	S86	750	19.893	0.010	0.2	0.1250	0.0000	OK
1440 minute summer	S19	750	19.451	0.044	0.4	0.0500	0.0000	OK
1440 minute summer	S79	30	19.090	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S82	750	18.783	0.009	0.4	0.0127	0.0000	OK
1440 minute summer	S80	750	17.679	0.008	0.4	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)
1440 minute summer	S86	4.000	S19	0.2	0.395	0.009	0.0019	
1440 minute summer	S19	4.001	S82	0.4	0.652	0.012	0.0054	
1440 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0035	
1440 minute summer	S82	4.002	S80	0.4	0.608	0.001	0.0161	5.8

Results for 1 year 1440 minute winter. 1500 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 winter	S86	600	19.890	0.007	0.1	0.0899	0.0000	OK
1440 minute winter	S19	600	19.437	0.030	0.2	0.0343	0.0000	OK
1440 minute winter	S79	30	19.090	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S82	600	18.781	0.007	0.2	0.0095	0.0000	OK
1440 minute winter	S80	600	17.675	0.005	0.2	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)
1440 minute winter	S86	4.000	S19	0.1	0.322	0.004	0.0012	
1440 minute winter	S19	4.001	S82	0.2	0.528	0.006	0.0033	
1440 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0023	
1440 minute winter	S82	4.002	S80	0.2	0.552	0.000	0.0090	6.9

Results for 30 year +10% CC 15 minute summer. 75 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
15 minute summer	S86	15	19.974	0.091	4.4	1.1182	0.0000	OK
15 minute summer	S19	15	19.974	0.567	6.0	0.6418	0.0000	SURCHARGED
15 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S82	32	18.791	0.017	1.6	0.0237	0.0000	OK
15 minute summer	S80	32	17.686	0.016	1.6	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	S86	4.000	S19	2.4	0.699	0.104	0.0535	
15 minute summer	S19	4.001	S82	1.6	0.995	0.048	0.0147	
15 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
15 minute summer	S82	4.002	S80	1.6	0.926	0.002	0.0434	2.8

Results for 30 year +10% CC 15 minute winter. 75 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
15 minute winter	S86	16	19.996	0.113	6.4	1.3763	0.0000	OK
15 minute winter	S19	16	19.995	0.588	5.2	0.6654	0.0000	SURCHARGED
15 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S82	36	18.791	0.017	1.7	0.0237	0.0000	OK
15 minute winter	S80	36	17.686	0.016	1.6	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	S86	4.000	S19	-3.2	0.731	-0.138	0.0589	
15 minute winter	S19	4.001	S82	1.7	0.995	0.048	0.0147	
15 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
15 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0434	3.2

Results for 30 year +10% CC 30 minute summer. 90 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	S86	25	20.001	0.118	4.4	1.4447	0.0000	OK
30 minute summer	S19	25	20.001	0.594	4.7	0.6719	0.0000	SURCHARGED
30 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S82	50	18.791	0.017	1.6	0.0237	0.0000	OK
30 minute summer	S80	50	17.686	0.016	1.6	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	S86	4.000	S19	1.6	0.723	0.072	0.0602	
30 minute summer	S19	4.001	S82	1.6	0.994	0.048	0.0146	
30 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
30 minute summer	S82	4.002	S80	1.6	0.927	0.002	0.0434	4.0

Results for 30 year +10% CC 30 minute winter. 90 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 winter	S86	27	20.025	0.142	3.9	1.7395	0.0000	OK
30 minute winter	S19	27	20.025	0.618	5.0	0.6991	0.0000	SURCHARGED
30 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S82	54	18.791	0.017	1.7	0.0237	0.0000	OK
30 minute winter	S80	54	17.686	0.016	1.6	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	S86	4.000	S19	2.1	0.710	0.091	0.0646	
30 minute winter	S19	4.001	S82	1.7	0.995	0.048	0.0147	
30 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
30 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0434	4.4

Results for 30 year +10% CC 60 minute summer. 120 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 summer	S86	42	20.007	0.124	3.2	1.5138	0.0000	OK
60 minute summer	S19	42	20.007	0.600	4.5	0.6782	0.0000	SURCHARGED
60 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S82	73	18.791	0.017	1.7	0.0237	0.0000	OK
60 minute summer	S80	73	17.686	0.016	1.6	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	S86	4.000	S19	2.5	0.700	0.107	0.0614	
60 minute summer	S19	4.001	S82	1.7	0.995	0.048	0.0147	
60 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
60 minute summer	S82	4.002	S80	1.6	0.927	0.002	0.0434	5.3

Results for 30 year +10% CC 60 minute winter. 120 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	S86	46	20.030	0.147	3.1	1.7998	0.0000	OK
60 minute winter	S19	46	20.030	0.623	3.5	0.7046	0.0000	SURCHARGED
60 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S82	79	18.791	0.017	1.7	0.0237	0.0000	OK
60 minute winter	S80	79	17.686	0.016	1.6	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	S86	4.000	S19	1.9	0.681	0.081	0.0651	
60 minute winter	S19	4.001	S82	1.7	0.995	0.048	0.0147	
60 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
60 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0435	6.0

Results for 30 year +10% CC 120 minute summer. 180 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	S86	78	19.986	0.103	2.7	1.2558	0.0000	OK
120 minute summer	S19	78	19.986	0.579	3.0	0.6545	0.0000	SURCHARGED
120 minute summer	S79	2	19.090	0.000	0.0	0.0000	0.0000	OK
120 minute summer	S82	108	18.791	0.017	1.6	0.0237	0.0000	OK
120 minute summer	S80	108	17.686	0.016	1.6	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	S86	4.000	S19	1.3	0.676	0.057	0.0564	
120 minute summer	S19	4.001	S82	1.6	0.994	0.047	0.0146	
120 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
120 minute summer	S82	4.002	S80	1.6	0.926	0.002	0.0434	7.1

Results for 30 year +10% CC 120 minute winter. 180 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	S86	80	19.977	0.094	1.7	1.1521	0.0000	OK
120 minute winter	S19	82	19.978	0.571	3.3	0.6458	0.0000	SURCHARGED
120 minute winter	S79	2	19.090	0.000	0.0	0.0000	0.0000	OK
120 minute winter	S82	112	18.791	0.017	1.7	0.0237	0.0000	OK
120 minute winter	S80	112	17.686	0.016	1.6	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	S86	4.000	S19	3.0	0.649	0.129	0.0542	
120 minute winter	S19	4.001	S82	1.7	0.995	0.048	0.0147	
120 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
120 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0434	7.8

Results for 30 year +10% CC 180 minute summer. 240 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	S86	112	19.954	0.071	2.1	0.8663	0.0000	OK
180 minute summer	S19	104	19.954	0.547	2.7	0.6186	0.0000	SURCHARGED
180 minute summer	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S82	92	18.791	0.017	1.6	0.0236	0.0000	OK
180 minute summer	S80	92	17.686	0.016	1.6	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	S86	4.000	S19	-1.7	0.663	-0.072	0.0456	
180 minute summer	S19	4.001	S82	1.6	0.991	0.047	0.0145	
180 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
180 minute summer	S82	4.002	S80	1.6	0.925	0.002	0.0432	8.0

Results for 30 year +10% CC 180 minute winter. 240 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	S86	112	19.921	0.038	1.0	0.4644	0.0000	OK
180 minute winter	S19	116	19.933	0.526	2.7	0.5954	0.0000	SURCHARGED
180 minute winter	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S82	92	18.791	0.017	1.7	0.0237	0.0000	OK
180 minute winter	S80	92	17.686	0.016	1.6	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	S86	4.000	S19	1.8	0.631	0.078	0.0318	
180 minute winter	S19	4.001	S82	1.7	0.995	0.048	0.0147	
180 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
180 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0435	9.0

Results for 30 year +10% CC 240 minute summer. 300 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	S86	140	19.922	0.039	1.7	0.4809	0.0000	OK
240 minute summer	S19	136	19.934	0.527	3.7	0.5959	0.0000	SURCHARGED
240 minute summer	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
240 minute summer	S82	160	18.791	0.017	1.6	0.0237	0.0000	OK
240 minute summer	S80	160	17.686	0.016	1.6	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	S86	4.000	S19	2.9	0.640	0.127	0.0326	
240 minute summer	S19	4.001	S82	1.6	0.993	0.047	0.0146	
240 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
240 minute summer	S82	4.002	S80	1.6	0.926	0.002	0.0433	8.9

Results for 30 year +10% CC 240 minute winter. 300 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	S86	132	19.903	0.020	0.8	0.2441	0.0000	OK
240 minute winter	S19	136	19.669	0.262	1.8	0.2964	0.0000	SURCHARGED
240 minute winter	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S82	136	18.791	0.017	1.6	0.0237	0.0000	OK
240 minute winter	S80	136	17.686	0.016	1.6	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	S86	4.000	S19	0.8	0.595	0.035	0.0050	
240 minute winter	S19	4.001	S82	1.6	0.994	0.047	0.0146	
240 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
240 minute winter	S82	4.002	S80	1.6	0.926	0.002	0.0434	10.0

Results for 30 year +10% CC 360 minute summer. 424 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	S86	184	19.903	0.020	0.9	0.2494	0.0000	OK
360 minute summer	S19	192	19.668	0.261	1.8	0.2952	0.0000	SURCHARGED
360 minute summer	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S82	192	18.791	0.017	1.6	0.0237	0.0000	OK
360 minute summer	S80	192	17.686	0.016	1.6	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	S86	4.000	S19	0.8	0.602	0.036	0.0051	
360 minute summer	S19	4.001	S82	1.6	0.994	0.047	0.0146	
360 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
360 minute summer	S82	4.002	S80	1.6	0.926	0.002	0.0434	10.3

