

**The Seam, Barnsley**

**Drainage Strategy & FRA**

**November 2024**



**FAIRHURST**

**CONTROL SHEET**

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**PROJECT TITLE:** The Seam, Barnsley

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Issue & Approval Schedule		Name	Signature	Date
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	Checked by	Sujay Kumar		31/10/24
	Approved by	Jason McArdle		1/11/24

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	5	23/05/2025	Final	Updated to suit new Appendix D	FM	On File
					JMM	On File
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					DF	On File
					DF	On File

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## 1. Introduction

### 1.1 Background

- 1.1.1 Fairhurst have been appointed to produce a drainage strategy, on behalf of Willmott Dixon to support the planning application for the development of the existing carpark at Barnsley.
- 1.1.2 The proposed development involves the redevelopment of the existing car park. The northern part of the site will be retained as car park and resurfaced, while the southern part of the site will be developed into a public realm space. The proposed site plan is located in **Appendix A**.

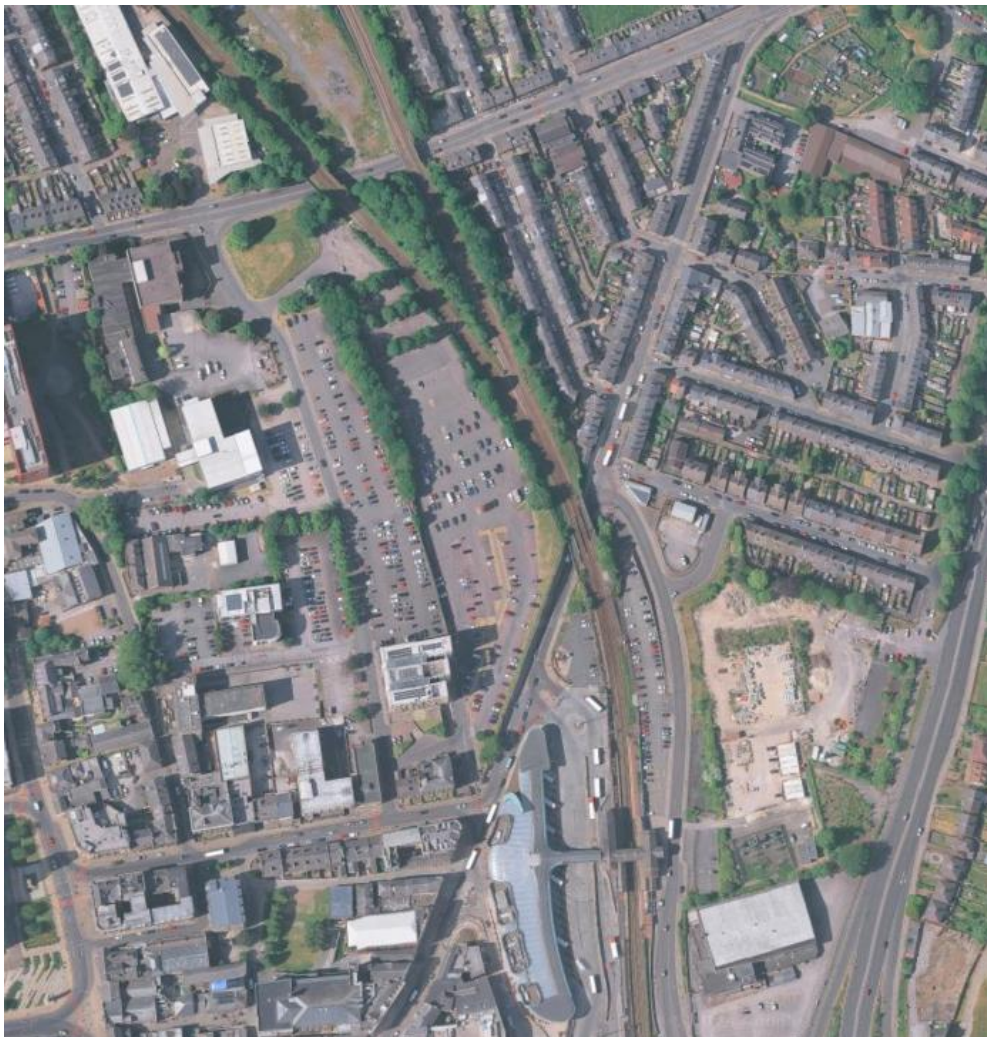


Figure 1: Satellite image of the site

## **2. Surface Water Drainage Assessment**

### **2.1 Hierarchy of Discharge**

2.1.1 Following the hierarchy of discharge, in accordance with Paragraph 56 in Flood Risk and Coastal Change section of the PPG and Building Regulations, surface water flows should be discharged in the following order:

1. Discharge via infiltration, as the first priority where achievable. If this is not feasible move to step 2.
2. Discharge via watercourse / water feature, as the second priority. If this is not feasible, move to step 3.
3. Discharge to public surface water sewer, as the third priority. Where this is not feasible, move to step 4.
4. Discharge to the public combined / foul sewer.

2.1.2 The aim of this approach is to try mimic the existing natural drainage regime as a priority.

#### Method 1 – Infiltration

An Intrusive ground investigation was carried out to confirm infiltration rates across the site. The residual soil is Pennine Middle Coal formation which is a good infiltration media, however across the site there are cohesive deposits with very poor infiltration. This along with the presence of contamination within the groundwater and soils has meant discharging via infiltration would not be appropriate and method 2 discharging via a watercourse has been reviewed.

#### Method 2 – Via Watercourse

The nearest watercourse is the River Dearne, located over 600m to the northeast of the site. To discharge into this river, a drainage network would need to be constructed beneath existing buildings and through land owned by third parties, or diverted around these obstacles. Both options would be prohibitively expensive, making this discharge method unfeasible. Therefore, Method 3 has been reviewed.

#### Method 3 – Via Surface Water Sewer

Two existing surface water sewers run beneath the pavement on Old Mill Lane Road to the north and Eldon Street North to the south of the site. The existing drainage network currently discharges from the site using both of these existing sewers. It is therefore proposed to continue to utilise these sewers, for the discharge of surface water flows from the site once the development is complete. See **Appendix B** for the utility survey.

### 3. Proposed Drainage Strategy

The proposed drainage strategy is divided into two networks. The drainage from the carpark area will discharge into an existing Yorkshire Water asset to the north, and the public realm area will discharge to the south, also into an existing Yorkshire Water asset. See **Appendix C** for Yorkshire Water Asset Map.

#### 3.1 Flood Risk Assessment

3.1.1 The EA Flood Maps for planning shows that the site is entirely located in Flood Zone 1 (low risk) and is therefore at low risk from flooding including surface water flooding.

#### 3.2 Northern Network

3.2.1 The northern section of the site involves the redevelopment of an existing carpark, with the majority of the existing levels retained, except for a middle section where levels are being raised by 300mm. The proposed levels have been raised to allow for the installation of a geocell system to protect existing tree roots from damage.

3.2.2 The proposed drainage to the north is to the Yorkshire Water surface water culvert located beneath the footpath on Old Mill Lane. The proposed network connects via a backdrop onto the existing 150mm pipe that saddle connects onto this culvert. See **Appendix D** for the proposed drainage strategy.

3.2.3 The flow rate to the north is restricted via a 0.185m orifice within MH1.1 before entering the existing 150mm pipe by a backdrop, this leads to a discharge rate of 39.2l/s in a 1 in 1 year storm event and a maximum discharge rate of 70.4l/s in a 1 in 100 year + climate change storm event. The rest of the northern network is made of majority 600mm diameter pipes that provide attenuation during large storm events.

3.2.4 As this network drains more than 50 car parking spaces, an oil separator has been provided with all surface water from the parking areas passing through before discharging into the Yorkshire Water culvert beneath the footpath on Old Mill Lane.

3.2.5 The flow results shown in **Appendix E**, show the connection into the existing 150mm pipe as surcharging during a 1 in 1 storm event. There is minor flooding on the model for storm events up to 1 in 100 year with 40% climate change, however it is for a 30 minute storm event so will not pond and will drain by entering back into the proposed network.

#### 3.3 Southern Network

3.3.1 The southern section of the site provides positive drainage for the proposed public realm and part of the remediated carpark.

3.3.2 The southern network discharges into the existing 225mm diameter pipe which discharges downstream into an existing back drop along the retaining wall to the

south, which then connects to the Yorkshire Water network beneath Eldon Street North. See **Appendix D** for the proposed drainage strategy.

- 3.3.3 As this network drains more than 50 car parking spaces, an oil separator has been provided with all surface water from the parking areas passing through before discharging into the Yorkshire Water network beneath Eldon Street North
- 3.3.4 The southern network is restricted via a 0.163m diameter orifice to discharge into the existing backdrop at 30.2l/s for a 1 in 1 year storm event and at a maximum of 79.6l/s in a 1 in 100 year + climate change storm event. There is minor flooding on the model for storm events up to 1 in 100 year with 40% climate change, however it is for a 30 minute storm event so will not pond and will drain by entering back into the proposed network.

### 3.4 Discharge Rates

- 3.4.1 Yorkshire water stipulated that the site must achieve a reduction in the existing discharge rate across the entire site for a 1 in 1 storm event. Please see below table 1 for the calculated existing discharge rates to the North and South, the reduced discharge rates and the proposed maximum discharge rates (See Appendix E for full discharge rates).

Catchment	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
	1 in 1	1 in 1	1 in 30	1 in 30	1 in 100	1 in 100	1 in 100 + CC	1 in 100 + CC
Northern	49.7 l/s	39.2 l/s	122.6 l/s	53.9 l/s	159.4 l/s	59.1 l/s	231.1 l/s	70.4 l/s
Southern	41.1 l/s	30.2 l/s	101.4 l/s	43.7 l/s	131.8 l/s	57.6 l/s	133.8 l/s	79.6 l/s

**Table 1 – Discharge Rate Comparisons**

- 3.4.2 As shown in table 1 both networks discharge into their associated Yorkshire Water assets with a reduction of what the existing arrangement is discharging at.

## **4. Report Conditions**

- 4.1 The report is based upon the information that has been acquired and/or made available to Fairhurst via the various searches and consultations completed as part of this assessment. In some cases, anecdotal information has been relied upon, where documented evidence has been absent.
- 4.2 The conclusions drawn in the above report are considered correct, although any subsequent additional information may allow refinement of the conclusions.
- 4.3 All work carried out in preparing this report has utilised Fairhursts' professional knowledge and understanding of the current UK standard and codes, terminology and legislation. Changes in this guidance may occur at any time in the future, and therefore cause any conclusions to become inappropriate or incorrect. Should this be the case then an updated assessment will be required based upon the latest released guidance.
- 4.4 This report has been produced using information contained within online mapping and documents prepared by others. Fairhurst can accept no liability or responsibility for the accuracy of the information provided.

**Appendix A**  
Proposed Site Plan



NOTES

LEGEND

- Existing Soft Landscape Area to be retained
- Proposed Wildflower Turf
- Proposed Grass Turf
- Proposed Ornamental Planting
- Proposed Hedge
- Proposed Tree Planting
- Existing Trees/ Vegetation to be retained
- Existing Trees to be removed
- Existing Area Retained - No Work
- Proposed Paving - Type 1 / Concrete Block Paving Vehicular (100x200mm)
- Proposed Paving - Type 2 / Sandstone Occasional Vehicular Use
- Proposed Paving - Type 3 / Granite Occasional Vehicular
- Proposed Paving - Type 4 / Sandstone Occasional Vehicular Use
- Proposed Paving - Type 5 / Sandstone Occasional Vehicular Use
- Asphalt Vehicular Grade
- Concrete Hard-standing
- Existing Asphalt Surface to be Renewed
- Permeable Block Paving
- Free-draining Gravel
- Tactile Blister Paving
- Hazard Warning Paving
- Perforated Metal Featured Texts
- Proposed Raised Planter Edge
- Proposed Focal Point Sculpture
- Closeboard Timber Fence
- Proposed 1.2m High Railing [with matching gates (manually lockable)]
- Proposed Knee Rail
- Palisade Fence to be Renewed [with existing posts & foundations retained]
- Designed CorTen Fence
- Handrail
- Free-standing Benches
- HVM Automatic Bollards
- HVM Fixed Bollards
- Totem Signs
- Litter Bins
- Metal Tree Grille [weathering steel]
- Metal Tree Grille for Sculpture
- Space Allowance for Ticket Machine [to be supplied by BMBG]
- Lighting Columns refer to drawing SEAM-ADL-ZZ-XX-DR-E-24002
- Rumble Strip
- EV Charger
- Wheel Stop
- Easement Zone offset from Retaining Wall [Refer to SEAM-FHT-ZZ-XX-DR-C-02001]
- Sculpture Kiosks
- Intercom
- EV Bays [infrastructure provided for Phase 1]
- EV Bays [infrastructure provided for Phase 2]

REVISION | C17 | DATE | 11.02.26 | BY | YL | CHECKED | PA  
 Kerb to east DDA bays updated to avoid clash with bollard foundation; Intercom added to service route entry; grass type updated; gravel to existing wall updated to as built; kerb to south entrance updated to as built

REVISION | C16 | DATE | 13.01.26 | BY | YL | CHECKED | PA  
 Updated to south entrance intercom position

REVISION | C15 | DATE | 17.12.25 | BY | YL | CHECKED | PA  
 Bollards to south entrance relocated

REVISION | C14 | DATE | 16.12.25 | BY | YL | CHECKED | PA  
 Paving arrangement to DMC 01 updated

REVISION | P32 | DATE | 11.12.25 | BY | YL | CHECKED | PA  
 General design update

REVISION | C13 | DATE | 19.11.25 | BY | YL | CHECKED | PA  
 Bench & seating updated to Furnitube details

REVISION | C12 | DATE | 06.11.25 | BY | YL | CHECKED | PA  
 Lighting position updated, bollards updated to actual size; litter bin updated to specification; pin kerb to south entrance manhole moved

REVISION | C11 | DATE | 23.10.25 | BY | YL | CHECKED | PA  
 Kerb line to east and west boundary updated to engineers' proposal; Lighting column relocated; parking bays arrangement updated

REVISION | C10 | DATE | 28.08.25 | BY | YL | CHECKED | PA  
 EV charger updated; wheel stop added

CLIENT | Willmott Dixon

PROJECT | **The Seam, Barnsley**

TITLE | Landscape Site Plan

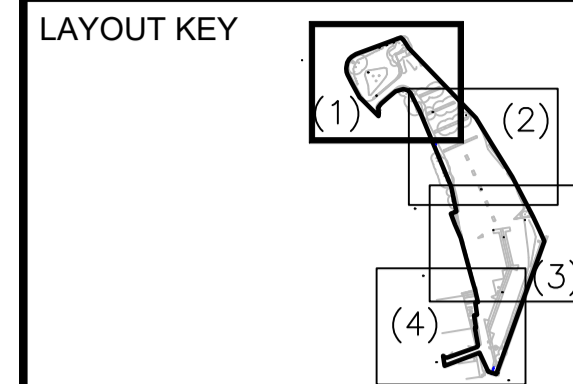
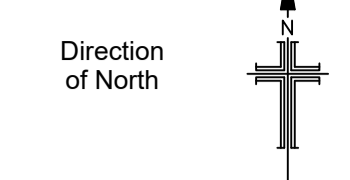
DWG No. | SEAM-ONE-ZZ-XX-DR-L-00001 | REV | C17

STATUS | CONSTRUCTION

SCALE | 1:500 @ A1 | DATE | 20.02.24 | DRN BY | TL



**Appendix B**  
Utilities Survey



Background topographical information used for this drawing is from drawing P24-00416-MET-EXT-XX-TOP-M2-G' dated 23/05/24.  
 Datum: OS Level Datum.  
 Using the OS GPS Network and applying OSGM15 National Geoid Model to obtain local area corrections

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The data presented in this drawing have been collected using a combination of the following: consultation of utility asset information, visual survey & inspection of manholes and inspection chambers; electromagnetic location techniques; ground penetrating radar, and, where applicable, trial hole excavations. These techniques have been deployed in accordance with the BS1 PAS128 Specification for the Detection, Verification and Location of Underground Utilities using the search methodologies indicated on sheet PAS1 and described in the accompanying report. This drawing should be used in conjunction with the accompanying report which details the limitations of these techniques and any hindering factors encountered during this survey.

Unless otherwise stated, all services shown on this plan have been surveyed using approved detectors and the connections between inspection chambers, if unable to be detected, are generally assumed to be direct unless there are indications to the contrary. The detection confidence for each utility segment is depicted in line with the PAS128 scheme outlined below. Information depicted as QL-C or QL-D cannot be guaranteed as it is based on utility record information which can be inaccurate and incomplete.

The service routes depicted may reflect the routes of multiple cables or pipes. It is not always possible to differentiate between buried construction features, utilities and other subsurface linear features due to the inherent limitations of the techniques employed. It is therefore possible that some features shown are not utility related. Due to the limitations of electromagnetic techniques all utility identifications should be treated with caution and verified prior to use during design or building works.

If the location or depth of services or features is of particular importance to a project then it is recommended that discussions are held with Met Geo Environmental Ltd. regarding any further considerations that may have arisen due to the nature and methods employed to ascertain the location data presented as part of this survey.

Please note that not all buried pipes, cables and ducts can be detected and mapped in consideration of their depth, location, material type, geology and proximity to other utilities. Even an appropriate and professionally executed survey may not be able to achieve a 100% detection rate. Where an area of utilities is likely to affect client project requirements, it is strongly recommended that PAS128 Type A verification surveys are carried out to confirm the position or absence of utilities where this is critical to the scheme.

No utility mapping survey can be considered a 100% accurate depiction of the sub-surface environment, and the use of these drawings does not remove the requirement for the use of safe digging techniques at all times, in line with the requirements of HSG47 and current CDM regulations.