Results for 30 year +10% CC 360 minute winter. 424 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	S86	200	19.900	0.017	0.6	0.2118	0.0000	OK
360 minute winter	S19	200	19.511	0.104	1.3	0.1172	0.0000	OK
360 minute winter	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S82	200	18.789	0.015	1.3	0.0213	0.0000	OK
360 minute winter	S80	200	17.685	0.015	1.3	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)
360 minute winter	S86	4.000	S19	0.6	0.547	0.026	0.0041	
360 minute winter	S19	4.001	S82	1.3	0.928	0.038	0.0124	
360 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0079	
360 minute winter	S82	4.002	S80	1.3	0.864	0.002	0.0367	11.3

Results for 30 year +10% CC 480 minute summer. 544 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	S86	248	19.902	0.019	0.7	0.2280	0.0000	OK
480 minute summer	S19	248	19.545	0.138	1.5	0.1560	0.0000	OK
480 minute summer	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S82	248	18.790	0.016	1.5	0.0225	0.0000	OK
480 minute summer	S80	248	17.685	0.015	1.5	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)
480 minute summer	S86	4.000	S19	0.7	0.571	0.030	0.0045	
480 minute summer	S19	4.001	S82	1.5	0.961	0.042	0.0135	
480 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0086	
480 minute summer	S82	4.002	S80	1.5	0.896	0.002	0.0400	11.7

Results for 30 year +10% CC 480 minute winter. 544 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	S86	264	19.899	0.016	0.5	0.1937	0.0000	OK
480 minute winter	S19	264	19.494	0.087	1.1	0.0984	0.0000	OK
480 minute winter	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S82	264	18.788	0.014	1.1	0.0198	0.0000	OK
480 minute winter	S80	264	17.683	0.013	1.1	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)
480 minute winter	S86	4.000	S19	0.5	0.519	0.022	0.0036	
480 minute winter	S19	4.001	S82	1.1	0.883	0.032	0.0110	
480 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0070	
480 minute winter	S82	4.002	S80	1.1	0.822	0.002	0.0327	12.8

Results for 30 year +10% CC 600 minute summer. 660 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	S86	315	19.900	0.017	0.6	0.2118	0.0000	OK
600 minute summer	S19	315	19.511	0.104	1.3	0.1172	0.0000	OK
600 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S82	315	18.789	0.015	1.3	0.0213	0.0000	OK
600 minute summer	S80	315	17.685	0.015	1.3	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	S86	4.000	S19	0.6	0.547	0.026	0.0041	
600 minute summer	S19	4.001	S82	1.3	0.928	0.037	0.0124	
600 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0079	
600 minute summer	S82	4.002	S80	1.3	0.864	0.002	0.0367	13.4

Results for 30 year +10% CC 600 minute winter. 660 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	S86	330	19.897	0.014	0.4	0.1736	0.0000	OK
600 minute winter	S19	330	19.480	0.073	0.9	0.0830	0.0000	OK
600 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S82	330	18.787	0.013	0.9	0.0181	0.0000	OK
600 minute winter	S80	330	17.682	0.012	0.9	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)
600 minute winter	S86	4.000	S19	0.4	0.487	0.017	0.0030	
600 minute winter	S19	4.001	S82	0.9	0.832	0.026	0.0096	
600 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0061	
600 minute winter	S82	4.002	S80	0.9	0.772	0.001	0.0285	14.0

Results for 30 year +10% CC 720 minute summer. 780 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	S86	375	19.899	0.016	0.5	0.1936	0.0000	OK
720 minute summer	S19	375	19.494	0.087	1.1	0.0984	0.0000	OK
720 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S82	375	18.788	0.014	1.1	0.0198	0.0000	OK
720 minute summer	S80	375	17.683	0.013	1.1	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)
720 minute summer	S86	4.000	S19	0.5	0.519	0.022	0.0036	
720 minute summer	S19	4.001	S82	1.1	0.883	0.032	0.0110	
720 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0070	
720 minute summer	S82	4.002	S80	1.1	0.821	0.002	0.0327	13.8

Results for 30 year +10% CC 720 minute winter. 780 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	S86	390	19.897	0.014	0.4	0.1736	0.0000	OK
720 minute winter	S19	375	19.480	0.073	0.9	0.0830	0.0000	OK
720 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S82	375	18.787	0.013	0.9	0.0181	0.0000	OK
720 minute winter	S80	375	17.682	0.012	0.9	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)
720 minute winter	S86	4.000	S19	0.4	0.487	0.017	0.0030	
720 minute winter	S19	4.001	S82	0.9	0.832	0.026	0.0096	
720 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0061	
720 minute winter	S82	4.002	S80	0.9	0.772	0.001	0.0285	15.1

Results for 30 year +10% CC 960 minute summer. 1020 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	S86	510	19.897	0.014	0.4	0.1736	0.0000	OK
960 minute summer	S19	510	19.480	0.073	0.9	0.0830	0.0000	OK
960 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S82	510	18.787	0.013	0.9	0.0181	0.0000	OK
960 minute summer	S80	510	17.682	0.012	0.9	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)
960 minute summer	S86	4.000	S19	0.4	0.487	0.017	0.0030	
960 minute summer	S19	4.001	S82	0.9	0.832	0.026	0.0096	
960 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0061	
960 minute summer	S82	4.002	S80	0.9	0.772	0.001	0.0285	14.7

Results for 30 year +10% CC 960 minute winter. 1020 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	S86	465	19.895	0.012	0.3	0.1511	0.0000	OK
960 minute winter	S19	480	19.468	0.061	0.7	0.0695	0.0000	OK
960 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S82	465	18.785	0.011	0.7	0.0162	0.0000	OK
960 minute winter	S80	465	17.681	0.011	0.7	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)
960 minute winter	S86	4.000	S19	0.3	0.447	0.013	0.0025	
960 minute winter	S19	4.001	S82	0.7	0.772	0.020	0.0080	
960 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0051	
960 minute winter	S82	4.002	S80	0.7	0.713	0.001	0.0240	17.4

Results for 30 year +10% CC 1440 minute summer. 1500 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	S86	750	19.895	0.012	0.3	0.1511	0.0000	OK
1440 minute summer	S19	750	19.468	0.061	0.7	0.0695	0.0000	OK
1440 minute summer	S79	30	19.090	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S82	750	18.785	0.011	0.7	0.0162	0.0000	OK
1440 minute summer	S80	750	17.681	0.011	0.7	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	S86	4.000	S19	0.3	0.447	0.013	0.0025	
1440 minute summer	S19	4.001	S82	0.7	0.772	0.020	0.0080	
1440 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0051	
1440 minute summer	S82	4.002	S80	0.7	0.713	0.001	0.0240	14.8

Results for 30 year +10% CC 1440 minute winter. 1500 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 winter	S86	660	19.893	0.010	0.2	0.1250	0.0000	OK
1440 minute winter	S19	690	19.457	0.050	0.5	0.0567	0.0000	OK
1440 minute winter	S79	30	19.090	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S82	690	18.784	0.010	0.5	0.0140	0.0000	OK
1440 minute winter	S80	690	17.680	0.010	0.5	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	S86	4.000	S19	0.2	0.395	0.009	0.0019	
1440 minute winter	S19	4.001	S82	0.5	0.700	0.014	0.0063	
1440 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0040	
1440 minute winter	S82	4.002	S80	0.5	0.643	0.001	0.0190	18.4

Results for 100 year +20% CC 15 minute summer. 75 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
15 minute summer	S86	16	20.126	0.243	7.2	1.9735	0.0000	SURCHARGED
15 minute summer	S19	16	20.130	0.723	7.5	0.8175	0.0000	SURCHARGED
15 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
15 minute summer	S82	45	18.791	0.017	1.6	0.0237	0.0000	OK
15 minute summer	S80	46	17.686	0.016	1.6	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	S86	4.000	S19	-2.9	0.682	-0.128	0.0653	
15 minute summer	S19	4.001	S82	1.6	0.995	0.048	0.0147	
15 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
15 minute summer	S82	4.002	S80	1.6	0.926	0.002	0.0434	4.0

Results for 100 year +20% CC 15 minute winter. 75 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
15 minute winter	S86	16	20.293	0.410	8.1	2.2128	0.0000	SURCHARGED
15 minute winter	S19	16	20.293	0.886	5.8	1.0024	0.0000	SURCHARGED
15 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
15 minute winter	S82	50	18.791	0.017	1.6	0.0237	0.0000	OK
15 minute winter	S80	50	17.686	0.016	1.6	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	S86	4.000	S19	-3.9	0.735	-0.170	0.0653	
15 minute winter	S19	4.001	S82	1.6	0.995	0.048	0.0147	
15 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
15 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0435	4.4

Results for 100 year +20% CC 30 minute summer. 90 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	S86	25	20.370	0.487	7.0	2.3216	0.0000	SURCHARGED
30 minute summer	S19	25	20.369	0.962	5.4	1.0885	0.0000	SURCHARGED
30 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
30 minute summer	S82	26	18.791	0.017	1.7	0.0241	0.0000	OK
30 minute summer	S80	26	17.686	0.016	1.7	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)
30 minute summer	S86	4.000	S19	-3.0	0.741	-0.129	0.0653	
30 minute summer	S19	4.001	S82	1.7	1.004	0.049	0.0150	
30 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0095	
30 minute summer	S82	4.002	S80	1.7	0.935	0.002	0.0444	5.6

Results for 100 year +20% CC 30 minute winter. 90 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 winter	S86	27	20.568	0.685	6.1	2.6052	0.0000	SURCHARGED
30 minute winter	S19	27	20.568	1.161	5.2	1.3126	0.0000	FLOOD RISK
30 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
30 minute winter	S82	27	18.791	0.017	1.9	0.0250	0.0000	OK
30 minute winter	S80	27	17.687	0.017	1.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
30 minute winter	S86	4.000	S19	-2.5	0.693	-0.107	0.0653	
30 minute winter	S19	4.001	S82	1.9	1.028	0.053	0.0159	
30 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0101	
30 minute winter	S82	4.002	S80	1.9	0.959	0.003	0.0472	6.3