Rev	Date	Drawn	Description	Check
-	-	-	-	-



Southgate House  
 Pontefract Road T: +44 [0] 1132 008 900  
 Stourton F: +44 [0] 1132 008 901  
 Leeds E: admin@metgeoenvironmental.com  
 West Yorkshire W: www.metgeoenvironmental.com  
 LS10 1SW

Client  
**WILLMOTT DIXON CONSTRUCTION LIMITED**

Site  
**County Way,  
 Barnsley, S70 2EQ**

Title  
**UTILITY MAPPING  
 SURVEY**

Surveyed	JA EM AP HB	Drawn	EM
Chk.	JPR	Date	28/05/2024 - 05/06/24
Scale	Job No	Sheet Size	Revision
1:200	P24-00416	A1	01
DWG Ref	Year	Number	Originator
P24	00416	MET	EXT UMS
			M2 GU 001



### SUB-SURFACE KEY

**DRAINAGE**

- FD-B1P FOULED
- SD-B3 SURFACE
- RM-B2 RISING MAIN
- GAS-B2P GAS (UNSPECIFIED)
- GAS-MP-M MEDIUM PRESSURE
- GAS-IP-P INTERMEDIATE PRESSURE
- GAS-HP-B1P HIGH PRESSURE
- CD-B2P COMBINED
- D-B3P UNIDENTIFIED
- OF-B4 OVERFLOW
- GAS-LP-B2 LOW PRESSURE
- GAS-IP-B4 INTERMEDIATE PRESSURE
- GAS-HP-B1P HIGH PRESSURE

**ELECTRICITY**

- ELEC-B1 ELECTRICITY CABLE(S) (UNSPECIFIED)
- HV-B1P HIGH VOLTAGE
- TL-B3 TRAFFIC LIGHT/CONTROL CABLE(S)
- LV-B2P LOW VOLTAGE
- OCY-B2P CCTV CABLE(S)

**PIPES, DUCTS & PIPELINES**

- HEAT-B2 DISTRICT HEATING/STEAM PIPE(S)
- FL-B1 FUEL PIPELINE
- PIPE-B3 UNIDENTIFIED PIPEWORK
- MAC-B3P ROUTE CONTAINING HEATING PIPE(S)
- OIL-B2 OIL PIPELINE
- X-B1P EMPTY DUCT
- TELECOMMUNICATIONS CABLE(S)

**WATER**

- WAT-B1 WATER SERVICE (UNSPECIFIED)
- WAT-MP-B3P MEDIUM PRESSURE
- WAT-RAW-C RAW WATER
- UNIDENTIFIED POTENTIAL UTILITY
- PWR-B2 POWER (LINEAR RESPONSE DETECTED USING 'POWER' MODE OF EM LOCATOR - INDUCED 50 HZ GROUND CURRENTS)
- RAO-B2 RADIO (LINEAR RESPONSE DETECTED USING 'RADIO' MODE OF EM LOCATOR - RE-RADIATED VLF RADIO WAVES)
- ELE-B2 APPROXIMATE DEPTH BELOW GROUND LEVEL OF APPARATUS IN METRES
- WAT-LP-B1P LOW PRESSURE
- WAT-HP-B2 HIGH PRESSURE
- WAT-PVT-A PRIVATE
- UNIDENTIFIED CABLE

**UNIDENTIFIED**

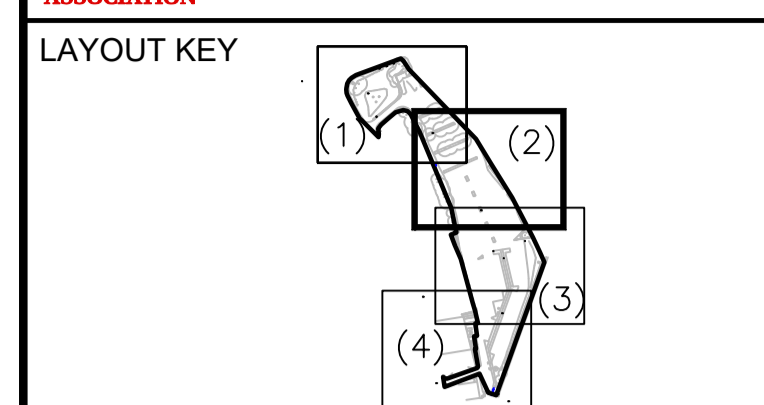
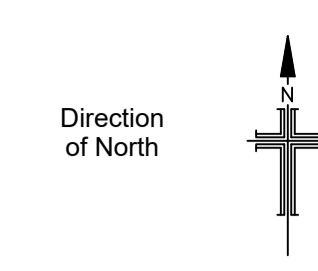
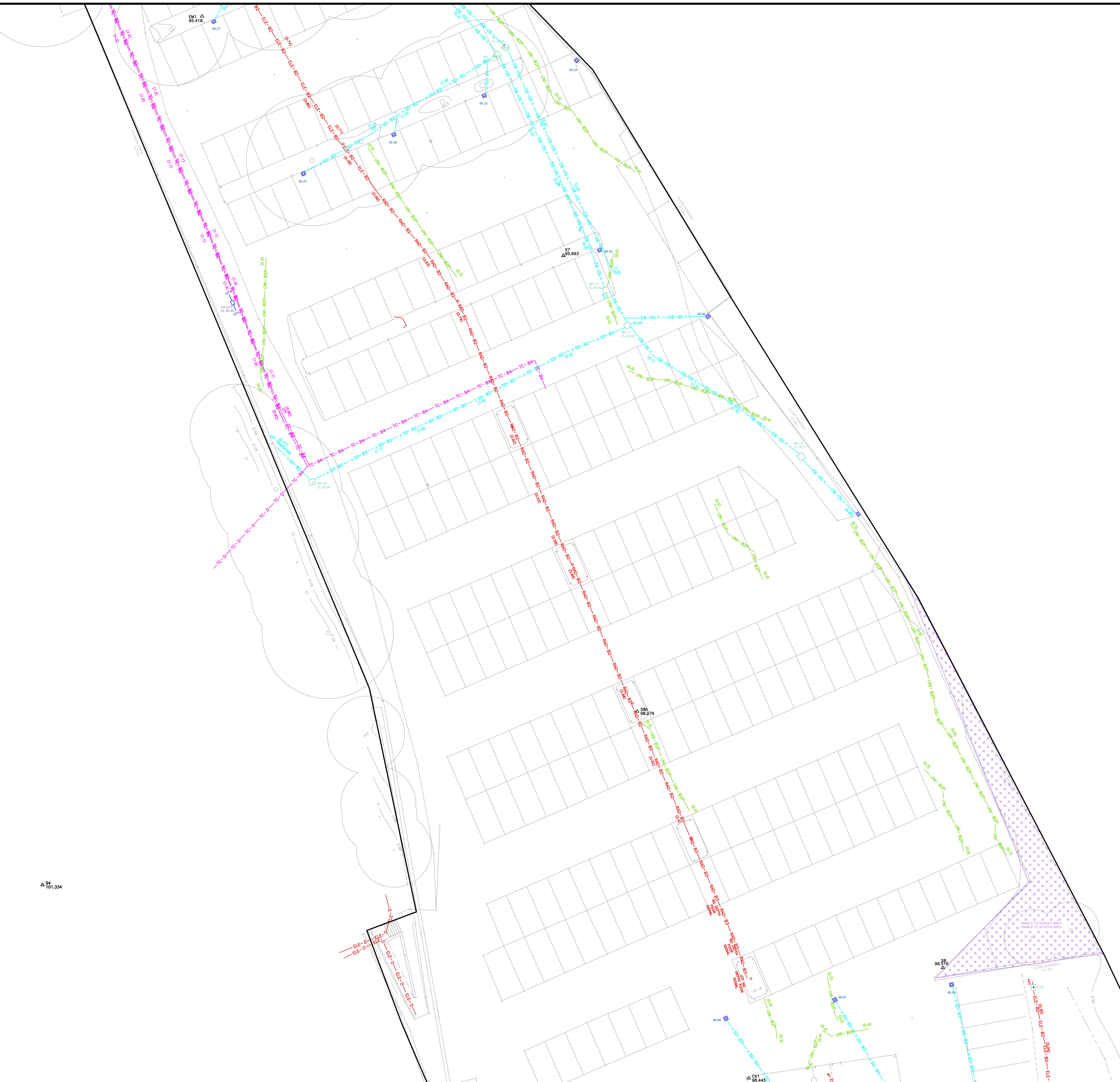
- UN-B1 UNIDENTIFIED POTENTIAL UTILITY
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- ELE-B2 APPROXIMATE DEPTH BELOW GROUND LEVEL OF APPARATUS IN METRES

**CONFIDENCE LEVELS**

(D)	UNDETECTED	FROM SERVICE RECORDS ONLY
(C)	UNDETECTED	FROM SERVICE RECORDS ONLY - SUPPORTING EVIDENCE FROM VISUAL INSPECTION (UTILITY COVERS, SCARS, ETC.)
(B4)	ASSUMED	UNDETECTED BY REMOTE LOCATION METHODS
(B3)(B3P)	DETECTED	HORIZONTAL POSITION ONLY ±500mm
(B2)(B2P)	DETECTED	HORIZONTAL POSITION ±250mm
(B1)(B1P)	DETECTED	VERTICAL POSITION ±40% OF DEPTH
(A)	VERIFIED	SERVICE HAS BEEN VISUALLY VERIFIED AND SURVEYED USING APPROPRIATE METHODS ±50mm IN POSITION & DEPTH
(P)	SEE REPORT FOR FULL DISCUSSION OF MAXIMUM ACHIEVABLE ACCURACY	SEE REPORT FOR FULL DISCUSSION OF MAXIMUM ACHIEVABLE ACCURACY

**OTHER POTENTIAL BURIED FEATURES**

- UN-B1 UNABLE TO RAISE
- UN-B2 UNABLE TO TRACE
- UN-B3 UNABLE TO MEASURE
- UN-B4 SERVICE EXTENDS OFF SITE
- UN-B5 DIAMETER OF PIPE OR DUCT
- UN-B6 APPROXIMATE CHAMBER EXTENTS
- UN-B7 TRENCH SCAR / SURFACE SCAR
- UN-B8 UNABLE TO SURVEY AREA DUE TO DENSE VEGETATION
- UN-B9 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B10 CABLE DUCT SHOWING NUMBER OF CABLES
- UN-B11 WINSOR TRAP/INTERCEPTOR ON CHAMBER OUTFLOW
- UN-B12 UNABLE TO SURVEY AREA DUE TO TERRAIN/TOPOGRAPHY
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- UN-B93 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B94 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B95 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B96 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B97 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B98 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B99 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
- UN-B100 UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS



Background topographical information used for this drawing is from drawing P24-00416-MET-EXT-XX-TOP-M2-G' dated 23/05/24.  
 Datum: OS Level Datum.  
 Using the OS GPS Network and applying OSGM15 National Geoid Model to obtain local area corrections

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**SUB-SURFACE KEY**

<b>DRAINAGE</b>	> FD-B1P - FOUL	> CD-B2P - COMBINED
	> SD-B3 - SURFACE	> D-B3P - UNIDENTIFIED
	> RM-B2 - RISING MAIN	> OF-B4 - OVERFLOW
<b>GAS</b>	GAS-B2P - GAS (UNSPECIFIED)	GAS-LP-B2 - LOW PRESSURE
	GAS-MP-D - MEDIUM PRESSURE	GAS-IP-B4 - INTERMEDIATE PRESSURE
	GAS-HP-B1P - HIGH PRESSURE	
<b>ELECTRICITY</b>	ELE-B1 - ELECTRICITY CABLE(S) (UNSPECIFIED)	LV-B2P - LOW VOLTAGE (UNSPECIFIED)
	HV-B1P - HIGH VOLTAGE	CCTV-B2 - CCTV CABLE(S)
	TL-B3 - TRAFFIC LIGHT/CONTROL CABLE(S)	
<b>PIPES, DUCTS &amp; PIPELINES</b>	HEAT-B2 - DISTRICT HEATING/STEAM PIPE(S)	ROUTE CONTAINING HEATING PIPE(S) & CABLE(S)
	FL-B1 - FUEL PIPELINE	OIL-B2 - OIL PIPELINE
	PIPE-B3 - UNIDENTIFIED PIPEWORK	X-B1P - EMPTY DUCT
	TELE-B1 - TELECOMMUNICATIONS CABLE(S)	TELE-B2P - TELECOMMUNICATIONS CABLE(S)
<b>WATER</b>	WAT-B1 - WATER SERVICE (UNSPECIFIED)	WAT-LP-B1P - LOW PRESSURE
	WAT-MP-B2P - MEDIUM PRESSURE	WAT-HP-B2 - HIGH PRESSURE
	WAT-RAW-C - RAW WATER	WAT-PVT-A - PRIVATE
<b>UNIDENTIFIED</b>	UNI-B1 - UNIDENTIFIED POTENTIAL UTILITY	CAB-B2P - UNIDENTIFIED CABLE
	PWR-B2 - POWER (LINEAR RESPONSE DETECTED USING 'POWER' MODE OF EM LOCATOR - INDUCED 50 Hz GROUND CURRENTS)	
	RAD-B3 - RADIO (LINEAR RESPONSE DETECTED USING 'RADIO' MODE OF EM LOCATOR - RE-RADIATED VLF RADIO WAVES)	
	ELC-B2 - APPROXIMATE DEPTH BELOW GROUND LEVEL OF APPARATUS IN METRES	

CONFIDENCE LEVELS	
(D)	UNDETECTED FROM SERVICE RECORDS ONLY
(C)	UNDETECTED FROM SERVICE RECORDS ONLY - SUPPORTING EVIDENCE FROM VISUAL INSPECTION (UTILITY COVERS, SCARS, ETC.)
(B4)	ASSUMED UNDETECTED BY REMOTE LOCATION METHODS
(B3)/(B3P)	DETECTED HORIZONTAL POSITION ONLY ±500mm
(B3)/(B3P)	DETECTED HORIZONTAL POSITION ±250mm VERTICAL POSITION 40% OF DEPTH
(B1)/(B1P)	DETECTED HORIZONTAL POSITION ±150mm VERTICAL POSITION ±15% OF DEPTH
(A)	VERIFIED SERVICE HAS BEEN VISUALLY VERIFIED AND SURVEYED USING APPROPRIATE METHODS ±50mm IN POSITION & DEPTH
(P)	SEE REPORT FOR FULL DISCUSSION OF MAXIMUM ACHIEVABLE ACCURACY
	SUFFIX DENOTES DATA HAS BEEN PROCESSED - POST COLLECTION

UTM	UNABLE TO TRACE	CL	METRES BELOW GROUND LEVEL COVER LEVEL
UTW	UNABLE TO MEASURE	ME	MEASUREMENT ESTIMATED
OS	SERVICE EXTENDS OFF SITE	SP	SCOFFIT LEVEL OF PIPE/DUCT
Ø	DIAMETER OF PIPE OR DUCT	IL	INVERT LEVEL OF PIPE/DUCT

[Hatched Box]	APPROXIMATE CHAMBER EXTENTS	[Dashed Box]	EXTENTS OF UTILITY MAPPING SURVEY
[Diagonal Lines]	TRENCH SCAR / SURFACE SCAR	[Stippled Box]	UNABLE TO SURVEY AREA DUE TO DENSE VEGETATION
[Dotted Box]	UNABLE TO SURVEY AREA DUE TO INABILITY TO ACCESS AREA	[Cross-hatched Box]	UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS
[Red Line]	CABLE DUCT SHOWING NUMBER OF CABLES	[Blue Line]	UNABLE TO SURVEY AREA DUE TO TERRAIN/TOPOGRAPHY
[Blue Arrow]	WINSOR TRAP/INTERCEPTOR ON CHAMBER OUTFLOW	[Blue Arrow]	BACKDROP (INTERNAL/EXTERNAL) ON CHAMBER INFLOW

**OTHER POTENTIAL BURIED FEATURES**

[Red Circle]	AREA OF ELEVATED GPR AMPLITUDE RESPONSE CAUSED BY SUB-SURFACE FEATURE OR DISTURBED GROUND. MAY POSSIBLY BE RELATED TO UTILITY APPARATUS OR SERVICE TRENCH.
[Green Circle]	AREA STRONG, REGULARLY SPACED GPR RESPONSES - LIKELY RELATED TO REINFORCED CONCRETE BUT SOMETIMES BURIED STONE SETTS (OR SIMILAR) MAY GIVE ANALOGOUS RESPONSE
[Blue Circle]	AREA OF MULTIPLE HYPERBOLA RESPONSES CAUSED BY SUB-SURFACE FEATURES. MAY POSSIBLY BE RELATED TO DISTURBED GROUND WITH CONCENTRATION OF DISCRETE REFLECTORS, AREAS OF TREE ROOTS, ANIMAL BURROWING OR SIMILAR.

Rev	06/06/2024	EM	--	--
Date		Drawn	Description	Check

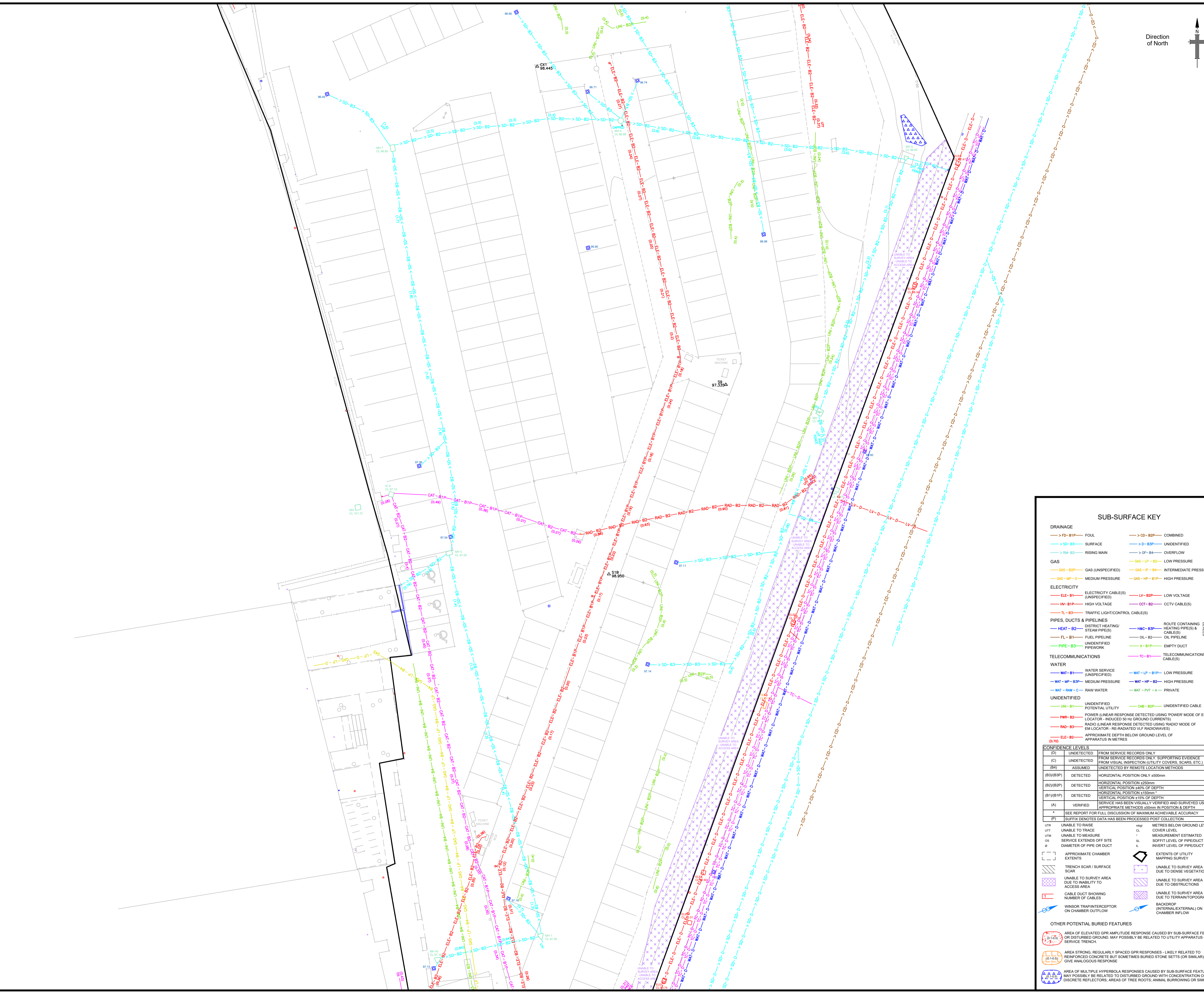
Southgate House  
 Pontefract Road T: +44 [0] 1132 008 900  
 Stourton F: +44 [0] 1132 008 901  
 Leeds E: admin@metgeoenvironmental.com  
 West Yorkshire W: www.metgeoenvironmental.com  
 LS10 1SW

Client  
**WILLMOTT DIXON CONSTRUCTION LIMITED**

Site  
 County Way,  
 Barnsley, S70 2EQ

Title  
**UTILITY MAPPING SURVEY**

Surveyed	JA EM AP HB	Drawn	EM
Chk.	JPR	Date	05/06/24
Scale	1:200	Job No	P24-00416
		Sheet Size	A1
		Revision	01
DWG Ref			
Year	Number	Originator	Zone
P24	00416	MET	EXT UMS
		ID	Type
		Role	Sheet
			002



**LAYOUT KEY**

Background topographical information used for this drawing is from drawing P24-00416-MET-EXT-XX-TOP-M2-G' dated 23/05/24.  
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	(0.70) ELEC-B2 - APPROXIMATE DEPTH BELOW GROUND LEVEL OF APPARATUS IN METRES	

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(B1)(B1P)	DETECTED VERTICAL POSITION ±10% OF DEPTH
(A)	DETECTED HORIZONTAL POSITION ±150mm
(V)	VERIFIED SERVICE HAS BEEN VISUALLY VERIFIED AND SURVEYED USING APPROPRIATE METHODS ±50mm IN POSITION & DEPTH
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UTM	UNABLE TO MEASURE	CL	COVER LEVEL
ES	SERVICE EXTENDS OFF SITE	ME	MEASUREMENT ESTIMATED
Ø	DIAMETER OF PIPE OR DUCT	IL	SPRIT LEVEL OF PIPE/DUCT
		IL	INVERT LEVEL OF PIPE/DUCT

[Symbol]	APPROXIMATE CHAMBER EXTENTS	[Symbol]	EXTENTS OF UTILITY MAPPING SURVEY
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Rev	Date	Drawn	Description	Check
-	06/06/2024	EM	--	--

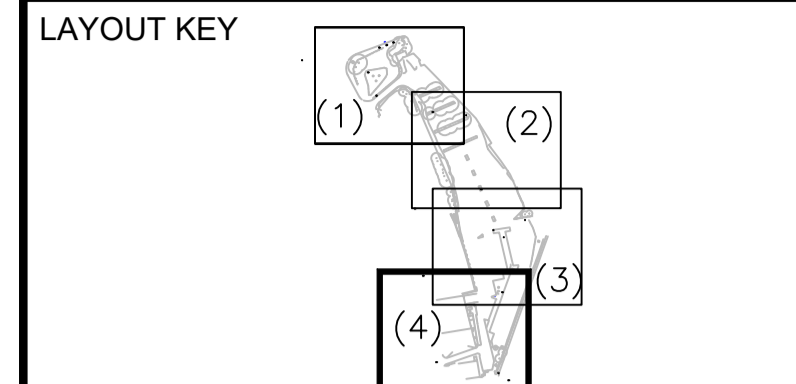
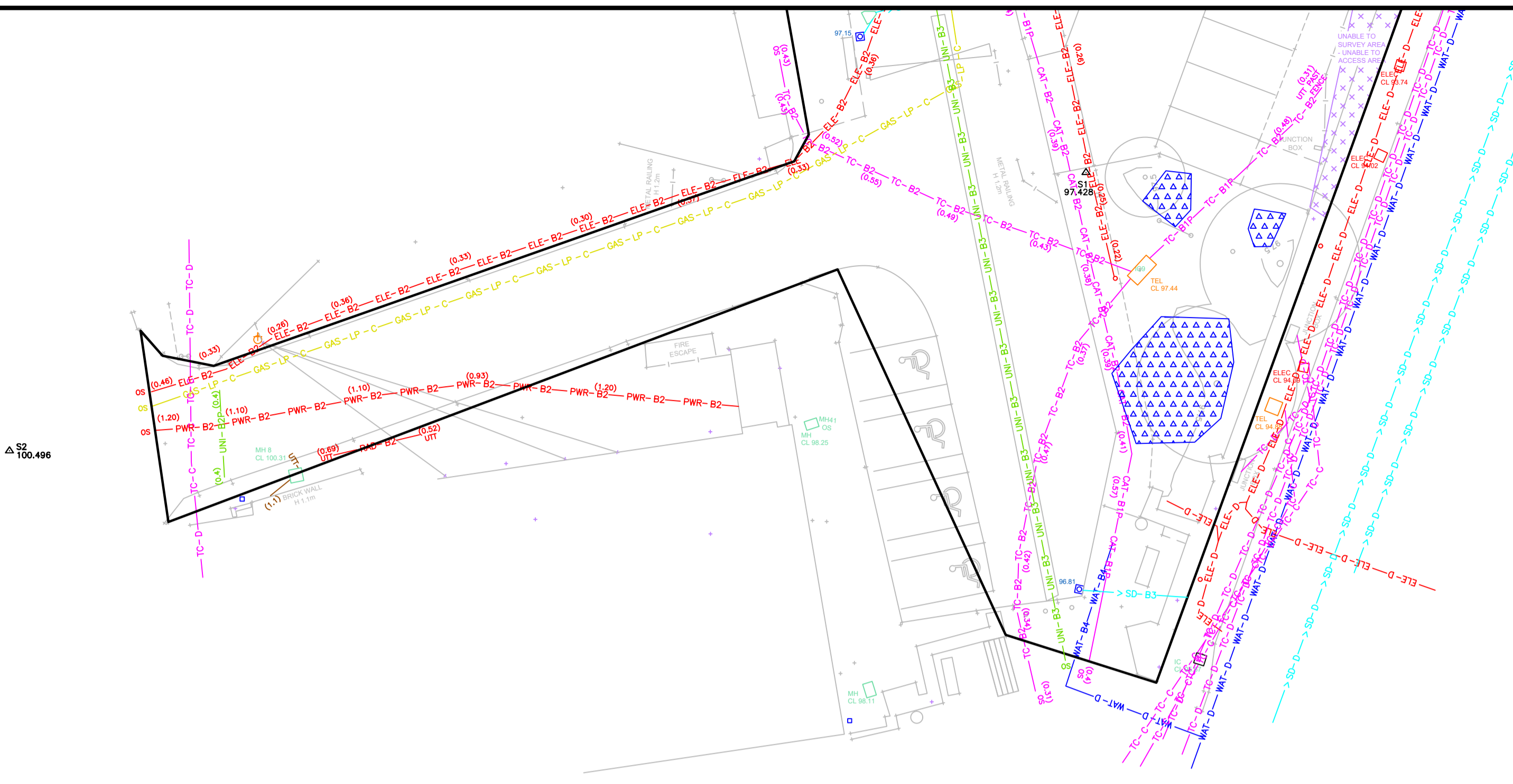
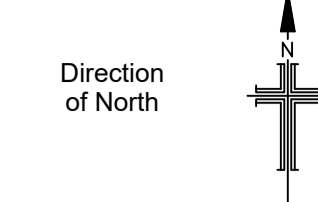
Southgate House  
 Pontefract Road T: +44 [0] 1132 008 900  
 Stourton F: +44 [0] 1132 008 901  
 Leeds E: admin@metgeoenvironmental.com  
 West Yorkshire W: www.metgeoenvironmental.com  
 LS10 1SW

Client  
 WILLMOTT DIXON CONSTRUCTION LIMITED

Site  
 County Way,  
 Barnsley, S70 2EQ

Title  
 UTILITY MAPPING SURVEY

Surveyed	JA EM AP HB	Drawn	EM
Chk.	JPR	Date	28/05/2024 - 05/06/24
Scale	1:200	Job No	P24-00416
		Sheet Size	A1
		Revision	01
DWG Ref			
Year	Number	Originator	Zone
P24	00416	MET	EXT UMS
		ID	Type
		Role	Sheet
			M2 GU 003



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<p>MH1 SURFACE CL 97.26 CHAMBER: 0.60m x 0.85m PIPE X: IL 95.95 PIPE A: IL 96.34 PIPE B: IL 96.28 PIPE C: IL 96.43</p>	<p>MH2 SURFACE CL 97.13 CHAMBER: 0.65m x 1.02m PIPE X: IL 95.17 PIPE A: IL 95.35 PIPE B: IL 95.59</p>	<p>MH3 SURFACE CL 96.69 CHAMBER: 0.95m x 0.97m PIPE X: IL 93.44 PIPE A: IL 93.92 PIPE B: IL 93.85</p>	<p>MH4 SURFACE CL 96.89 CHAMBER: 1.40m x 1.31m PIPE X: IL 94.08 PIPE A: IL 95.43 CAPPED PIPE B: IL 94.17</p>
<p>MH5 SURFACE CL 97.05 CHAMBER: 1050mmø PIPE X: 225ø IL 95.61 PIPE A: 225ø IL 95.67 PIPE B: 150ø IL 95.83</p>	<p>MH7 SURFACE CL 96.80 CHAMBER: 1.20m x 1.20m PIPE X: 225ø IL 94.69 PIPE A: 225ø IL 94.74 PIPE B: 150ø IL 95.00</p>	<p>MH8 FOUL CL 100.31 CHAMBER: 0.90m x 0.60m PIPE X: UTMø IL 98.81 PIPE A: 150ø IL 99.31</p>	<p>MH10 SURFACE CL 95.80 CHAMBER: 0.90m x 0.90m PIPE X: 150ø IL 94.24 PIPE A: 150ø IL 94.31</p>
<p>MH11 SURFACE CL 95.69 CHAMBER: 0.80m x 1.10m PIPE X: IL 93.51 PIPE A: IL 93.51 PIPE B: IL 93.51 PIPE C: IL 93.61</p>	<p>MH12 SURFACE CL 95.62 CHAMBER: 900mmø PIPE X: IL 93.15 PIPE A: IL 93.45 PIPE B: IL 93.70</p>	<p>MH13 SURFACE CL 95.71 CHAMBER: 0.90m x 0.90m PIPE X: 150ø IL 94.35 PIPE A: 150ø IL 94.41</p>	<p>MH14 SURFACE CL 95.21 CHAMBER: 1.20m x 0.90m PIPE X: IL 93.00 PIPE A: IL 93.03 PIPE B: IL 93.01</p>
<p>MH15 SURFACE CL 95.20 CHAMBER: 0.90m x 1.20m PIPE X: 150ø IL 93.16 PIPE A: 150ø IL 93.18</p>	<p>MH16 SURFACE CL 95.14 CHAMBER: 1.20m x 0.90m PIPE X: IL 92.55 PIPE A: IL 92.57 PIPE B: IL 92.61</p>	<p>MH17 SURFACE CL 95.14 CHAMBER: 0.90m x 1.20m PIPE X: 150ø IL 92.71 PIPE A: 150ø IL 92.73</p>	<p>MH18 SURFACE CL 95.50 CHAMBER: 0.90m x 1.20m PIPE X: 150ø IL 92.08 PIPE A: 150ø IL 92.10</p>
<p>MH19 SURFACE CL 95.52 CHAMBER: 1.20m x 0.90m PIPE X: IL 92.06 PIPE A: IL 92.07 PIPE B: IL 92.12</p>	<p>MH20 SURFACE CL 96.46 CHAMBER: 0.65m x 0.65m PIPE X: 100ø IL 95.82 PIPE A: 150ø IL 95.78</p>	<p>MH21 SURFACE CL 98.33 CHAMBER: 0.60m x 0.60m PIPE X: 150ø IL 97.80</p>	<p>MH22 SURFACE CL 92.21 CHAMBER: 1.00m* x 0.70m PIPE X: 450ø IL 91.01 PIPE A: 150ø IL 91.05</p>
<p>MH23 SURFACE CL 91.88 CHAMBER: 0.45m x 0.60m PIPE X: 150ø IL 91.25 PIPE A: 150ø IL 91.18</p>	<p>MH24 SURFACE CL 92.01 CHAMBER: 0.45m x 0.60m PIPE X: 150ø IL 91.43 PIPE A: 150ø IL 91.30</p>	<p>MH25 SURFACE CL 91.15 UTR</p>	<p>MH26 SURFACE CL 91.15 COVER BROKEN</p>
<p>MH40 SURFACE CL 97.19 CHAMBER: 0.80m x 0.80m PIPE X: 150ø IL 96.44 PIPE A: 150ø IL 96.57</p>	<p>MH41 FOUL CL 98.25 CHAMBER: 0.90m x 0.45m PIPE X: 275ø IL 97.81 PIPE A: 100ø PIPE B: 225ø</p>	<p>MH27 SURFACE CL 92.21 CHAMBER: 1.00m* x 0.70m PIPE X: 450ø IL 91.01 PIPE A: 150ø IL 91.05</p>	<p>MH28 SURFACE CL 92.01 CHAMBER: 0.45m x 0.60m PIPE X: 150ø IL 91.43 PIPE A: 150ø IL 91.30</p>

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ELECTRICITY	ELE-B1 - ELECTRICITY CABLE(S)	LV-B2P - LOW VOLTAGE
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PIPES, DUCTS & PIPELINES	HEAT-B2 - DISTRICT HEATING/STEAM PIPE(S)	MHC-B3P - ROUTE CONTAINING HEATING PIPE(S)
	FL-B1 - FUEL PIPELINE	OL-B2 - OIL PIPELINE
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TELECOMMUNICATIONS		TC-B1 - TELECOMMUNICATION CABLE(S)
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	WAT-RAW-C - RAW WATER	WAT-PVT-A - PRIVATE
UNIDENTIFIED	UNI-B1 - UNIDENTIFIED POTENTIAL UTILITY	CAB-B2P - UNIDENTIFIED CABLE
	PWR-B2 - POWER (LINEAR RESPONSE DETECTED USING 'POWER' MODE OF EM LOCATOR - INDUCED 50 Hz GROUND CURRENTS)	
	RAD-B3 - RADIO (LINEAR RESPONSE DETECTED USING 'RADIO' MODE OF EM LOCATOR - RE-RADIATED VLF RADIO WAVES)	
	APPROXIMATE DEPTH BELOW GROUND LEVEL OF APPARATUS IN METRES	

<p>IC6 CATV CL 97.12 CHAMBER: 0.60m x 0.60m DUCT A: IL 96.79 DUCTS B: SL 96.77 ALL DUCTS: 50ø SILT 0.59mbgl</p>	<p>IC9 BT CL 97.44 CHAMBER: 1.40m x 0.70m DUCT A: SL 97.23 DUCT B: SL 97.15 DUCT C: SL 97.11 ALL DUCTS: 100ø SILT 0.49mbgl</p>	<p>IC23 VODAPHONE CL 91.79 CHAMBER: 0.95m x 0.45m DUCT A: SL 91.48 DUCT B: SL 91.53 ALL DUCTS: 50ø SILT 0.35mbgl</p>	<p>IC24 WATER METER CL 91.99 CHAMBER: 0.70m x 0.40m PIPE A: 50ø* IL 91.31</p>
<p>IC25 BT CL 91.54 CHAMBER: 2.40m x 0.80m DUCTS A: SL 90.64 TOP: SL 91.25 SL 91.13 BOTTOM: SL 91.13 SL 90.99 SILT 1.04mbgl WATER: 0.77mbgl</p>	<p>IC26 TL/SL CL 91.65 CHAMBER: 0.45m x 0.45m DUCT A: SL 91.22 DUCT B: SL 91.23 ALL DUCTS: 100ø SILT 0.53mbgl</p>	<p>IC30 BT CL 97.55 CHAMBER: 0.60m x 1.30m DUCT A: SL 97.18 DUCT B: SL 97.13 TOP: SL 97.22 BOTTOM: SL 97.07 ALL DUCTS 100ø UNLESS STATED SILT 0.68mbgl WATER: 0.63mbgl</p>	<p>IC31 TL/SL CL 96.21 CHAMBER: 0.45m x 0.45m DUCT A: SL 95.86 TOP: SL 95.99 BOTTOM: SL 95.86 ALL DUCTS 100ø UNLESS STATED SILT 0.46mbgl</p>
<p>IC32 TL/SL CL 94.08 CHAMBER: 0.45m x 0.45m DUCT A: SL 93.78 DUCT B: SL 93.80 ALL DUCTS: 100ø SILT 0.39mbgl</p>	<p>IC33 CATV CL 92.69 CHAMBER: 0.90m x 0.50m DUCTS A: SL 91.61 DUCT B: SL 91.52 DUCT C: SL 91.58 ALL DUCTS: 100ø SILT 0.50mbgl</p>	<p>IC34 BT CL 92.11 CHAMBER: 1.30m x 0.60m DUCT A: SL 91.61 DUCT B: SL 91.52 DUCT C: SL 91.58 TOP: SL 91.86 MIDDLE: SL 91.74 BOTTOM: SL 91.61 SILT 0.66mbgl ALL DUCTS 100ø UNLESS STATED</p>	<p>IC35 ELEC CL 96.87 CHAMBER: 0.45m x 0.60m DUCT A: SL 96.31 DUCT B: SL 96.36 ALL DUCTS: 100ø SILT 0.68mbgl</p>
<p>IC36B TL/SL CL 90.73 CHAMBER: 0.45m x 0.45m DUCT A: SL 90.45 ALL DUCTS: 100ø SILT 0.40mbgl</p>			

CONFIDENCE LEVELS

(D)	UNDETECTED	FROM SERVICE RECORDS ONLY
(C)	UNDETECTED	FROM SERVICE RECORDS ONLY SUPPORTING EVIDENCE FROM VISUAL INSPECTION (UTILITY COVERS, SCARS, ETC.)
(B4)	ASSUMED	UNDETECTED BY REMOTE LOCATION METHODS
(B3)(B3P)	DETECTED	HORIZONTAL POSITION ONLY ±500mm
(B2)(B2P)	DETECTED	HORIZONTAL POSITION ±250mm
(B1)(B1P)	DETECTED	VERTICAL POSITION ±10% OF DEPTH
(A)	VERIFIED	HORIZONTAL POSITION ±150mm
(P)	VERIFIED	VERTICAL POSITION ±10% OF DEPTH
		SERVICE HAS BEEN VISUALLY VERIFIED AND SURVEYED USING APPROPRIATE METHODS ±50mm IN POSITION & DEPTH
		SEE REPORT FOR FULL DISCUSSION OF MAXIMUM ACHIEVABLE ACCURACY
		SUFFIX DENOTES DATA HAS BEEN PROCESSED POST COLLECTION

METRES BELOW GROUND LEVEL

UTR	UNABLE TO RAISE	CL	COVER LEVEL
UTM	UNABLE TO TRACE	ME	MEASUREMENT ESTIMATED
OR	UNABLE TO MEASURE	SL	SURFACE LEVEL OF PIPEDUCT
Ø	SERVICE EXTENDS OFF SITE	IL	INVERT LEVEL OF PIPE/DUCT
Ø	DIAMETER OF PIPE OR DUCT		

APPROXIMATE CHAMBER EXTENTS

TRENCH SCAR / SURFACE SCAR

UNABLE TO SURVEY AREA DUE TO INACCESSIBILITY

CABLE DUCT SHOWING NUMBER OF CABLES

WINDSOR TRAP/INTERCEPTOR ON CHAMBER OUTFLOW

EXTENTS OF UTILITY MAPPING SURVEY

UNABLE TO SURVEY AREA DUE TO DENSE VEGETATION

UNABLE TO SURVEY AREA DUE TO OBSTRUCTIONS

UNABLE TO SURVEY AREA DUE TO TERRAIN/TOPOGRAPHY

BACKDROP (INTERNAL/EXTERNAL) ON CHAMBER INFLOW

OTHER POTENTIAL BURIED FEATURES

AREA OF ELEVATED GPR AMPLITUDE RESPONSE CAUSED BY SUB-SURFACE FEATURE OR DISTURBED GROUND. MAY POSSIBLY BE RELATED TO UTILITY APPARATUS OR SERVICE TRENCH.