Results for 100 year +20% CC 60 minute summer. 120 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 summer	S86	43	20.469	0.586	5.3	2.4640	0.0000	SURCHARGED
60 minute summer	S19	43	20.469	1.062	3.9	1.2010	0.0000	FLOOD RISK
60 minute summer	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
60 minute summer	S82	43	18.791	0.017	1.8	0.0246	0.0000	OK
60 minute summer	S80	43	17.687	0.017	1.8	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)
60 minute summer	S86	4.000	S19	-2.0	0.705	-0.088	0.0653	
60 minute summer	S19	4.001	S82	1.8	1.017	0.051	0.0155	
60 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0098	
60 minute summer	S82	4.002	S80	1.8	0.947	0.003	0.0458	7.6

Results for 100 year +20% CC 60 minute winter. 120 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	S86	46	20.651	0.768	4.1	2.7248	0.0000	FLOOD RISK
60 minute winter	S19	46	20.651	1.244	3.9	1.4071	0.0000	FLOOD RISK
60 minute winter	S79	1	19.090	0.000	0.0	0.0000	0.0000	OK
60 minute winter	S82	46	18.792	0.018	1.9	0.0254	0.0000	OK
60 minute winter	S80	46	17.687	0.017	1.9	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	S86	4.000	S19	1.7	0.690	0.075	0.0653	
60 minute winter	S19	4.001	S82	1.9	1.038	0.055	0.0163	
60 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0103	
60 minute winter	S82	4.002	S80	1.9	0.967	0.003	0.0483	8.5

Results for 100 year +20% CC 120 minute summer. 180 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	S86	78	20.392	0.509	3.3	2.3544	0.0000	SURCHARGED
120 minute summer	S19	78	20.396	0.989	3.1	1.1181	0.0000	SURCHARGED
120 minute summer	S79	2	19.090	0.000	0.0	0.0000	0.0000	OK
120 minute summer	S82	78	18.791	0.017	1.7	0.0242	0.0000	OK
120 minute summer	S80	78	17.687	0.017	1.7	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 summer	S86	4.000	S19	1.9	0.676	0.083	0.0653	
120 minute summer	S19	4.001	S82	1.7	1.007	0.050	0.0151	
120 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0096	
120 minute summer	S82	4.002	S80	1.7	0.938	0.002	0.0447	9.8

Results for 100 year +20% CC 120 minute winter. 180 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	S86	84	20.490	0.607	2.3	2.4941	0.0000	SURCHARGED
120 minute winter	S19	84	20.492	1.085	2.8	1.2275	0.0000	FLOOD RISK
120 minute winter	S79	2	19.090	0.000	0.0	0.0000	0.0000	OK
120 minute winter	S82	84	18.791	0.017	1.8	0.0247	0.0000	OK
120 minute winter	S80	84	17.687	0.017	1.8	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)
120 minute winter	S86	4.000	S19	1.6	0.646	0.068	0.0653	
120 minute winter	S19	4.001	S82	1.8	1.019	0.052	0.0156	
120 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0099	
120 minute winter	S82	4.002	S80	1.8	0.950	0.003	0.0461	11.0

Results for 100 year +20% CC 180 minute summer. 240 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	S86	112	20.269	0.386	2.3	2.1778	0.0000	SURCHARGED
180 minute summer	S19	112	20.273	0.866	2.5	0.9797	0.0000	SURCHARGED
180 minute summer	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
180 minute summer	S82	84	18.791	0.017	1.6	0.0238	0.0000	OK
180 minute summer	S80	84	17.686	0.016	1.7	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)
180 minute summer	S86	4.000	S19	1.5	0.646	0.066	0.0653	
180 minute summer	S19	4.001	S82	1.6	0.995	0.048	0.0147	
180 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
180 minute summer	S82	4.002	S80	1.7	0.927	0.002	0.0435	11.4

Results for 100 year +20% CC 180 minute winter. 240 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	S86	120	20.272	0.389	1.8	2.1824	0.0000	SURCHARGED
180 minute winter	S19	120	20.272	0.865	2.3	0.9785	0.0000	SURCHARGED
180 minute winter	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S82	180	18.791	0.017	1.6	0.0237	0.0000	OK
180 minute winter	S80	180	17.686	0.016	1.6	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	S86	4.000	S19	1.6	0.640	0.070	0.0653	
180 minute winter	S19	4.001	S82	1.6	0.995	0.048	0.0146	
180 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
180 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0435	12.6

Results for 100 year +20% CC 240 minute summer. 300 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	S86	148	20.122	0.239	1.7	1.9679	0.0000	SURCHARGED
240 minute summer	S19	148	20.122	0.715	2.5	0.8089	0.0000	SURCHARGED
240 minute summer	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
240 minute summer	S82	112	18.791	0.017	1.6	0.0237	0.0000	OK
240 minute summer	S80	112	17.686	0.016	1.6	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	S86	4.000	S19	1.7	0.656	0.072	0.0653	
240 minute summer	S19	4.001	S82	1.6	0.994	0.047	0.0146	
240 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
240 minute summer	S82	4.002	S80	1.6	0.926	0.002	0.0433	12.6

Results for 100 year +20% CC 240 minute winter. 300 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	S86	156	20.034	0.151	1.7	1.8417	0.0000	SURCHARGED
240 minute winter	S19	160	20.033	0.626	2.2	0.7082	0.0000	SURCHARGED
240 minute winter	S79	4	19.090	0.000	0.0	0.0000	0.0000	OK
240 minute winter	S82	108	18.791	0.017	1.7	0.0237	0.0000	OK
240 minute winter	S80	108	17.686	0.016	1.6	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	S86	4.000	S19	1.3	0.631	0.056	0.0652	
240 minute winter	S19	4.001	S82	1.7	0.995	0.048	0.0147	
240 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
240 minute winter	S82	4.002	S80	1.6	0.927	0.002	0.0435	14.0

Results for 100 year +20% CC 360 minute summer. 424 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	S86	216	19.980	0.097	1.5	1.1862	0.0000	OK
360 minute summer	S19	208	19.979	0.572	2.2	0.6472	0.0000	SURCHARGED
360 minute summer	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
360 minute summer	S82	176	18.791	0.017	1.7	0.0238	0.0000	OK
360 minute summer	S80	176	17.686	0.016	1.7	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	S86	4.000	S19	1.7	0.622	0.073	0.0550	
360 minute summer	S19	4.001	S82	1.7	0.995	0.048	0.0147	
360 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
360 minute summer	S82	4.002	S80	1.7	0.927	0.002	0.0435	14.0

Results for 100 year +20% CC 360 minute winter. 424 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	S86	216	19.906	0.023	0.9	0.2829	0.0000	OK
360 minute winter	S19	216	19.908	0.501	2.0	0.5670	0.0000	SURCHARGED
360 minute winter	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
360 minute winter	S82	184	18.791	0.017	1.6	0.0237	0.0000	OK
360 minute winter	S80	184	17.686	0.016	1.7	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 winter	S86	4.000	S19	1.1	0.608	0.048	0.0229	
360 minute winter	S19	4.001	S82	1.6	0.995	0.048	0.0147	
360 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0093	
360 minute winter	S82	4.002	S80	1.7	0.927	0.002	0.0435	16.3

Results for 100 year +20% CC 480 minute summer. 544 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	S86	264	19.922	0.039	1.7	0.4783	0.0000	OK
480 minute summer	S19	264	19.939	0.532	2.4	0.6022	0.0000	SURCHARGED
480 minute summer	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
480 minute summer	S82	240	18.791	0.017	1.7	0.0237	0.0000	OK
480 minute summer	S80	240	17.686	0.016	1.6	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	S86	4.000	S19	1.6	0.622	0.068	0.0344	
480 minute summer	S19	4.001	S82	1.7	0.995	0.048	0.0147	
480 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
480 minute summer	S82	4.002	S80	1.6	0.927	0.002	0.0435	15.5

Results for 100 year +20% CC 480 minute winter. 544 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	S86	264	19.902	0.019	0.7	0.2284	0.0000	OK
480 minute winter	S19	264	19.555	0.148	1.5	0.1679	0.0000	OK
480 minute winter	S79	8	19.090	0.000	0.0	0.0000	0.0000	OK
480 minute winter	S82	264	18.790	0.016	1.5	0.0227	0.0000	OK
480 minute winter	S80	264	17.686	0.016	1.5	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)
480 minute winter	S86	4.000	S19	0.7	0.572	0.030	0.0045	
480 minute winter	S19	4.001	S82	1.5	0.967	0.043	0.0137	
480 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0087	
480 minute winter	S82	4.002	S80	1.5	0.902	0.002	0.0406	17.3

Results for 100 year +20% CC 600 minute summer. 660 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	S86	315	19.903	0.020	0.8	0.2441	0.0000	OK
600 minute summer	S19	315	19.646	0.239	1.7	0.2701	0.0000	SURCHARGED
600 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
600 minute summer	S82	315	18.791	0.017	1.6	0.0236	0.0000	OK
600 minute summer	S80	315	17.686	0.016	1.6	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	S86	4.000	S19	0.8	0.595	0.035	0.0050	
600 minute summer	S19	4.001	S82	1.6	0.992	0.047	0.0146	
600 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0093	
600 minute summer	S82	4.002	S80	1.6	0.924	0.002	0.0432	17.1

Results for 100 year +20% CC 600 minute winter. 660 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	S86	330	19.900	0.017	0.6	0.2118	0.0000	OK
600 minute winter	S19	330	19.511	0.104	1.3	0.1172	0.0000	OK
600 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
600 minute winter	S82	330	18.789	0.015	1.3	0.0213	0.0000	OK
600 minute winter	S80	330	17.685	0.015	1.3	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 winter	S86	4.000	S19	0.6	0.547	0.026	0.0041	
600 minute winter	S19	4.001	S82	1.3	0.928	0.038	0.0124	
600 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0079	
600 minute winter	S82	4.002	S80	1.3	0.864	0.002	0.0367	18.5