AREA STRONG, REGULARLY SPACED GPR RESPONSES - LIKELY RELATED TO REINFORCED CONCRETE BUT SOMETIMES BURIED STONE SETTS (OR SIMILAR) MAY GIVE ANALOGOUS RESPONSE

AREA OF MULTIPLE HYPERBOLA RESPONSES CAUSED BY SUB-SURFACE FEATURES. MAY POSSIBLY BE RELATED TO DISTURBED GROUND WITH CONCENTRATION OF DISCRETE REFLECTORS. AREAS OF TREE ROOTS, ANIMAL BURROWINGS OR SIMILAR.

Southgate House  
Pontefract Road T: +44 [0] 1132 008 900  
Stourton F: +44 [0] 1132 008 901  
Leeds E: admin@metgeoenvironmental.com  
West Yorkshire W: www.metgeoenvironmental.com  
LS10 1SW

Client  
WILLMOTT DIXON CONSTRUCTION LIMITED

Site  
County Way,  
Barnsley, S70 2EQ

Title  
UTILITY MAPPING SURVEY

Surveyed	JA EM AP HB	Drawn	EM
Chk.	JPR	Date	28/05/2024 - 05/06/24
Scale	1:200	Job No	P24-00416
		Sheet Size	A1
		Revision	01
DWG Ref			
Year	Number	Originator	Zone
P24	00416	MET	EXT UMS
		ID	Type
		Role	Sheet
			004

**Appendix C**

Yorkshire Water Asset Map

## YORKSHIRE WATER PROTECTION OF MAINS AND SERVICES

1. The position of Yorkshire Water Services Ltd (YWS) apparatus shown on the existing mains record drawing(s) indicates the **general** position and nature of our apparatus and the accuracy of this information cannot be guaranteed. Any damage to YWS apparatus as a result of your works may have serious consequences and you will be held responsible for all costs incurred. Prior to commencing major works, the exact location of apparatus must be determined on site, if necessary by excavating trial holes. The actual position of such apparatus and that of service pipes which have not been indicated must be established on site by contacting the Customer Helpline on 0845 124 24 24 for both water and sewerage.
2. The public sewer and water network is lawfully retained in its existing position and the sewerage and water undertaker is entitled to have it remain so without any disturbance. The provisions of section 159 of the Water Industry Act 1991 provides that the undertaker may "inspect, maintain, adjust, repair or alter" the network. Those rights are given to enable the undertaker to perform its statutory duties. Any development of the land or any other action that unacceptably hindered the exercise of those rights would be unlawful. The provisions contained in Section 185 of the Water Industry Act 1991 state that where it is reasonable to do so, a person may require the water supply undertaker to alter or remove a pipe where it is necessary to enable that person to carry out a proposed change of use of the land. The provisions contained in Section 185 also require the person making the request to pay the full cost of carrying out the necessary works.
3. Ground levels over existing YWS apparatus are to be maintained. Sewers in highways will **generally** be laid to give 1200mm of cover from finished ground level working to kerb races, other permanent identification of the limits of the road or to an agreed line and level. Substantial increases or decreases to this 1200mm depth of cover will result in the sewer being re-laid at your expense. Water mains and services will **generally** be laid with a minimum of 750mm depth of cover however some mains and services usually those installed over 50 years ago may have less ground cover.
4. If surface levels are to be decreased / increased significantly the effects on existing water supply apparatus will be carefully considered and if any alterations are necessary, the costs of the alterations will be recharged to you in full. Outlets on fire hydrants must be no more than 300mm below the new levels and all surface boxes must be adjusted as part of the scheme.
5. To enable future repair works to be carried out without hindrance; any pipe, cable, duct, etc. installed parallel to a water main or service pipe should not be installed directly over or within 300mm of a water main or service pipe or 1000mm of a waste water asset. Where a pipe, cable, duct, etc. crosses a main or service it should preferably cross perpendicular or at an angle of no less than 45° and with a minimum clearance of 150mm. These requirements apply to activities within an existing highway and are relevant to the installation of pipes, cables, ducts, etc. up to and including 250mm in diameter (*see illustration below*). Necessary protection measures for installations greater than 250mm in diameter and/or in private land will need to be agreed on an individual basis. Installations within a new development site must comply with the National Joint Utilities Group publication Volume 2: NJUG Guidelines On The Positioning Of Underground Utilities Apparatus For New Development Sites.
6. All excavation works near to YW apparatus should be by hand digging only.
7. Backfilling with a suitable material to a minimum 300mm above YW apparatus is required.
8. Adequate support must be provided where any works pass under YW apparatus.
9. Jointing chambers, lighting columns and other structures must be installed in such a way that future repair or maintenance works to YW apparatus will not be hindered.
10. Apparatus such as; railings, sign posts, etc. must not be placed in such a way that they prevent access to or full operation of controlling valves, hydrants or similar apparatus. YWS surface boxes must not be covered or buried. Any adjustment, alteration or replacement of manhole covers must be agreed on site prior to the commencement of the works with a YWS Inspector who may be contacted via our Call Centre on 0845 124 24 24.
11. Explosives shall not be used within 100 metres of any Yorkshire Water Services apparatus or installations.
12. Vibrating plant should not be used directly over any apparatus. Movement or operation by vehicles or heavy plant is not to be permitted in the immediate vicinity of YWS plant or apparatus unless there has been prior consultation and, if necessary, adequate protection provided without cost to YWS.
13. **Under no circumstances** should thrust boring or similar trenchless techniques commence until the actual position of the Company's mains/services along the proposed route have been confirmed by trial holes.
14. Any alterations to the highway should be notified following the procedures outlined in the New Road and Street Works Act 1991 Code of Practice; Measures Necessary Where Apparatus Is Affected By Major Works (Diversionary Works).
15. You will be held responsible for any damage or loss to YWS apparatus during and after completion of work, caused by yourselves, your servant or agent. Any damage caused or observed to YWS plant or apparatus should be immediately reported to YWS. Should YW incur any costs as a result of non-compliance with the above, all costs will be rechargeable in full.
16. You should ensure that nothing is done on the site to prejudice the safety or operation of YWS employees, plant or apparatus.
17. In accordance with the New Roads and Street Works Act 1991, Chapter 22, Part 3, Section 80. The location of any identified YW asset "*which is not marked, or is wrongly marked, on the records made available*" should be communicated back to Yorkshire Water. The location of the apparatus should be identified on copies of the supplied plans which should be returned to Yorkshire Water (Asset Records Team) with photographic supporting evidence where possible.
18. The Government has decided that responsibility for private sewers serving two or more properties and lateral drains (the section of pipe beyond the boundary of a single property, connecting it to the public sewer) will be transferred to the water companies on Oct 1 2011.

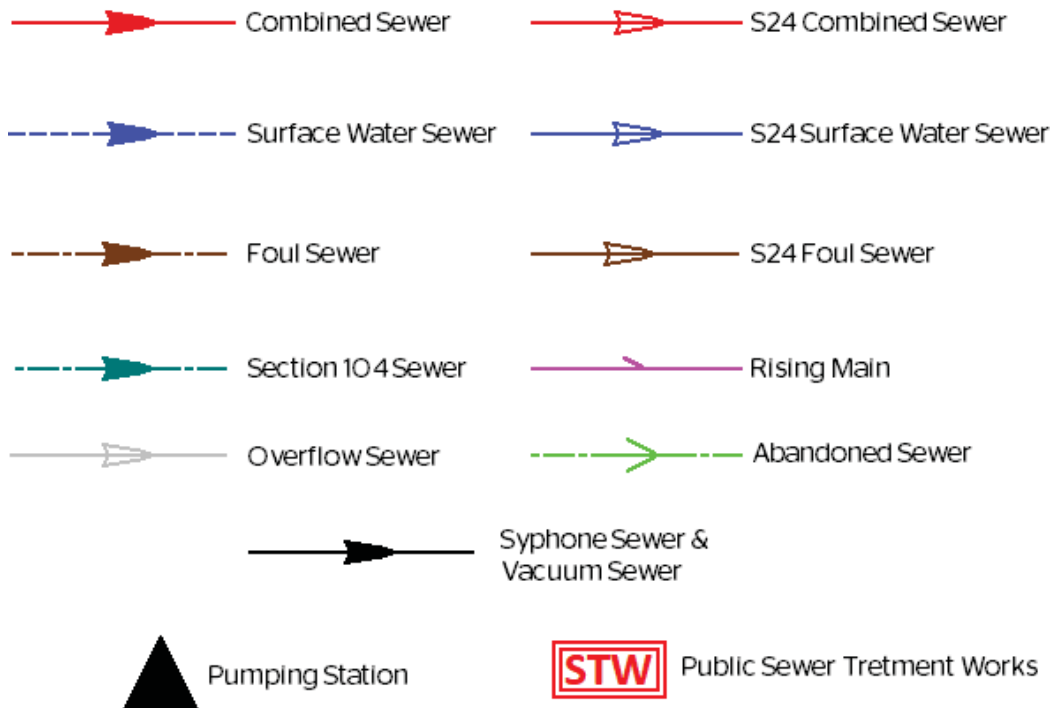
Private pumping stations will also transfer during the period 1 October 2011 – 1 Oct 2016. Records of these assets may not yet be shown on the existing mains record drawing(s). If you encounter any of these assets you must inform Yorkshire Water Services Ltd (YWS).

19. Please note that the information supplied on the enclosed plans is reproduced from Ordnance Survey material with the permission of the Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office, © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Licence Number 1000019559.
20. This information is for guidance only and the position and depth of any YW apparatus is approximate only. Likewise, the nature and condition of any YW apparatus cannot be guaranteed. YW has no responsibility for recording the locations of privately owned apparatus. As of 1 October 2011, there may be some lateral drains and/or public sewers which are not documented on YW records but may still be present. For the avoidance of doubt, this information is not a substitute for appropriate professional and/or legal advice. YW accepts no responsibility for any inaccuracy or omissions in this information. The actual position of YW apparatus must be determined on site by excavating trial holes by hand. YW requires a minimum of two working days' written notice of the intention to excavate any trial holes before any excavation can be undertaken. If there are any queries in this respect please contact Yorkshire Water on 0845 124 24 24.

## Property Identifier

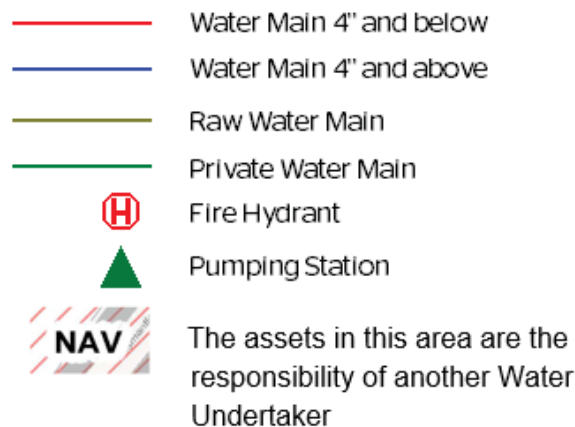


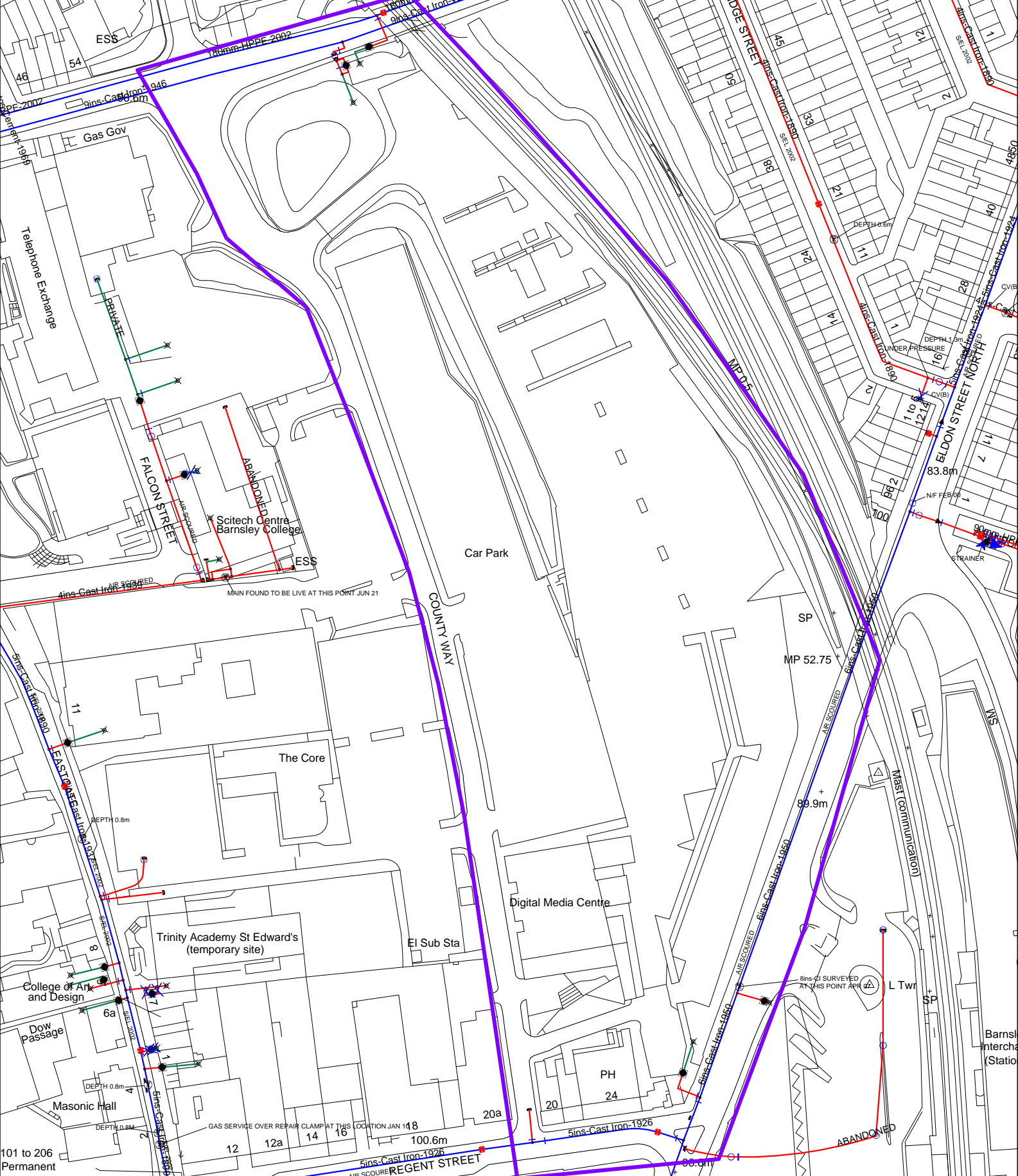
## Sewer Legend



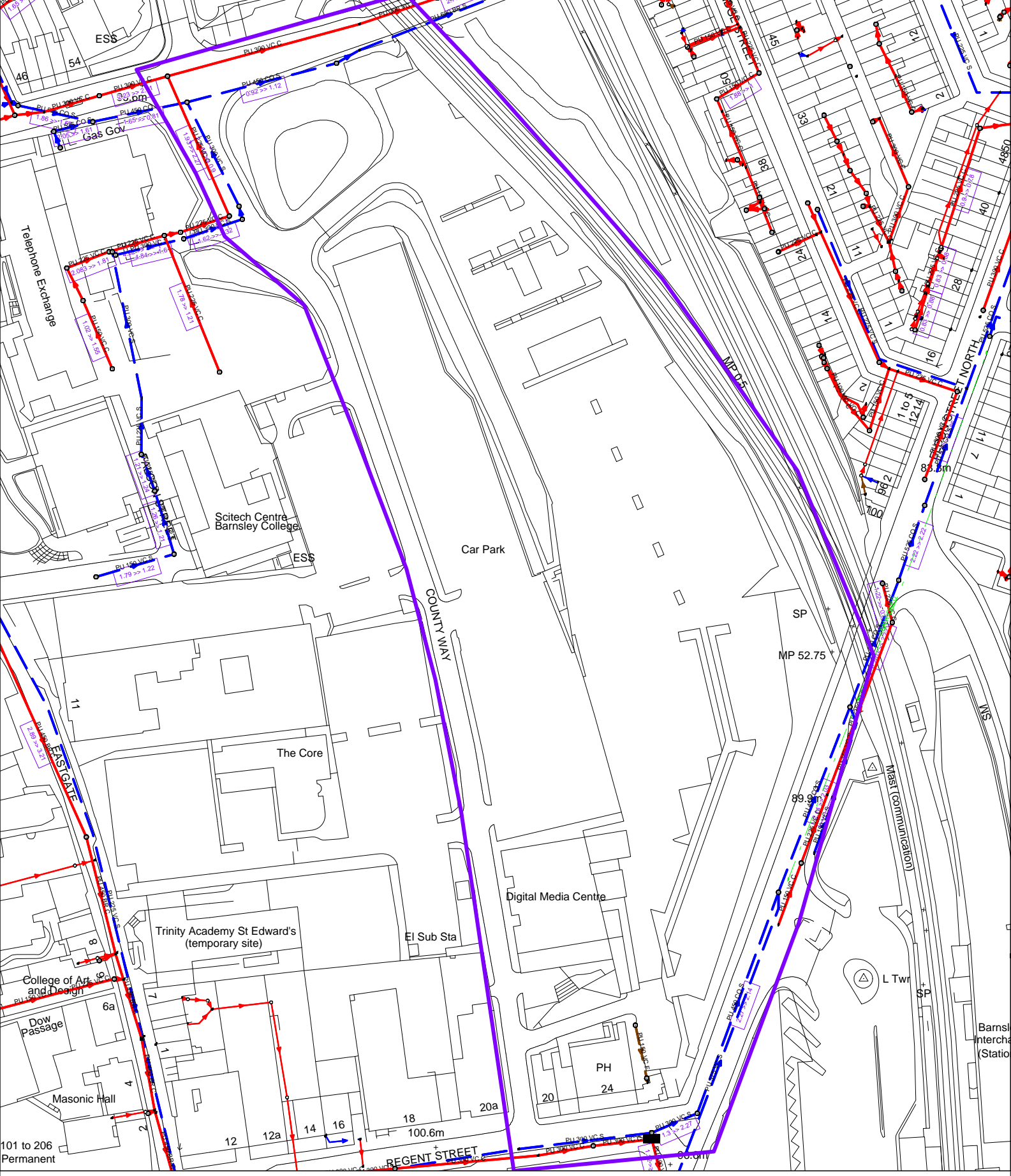
Please note that the direction of flow arrows may not always appear depending on the scale of the map.

## Water Legend





Public Clean Water Network 20/05/2024 14:43:24 OS Grid Coordinates: 434435 : 406547 Map Name : SE3406NW svcGISSafeMovePD



Public Waste Water Network 20/05/2024 14:43:26 OS Grid Coordinates: 434435 : 406547 Map Name : SE3406NW svcGISSafeMovePD

**Appendix D**  
Proposed Drainage Strategy

Do not scale from this drawing.

SAFETY HEALTH AND ENVIRONMENTAL INFORMATION

IN ADDITION TO THE HAZARD/RISKS NORMALLY ASSOCIATED WITH THE TYPES OF WORK DETAILED ON THIS DRAWING, NOTE THE FOLLOWING RISKS AND INFORMATION.

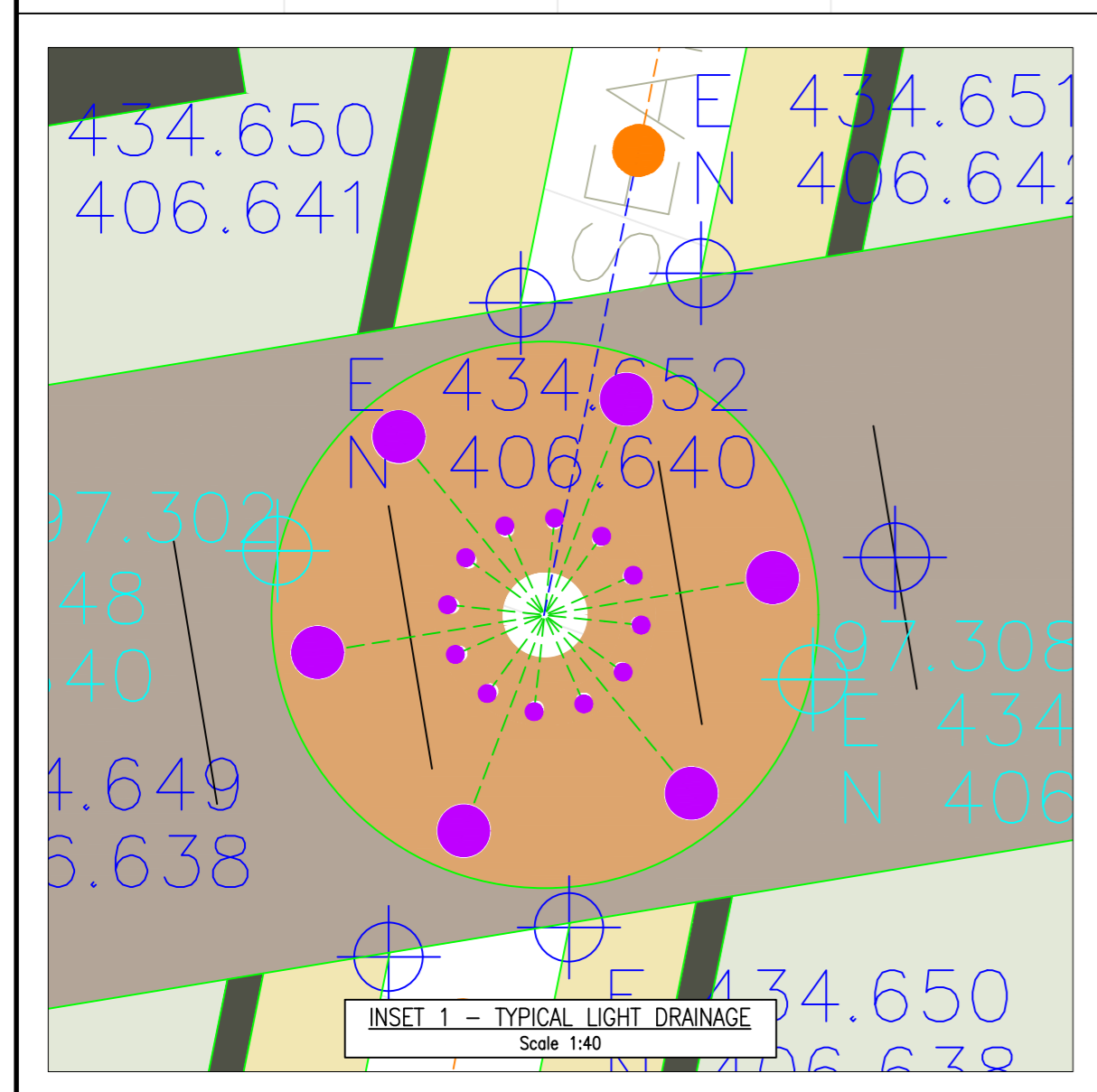
RISKS LISTED HERE ARE NOT EXHAUSTIVE. REFER TO DESIGN ASSESSMENT FORM DID-159592-11.

CONSTRUCTION

- WORKING IN A LIVE SEWERAGE SYSTEM
- WORKING ADJACENT TO LIVE ROADWAY
- EXISTING SERVICES
- PUBLIC INTERFACE

FOR INFORMATION RELATING TO USE, CLEANING AND MAINTENANCE SEE THE HEALTH AND SAFETY FILE

IT IS ASSUMED THAT ALL WORKS WILL BE CARRIED OUT BY A COMPETENT CONTRACTOR WORKING, WHERE APPROPRIATE, TO AN APPROVED METHOD STATEMENT.



RELINING OF EXISTING NETWORK REQUIRED

SPEL STORMCEPTOR VENT PIPE

EASEMENT ZONE BEHIND & OFFSET FROM EXISTING ELDON STREET RETAINING WALL. ANY TEMPORARY CONSTRUCTION LOADS (PLANT, EARTH MOVING EQUIPMENT ETC) TO BE MINIMISED TO AVOID COMPROMISING THE EXISTING RETAINING WALL. PLEASE REFER TO FAIRHURST DOCUMENT DID-159592-06

SEE INSET 1 FOR LIGHTING DRAINAGE INTO SCULPTURE DRAINAGE OUTLET

SADDLE CONNECTION INTO CORTEN PATH PERFORATED PIPE

SEE INSET 1 FOR LIGHTING DRAINAGE INTO SCULPTURE DRAINAGE OUTLET

**Key**

- Site boundary
- Proposed surface water drainage
- Existing surface water drainage
- Proposed Drainage Kerb
- Proposed Aco-drain - refer to drawing 2002 for Aco specs
- Proposed Petrol Interceptor
- Root Protection Zone
- Corten Path 150# Perforated Geotextile Wrapped Pipe
- Existing Surface Water Drainage to be grouted or grubbed
- Pile Exclusion Zone to Rear of Eldon Street Retaining Wall
- Permeable Block Paving - 025/117
- Road Gully
- ACO Drain Sump
- PPIC Chamber - 600mm Diameter
- Tree PI Outlet
- Permeable Paving Diffuser Box
- Proposed Lighting Position - 2 sizes (approx location)
- Lighting Drainage Connection into Sculpture Drainage Outlet

Rev	Date	Description	Drawn	Checked	Approved
C13	16/02/26	UPDATED DRAINAGE AND BASE LAYOUT	JBG	PJM	PJM
C12	21/12/25	UPDATED DRAINAGE AND BASE LAYOUT	JBG	PJM	PJM
C11	17/10/25	UPDATED DRAINAGE LAYOUT, NEW KERBLINE IMPLEMENTED	JBG	PJM	PJM
C10	01/10/25	UPDATED TO SUIT REVISED SITE LAYOUT, BEANIE KERBS ALONG EASTERN BOUNDARY, AS CLOUDED.	FM	JMM	JMM
C09	26/09/25	REVISED TO SHOW ACO-DRAIN INSTEAD OF GULLIES. AS CLOUDED	JH	FM	JMM
C08	25/09/25	REVISED TO SHOW GULLIES INSTEAD OF BEANY KERBS. IL OF MH1 TO MH9 INCREASED BY 100MM AT REQUEST OF CONTRACTOR. AS CLOUDED	JH	FM	MC
C07	29/08/25	REVISED TO SUIT NEW SITE LAYOUT + UPDATED SUB-STATION DRAINAGE AT THE REQUEST OF MOORTOWN. AS CLOUDED.	HW	MC	MC
C06	18/08/25	MH13 REVISED TO CATCHPIT, 7,002 DOWN SIZED TO 450# AT THE REQUEST OF CONTRACTOR. SADDLE CONNECTION FOR BEANY KERB ADDED. TREETPIT OUTLET ADDED, ACO AT SUBSTATIONS ADDED, CORTEN PATH DRAINAGE UPDATED. AS CLOUDED.	FM	SC	SC
C05	17/07/25	REVISED GULLY LOCATIONS BASED ON PROPOSED LEVELS AS CLOUDED.	HW	JMM	JMM
C04	16/07/25	CATCHPIT SUMP VALUES ADDED. AS CLOUDED.	FM	MC	MC
Rev	Date	Description	Drawn	Checked	Approved

- This drawing is based on the following received information:
  - One Environment SEAM-ONE-ZZ-XX-DR-L-00001-002 - Hardworks GA
  - 1ST HORIZON Utility Survey HB-T58855-01, 02, 03, 04
  - Met Geo Environment P24-00416-MET-EXT-XX-TOP-M3-G-1-3D Topographical Survey
- For NBS Specification references refer to One Environment document N1453-SEAM-ONE-ZZ-XX-SP-L-00001.
- Lighting for sculptures only shown for central Yorkshire Rose within Inset 1, remaining two Yorkshire Rose's lightings follow similar connections.
- Lighting positions are approximations and subject to change.

Client:

Project Title:

**THE SEAM, BARNSELY**

Drawing Title:

**PROPOSED DRAINAGE**

Scale at A1:

1:500

Status:

RIBA Stage 5

Drawn:

FM

Checked:

SKT

Approved:

SKT

Date:

14/08/24

Date:

14/08/24

Date:

14/08/24

Drawing No.:

SEAM-FHT-ZZ-XX-DR-C-02001

Revision:

C+3

**FAIRHURST**

1 Amgrove Court, Barrack Road,  
Newcastle-upon-Tyne, NE4 4QB  
Tel: 0191 221 0505 Fax: 0844 381 4412

**Appendix E**  
Causeway Flow Results

### Design Settings

Rainfall Methodology FSR Return Period (years) 100 Additional Flow (%) 45 FSR Region England and Wales M5-60 (mm) 19.000 Ratio-R 0.350 CV 0.750 Time of Entry (mins) 5.00	Maximum Time of Concentration (mins) 30.00 Maximum Rainfall (mm/hr) 50.0 Minimum Velocity (m/s) 1.00 Connection Type Level Soffits Minimum Backdrop Height (m) 0.200 Preferred Cover Depth (m) 1.200 Include Intermediate Ground ✓ Enforce best practice design rules x
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

### Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Easting (m)	Northing (m)	Depth (m)
MH9	0.131	5.00	95.759	1800	434644.832	406781.270	2.109
MH8	0.107	5.00	95.932	1800	434604.682	406764.259	2.379
MH7	0.073	5.00	95.651	1800	434606.128	406803.461	2.170
MH6	0.066	5.00	95.815	1800	434589.269	406796.202	2.407
MH5	0.050	5.00	95.717	1800	434592.624	406818.434	2.340
MH4	0.015	5.00	95.851	1800	434581.469	406813.762	2.522
MH3	0.033	5.00	95.671	1800	434585.568	406837.239	2.373
MH2	0.068	5.00	95.803	1800	434573.154	406832.393	2.558
MH1	0.070	5.00	95.780	1800	434562.462	406856.548	2.667
MH1.1	0.020	5.00	95.846	2700	434555.255	406873.855	2.811
NEW SW 1			95.595	1500	434561.332	406878.454	3.956
EX SW 1			91.880	1350	434548.132	406889.980	0.630
MH16	0.107	5.00	97.215	1500	434653.384	406631.578	1.575
MH14	0.030	5.00	97.125	1350	434643.550	406647.045	1.350
MH15	0.021	5.00	97.143	1950	434654.756	406648.764	2.425
MH17			97.147	1950	434665.157	406650.359	2.450
MH11	0.097	5.00	96.631	1800	434621.652	406708.164	1.831
MH12	0.103	5.00	97.095	1800	434635.892	406677.345	2.445
MH10	0.132	5.00	96.589	1800	434654.683	406722.085	1.950
MH13	0.053	5.00	97.045	1800	434668.744	406691.705	2.617
MH18			96.941	1950	434678.865	406703.295	2.941
MH19	0.000		97.037	2400	434676.582	406694.906	2.626
EX SW 3			96.680	1350	434687.131	406702.025	3.413

### 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	MH9	MH8	43.605	0.600	93.650	93.553	0.097	450.0	600	5.64	50.0
1.001	MH8	MH6	35.467	0.600	93.553	93.408	0.145	244.6	600	6.02	50.0
2.000	MH7	MH6	18.355	0.600	93.481	93.408	0.073	250.0	600	5.20	50.0
1.002	MH6	MH4	19.214	0.600	93.408	93.329	0.079	243.2	600	6.22	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	1.141	322.7	25.7	1.509	1.779	0.131	0.0
1.001	1.552	438.9	46.8	1.779	1.807	0.238	0.0
2.000	1.535	434.1	14.3	1.570	1.807	0.073	0.0
1.002	1.557	440.1	74.1	1.807	1.922	0.377	0.0

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
3.000	MH5	MH4	12.094	0.600	93.377	93.329	0.048	250.0	600	5.13	50.0
1.003	MH4	MH2	20.402	0.600	93.329	93.245	0.084	242.9	600	6.44	50.0
4.000	MH3	MH2	13.326	0.600	93.298	93.245	0.053	250.0	600	5.14	50.0
1.004	MH2	MH1	26.416	0.600	93.245	93.113	0.132	200.0	600	6.70	50.0
1.005	MH1	MH1.1	18.748	0.600	93.113	93.035	0.078	240.4	375	6.97	50.0
1.006	MH1.1	NEW SW 1	7.621	0.600	93.035	92.997	0.038	200.0	375	7.07	50.0
EX1.000	NEW SW 1	EX SW 1	17.524	0.600	91.639	91.250	0.389	45.0	150	7.26	50.0
5.002	MH19	MH18	8.694	0.600	94.411	94.000	0.411	21.2	375	6.05	50.0
5.000	MH16	MH17	22.166	0.600	95.640	94.997	0.643	34.5	300	5.14	50.0
6.000	MH14	MH15	11.337	0.600	95.775	95.167	0.608	18.6	150	5.08	50.0
6.001	MH15	MH17	10.523	0.600	94.718	94.697	0.021	501.1	600	5.24	50.0
5.001	MH17	MH19	45.989	0.600	94.697	94.561	0.136	338.2	600	5.82	50.0
7.000	MH11	MH12	33.950	0.600	94.800	94.650	0.150	226.3	600	5.35	50.0
7.001	MH12	MH13	35.853	0.600	94.650	94.578	0.072	500.0	600	5.90	50.0
8.000	MH10	MH13	33.476	0.600	94.639	94.428	0.211	158.7	750	5.25	50.0
7.002	MH13	MH19	8.466	0.600	94.428	94.411	0.017	500.0	750	6.02	50.0
5.003	MH18	EX SW 3	6.270	0.600	94.000	93.267	0.733	8.6	225	6.08	50.0




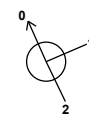









Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
3.000	1.535	434.1	9.8	1.740	1.922	0.050	0.0
1.003	1.558	440.5	86.9	1.922	1.958	0.442	0.0
4.000	1.535	434.1	6.5	1.773	1.958	0.033	0.0
1.004	1.718	485.8	106.7	1.958	2.067	0.543	0.0
1.005	1.164	128.6	120.5	2.292	2.436	0.613	0.0
1.006	1.277	141.1	124.4	2.436	2.223	0.633	0.0
EX1.000	1.503	26.6	124.4	3.806	0.480	0.633	0.0
5.002	3.954	436.7	106.7	2.251	2.566	0.543	0.0
5.000	2.686	189.9	21.0	1.275	1.850	0.107	0.0
6.000	2.343	41.4	5.9	1.200	1.826	0.030	0.0
6.001	1.081	305.6	10.0	1.825	1.850	0.051	0.0
5.001	1.318	372.7	31.0	1.850	1.876	0.158	0.0
7.000	1.614	456.4	19.1	1.231	1.845	0.097	0.0
7.001	1.082	305.9	39.3	1.845	1.867	0.200	0.0
8.000	2.219	980.3	25.9	1.200	1.867	0.132	0.0
7.002	1.244	549.7	75.7	1.867	1.876	0.385	0.0
5.003	4.501	178.9	106.7	2.716	3.188	0.543	0.0