Results for 100 year +20% CC 720 minute summer. 780 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	S86	375	19.902	0.019	0.7	0.2284	0.0000	OK
720 minute summer	S19	375	19.553	0.146	1.5	0.1648	0.0000	OK
720 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
720 minute summer	S82	375	18.790	0.016	1.5	0.0227	0.0000	OK
720 minute summer	S80	375	17.685	0.015	1.5	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 summer	S86	4.000	S19	0.7	0.572	0.030	0.0045	
720 minute summer	S19	4.001	S82	1.5	0.966	0.043	0.0137	
720 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0087	
720 minute summer	S82	4.002	S80	1.5	0.900	0.002	0.0405	18.4

Results for 100 year +20% CC 720 minute winter. 780 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	S86	375	19.899	0.016	0.5	0.1937	0.0000	OK
720 minute winter	S19	390	19.494	0.087	1.1	0.0984	0.0000	OK
720 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
720 minute winter	S82	375	18.788	0.014	1.1	0.0198	0.0000	OK
720 minute winter	S80	390	17.683	0.013	1.1	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)
720 minute winter	S86	4.000	S19	0.5	0.519	0.022	0.0036	
720 minute winter	S19	4.001	S82	1.1	0.883	0.032	0.0110	
720 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0070	
720 minute winter	S82	4.002	S80	1.1	0.822	0.002	0.0327	19.8

Results for 100 year +20% CC 960 minute summer. 1020 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	S86	495	19.900	0.017	0.6	0.2118	0.0000	OK
960 minute summer	S19	495	19.511	0.104	1.3	0.1172	0.0000	OK
960 minute summer	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
960 minute summer	S82	495	18.789	0.015	1.3	0.0213	0.0000	OK
960 minute summer	S80	495	17.685	0.015	1.3	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	S86	4.000	S19	0.6	0.547	0.026	0.0041	
960 minute summer	S19	4.001	S82	1.3	0.928	0.037	0.0124	
960 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0079	
960 minute summer	S82	4.002	S80	1.3	0.864	0.002	0.0367	21.3

Results for 100 year +20% CC 960 minute winter. 1020 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	S86	480	19.897	0.014	0.4	0.1736	0.0000	OK
960 minute winter	S19	480	19.480	0.073	0.9	0.0830	0.0000	OK
960 minute winter	S79	15	19.090	0.000	0.0	0.0000	0.0000	OK
960 minute winter	S82	480	18.787	0.013	0.9	0.0181	0.0000	OK
960 minute winter	S80	480	17.682	0.012	0.9	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)
960 minute winter	S86	4.000	S19	0.4	0.487	0.017	0.0030	
960 minute winter	S19	4.001	S82	0.9	0.832	0.026	0.0096	
960 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0061	
960 minute winter	S82	4.002	S80	0.9	0.772	0.001	0.0285	22.3

Results for 100 year +20% CC 1440 minute summer. 1500 minute analysis at 30 minute timestep. Mass balance: 100.00%

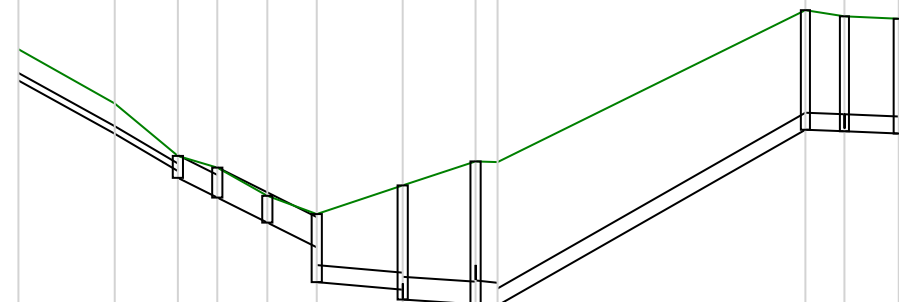
Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute summer	S86	750	19.897	0.014	0.4	0.1736	0.0000	OK
1440 minute summer	S19	750	19.480	0.073	0.9	0.0830	0.0000	OK
1440 minute summer	S79	30	19.090	0.000	0.0	0.0000	0.0000	OK
1440 minute summer	S82	750	18.787	0.013	0.9	0.0181	0.0000	OK
1440 minute summer	S80	750	17.682	0.012	0.9	0.0000	0.0000	OK

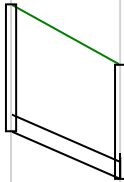
Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
1440 minute summer	S86	4.000	S19	0.4	0.487	0.017	0.0030	
1440 minute summer	S19	4.001	S82	0.9	0.832	0.026	0.0096	
1440 minute summer	S79	5.000	S82	0.0	0.000	0.000	0.0061	
1440 minute summer	S82	4.002	S80	0.9	0.772	0.001	0.0285	23.1

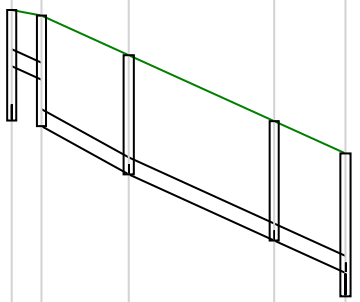
Results for 100 year +20% CC 1440 minute winter. 1500 minute analysis at 30 minute timestep. Mass balance: 100.00%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
1440 minute winter	S86	660	19.895	0.012	0.3	0.1511	0.0000	OK
1440 minute winter	S19	690	19.468	0.061	0.7	0.0695	0.0000	OK
1440 minute winter	S79	30	19.090	0.000	0.0	0.0000	0.0000	OK
1440 minute winter	S82	690	18.785	0.011	0.7	0.0162	0.0000	OK
1440 minute winter	S80	690	17.681	0.011	0.7	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 winter	S86	4.000	S19	0.3	0.447	0.013	0.0025	
1440 minute winter	S19	4.001	S82	0.7	0.772	0.020	0.0080	
1440 minute winter	S79	5.000	S82	0.0	0.000	0.000	0.0051	
1440 minute winter	S82	4.002	S80	0.7	0.713	0.001	0.0240	26.7

Node Name	P1	P2	S52	S53	S54	S55	S62	S63	S25	P60	S63	S28
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 16.000 												
Link Name	1.000	1.001	1.002	1.003	1.004	1.005	1.006	1.007	1.008	1.009	1.010	
Section Type	100mm	100mm	100mm	100mm	100mm	225mm	300mm	300mm	225mm	225mm	225mm	
Slope (1:X)	18.1	16.9	20.0	20.0	20.0	113.6	150.6	93.8	-17.5	258.2	239.5	
Cover Level (m)	23.080	22.362	21.669	21.514	21.141	20.900	21.279	21.596		23.596	23.515	23.483
Invert Level (m)	22.666	21.962	21.962	21.469	21.378	21.118	20.787	20.460		22.015	21.995	21.965
Length (m)	12.739	8.347	5.266	6.615	6.533	11.363	9.636	2.184	40.707	5.117	7.184	

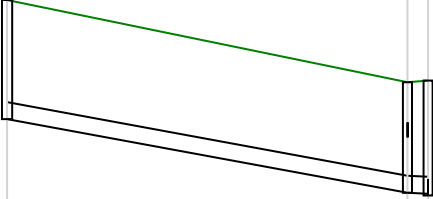
Node Name	P3	S62
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 15.000		
Link Name	2.000	
Section Type	225mm	
Slope (1:X)	22.9	
Cover Level (m)	22.078	21.279
Invert Level (m)	20.400 19.770	
Length (m)	14.425	

Node Name		P7	P5	S57	S59	S61
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 16.000						
	Link Name	3.0	3.000	3.001	3.002	
	Section Type	22	225mm	225mm	225mm	
	Slope (1:X)	22	18.1	22.0	22.0	
	Cover Level (m)	23.493	23.419	22.895	22.023	21.596
Invert Level (m)		22.530	21.957	21.319	20.444	
		22.530	21.957	21.319	20.444	
		22.530	21.957	21.319	20.444	
		22.530	21.957	21.319	20.444	
		22.530	21.957	21.319	20.444	
Length (m)		3.0	11.537	19.235	9.426	

Node Name	S557
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 16.000	
Link Name	4.0
Section Type	15
Slope (1:X)	22
Cover Level (m)	22.936 22.895
Invert Level (m)	21.908
Length (m)	4.1

Node Name	S58S59		
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 16.000			
Link Name	5.00		
Section Type	150		
Slope (1:X)	22.1		
Cover Level (m)	22.096 22.023		
Invert Level (m)	20.646 20.646		
Length (m)	5.00		

Node Name	S60661	
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 15.000		
	Link Name	6.0
	Section Type	150
	Slope (1:X)	21.1
	Cover Level (m)	21.663 21.596
Invert Level (m)	20.024	
Length (m)	4.5	

Node Name	P9	P563
A4 drawing Hor Scale 1000 Ver Scale 100 Datum (m) 18.000		
Link Name	7.000	7.000
Section Type	225mm	225mm
Slope (1:X)	54.4	20
Cover Level (m)	24.580	23.493 23.515
Invert Level (m)	23.005	22.031 22.018 22.031
Length (m)	52.944	2.000

Appendix C - BYPASS PETROL INTERCEPTOR

SEPARATORS

A RANGE OF FUEL/OIL SEPARATORS
FOR PEACE OF MIND



Klargester

60 YEARS OF
Expertise &
Innovation
1955-2015

Separators

A RANGE OF FUEL/OIL SEPARATORS FOR PEACE OF MIND

Surface water drains normally discharge to a watercourse or indirectly into underground waters (groundwater) via a soakaway. Contamination of surface water by oil, chemicals or suspended solids can cause these discharges to have a serious impact on the receiving water.

The Environment Regulators, Environment Agency, England and Wales, SEPA, Scottish Environmental Protection Agency in Scotland and Department of Environment & Heritage in Northern Ireland, have published guidance on surface water disposal, which offers a range of means of dealing with pollution both at source and at the point of discharge from site (so called 'end of pipe' treatment). These techniques are known as 'Sustainable Drainage Systems' (SuDS).

Where run-off is draining from relatively low risk areas such as car-parks and non-operational areas, a source control approach, such as permeable surfaces or infiltration trenches, may offer a suitable means of treatment, removing the need for a separator.

Oil separators are installed on surface water drainage systems to protect receiving waters from pollution by oil, which may be present due to minor leaks from vehicles and plant, from accidental spillage.

Effluent from industrial processes and vehicle washing should normally be discharged to the foul sewer (subject to the approval of the sewerage undertaker) for further treatment at a municipal treatment works.

SEPARATOR STANDARDS AND TYPES

A British (and European) standard (EN 858-1 and 858-2) for the design and use of prefabricated oil separators has been adopted. New prefabricated separators should comply with the standard.

SEPARATOR CLASSES

The standard refers to two 'classes' of separator, based on performance under standard test conditions.

CLASS I

Designed to achieve a concentration of less than 5mg/l of oil under standard test conditions, should be used when the separator is required to remove very small oil droplets.

CLASS II

Designed to achieve a concentration of less than 100mg/l oil under standard test conditions and are suitable for dealing with discharges where a lower quality requirement applies (for example where the effluent passes to foul sewer).

Both classes can be produced as full retention separators. The oil concentration limits of 5 mg/l and 100 mg/l are only applicable under standard test conditions. It should not be expected that separators will comply with these limits when operating under field conditions.

FULL RETENTION SEPARATORS

Full retention separators treat the full flow that can be delivered by the drainage system, which is normally equivalent to the flow generated by a rainfall intensity of 65mm/hr.

On large sites, some short term flooding may be an acceptable means of limiting the flow rate and hence the size of full retention systems.

Get in touch for a **FREE** professional site visit and a representative will contact you within 5 working days to arrange a visit.

helpingyou@klargester.com to make the right decision or call **028 302 66799**

BYPASS SEPARATORS

Bypass separators fully treat all flows generated by rainfall rates of up to 6.5mm/hr. This covers over 99% of all rainfall events. Flows above this rate are allowed to bypass the separator. These separators are used when it is considered an acceptable risk not to provide full treatment for high flows, for example where the risk of a large spillage and heavy rainfall occurring at the same time is small.

FORECOURT SEPARATORS

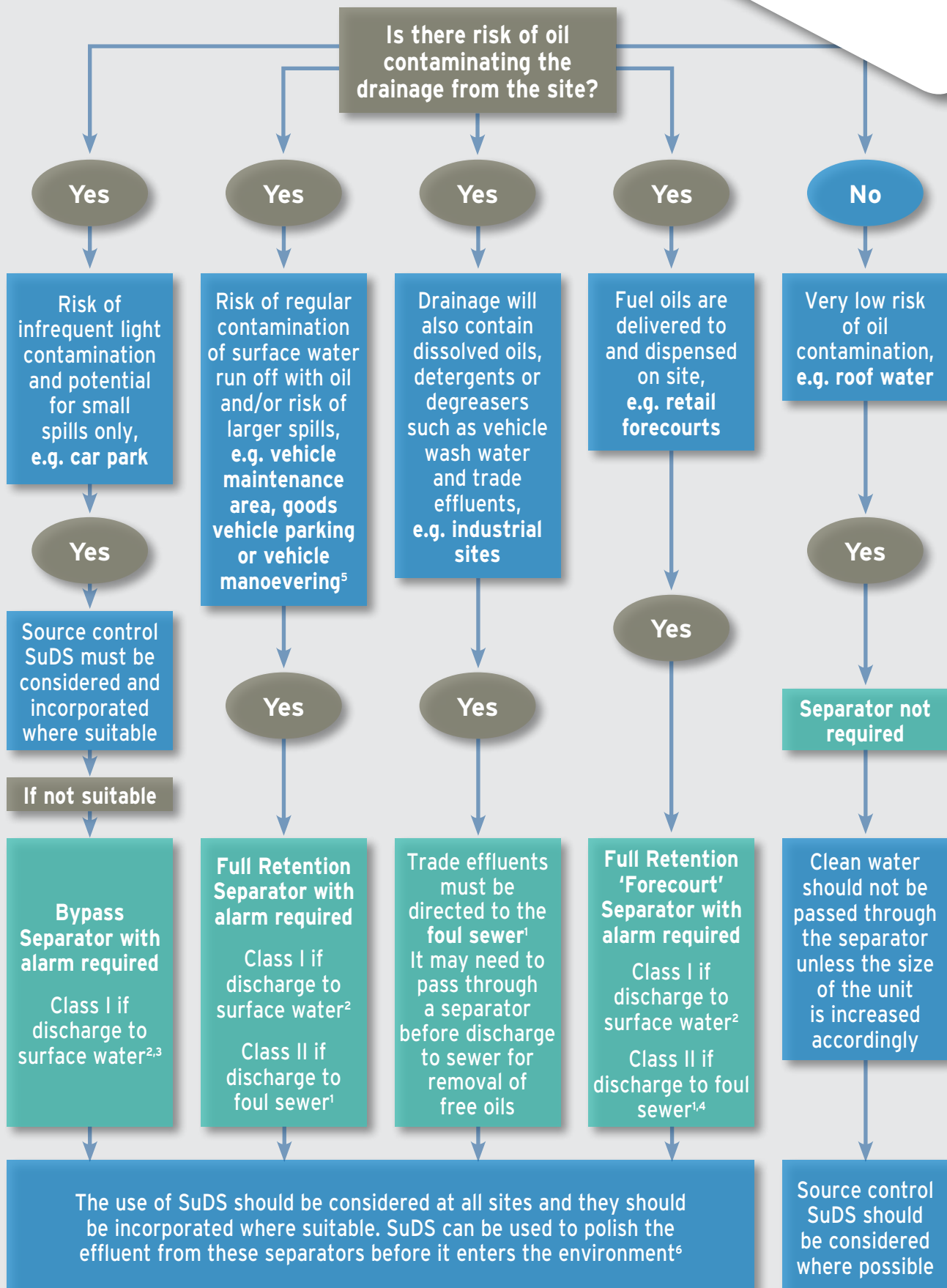
Forecourt separators are full retention separators specified to retain on site the maximum spillage likely to occur on a petrol filling station. They are required for both safety and environmental reasons and will treat spillages occurring during vehicle refuelling and road tanker delivery. The size of the separator is increased in order to retain the possible loss of the contents of one compartment of a road tanker, which may be up to 7,600 litres.

SELECTING THE RIGHT SEPARATOR

The chart on the following page gives guidance to aid selection of the appropriate type of fuel/oil separator for use in surface water drainage systems which discharge into rivers and soakaways.

For further detailed information, please consult the Environment Agency Pollution Prevention Guideline 03 (PPG 3) 'Use and design of oil separators in surface water drainage systems' available from their website.

Kingspan Klargester has a specialist team who provide technical assistance in selecting the appropriate separator for your application.



1 You must seek prior permission from your local sewer provider before you decide which separator to install and before you make any discharge.

2 You must seek prior permission from the relevant environmental body before you decide which separator to install.

3 In this case, if it is considered that there is a low risk of pollution a source control SuDS scheme may be appropriate.

4 In certain circumstances, the sewer provider may require a Class 1 separator for discharges to sewer to prevent explosive atmospheres from being generated.

5 Drainage from higher risk areas such as vehicle maintenance yards and goods vehicle parking areas should be connected to foul sewer in preference to surface water.

6 In certain circumstances, a separator may be one of the devices used in the SuDS scheme. Ask us for advice.

Bypass NSB RANGE

APPLICATION

Bypass separators are used when it is considered an acceptable risk not to provide full treatment, for very high flows, and are used, for example, where the risk of a large spillage and heavy rainfall occurring at the same time is small, e.g.

- Surface car parks.
- Roadways.
- Lightly contaminated commercial areas.

PERFORMANCE

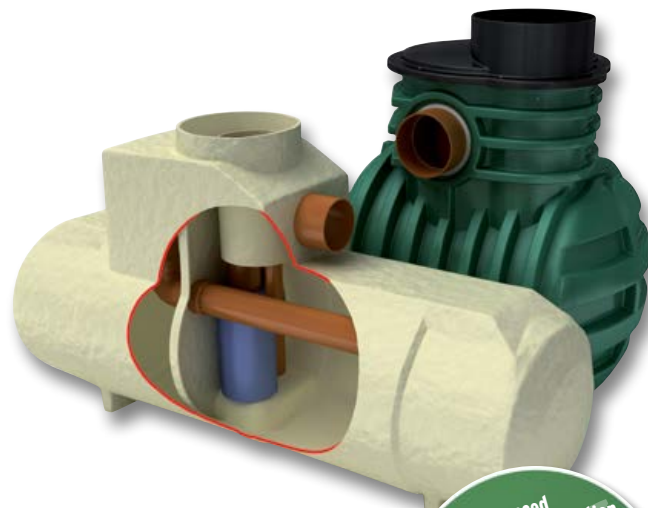
Klargester were one of the first UK manufacturers to have separators tested to EN 858-1. Klargester have now added the NSB bypass range to their portfolio of certified and tested models. The NSB number denotes the maximum flow at which the separator treats liquids. The British Standards Institute (BSI) tested the required range of Kingspan Klargester Bypass separators and certified their performance in relation to their flow and process performance assessing the effluent qualities to the requirements of EN 858-1. Klargester bypass separator designs follow the parameters determined during the testing of the required range of bypass separators.