Pipeline Schedule



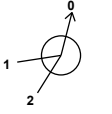



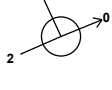

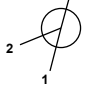
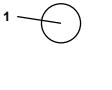
Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	43.605	450.0	600	1 STANDARD	95.759	93.650	1.509	95.932	93.553	1.779
1.001	35.467	244.6	600	1 STANDARD	95.932	93.553	1.779	95.815	93.408	1.807
2.000	18.355	250.0	600	1 STANDARD	95.651	93.481	1.570	95.815	93.408	1.807
1.002	19.214	243.2	600	1 STANDARD	95.815	93.408	1.807	95.851	93.329	1.922
3.000	12.094	250.0	600	1 STANDARD	95.717	93.377	1.740	95.851	93.329	1.922
1.003	20.402	242.9	600	1 STANDARD	95.851	93.329	1.922	95.803	93.245	1.958
4.000	13.326	250.0	600	1 STANDARD	95.671	93.298	1.773	95.803	93.245	1.958
1.004	26.416	200.0	600	1 STANDARD	95.803	93.245	1.958	95.780	93.113	2.067
1.005	18.748	240.4	375	1 STANDARD	95.780	93.113	2.292	95.846	93.035	2.436
1.006	7.621	200.0	375	1 STANDARD	95.846	93.035	2.436	95.595	92.997	2.223
EX1.000	17.524	45.0	150	1 STANDARD	95.595	91.639	3.806	91.880	91.250	0.480
5.002	8.694	21.2	375	1 STANDARD	97.037	94.411	2.251	96.941	94.000	2.566
5.000	22.166	34.5	300	1 STANDARD	97.215	95.640	1.275	97.147	94.997	1.850
6.000	11.337	18.6	150	1 STANDARD	97.125	95.775	1.200	97.143	95.167	1.826
6.001	10.523	501.1	600	1 STANDARD	97.143	94.718	1.825	97.147	94.697	1.850
5.001	45.989	338.2	600	1 STANDARD	97.147	94.697	1.850	97.037	94.561	1.876
7.000	33.950	226.3	600	1 STANDARD	96.631	94.800	1.231	97.095	94.650	1.845
7.001	35.853	500.0	600	1 STANDARD	97.095	94.650	1.845	97.045	94.578	1.867
8.000	33.476	158.7	750	1 STANDARD	96.589	94.639	1.200	97.045	94.428	1.867
7.002	8.466	500.0	750	1 STANDARD	97.045	94.428	1.867	97.037	94.411	1.876
5.003	6.270	8.6	225	1 STANDARD	96.941	94.000	2.716	96.680	93.267	3.188

Link	US Node	Dia (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	MH9	1800	Manhole	1 STANDARD	MH8	1800	Manhole	1 STANDARD
1.001	MH8	1800	Manhole	1 STANDARD	MH6	1800	Manhole	1 STANDARD
2.000	MH7	1800	Manhole	1 STANDARD	MH6	1800	Manhole	1 STANDARD
1.002	MH6	1800	Manhole	1 STANDARD	MH4	1800	Manhole	1 STANDARD
3.000	MH5	1800	Manhole	1 STANDARD	MH4	1800	Manhole	1 STANDARD
1.003	MH4	1800	Manhole	1 STANDARD	MH2	1800	Manhole	1 STANDARD
4.000	MH3	1800	Manhole	1 STANDARD	MH2	1800	Manhole	1 STANDARD
1.004	MH2	1800	Manhole	1 STANDARD	MH1	1800	Manhole	1 STANDARD
1.005	MH1	1800	Manhole	1 STANDARD	MH1.1	2700	Manhole	1 STANDARD
1.006	MH1.1	2700	Manhole	1 STANDARD	NEW SW 1	1500	Manhole	1 STANDARD
EX1.000	NEW SW 1	1500	Manhole	1 STANDARD	EX SW 1	1350	Manhole	1 STANDARD
5.002	MH19	2400	Manhole	1 STANDARD	MH18	1950	Manhole	1 STANDARD
5.000	MH16	1500	Manhole	1 STANDARD	MH17	1950	Manhole	1 STANDARD
6.000	MH14	1350	Manhole	1 STANDARD	MH15	1950	Manhole	1 STANDARD
6.001	MH15	1950	Manhole	1 STANDARD	MH17	1950	Manhole	1 STANDARD
5.001	MH17	1950	Manhole	1 STANDARD	MH19	2400	Manhole	1 STANDARD
7.000	MH11	1800	Manhole	1 STANDARD	MH12	1800	Manhole	1 STANDARD
7.001	MH12	1800	Manhole	1 STANDARD	MH13	1800	Manhole	1 STANDARD
8.000	MH10	1800	Manhole	1 STANDARD	MH13	1800	Manhole	1 STANDARD
7.002	MH13	1800	Manhole	1 STANDARD	MH19	2400	Manhole	1 STANDARD
5.003	MH18	1950	Manhole	1 STANDARD	EX SW 3	1350	Manhole	1 STANDARD

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
MH9	434644.832	406781.270	95.759	2.109	1800		0	1.000	93.650	600
MH8	434604.682	406764.259	95.932	2.379	1800		1	1.000	93.553	600
MH7	434606.128	406803.461	95.651	2.170	1800		0	1.001	93.553	600
MH6	434589.269	406796.202	95.815	2.407	1800		0	2.000	93.481	600
MH5	434592.624	406818.434	95.717	2.340	1800		1	2.000	93.408	600
MH4	434581.469	406813.762	95.851	2.522	1800		2	1.001	93.408	600
MH3	434585.568	406837.239	95.671	2.373	1800		0	1.002	93.408	600
MH2	434573.154	406832.393	95.803	2.558	1800		0	3.000	93.377	600
MH1	434562.462	406856.548	95.780	2.667	1800		1	3.000	93.329	600
MH1.1	434555.255	406873.855	95.846	2.811	2700		2	1.002	93.329	600
NEW SW 1	434561.332	406878.454	95.595	3.956	1500		0	1.003	93.329	600
EX SW 1	434548.132	406889.980	91.880	0.630	1350		0	4.000	93.298	600
MH16	434653.384	406631.578	97.215	1.575	1500		1	4.000	93.245	600
							0	1.004	93.245	600
							1	1.005	93.113	600
							0	1.005	93.113	375
							1	1.005	93.035	375
							0	1.006	93.035	375
							1	1.006	92.997	375
							0	EX1.000	91.639	150
							1	EX1.000	91.250	150
							0	5.000	95.640	300

**Manhole Schedule**

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Connections	Link	IL (m)	Dia (mm)	
MH14	434643.550	406647.045	97.125	1.350	1350					
							0	6.000	95.775	150
MH15	434654.756	406648.764	97.143	2.425	1950					
							1	6.000	95.167	150
							0	6.001	94.718	600
MH17	434665.157	406650.359	97.147	2.450	1950					
							1	6.001	94.697	600
							2	5.000	94.997	300
							0	5.001	94.697	600
MH11	434621.652	406708.164	96.631	1.831	1800					
							0	7.000	94.800	600
MH12	434635.892	406677.345	97.095	2.445	1800					
							1	7.000	94.650	600
							0	7.001	94.650	600
MH10	434654.683	406722.085	96.589	1.950	1800					
							0	8.000	94.639	750
MH13	434668.744	406691.705	97.045	2.617	1800					
							1	8.000	94.428	750
							2	7.001	94.578	600
							0	7.002	94.428	750
MH18	434678.865	406703.295	96.941	2.941	1950					
							1	5.002	94.000	375
							0	5.003	94.000	225
MH19	434676.582	406694.906	97.037	2.626	2400					
							1	5.001	94.561	600
							2	7.002	94.411	750
							0	5.002	94.411	375
EX SW 3	434687.131	406702.025	96.680	3.413	1350					
							1	5.003	93.267	225

**Simulation Settings**

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	19.000	Additional Storage (m <sup>3</sup> /ha)	20.0
Ratio-R	0.350	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	0	0	0
100	0	0	0
100	40	0	0

**Node MH1.1 Online Orifice Control**

Flap Valve	x	Design Depth (m)	2.000	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	99.0		
Invert Level (m)	93.035	Diameter (m)	0.185		

**Node MH19 Online Orifice Control**

Flap Valve	x	Design Depth (m)	2.000	Discharge Coefficient	0.600
Replaces Downstream Link	x	Design Flow (l/s)	77.5		
Invert Level (m)	94.411	Diameter (m)	0.163		

**Results for 1 year Critical Storm Duration. Lowest mass balance: 99.93%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute winter	MH9	10	93.740	0.090	16.8	0.3409	0.0000	OK
15 minute winter	MH8	11	93.656	0.103	29.9	0.3540	0.0000	OK
15 minute winter	MH7	11	93.549	0.068	9.3	0.2180	0.0000	OK
15 minute winter	MH6	11	93.546	0.138	45.4	0.4277	0.0000	OK
15 minute winter	MH5	14	93.521	0.144	6.4	0.4273	0.0000	OK
15 minute winter	MH4	14	93.510	0.181	51.8	0.4828	0.0000	OK
15 minute winter	MH3	15	93.511	0.213	8.8	0.6006	0.0000	OK
15 minute winter	MH2	15	93.505	0.260	62.2	0.8006	0.0000	OK
15 minute winter	MH1	14	93.505	0.392	61.2	1.2019	0.0000	SURCHARGED
15 minute winter	MH1.1	14	93.494	0.459	45.7	2.6950	0.0000	SURCHARGED
15 minute winter	NEW SW 1	16	92.392	0.753	40.1	1.3300	0.0000	SURCHARGED
60 minute winter	EX SW 1	32	91.392	0.142	34.9	0.0000	0.0000	OK
15 minute winter	MH16	10	95.695	0.055	13.7	0.1732	0.0000	OK
15 minute winter	MH14	10	95.806	0.031	3.8	0.0589	0.0000	OK
15 minute winter	MH15	11	94.792	0.074	6.5	0.2343	0.0000	OK
15 minute winter	MH17	11	94.788	0.091	19.6	0.2712	0.0000	OK
15 minute winter	MH11	10	94.866	0.066	12.4	0.2377	0.0000	OK
15 minute winter	MH12	14	94.799	0.149	25.2	0.5046	0.0000	OK
15 minute winter	MH10	15	94.794	0.155	17.2	0.6041	0.0000	OK
15 minute winter	MH13	14	94.789	0.361	46.3	1.0653	0.0000	OK
15 minute winter	MH18	13	94.070	0.070	30.2	0.2086	0.0000	OK
15 minute winter	MH19	13	94.789	0.378	45.6	1.7094	0.0000	SURCHARGED
15 minute winter	EX SW 3	13	93.329	0.062	30.2	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute winter	MH9	1.000	MH8	16.2	0.565	0.050	1.2690	
15 minute winter	MH8	1.001	MH6	29.2	0.726	0.067	1.4364	
15 minute winter	MH7	2.000	MH6	8.7	0.322	0.020	0.6093	
15 minute winter	MH6	1.002	MH4	44.6	0.874	0.101	1.0269	
15 minute winter	MH5	3.000	MH4	5.3	0.310	0.012	0.7463	
15 minute winter	MH4	1.003	MH2	50.5	0.956	0.115	1.8643	
15 minute winter	MH3	4.000	MH2	-6.4	0.190	-0.015	1.3762	
15 minute winter	MH2	1.004	MH1	52.2	0.771	0.108	4.1120	
15 minute winter	MH1	1.005	MH1.1	43.1	0.657	0.335	2.0678	
15 minute winter	MH1.1	1.006	NEW SW 1	40.1	1.047	0.285	0.2922	
15 minute winter	NEW SW 1	EX1.000	EX SW 1	39.2	2.227	1.476	0.3054	37.2
15 minute winter	MH16	5.000	MH17	13.5	1.542	0.071	0.1936	
15 minute winter	MH14	6.000	MH15	3.8	1.432	0.091	0.0297	
15 minute winter	MH15	6.001	MH17	6.2	0.276	0.020	0.2454	
15 minute winter	MH17	5.001	MH19	19.3	0.600	0.052	2.8146	
15 minute winter	MH11	7.000	MH12	12.0	0.469	0.026	1.1025	
15 minute winter	MH12	7.001	MH13	24.9	0.634	0.081	2.5618	
15 minute winter	MH10	8.000	MH13	18.1	0.392	0.018	4.5501	
15 minute winter	MH13	7.002	MH19	27.5	0.504	0.050	1.8282	
15 minute winter	MH18	5.003	EX SW 3	30.2	3.116	0.169	0.0609	31.9
15 minute winter	MH19	5.002	MH18	30.2	2.101	0.069	0.1251	

**Results for 30 year Critical Storm Duration. Lowest mass balance: 99.93%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute winter	MH9	24	93.909	0.259	32.2	0.9799	0.0000	OK
30 minute winter	MH8	25	93.905	0.352	59.0	1.2112	0.0000	OK
30 minute winter	MH7	25	93.902	0.421	18.0	1.3553	0.0000	OK
30 minute winter	MH6	24	93.901	0.493	80.3	1.5243	0.0000	OK
30 minute winter	MH5	25	93.901	0.524	13.9	1.5585	0.0000	OK
30 minute winter	MH4	24	93.901	0.572	76.3	1.5250	0.0000	OK
30 minute winter	MH3	24	93.904	0.606	12.4	1.7111	0.0000	SURCHARGED
30 minute winter	MH2	24	93.901	0.656	70.7	2.0189	0.0000	SURCHARGED
30 minute winter	MH1	24	93.900	0.787	62.6	2.4157	0.0000	SURCHARGED
30 minute winter	MH1.1	26	93.879	0.844	60.7	4.9504	0.0000	SURCHARGED
30 minute winter	NEW SW 1	26	93.285	1.646	55.1	2.9087	0.0000	SURCHARGED
60 minute summer	EX SW 1	69	91.392	0.142	52.7	0.0000	0.0000	OK
15 minute winter	MH16	10	95.728	0.088	33.5	0.2765	0.0000	OK
15 minute winter	MH14	10	95.826	0.051	9.4	0.0951	0.0000	OK
30 minute winter	MH15	26	95.121	0.403	12.6	1.2750	0.0000	OK
30 minute winter	MH17	26	95.121	0.424	34.6	1.2656	0.0000	OK
30 minute winter	MH11	24	95.126	0.326	23.9	1.1766	0.0000	OK
30 minute winter	MH12	24	95.119	0.469	45.7	1.5902	0.0000	OK
30 minute winter	MH10	25	95.117	0.478	32.5	1.8640	0.0000	OK
30 minute winter	MH13	25	95.123	0.695	73.1	2.0512	0.0000	OK
30 minute winter	MH18	26	94.087	0.087	43.8	0.2594	0.0000	OK
30 minute winter	MH19	25	95.124	0.713	58.4	3.2244	0.0000	SURCHARGED
30 minute winter	EX SW 3	26	93.342	0.075	43.7	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute winter	MH9	1.000	MH8	32.7	0.668	0.101	6.1575	
30 minute winter	MH8	1.001	MH6	55.8	0.811	0.127	7.4284	
30 minute winter	MH7	2.000	MH6	18.6	0.317	0.043	4.2091	
30 minute winter	MH6	1.002	MH4	64.9	0.894	0.147	5.0418	
30 minute winter	MH5	3.000	MH4	12.9	0.325	0.030	3.2476	
30 minute winter	MH4	1.003	MH2	55.3	0.889	0.126	5.7003	
30 minute winter	MH3	4.000	MH2	7.5	0.189	0.017	3.7534	
30 minute winter	MH2	1.004	MH1	50.8	0.719	0.105	7.4408	
30 minute winter	MH1	1.005	MH1.1	57.1	0.631	0.444	2.0678	
30 minute winter	MH1.1	1.006	NEW SW 1	55.1	1.126	0.391	0.6606	
30 minute winter	NEW SW 1	EX1.000	EX SW 1	53.9	3.065	2.031	0.3055	121.9
15 minute winter	MH16	5.000	MH17	33.1	1.977	0.174	0.3709	
15 minute winter	MH14	6.000	MH15	9.3	1.834	0.225	0.0575	
30 minute winter	MH15	6.001	MH17	9.9	0.292	0.032	2.1801	
30 minute winter	MH17	5.001	MH19	30.8	0.561	0.083	11.1932	
30 minute winter	MH11	7.000	MH12	21.7	0.508	0.048	6.6756	
30 minute winter	MH12	7.001	MH13	33.8	0.594	0.110	9.0513	
30 minute winter	MH10	8.000	MH13	30.3	0.418	0.031	12.0870	
30 minute winter	MH13	7.002	MH19	48.3	0.533	0.088	3.6323	
30 minute winter	MH18	5.003	EX SW 3	43.7	3.393	0.244	0.0808	104.5
30 minute winter	MH19	5.002	MH18	43.8	2.261	0.100	0.1684	

**Results for 100 year Critical Storm Duration. Lowest mass balance: 99.93%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute winter	MH9	25	94.395	0.745	42.1	2.8228	0.0000	SURCHARGED
30 minute winter	MH8	25	94.391	0.838	76.8	2.8864	0.0000	SURCHARGED
30 minute winter	MH7	25	94.396	0.915	23.5	2.9445	0.0000	SURCHARGED
30 minute winter	MH6	25	94.396	0.988	95.8	3.0543	0.0000	SURCHARGED
30 minute winter	MH5	25	94.397	1.020	16.1	3.0324	0.0000	SURCHARGED
30 minute winter	MH4	25	94.397	1.068	74.3	2.8462	0.0000	SURCHARGED
30 minute winter	MH3	25	94.392	1.094	14.1	3.0894	0.0000	SURCHARGED
30 minute winter	MH2	25	94.392	1.147	79.2	3.5296	0.0000	SURCHARGED
30 minute winter	MH1	25	94.389	1.276	83.6	3.9180	0.0000	SURCHARGED
30 minute winter	MH1.1	25	94.367	1.331	78.3	7.8132	0.0000	SURCHARGED
30 minute winter	NEW SW 1	26	93.663	2.024	59.9	3.5761	0.0000	SURCHARGED
240 minute winter	EX SW 1	96	91.392	0.142	45.5	0.0000	0.0000	OK
15 minute winter	MH16	10	95.742	0.102	43.3	0.3184	0.0000	OK
15 minute winter	MH14	10	95.834	0.059	12.2	0.1101	0.0000	OK
30 minute winter	MH15	25	95.594	0.876	17.3	2.7670	0.0000	SURCHARGED
30 minute winter	MH17	25	95.594	0.897	47.4	2.6770	0.0000	SURCHARGED
30 minute winter	MH11	24	95.610	0.810	31.2	2.9181	0.0000	SURCHARGED
30 minute winter	MH12	25	95.593	0.943	56.5	3.1928	0.0000	SURCHARGED
30 minute winter	MH10	24	95.581	0.942	42.4	3.6743	0.0000	SURCHARGED
30 minute winter	MH13	24	95.585	1.157	79.1	3.4134	0.0000	SURCHARGED
30 minute winter	MH18	25	94.103	0.103	57.4	0.3081	0.0000	OK
30 minute winter	MH19	24	95.585	1.174	70.4	5.3123	0.0000	SURCHARGED
30 minute winter	EX SW 3	25	93.354	0.087	57.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute winter	MH9	1.000	MH8	42.4	0.701	0.131	12.2825	
30 minute winter	MH8	1.001	MH6	66.2	0.809	0.151	9.9902	
30 minute winter	MH7	2.000	MH6	18.6	0.329	0.043	5.1702	
30 minute winter	MH6	1.002	MH4	67.5	0.892	0.153	5.4121	
30 minute winter	MH5	3.000	MH4	11.6	0.351	0.027	3.4066	
30 minute winter	MH4	1.003	MH2	62.4	0.902	0.142	5.7468	
30 minute winter	MH3	4.000	MH2	6.9	0.206	0.016	3.7536	
30 minute winter	MH2	1.004	MH1	65.0	0.738	0.134	7.4408	
30 minute winter	MH1	1.005	MH1.1	72.9	0.661	0.567	2.0678	
30 minute winter	MH1.1	1.006	NEW SW 1	59.9	1.140	0.425	0.8406	
30 minute winter	NEW SW 1	EX1.000	EX SW 1	59.1	3.356	2.225	0.3054	159.2
15 minute winter	MH16	5.000	MH17	42.8	2.114	0.225	0.8714	
15 minute winter	MH14	6.000	MH15	12.1	1.962	0.291	0.1138	
30 minute winter	MH15	6.001	MH17	13.5	0.298	0.044	2.9641	
30 minute winter	MH17	5.001	MH19	33.8	0.581	0.091	12.9541	
30 minute winter	MH11	7.000	MH12	27.1	0.500	0.059	9.5629	
30 minute winter	MH12	7.001	MH13	43.8	0.602	0.143	10.0990	
30 minute winter	MH10	8.000	MH13	34.4	0.435	0.035	14.7335	
30 minute winter	MH13	7.002	MH19	61.5	0.533	0.112	3.7261	
30 minute winter	MH18	5.003	EX SW 3	57.6	3.606	0.322	0.1002	136.4
30 minute winter	MH19	5.002	MH18	57.4	2.369	0.131	0.2107	

**Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.93%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute winter	MH9	42	95.669	2.019	45.8	7.6442	0.0000	FLOOD RISK
60 minute winter	MH8	42	95.659	2.106	64.9	7.2517	0.0000	FLOOD RISK
30 minute winter	MH7	24	95.651	2.170	57.5	6.9831	4.1359	FLOOD
30 minute winter	MH6	24	95.659	2.251	130.8	6.9616	0.0000	FLOOD RISK
60 minute winter	MH5	42	95.662	2.285	15.4	6.7924	0.0000	FLOOD RISK
60 minute winter	MH4	42	95.661	2.332	90.4	6.2118	0.0000	FLOOD RISK
30 minute winter	MH3	24	95.668	2.370	19.7	6.6899	0.0000	FLOOD RISK
30 minute winter	MH2	24	95.666	2.421	111.1	7.4456	0.0000	FLOOD RISK
30 minute winter	MH1	24	95.670	2.557	128.3	7.8487	0.0000	FLOOD RISK
30 minute winter	MH1.1	24	95.644	2.609	116.7	15.3123	0.0000	FLOOD RISK
60 minute winter	NEW SW 1	45	94.619	2.980	71.5	5.2656	0.0000	SURCHARGED
15 minute summer	EX SW 1	53	91.392	0.142	63.1	0.0000	0.0000	OK
60 minute winter	MH16	41	96.605	0.965	32.9	3.0156	0.0000	SURCHARGED
30 minute winter	MH14	23	96.639	0.864	13.7	1.6211	0.0000	SURCHARGED
60 minute winter	MH15	41	96.594	1.876	15.7	5.9285	0.0000	SURCHARGED
60 minute winter	MH17	41	96.592	1.895	38.9	5.6594	0.0000	SURCHARGED
30 minute winter	MH11	22	96.620	1.820	43.6	6.5581	0.0000	FLOOD RISK
30 minute winter	MH12	22	96.618	1.968	69.5	6.6652	0.0000	SURCHARGED
30 minute winter	MH10	22	96.589	1.950	67.0	7.6031	4.6115	FLOOD
30 minute winter	MH13	22	96.593	2.165	109.3	6.3873	0.0000	SURCHARGED
60 minute winter	MH18	41	94.128	0.128	79.5	0.3831	0.0000	OK
30 minute winter	MH19	22	96.590	2.179	95.8	9.8585	0.0000	SURCHARGED
60 minute winter	EX SW 3	41	93.371	0.104	79.6	0.0000	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute winter	MH9	1.000	MH8	32.0	0.645	0.099	12.2825	
60 minute winter	MH8	1.001	MH6	67.6	0.747	0.154	9.9902	
30 minute winter	MH7	2.000	MH6	-45.1	0.353	-0.104	5.1702	
30 minute winter	MH6	1.002	MH4	103.0	0.878	0.234	5.4121	
60 minute winter	MH5	3.000	MH4	11.8	0.321	0.027	3.4066	
60 minute winter	MH4	1.003	MH2	78.0	0.813	0.177	5.7468	
30 minute winter	MH3	4.000	MH2	8.3	0.227	0.019	3.7536	
30 minute winter	MH2	1.004	MH1	96.8	0.763	0.199	7.4408	
30 minute winter	MH1	1.005	MH1.1	107.7	0.976	0.838	2.0678	
30 minute winter	MH1.1	1.006	NEW SW 1	72.5	1.147	0.514	0.8406	
60 minute winter	NEW SW 1	EX1.000	EX SW 1	70.4	4.001	2.652	0.3054	282.8
60 minute winter	MH16	5.000	MH17	35.2	1.909	0.185	1.5609	
30 minute winter	MH14	6.000	MH15	13.5	2.014	0.326	0.1996	
60 minute winter	MH15	6.001	MH17	13.8	0.268	0.045	2.9641	
60 minute winter	MH17	5.001	MH19	39.3	0.566	0.105	12.9541	
30 minute winter	MH11	7.000	MH12	25.6	0.492	0.056	9.5629	
30 minute winter	MH12	7.001	MH13	57.5	0.617	0.188	10.0990	
30 minute winter	MH10	8.000	MH13	-38.7	0.467	-0.039	14.7335	
30 minute winter	MH13	7.002	MH19	86.2	0.540	0.157	3.7261	
60 minute winter	MH18	5.003	EX SW 3	79.6	3.844	0.445	0.1298	243.1
30 minute winter	MH19	5.002	MH18	79.5	2.478	0.182	0.2790	

**Results for 1 year 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.95%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	MH9	10	93.738	0.088	15.9	0.3332	0.0000	OK
15 minute summer	MH8	11	93.653	0.100	28.4	0.3457	0.0000	OK
15 minute summer	MH7	11	93.544	0.063	8.9	0.2031	0.0000	OK
15 minute summer	MH6	11	93.543	0.135	43.2	0.4174	0.0000	OK
15 minute summer	MH5	15	93.478	0.101	6.1	0.3010	0.0000	OK
15 minute summer	MH4	15	93.476	0.147	50.1	0.3906	0.0000	OK
15 minute summer	MH3	14	93.491	0.193	12.9	0.5446	0.0000	OK
15 minute summer	MH2	14	93.481	0.236	60.3	0.7272	0.0000	OK
15 minute summer	MH1	13	93.486	0.373	62.0	1.1442	0.0000	OK
15 minute summer	MH1.1	13	93.476	0.441	46.0	2.5854	0.0000	SURCHARGED
15 minute summer	NEW SW 1	15	92.301	0.662	38.2	1.1690	0.0000	SURCHARGED
15 minute summer	EX SW 1	12	91.392	0.142	37.3	0.0000	0.0000	OK
15 minute summer	MH16	10	95.694	0.054	13.0	0.1689	0.0000	OK
15 minute summer	MH14	10	95.806	0.031	3.7	0.0581	0.0000	OK
15 minute summer	MH15	11	94.790	0.072	6.3	0.2275	0.0000	OK
15 minute summer	MH17	11	94.786	0.089	18.5	0.2657	0.0000	OK
15 minute summer	MH11	10	94.865	0.065	11.8	0.2325	0.0000	OK
15 minute summer	MH12	14	94.778	0.128	24.0	0.4351	0.0000	OK
15 minute summer	MH10	14	94.783	0.144	16.1	0.5601	0.0000	OK
15 minute summer	MH13	13	94.776	0.348	42.7	1.0277	0.0000	OK
15 minute summer	MH18	13	94.069	0.069	29.7	0.2061	0.0000	OK
15 minute summer	MH19	13	94.779	0.368	39.9	1.6636	0.0000	OK
15 minute summer	EX SW 3	13	93.329	0.062	29.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute summer	MH9	1.000	MH8	15.5	0.560	0.048	1.2280	
15 minute summer	MH8	1.001	MH6	27.9	0.717	0.064	1.3879	
15 minute summer	MH7	2.000	MH6	8.7	0.333	0.020	0.5782	
15 minute summer	MH6	1.002	MH4	42.8	0.869	0.097	0.9472	
15 minute summer	MH5	3.000	MH4	7.1	0.301	0.016	0.5113	
15 minute summer	MH4	1.003	MH2	49.5	0.976	0.112	1.5796	
15 minute summer	MH3	4.000	MH2	-9.8	0.178	-0.023	1.2077	
15 minute summer	MH2	1.004	MH1	53.9	0.765	0.111	3.6727	
15 minute summer	MH1	1.005	MH1.1	44.8	0.650	0.348	2.0666	
15 minute summer	MH1.1	1.006	NEW SW 1	38.2	1.033	0.271	0.2825	
15 minute summer	NEW SW 1	EX1.000	EX SW 1	37.3	2.122	1.406	0.3054	33.2
15 minute summer	MH16	5.000	MH17	12.8	1.522	0.068	0.1869	
15 minute summer	MH14	6.000	MH15	3.7	1.421	0.088	0.0291	
15 minute summer	MH15	6.001	MH17	5.9	0.284	0.019	0.2370	
15 minute summer	MH17	5.001	MH19	18.5	0.616	0.050	2.6249	
15 minute summer	MH11	7.000	MH12	11.5	0.474	0.025	0.9008	
15 minute summer	MH12	7.001	MH13	24.0	0.637	0.079	2.1508	
15 minute summer	MH10	8.000	MH13	15.7	0.372	0.016	4.2154	
15 minute summer	MH13	7.002	MH19	21.4	0.492	0.039	1.7559	
15 minute summer	MH18	5.003	EX SW 3	29.6	3.097	0.165	0.0599	28.5
15 minute summer	MH19	5.002	MH18	29.7	2.094	0.068	0.1232	

**Results for 1 year 15 minute winter. 255 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 (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute winter	MH9	10	93.740	0.090	16.8	0.3409	0.0000	OK
15 minute winter	MH8	11	93.656	0.103	29.9	0.3540	0.0000	OK
15 minute winter	MH7	11	93.549	0.068	9.3	0.2180	0.0000	OK
15 minute winter	MH6	11	93.546	0.138	45.4	0.4277	0.0000	OK
15 minute winter	MH5	14	93.521	0.144	6.4	0.4273	0.0000	OK
15 minute winter	MH4	14	93.510	0.181	51.8	0.4828	0.0000	OK
15 minute winter	MH3	15	93.511	0.213	8.8	0.6006	0.0000	OK
15 minute winter	MH2	15	93.505	0.260	62.2	0.8006	0.0000	OK
15 minute winter	MH1	14	93.505	0.392	61.2	1.2019	0.0000	SURCHARGED
15 minute winter	MH1.1	14	93.494	0.459	45.7	2.6950	0.0000	SURCHARGED
15 minute winter	NEW SW 1	16	92.392	0.753	40.1	1.3300	0.0000	SURCHARGED
15 minute winter	EX SW 1	11	91.392	0.142	39.2	0.0000	0.0000	OK
15 minute winter	MH16	10	95.695	0.055	13.7	0.1732	0.0000	OK
15 minute winter	MH14	10	95.806	0.031	3.8	0.0589	0.0000	OK
15 minute winter	MH15	11	94.792	0.074	6.5	0.2343	0.0000	OK
15 minute winter	MH17	11	94.788	0.091	19.6	0.2712	0.0000	OK
15 minute winter	MH11	10	94.866	0.066	12.4	0.2377	0.0000	OK
15 minute winter	MH12	14	94.799	0.149	25.2	0.5046	0.0000	OK
15 minute winter	MH10	15	94.794	0.155	17.2	0.6041	0.0000	OK
15 minute winter	MH13	14	94.789	0.361	46.3	1.0653	0.0000	OK
15 minute winter	MH18	13	94.070	0.070	30.2	0.2086	0.0000	OK
15 minute winter	MH19	13	94.789	0.378	45.6	1.7094	0.0000	SURCHARGED
15 minute winter	EX SW 3	13	93.329	0.062	30.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute winter	MH9	1.000	MH8	16.2	0.565	0.050	1.2690	
15 minute winter	MH8	1.001	MH6	29.2	0.726	0.067	1.4364	
15 minute winter	MH7	2.000	MH6	8.7	0.322	0.020	0.6093	
15 minute winter	MH6	1.002	MH4	44.6	0.874	0.101	1.0269	
15 minute winter	MH5	3.000	MH4	5.3	0.310	0.012	0.7463	
15 minute winter	MH4	1.003	MH2	50.5	0.956	0.115	1.8643	
15 minute winter	MH3	4.000	MH2	-6.4	0.190	-0.015	1.3762	
15 minute winter	MH2	1.004	MH1	52.2	0.771	0.108	4.1120	
15 minute winter	MH1	1.005	MH1.1	43.1	0.657	0.335	2.0678	
15 minute winter	MH1.1	1.006	NEW SW 1	40.1	1.047	0.285	0.2922	
15 minute winter	NEW SW 1	EX1.000	EX SW 1	39.2	2.227	1.476	0.3054	37.2
15 minute winter	MH16	5.000	MH17	13.5	1.542	0.071	0.1936	
15 minute winter	MH14	6.000	MH15	3.8	1.432	0.091	0.0297	
15 minute winter	MH15	6.001	MH17	6.2	0.276	0.020	0.2454	
15 minute winter	MH17	5.001	MH19	19.3	0.600	0.052	2.8146	
15 minute winter	MH11	7.000	MH12	12.0	0.469	0.026	1.1025	
15 minute winter	MH12	7.001	MH13	24.9	0.634	0.081	2.5618	
15 minute winter	MH10	8.000	MH13	18.1	0.392	0.018	4.5501	
15 minute winter	MH13	7.002	MH19	27.5	0.504	0.050	1.8282	
15 minute winter	MH18	5.003	EX SW 3	30.2	3.116	0.169	0.0609	31.9
15 minute winter	MH19	5.002	MH18	30.2	2.101	0.069	0.1251	

**Results for 1 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute summer	MH9	18	93.734	0.084	14.5	0.3199	0.0000	OK
30 minute summer	MH8	18	93.649	0.096	26.2	0.3305	0.0000	OK
30 minute summer	MH7	19	93.540	0.058	8.1	0.1882	0.0000	OK
30 minute summer	MH6	19	93.537	0.129	40.6	0.4005	0.0000	OK
30 minute summer	MH5	22	93.491	0.114	5.5	0.3383	0.0000	OK
30 minute summer	MH4	22	93.485	0.156	46.2	0.4152	0.0000	OK
30 minute summer	MH3	21	93.491	0.193	10.7	0.5447	0.0000	OK
30 minute summer	MH2	21	93.482	0.237	53.5	0.7292	0.0000	OK
30 minute summer	MH1	23	93.479	0.366	55.7	1.1231	0.0000	OK
30 minute summer	MH1.1	22	93.473	0.438	45.0	2.5691	0.0000	SURCHARGED
30 minute summer	NEW SW 1	24	92.327	0.688	38.7	1.2161	0.0000	SURCHARGED
30 minute summer	EX SW 1	19	91.392	0.142	37.9	0.0000	0.0000	OK
30 minute summer	MH16	18	95.692	0.052	11.8	0.1618	0.0000	OK
30 minute summer	MH14	18	95.804	0.029	3.3	0.0552	0.0000	OK
30 minute summer	MH15	18	94.786	0.068	5.6	0.2158	0.0000	OK
30 minute summer	MH17	19	94.782	0.085	17.2	0.2538	0.0000	OK
30 minute summer	MH11	18	94.862	0.062	10.7	0.2242	0.0000	OK
30 minute summer	MH12	22	94.782	0.132	22.0	0.4462	0.0000	OK
30 minute summer	MH10	21	94.786	0.147	14.6	0.5714	0.0000	OK
30 minute summer	MH13	22	94.779	0.351	38.6	1.0366	0.0000	OK
30 minute summer	MH18	22	94.069	0.069	29.8	0.2067	0.0000	OK
30 minute summer	MH19	22	94.780	0.369	41.0	1.6672	0.0000	OK
30 minute summer	EX SW 3	22	93.329	0.062	29.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute summer	MH9	1.000	MH8	14.4	0.543	0.045	1.1571	
30 minute summer	MH8	1.001	MH6	25.4	0.697	0.058	1.3037	
30 minute summer	MH7	2.000	MH6	7.9	0.311	0.018	0.5382	
30 minute summer	MH6	1.002	MH4	39.8	0.854	0.090	0.9023	
30 minute summer	MH5	3.000	MH4	5.3	0.256	0.012	0.5753	
30 minute summer	MH4	1.003	MH2	46.5	0.945	0.106	1.6020	
30 minute summer	MH3	4.000	MH2	-7.4	0.165	-0.017	1.2103	
30 minute summer	MH2	1.004	MH1	48.6	0.715	0.100	3.6935	
30 minute summer	MH1	1.005	MH1.1	43.4	0.534	0.338	2.0608	
30 minute summer	MH1.1	1.006	NEW SW 1	38.7	1.036	0.274	0.2848	
30 minute summer	NEW SW 1	EX1.000	EX SW 1	37.9	2.155	1.428	0.3054	44.3
30 minute summer	MH16	5.000	MH17	11.8	1.487	0.062	0.1758	
30 minute summer	MH14	6.000	MH15	3.3	1.382	0.080	0.0271	
30 minute summer	MH15	6.001	MH17	5.4	0.264	0.018	0.2204	
30 minute summer	MH17	5.001	MH19	16.8	0.573	0.045	2.5672	
30 minute summer	MH11	7.000	MH12	10.6	0.444	0.023	0.9483	
30 minute summer	MH12	7.001	MH13	21.9	0.602	0.072	2.3059	
30 minute summer	MH10	8.000	MH13	14.0	0.336	0.014	4.3110	
30 minute summer	MH13	7.002	MH19	25.2	0.434	0.046	1.7680	
30 minute summer	MH18	5.003	EX SW 3	29.7	3.103	0.166	0.0602	37.9
30 minute summer	MH19	5.002	MH18	29.8	2.094	0.068	0.1235	