Each bypass separator design includes the necessary volume requirements for:

- Oil separation capacity.
- Oil storage volume.
- Silt storage capacity.
- Coalescer.

The unit is designed to treat 10% of peak flow. The calculated drainage areas served by each separator are indicated according to the formula given by PPG3 $NSB = 0.0018A(m^2)$. Flows generated by higher rainfall rates will pass through part of the separator and bypass the main separation chamber.

Class I separators are designed to achieve a concentration of 5mg/litre of oil under standard test conditions.



Advanced
rotomoulded construction
on selected models

- Compact and robust
- Require less backfill
- Tough, lightweight and easy to handle

FEATURES

- Light and easy to install.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.
- Vent points within necks.
- Oil alarm system available (required by EN 858-1 and PPG3).
- Extension access shafts for deep inverts.
- Maintenance from ground level.
- GRP or rotomoulded construction (subject to model).

To specify a nominal size bypass separator, the following information is needed:-

- The calculated flow rate for the drainage area served. Our designs are based on the assumption that any interconnecting pipework fitted elsewhere on site does not impede flow into or out of the separator and that the flow is not pumped.
- The drain invert inlet depth.
- Pipework type, size and orientation.

SIZES AND SPECIFICATIONS

UNIT NOMINAL SIZE	FLOW (l/s)	PEAK FLOW RATE (l/s)	DRAINAGE AREA (m ²)	STORAGE CAPACITY (litres)		UNIT LENGTH (mm)	UNIT DIA. (mm)	ACCESS SHAFT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT	STANDARD FALL ACROSS (mm)	MIN. INLET INVERT (mm)	STANDARD PIPEWORK DIA.
NSBP003	3	30	1670	300	45	1700	1350	600	1420	1320	100	500	160
NSBP004	4.5	45	2500	450	60	1700	1350	600	1420	1320	100	500	160
NSBP006	6	60	3335	600	90	1700	1350	600	1420	1320	100	500	160
NSBE010	10	100	5560	1000	150	2069	1220	750	1450	1350	100	700	315
NSBE015	15	150	8335	1500	225	2947	1220	750	1450	1350	100	700	315
NSBE020	20	200	11111	2000	300	3893	1220	750	1450	1350	100	700	375
NSBE025	25	250	13890	2500	375	3575	1420	750	1680	1580	100	700	375
NSBE030	30	300	16670	3000	450	4265	1420	750	1680	1580	100	700	450
NSBE040	40	400	22222	4000	600	3230	1920	600	2185	2035	150	1000	500
NSBE050	50	500	27778	5000	750	3960	1920	600	2185	2035	150	1000	600
NSBE075	75	750	41667	7500	1125	5841	1920	600	2235	2035	200	950	675
NSBE100	100	1000	55556	10000	1500	7661	1920	600	2235	2035	200	950	750
NSBE125	125	1250	69444	12500	1875	9548	1920	600	2235	2035	200	950	750

■ Rotomoulded chamber construction ■ GRP chamber construction * Some units have more than one access shaft – diameter of largest shown.

Full Retention NSF RANGE

APPLICATION

Full retention separators are used in high risk spillage areas such as:

- Fuel distribution depots.
- Vehicle workshops.
- Scrap Yards

PERFORMANCE

Kingspan Klargester were the first UK manufacturer to have the required range (3-30 l/sec) certified to EN 858-1 in the UK. The NSF number denotes the flow at which the separator operates.

The British Standards Institute (BSI) have witnessed the performance tests of the required range of separators and have certified their performance, in relation to their flow and process performance to ensure that they met the effluent quality requirements of EN 858-1. Larger separator designs have been determined using the formulas extrapolated from the test range.

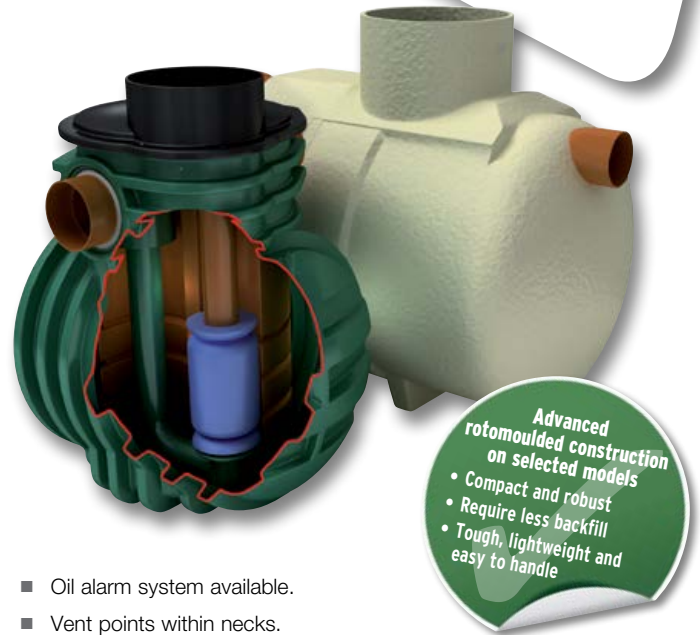
Each full retention separator design includes the necessary volume requirements for:

- Oil separation capacity.
- Oil storage volume.
- Silt storage capacity.
- Coalescer (Class I units only).
- Automatic closure device.

Klargester full retention separators treat the whole of the specified flow.

FEATURES

- Light and easy to install.
- Class I and Class II designs.
- 3-30 l/sec range independently tested and performance sampled, certified by the BSI.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.



- Oil alarm system available.
- Vent points within necks.
- Extension access shafts for deep inverts.
- Maintenance from ground level.
- GRP or rotomoulded construction (subject to model).

To specify a nominal size full retention separator, the following information is needed:-

- The calculated flow rate for the drainage area served. Our designs are based on the assumption that any interconnecting pipework fitted elsewhere on site does not impede flow into or out of the separator and that the influent is not pumped.
- The required discharge standard. This will decide whether a Class I or Class II unit is required.
- The drain invert inlet depth.
- Pipework type, size and orientation.

SIZES AND SPECIFICATIONS

UNIT NOMINAL SIZE	FLOW (l/s)	DRAINAGE AREA (m ²) PPG-3 (0.018)	STORAGE CAPACITY (litres)		UNIT LENGTH (mm)	UNIT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT	MIN. INLET INLET (mm)	STANDARD PIPEWORK DIA. (mm)
			SILT	OIL						
NSFP003	3	170	300	30	1700	1350	1420	1345	500	160
NSFP006	6	335	600	60	1700	1350	1420	1345	500	160
NSFA010	10	555	1000	100	2610	1225	1050	1000	500	200
NSFA015	15	835	1500	150	3910	1225	1050	1000	500	200
NSFA020	20	1115	2000	200	3200	2010	1810	1760	1000	315
NSFA030	30	1670	3000	300	3915	2010	1810	1760	1000	315
NSFA040	40	2225	4000	400	4640	2010	1810	1760	1000	315
NSFA050	50	2780	5000	500	5425	2010	1810	1760	1000	315
NSFA065	65	3610	6500	650	6850	2010	1810	1760	1000	315
NSFA080	80	4445	8000	800	5744	2820	2500	2450	1000	300
NSFA100	100	5560	10000	1000	6200	2820	2500	2450	1000	400
NSFA125	125	6945	12500	1250	7365	2820	2500	2450	1000	450
NSFA150	150	8335	15000	1500	8675	2820	2550	2450	1000	525
NSFA175	175	9725	17500	1750	9975	2820	2550	2450	1000	525
NSFA200	200	11110	20000	2000	11280	2820	2550	2450	1000	600

■ Rotomoulded chamber construction ■ GRP chamber construction

Washdown & Silt

APPLICATION

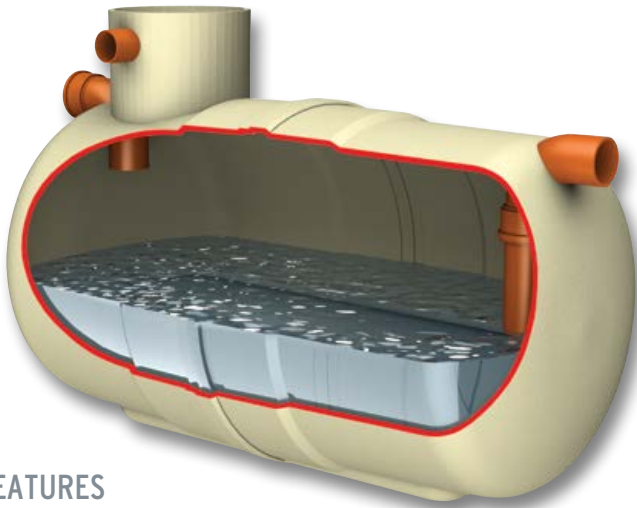
This unit can be used in areas such as car wash and other cleaning facilities that discharge directly into a foul drain, which feeds to a municipal treatment facility.

If emulsifiers are present the discharge must not be allowed to enter an NS Class I or Class II unit.

- Car wash.
- Tool hire depots.
- Truck cleansing.
- Construction compounds cleansing points.

PERFORMANCE

Such wash down facilities must not be allowed to discharge directly into surface water but must be directed to a foul connection leading to a municipal treatment works as they utilise emulsifiers, soaps and detergents, which can dissolve and disperse the oils.



FEATURES

- Light and easy to install.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.
- Vent points within necks.
- Extension access shafts for deep inverts.
- Maintenance from ground level.

SIZES AND SPECIFICATIONS

REF.	TOTAL CAPACITY (litres)	MAX. REC. SILT	MAX. FLOW RATE (l/s)	LENGTH (mm)	DIAMETER (mm)	ACCESS SHAFT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT (mm)	STANDARD FALL ACROSS UNIT (mm)	MIN. INLET INVERT (mm)	STANDARD PIPEWORK DIA. (mm)	APPROX EMPTY (kg)
W1/010	1000	500	3	1123	1225	460	1150	1100	50	500	160	60
W1/020	2000	1000	5	2074	1225	460	1150	1100	50	500	160	120
W1/030	3000	1500	8	2952	1225	460	1150	1100	50	500	160	150
W1/040	4000	2000	11	3898	1225	460	1150	1100	50	500	160	180
W1/060	6000	3000	16	4530	1440	600	1360	1310	50	500	160	320
W1/080	8000	4000	22	3200	2020	600	2005	1955	50	500	160	585
W1/100	10000	5000	27	3915	2020	600	2005	1955	50	500	160	680
W1/120	12000	6000	33	4640	2020	600	2005	1955	50	500	160	770
W1/150	15000	7500	41	5435	2075	600	1940	1890	50	500	160	965
W1/190	19000	9500	52	6865	2075	600	1940	1890	50	500	160	1200

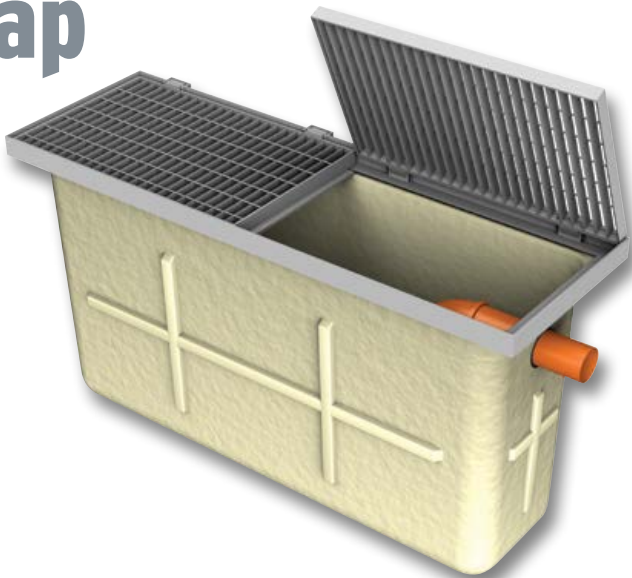
Car Wash Silt Trap

APPLICATION

Car Wash silt trap is designed for use before a separator in car wash applications to ensure effective silt removal.

FEATURES

- FACTA Class B covers.
- Light and easy to install.
- Maintenance from ground level.



Forecourt

APPLICATION

The forecourt separator is designed for installation in petrol filling station forecourts and similar applications. The function of the separator is to intercept hydrocarbon pollutants such as petroleum and oil and prevent their entry to the drainage system, thus protecting the environment against hydrocarbon contaminated surface water run-off and gross spillage.

PERFORMANCE

Operation ensures that the flow cannot exit the unit without first passing through the coalescer assembly.

In normal operation, the forecourt separator has sufficient capacity to provide storage for separated pollutants within the main chamber, but is also able to contain up to 7,600 litres of pollutant arising from the spillage of a fuel delivery tanker compartment on the petrol forecourt. The separator has been designed to ensure that oil cannot exit the separator in the event of a major spillage, subsequently the separator should be emptied immediately.

FEATURES

- Light and easy to install.
- Inclusive of silt storage volume.
- Fitted inlet/outlet connectors.
- Vent points within necks.
- Extension access shafts for deep inverts.
- Maintenance from ground level.

SIZES AND SPECIFICATIONS

ENVIROCEPTOR CLASS	TOTAL CAP. (litres)	DRAINAGE AREA (m ²)	MAX. FLOW RATE (l/s)	LENGTH (mm)	DIAMETER (mm)	ACCESS SHAFT DIA. (mm)	BASE TO INLET INVERT (mm)	BASE TO OUTLET INVERT (mm)	STD. FALL ACROSS UNIT (mm)	MIN. INLET INVERT (mm)	STD. PIPEWORK (mm)	EMPTY WEIGHT (kg)
I	10000	555	10	3963	1920	600	2110	2060	50	400	160	500
II	10000	555	10	3963	1920	600	2110	2060	50	400	160	500
I	10000	1110	20	3963	1920	600	2110	2060	50	400	200	500
II	10000	1110	20	3963	1920	600	2110	2060	50	400	200	500



- Class I and Class II design.
- Oil storage volume.
- Coalescer (Class I unit only).
- Automatic closure device.
- Oil alarm system available.

INSTALLATION

The unit should be installed on a suitable concrete base slab and surrounded with concrete or pea gravel backfill. See sales drawing for installation.

If the separator is to be installed within a trafficked area, then a suitable cover slab must be designed to ensure that loads are not transmitted to the unit.

The separator should be installed and vented in accordance with Health and Safety Guidance Note HS(G)41 for filling stations, subject to Local Authority requirements.

Alarm Systems

British European Standard EN 858-1 and Environment Agency Pollution Prevention Guideline PPG3 requires that all separators are to be fitted with an oil level alarm system and that it should be installed and calibrated by a suitably qualified technician so that it will respond to an alarm condition when the separator requires emptying.

- Easily fitted to existing tanks.
- Excellent operational range.
- Visual and audible alarm.
- Additional telemetry option.



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- Assistance on gaining environmental consents and building approvals
- Tank and drainage system installation
- Connection to discharge point and electrical networks
- Waste emptying and disposal

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- OIL/WATER SEPARATORS
- BELOW GROUND STORAGE TANKS
- GREASE & SILT TRAPS

RAINWATER SOLUTIONS

- BELOW GROUND RAINWATER HARVESTING SYSTEMS
- ABOVE GROUND RAINWATER HARVESTING SYSTEMS

Klargester

UK: College Road North, Aston Clinton, Aylesbury, Buckinghamshire HP22 5EW

Tel: +44 (0) 1296 633000 Fax: +44 (0) 1296 633001 Scottish Office: Tel: +44 (0) 1355 248484
email: klargester@kingspan.com

Ireland: Unit 1a, Derryboy Road, Carnbane Business Park, Newry, Co. Down BT35 6QH

NI Tel : +44 (0) 28 302 66799 Fax: +44 (0) 28 302 60046 ROI Tel: 048 302 66799 Fax: 048 302 60046
email: klargesterinfor@kingspan.com

Visit our website www.kingspanenviro.com/klargester



In keeping with Company policy of continuing research and development and in order to offer our clients the most advanced products, Kingspan Environmental reserves the right to alter specifications and drawings without prior notice.

Appendix D - UISCE EIREANN CORRESPONDENCE

CONFIRMATION OF FEASIBILITY

Gift Mzembe

TOBIN

Fairgreen House
Fairgreen Road
Galway
H91AXK8

24 March 2025

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Uisce Éireann
PO Box 448
South City
Delivery Office
Cork City

www.water.ie

**Our Ref: CDS24009053 Pre-Connection Enquiry
Social Housing Development, Cappagh Road, Galway**

Dear Applicant/Agent,

We have completed the review of the Pre-Connection Enquiry.

Uisce Éireann has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Housing Development of 22 unit(s) at Social Housing Development, Cappagh Road, Galway, (the **Development**).

Based upon the details provided we can advise the following regarding connecting to the networks;

- **Water Connection** - Feasible without infrastructure upgrade by Uisce Éireann
- **Wastewater Connection** - Feasible without infrastructure upgrade by Uisce Éireann

This letter does not constitute an offer, in whole or in part, to provide a connection to any Uisce Éireann infrastructure. Before the Development can be connected to our network(s) you must submit a connection application and be granted and sign a connection agreement with Uisce Éireann.

As the network capacity changes constantly, this review is only valid at the time of its completion. As soon as planning permission has been granted for the

Stiúrthóirí / Directors: Niall Gleeson (POF / CEO), Jerry Grant (Cathaoirleach / Chairperson), Gerard Britchfield, Liz Joyce, Michael Nolan, Patricia King, Eileen Maher, Cathy Mannion, Paul Reid, Michael Walsh.

Oifig Chláraithe / Registered Office: Teach Colvill, 24-26 Sráid Thalbóid, Baile Átha Cliath 1, D01 NP86 / Colvill House, 24-26 Talbot Street, Dublin, Ireland D01NP86

Is cuideachta ghníomhaíochta ainmnithe atá faoi theorainn scaireanna é Uisce Éireann / Uisce Éireann is a designated activity company, limited by shares.

Cláraithe in Éirinn Uimh.: 530363 / Registered in Ireland No.: 530363.

Development, a completed connection application should be submitted. The connection application is available at www.water.ie/connections/get-connected/

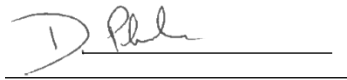
Where can you find more information?

- **Section A** - What is important to know?
- **Section B** - Details of Uisce Éireann's Network(s)

This letter is issued to provide information about the current feasibility of the proposed connection(s) to Uisce Éireann's network(s). This is not a connection offer and capacity in Uisce Éireann's network(s) may only be secured by entering into a connection agreement with Uisce Éireann.

For any further information, visit www.water.ie/connections, email newconnections@water.ie or contact 1800 278 278.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'D. Phelan', is written over a horizontal line.

Dermot Phelan
Connections Delivery Manager

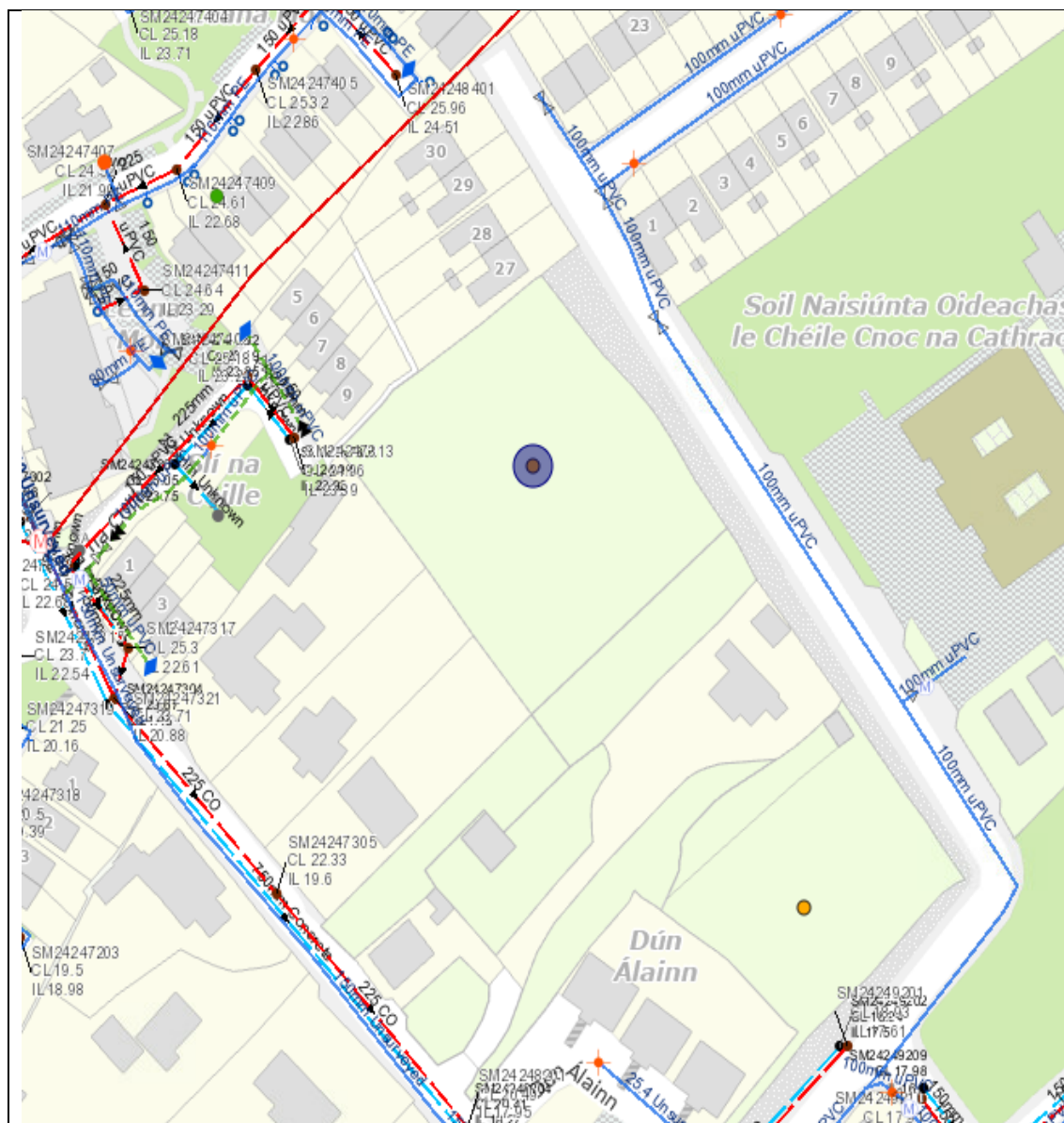
Section A - What is important to know?

What is important to know?	Why is this important?
Do you need a contract to connect?	• Yes, a contract is required to connect. This letter does not constitute a contract or an offer in whole or in part to provide a connection to Uisce Éireann's network(s). • Before the Development can connect to Uisce Éireann's network(s), you must submit a connection application <u>and be granted and sign</u> a connection agreement with Uisce Éireann.
When should I submit a Connection Application?	• A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	• Uisce Éireann connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	• All works to Uisce Éireann's network(s), including works in the public space, must be carried out by Uisce Éireann*. *Where a Developer has been granted specific permission and has been issued a connection offer for Self-Lay in the Public Road/Area, they may complete the relevant connection works
Fire flow Requirements	• The Confirmation of Feasibility does not extend to fire flow requirements for the Development. Fire flow requirements are a matter for the Developer to determine. • What to do? - Contact the relevant Local Fire Authority
Plan for disposal of storm water	• The Confirmation of Feasibility does not extend to the management or disposal of storm water or ground waters. • What to do? - Contact the relevant Local Authority to discuss the management or disposal of proposed storm water or ground water discharges.
Where do I find details of Uisce Éireann's network(s)?	• Requests for maps showing Uisce Éireann's network(s) can be submitted to: datarequests@water.ie

What are the design requirements for the connection(s)?	• The design and construction of the Water & Wastewater pipes and related infrastructure to be installed in this Development shall comply with <i>the Uisce Éireann Connections and Developer Services Standard Details and Codes of Practice</i>, available at www.water.ie/connections
Trade Effluent Licensing	• Any person discharging trade effluent** to a sewer, must have a Trade Effluent Licence issued pursuant to section 16 of the Local Government (Water Pollution) Act, 1977 (as amended). • More information and an application form for a Trade Effluent License can be found at the following link: https://www.water.ie/business/trade-effluent/about/ **trade effluent is defined in the Local Government (Water Pollution) Act, 1977 (as amended)

Section B – Details of Uisce Éireann’s Network(s)

The map included below outlines the current Uisce Éireann infrastructure adjacent the Development: To access Uisce Éireann Maps email datarequests@water.ie



Reproduced from the Ordnance Survey of Ireland by Permission of the Government. License No. 3-3-34

Note: The information provided on the included maps as to the position of Uisce Éireann’s underground network(s) is provided as a general guide only. The information is based on the best available information provided by each Local Authority in Ireland to Uisce Éireann.

Whilst every care has been taken in respect of the information on Uisce Éireann’s network(s), Uisce Éireann assumes no responsibility for and gives no guarantees, undertakings or warranties concerning the accuracy, completeness or up to date nature of the information provided, nor does it accept any liability whatsoever arising from or out of any errors or omissions. This information

should not be solely relied upon in the event of excavations or any other works being carried out in the vicinity of Uisce Éireann's underground network(s). The onus is on the parties carrying out excavations or any other works to ensure the exact location of Uisce Éireann's underground network(s) is identified prior to excavations or any other works being carried out. Service connection pipes are not generally shown but their presence should be anticipated.

CONFIRMATION OF FEASIBILITY

Gift Mzembe

TOBIN

Fairgreen House
Fairgreen Road
Galway
H91AXK8

24 March 2025

Uisce Éireann
Bosca OP 448
Oifig Sheachadta na
Cathrach Theas
Cathair Chorcaí

Uisce Éireann
PO Box 448
South City
Delivery Office
Cork City

www.water.ie

**Our Ref: CDS24009056 Pre-Connection Enquiry
Social Housing Development, Cappagh Road, Galway**

Dear Applicant/Agent,

We have completed the review of the Pre-Connection Enquiry.

Uisce Éireann has reviewed the pre-connection enquiry in relation to a Water & Wastewater connection for a Housing Development of 18 unit(s) at Social Housing Development, Cappagh Road, Galway, (the **Development**).

Based upon the details provided we can advise the following regarding connecting to the networks;

- **Water Connection** - Feasible without infrastructure upgrade by Uisce Éireann
- **Wastewater Connection** - Feasible without infrastructure upgrade by Uisce Éireann

This letter does not constitute an offer, in whole or in part, to provide a connection to any Uisce Éireann infrastructure. Before the Development can be connected to our network(s) you must submit a connection application and be granted and sign a connection agreement with Uisce Éireann.

As the network capacity changes constantly, this review is only valid at the time of its completion. As soon as planning permission has been granted for the

Stiúthóirí / Directors: Niall Gleeson (POF / CEO), Jerry Grant (Cathaoirleach / Chairperson), Gerard Britchfield, Liz Joyce, Michael Nolan, Patricia King, Eileen Maher, Cathy Mannion, Paul Reid, Michael Walsh.

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Development, a completed connection application should be submitted. The connection application is available at www.water.ie/connections/get-connected/

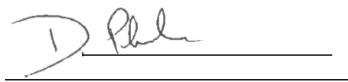
Where can you find more information?

- **Section A** - What is important to know?
- **Section B** - Details of Uisce Éireann's Network(s)

This letter is issued to provide information about the current feasibility of the proposed connection(s) to Uisce Éireann's network(s). This is not a connection offer and capacity in Uisce Éireann's network(s) may only be secured by entering into a connection agreement with Uisce Éireann.

For any further information, visit www.water.ie/connections, email newconnections@water.ie or contact 1800 278 278.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'D. Phelan', is written over a horizontal line.

Dermot Phelan
Connections Delivery Manager

Section A - What is important to know?

What is important to know?	Why is this important?
Do you need a contract to connect?	• Yes, a contract is required to connect. This letter does not constitute a contract or an offer in whole or in part to provide a connection to Uisce Éireann's network(s). • Before the Development can connect to Uisce Éireann's network(s), you must submit a connection application <u>and be granted and sign</u> a connection agreement with Uisce Éireann.
When should I submit a Connection Application?	• A connection application should only be submitted after planning permission has been granted.
Where can I find information on connection charges?	• Uisce Éireann connection charges can be found at: https://www.water.ie/connections/information/charges/
Who will carry out the connection work?	• All works to Uisce Éireann's network(s), including works in the public space, must be carried out by Uisce Éireann*. *Where a Developer has been granted specific permission and has been issued a connection offer for Self-Lay in the Public Road/Area, they may complete the relevant connection works
Fire flow Requirements	• The Confirmation of Feasibility does not extend to fire flow requirements for the Development. Fire flow requirements are a matter for the Developer to determine. • What to do? - Contact the relevant Local Fire Authority
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Where do I find details of Uisce Éireann's network(s)?	• Requests for maps showing Uisce Éireann's network(s) can be submitted to: datarequests@water.ie

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