**Results for 1 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute winter	MH9	18	93.730	0.080	13.1	0.3047	0.0000	OK
30 minute winter	MH8	18	93.645	0.092	23.7	0.3165	0.0000	OK
30 minute winter	MH7	18	93.534	0.053	7.3	0.1718	0.0000	OK
30 minute winter	MH6	19	93.532	0.124	37.1	0.3843	0.0000	OK
30 minute winter	MH5	24	93.489	0.112	5.0	0.3321	0.0000	OK
30 minute winter	MH4	23	93.491	0.162	43.0	0.4303	0.0000	OK
30 minute winter	MH3	22	93.495	0.197	8.0	0.5575	0.0000	OK
30 minute winter	MH2	22	93.491	0.246	52.3	0.7575	0.0000	OK
30 minute winter	MH1	23	93.489	0.376	55.4	1.1558	0.0000	SURCHARGED
30 minute winter	MH1.1	23	93.483	0.448	43.1	2.6288	0.0000	SURCHARGED
30 minute winter	NEW SW 1	24	92.359	0.720	39.3	1.2718	0.0000	SURCHARGED
30 minute winter	EX SW 1	18	91.392	0.142	38.6	0.0000	0.0000	OK
30 minute winter	MH16	18	95.689	0.049	10.7	0.1540	0.0000	OK
30 minute winter	MH14	18	95.803	0.028	3.0	0.0526	0.0000	OK
30 minute winter	MH15	24	94.788	0.070	5.1	0.2227	0.0000	OK
30 minute winter	MH17	23	94.786	0.089	15.7	0.2671	0.0000	OK
30 minute winter	MH11	18	94.859	0.059	9.7	0.2141	0.0000	OK
30 minute winter	MH12	22	94.788	0.138	20.0	0.4675	0.0000	OK
30 minute winter	MH10	22	94.791	0.152	13.2	0.5922	0.0000	OK
30 minute winter	MH13	23	94.786	0.358	36.8	1.0575	0.0000	OK
30 minute winter	MH18	23	94.070	0.070	30.1	0.2081	0.0000	OK
30 minute winter	MH19	23	94.787	0.376	38.6	1.7029	0.0000	SURCHARGED
30 minute winter	EX SW 3	23	93.329	0.062	30.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute winter	MH9	1.000	MH8	13.0	0.524	0.040	1.0817	
30 minute winter	MH8	1.001	MH6	23.2	0.679	0.053	1.2279	
30 minute winter	MH7	2.000	MH6	7.3	0.290	0.017	0.4955	
30 minute winter	MH6	1.002	MH4	36.9	0.834	0.084	0.9014	
30 minute winter	MH5	3.000	MH4	4.7	0.271	0.011	0.5872	
30 minute winter	MH4	1.003	MH2	42.6	0.911	0.097	1.7294	
30 minute winter	MH3	4.000	MH2	-4.7	0.166	-0.011	1.2633	
30 minute winter	MH2	1.004	MH1	48.8	0.696	0.100	3.8858	
30 minute winter	MH1	1.005	MH1.1	41.2	0.556	0.320	2.0673	
30 minute winter	MH1.1	1.006	NEW SW 1	39.3	1.041	0.279	0.2881	
30 minute winter	NEW SW 1	EX1.000	EX SW 1	38.6	2.190	1.452	0.3054	49.5
30 minute winter	MH16	5.000	MH17	10.7	1.447	0.056	0.1639	
30 minute winter	MH14	6.000	MH15	3.0	1.344	0.072	0.0253	
30 minute winter	MH15	6.001	MH17	5.0	0.256	0.016	0.2324	
30 minute winter	MH17	5.001	MH19	15.5	0.560	0.041	2.8382	
30 minute winter	MH11	7.000	MH12	9.7	0.434	0.021	1.0141	
30 minute winter	MH12	7.001	MH13	19.7	0.596	0.064	2.3936	
30 minute winter	MH10	8.000	MH13	14.3	0.341	0.015	4.4916	
30 minute winter	MH13	7.002	MH19	23.4	0.461	0.043	1.8154	
30 minute winter	MH18	5.003	EX SW 3	30.1	3.111	0.168	0.0607	42.4
30 minute winter	MH19	5.002	MH18	30.1	2.100	0.069	0.1247	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute summer	MH9	33	93.725	0.075	11.2	0.2825	0.0000	OK
60 minute summer	MH8	34	93.638	0.085	20.2	0.2932	0.0000	OK
60 minute summer	MH7	33	93.530	0.049	6.2	0.1590	0.0000	OK
60 minute summer	MH6	34	93.522	0.114	31.6	0.3527	0.0000	OK
60 minute summer	MH5	34	93.452	0.075	4.3	0.2227	0.0000	OK
60 minute summer	MH4	34	93.451	0.122	36.7	0.3256	0.0000	OK
60 minute summer	MH3	38	93.450	0.152	5.8	0.4293	0.0000	OK
60 minute summer	MH2	38	93.446	0.201	43.0	0.6193	0.0000	OK
60 minute summer	MH1	37	93.450	0.337	47.2	1.0336	0.0000	OK
60 minute summer	MH1.1	37	93.444	0.409	41.1	2.4000	0.0000	SURCHARGED
60 minute summer	NEW SW 1	39	92.239	0.600	36.7	1.0609	0.0000	SURCHARGED
60 minute summer	EX SW 1	47	91.392	0.142	36.1	0.0000	0.0000	OK
60 minute summer	MH16	33	95.685	0.045	9.1	0.1420	0.0000	OK
60 minute summer	MH14	33	95.801	0.026	2.6	0.0490	0.0000	OK
60 minute summer	MH15	33	94.777	0.059	4.4	0.1875	0.0000	OK
60 minute summer	MH17	34	94.773	0.076	13.4	0.2263	0.0000	OK
60 minute summer	MH11	33	94.855	0.055	8.3	0.1990	0.0000	OK
60 minute summer	MH12	38	94.759	0.109	17.1	0.3676	0.0000	OK
60 minute summer	MH10	38	94.761	0.122	11.3	0.4745	0.0000	OK
60 minute summer	MH13	37	94.756	0.328	31.9	0.9666	0.0000	OK
60 minute summer	MH18	37	94.067	0.067	28.5	0.2013	0.0000	OK
60 minute summer	MH19	37	94.756	0.345	33.6	1.5616	0.0000	OK
60 minute summer	EX SW 3	37	93.327	0.060	28.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute summer	MH9	1.000	MH8	11.1	0.501	0.034	0.9682	
60 minute summer	MH8	1.001	MH6	19.9	0.651	0.045	1.0918	
60 minute summer	MH7	2.000	MH6	6.2	0.278	0.014	0.4396	
60 minute summer	MH6	1.002	MH4	31.4	0.804	0.071	0.7521	
60 minute summer	MH5	3.000	MH4	4.0	0.251	0.009	0.3707	
60 minute summer	MH4	1.003	MH2	36.8	0.878	0.084	1.2321	
60 minute summer	MH3	4.000	MH2	3.3	0.137	0.008	0.9258	
60 minute summer	MH2	1.004	MH1	42.1	0.672	0.087	3.1981	
60 minute summer	MH1	1.005	MH1.1	39.6	0.520	0.308	2.0119	
60 minute summer	MH1.1	1.006	NEW SW 1	36.7	1.019	0.260	0.2741	
60 minute summer	NEW SW 1	EX1.000	EX SW 1	36.1	2.050	1.359	0.3055	57.2
60 minute summer	MH16	5.000	MH17	9.1	1.381	0.048	0.1460	
60 minute summer	MH14	6.000	MH15	2.6	1.290	0.063	0.0229	
60 minute summer	MH15	6.001	MH17	4.3	0.250	0.014	0.1834	
60 minute summer	MH17	5.001	MH19	13.2	0.548	0.035	2.2216	
60 minute summer	MH11	7.000	MH12	8.3	0.413	0.018	0.7493	
60 minute summer	MH12	7.001	MH13	16.9	0.581	0.055	1.8620	
60 minute summer	MH10	8.000	MH13	11.0	0.283	0.011	3.8257	
60 minute summer	MH13	7.002	MH19	20.4	0.399	0.037	1.6195	
60 minute summer	MH18	5.003	EX SW 3	28.4	3.069	0.159	0.0581	49.2
60 minute summer	MH19	5.002	MH18	28.5	2.075	0.065	0.1193	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute winter	MH9	33	93.718	0.068	9.1	0.2570	0.0000	OK
60 minute winter	MH8	34	93.631	0.078	16.5	0.2675	0.0000	OK
60 minute winter	MH7	33	93.526	0.045	5.1	0.1453	0.0000	OK
60 minute winter	MH6	34	93.511	0.103	26.0	0.3187	0.0000	OK
60 minute winter	MH5	34	93.440	0.063	3.5	0.1864	0.0000	OK
60 minute winter	MH4	34	93.439	0.110	30.5	0.2938	0.0000	OK
60 minute winter	MH3	38	93.425	0.127	3.4	0.3584	0.0000	OK
60 minute winter	MH2	38	93.422	0.177	38.1	0.5459	0.0000	OK
60 minute winter	MH1	39	93.423	0.310	39.9	0.9523	0.0000	OK
60 minute winter	MH1.1	39	93.419	0.384	36.2	2.2509	0.0000	SURCHARGED
60 minute winter	NEW SW 1	40	92.185	0.546	35.3	0.9651	0.0000	SURCHARGED
60 minute winter	EX SW 1	32	91.392	0.142	34.9	0.0000	0.0000	OK
60 minute winter	MH16	33	95.681	0.041	7.4	0.1283	0.0000	OK
60 minute winter	MH14	33	95.798	0.023	2.1	0.0440	0.0000	OK
60 minute winter	MH15	33	94.771	0.053	3.6	0.1672	0.0000	OK
60 minute winter	MH17	34	94.766	0.069	11.0	0.2065	0.0000	OK
60 minute winter	MH11	33	94.850	0.050	6.7	0.1802	0.0000	OK
60 minute winter	MH12	38	94.747	0.097	13.8	0.3278	0.0000	OK
60 minute winter	MH10	40	94.744	0.105	9.1	0.4105	0.0000	OK
60 minute winter	MH13	39	94.744	0.316	26.6	0.9310	0.0000	OK
60 minute winter	MH18	39	94.067	0.067	27.8	0.1989	0.0000	OK
60 minute winter	MH19	39	94.744	0.333	31.8	1.5043	0.0000	OK
60 minute winter	EX SW 3	39	93.327	0.060	27.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute winter	MH9	1.000	MH8	9.1	0.468	0.028	0.8435	
60 minute winter	MH8	1.001	MH6	16.4	0.616	0.037	0.9472	
60 minute winter	MH7	2.000	MH6	5.1	0.259	0.012	0.3819	
60 minute winter	MH6	1.002	MH4	25.9	0.772	0.059	0.6491	
60 minute winter	MH5	3.000	MH4	3.5	0.262	0.008	0.3084	
60 minute winter	MH4	1.003	MH2	30.6	0.842	0.070	1.0276	
60 minute winter	MH3	4.000	MH2	2.9	0.162	0.007	0.7528	
60 minute winter	MH2	1.004	MH1	35.2	0.662	0.073	2.8433	
60 minute winter	MH1	1.005	MH1.1	35.1	0.515	0.273	1.9479	
60 minute winter	MH1.1	1.006	NEW SW 1	35.3	1.011	0.250	0.2664	
60 minute winter	NEW SW 1	EX1.000	EX SW 1	34.9	1.984	1.315	0.3056	64.2
60 minute winter	MH16	5.000	MH17	7.4	1.301	0.039	0.1261	
60 minute winter	MH14	6.000	MH15	2.1	1.214	0.051	0.0196	
60 minute winter	MH15	6.001	MH17	3.6	0.239	0.012	0.1576	
60 minute winter	MH17	5.001	MH19	10.9	0.545	0.029	2.0163	
60 minute winter	MH11	7.000	MH12	6.7	0.389	0.015	0.6619	
60 minute winter	MH12	7.001	MH13	13.7	0.569	0.045	1.6572	
60 minute winter	MH10	8.000	MH13	9.8	0.293	0.010	3.5498	
60 minute winter	MH13	7.002	MH19	20.9	0.409	0.038	1.5419	
60 minute winter	MH18	5.003	EX SW 3	27.8	3.054	0.155	0.0572	55.2
60 minute winter	MH19	5.002	MH18	27.8	2.065	0.064	0.1171	

**Results for 1 year 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute summer	MH9	64	93.712	0.062	7.6	0.2360	0.0000	OK
120 minute summer	MH8	64	93.624	0.071	13.8	0.2458	0.0000	OK
120 minute summer	MH7	64	93.522	0.041	4.2	0.1332	0.0000	OK
120 minute summer	MH6	64	93.501	0.093	21.7	0.2889	0.0000	OK
120 minute summer	MH5	64	93.430	0.053	2.9	0.1571	0.0000	OK
120 minute summer	MH4	64	93.429	0.100	25.2	0.2675	0.0000	OK
120 minute summer	MH3	70	93.359	0.061	1.9	0.1721	0.0000	OK
120 minute summer	MH2	68	93.358	0.113	30.7	0.3464	0.0000	OK
120 minute summer	MH1	68	93.362	0.249	34.5	0.7641	0.0000	OK
120 minute summer	MH1.1	68	93.358	0.323	32.4	1.8951	0.0000	OK
120 minute summer	NEW SW 1	70	92.016	0.377	31.2	0.6657	0.0000	SURCHARGED
120 minute summer	EX SW 1	66	91.392	0.142	31.0	0.0000	0.0000	OK
120 minute summer	MH16	64	95.678	0.038	6.2	0.1177	0.0000	OK
120 minute summer	MH14	64	95.796	0.021	1.7	0.0397	0.0000	OK
120 minute summer	MH15	64	94.765	0.047	2.9	0.1488	0.0000	OK
120 minute summer	MH17	64	94.760	0.063	9.1	0.1890	0.0000	OK
120 minute summer	MH11	64	94.846	0.046	5.6	0.1658	0.0000	OK
120 minute summer	MH12	62	94.729	0.079	11.6	0.2675	0.0000	OK
120 minute summer	MH10	68	94.695	0.056	7.7	0.2188	0.0000	OK
120 minute summer	MH13	68	94.699	0.271	22.6	0.7990	0.0000	OK
120 minute summer	MH18	68	94.063	0.063	25.2	0.1879	0.0000	OK
120 minute summer	MH19	68	94.699	0.288	27.3	1.3009	0.0000	OK
120 minute summer	EX SW 3	68	93.324	0.057	25.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute summer	MH9	1.000	MH8	7.6	0.445	0.023	0.7461	
120 minute summer	MH8	1.001	MH6	13.7	0.590	0.031	0.8275	
120 minute summer	MH7	2.000	MH6	4.2	0.248	0.010	0.3323	
120 minute summer	MH6	1.002	MH4	21.5	0.732	0.049	0.5650	
120 minute summer	MH5	3.000	MH4	2.8	0.202	0.007	0.2600	
120 minute summer	MH4	1.003	MH2	25.0	0.812	0.057	0.6667	
120 minute summer	MH3	4.000	MH2	2.5	0.116	0.006	0.3403	
120 minute summer	MH2	1.004	MH1	30.4	0.645	0.062	1.9411	
120 minute summer	MH1	1.005	MH1.1	31.5	0.480	0.245	1.6745	
120 minute summer	MH1.1	1.006	NEW SW 1	31.2	0.978	0.221	0.2435	
120 minute summer	NEW SW 1	EX1.000	EX SW 1	31.0	1.760	1.166	0.3054	73.1
120 minute summer	MH16	5.000	MH17	6.2	1.234	0.033	0.1114	
120 minute summer	MH14	6.000	MH15	1.7	1.141	0.041	0.0169	
120 minute summer	MH15	6.001	MH17	2.9	0.225	0.009	0.1365	
120 minute summer	MH17	5.001	MH19	9.0	0.533	0.024	1.4515	
120 minute summer	MH11	7.000	MH12	5.6	0.363	0.012	0.5346	
120 minute summer	MH12	7.001	MH13	11.8	0.547	0.038	1.0711	
120 minute summer	MH10	8.000	MH13	7.7	0.250	0.008	2.6451	
120 minute summer	MH13	7.002	MH19	18.3	0.310	0.033	1.2636	
120 minute summer	MH18	5.003	EX SW 3	25.2	2.979	0.141	0.0530	62.6
120 minute summer	MH19	5.002	MH18	25.2	2.020	0.058	0.1084	

**Results for 1 year 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute winter	MH9	64	93.705	0.055	5.9	0.2095	0.0000	OK
120 minute winter	MH8	64	93.616	0.063	10.7	0.2185	0.0000	OK
120 minute winter	MH7	64	93.518	0.037	3.3	0.1190	0.0000	OK
120 minute winter	MH6	64	93.490	0.082	17.0	0.2547	0.0000	OK
120 minute winter	MH5	66	93.419	0.042	2.2	0.1234	0.0000	OK
120 minute winter	MH4	66	93.418	0.089	19.8	0.2369	0.0000	OK
120 minute winter	MH3	66	93.335	0.037	1.5	0.1032	0.0000	OK
120 minute winter	MH2	66	93.334	0.089	24.2	0.2747	0.0000	OK
120 minute winter	MH1	68	93.305	0.192	27.3	0.5879	0.0000	OK
120 minute winter	MH1.1	68	93.300	0.265	27.3	1.5537	0.0000	OK
120 minute winter	NEW SW 1	70	91.865	0.226	27.1	0.4000	0.0000	SURCHARGED
120 minute winter	EX SW 1	70	91.391	0.141	27.0	0.0000	0.0000	OK
120 minute winter	MH16	64	95.673	0.033	4.8	0.1042	0.0000	OK
120 minute winter	MH14	64	95.794	0.019	1.3	0.0348	0.0000	OK
120 minute winter	MH15	64	94.758	0.040	2.2	0.1263	0.0000	OK
120 minute winter	MH17	64	94.753	0.056	7.0	0.1674	0.0000	OK
120 minute winter	MH11	64	94.841	0.041	4.3	0.1473	0.0000	OK
120 minute winter	MH12	64	94.722	0.072	8.9	0.2422	0.0000	OK
120 minute winter	MH10	64	94.680	0.041	5.9	0.1605	0.0000	OK
120 minute winter	MH13	70	94.657	0.229	17.3	0.6765	0.0000	OK
120 minute winter	MH18	70	94.059	0.059	22.5	0.1764	0.0000	OK
120 minute winter	MH19	70	94.657	0.246	22.8	1.1120	0.0000	OK
120 minute winter	EX SW 3	70	93.321	0.054	22.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute winter	MH9	1.000	MH8	5.9	0.411	0.018	0.6260	
120 minute winter	MH8	1.001	MH6	10.7	0.549	0.024	0.6916	
120 minute winter	MH7	2.000	MH6	3.3	0.229	0.008	0.2779	
120 minute winter	MH6	1.002	MH4	16.9	0.689	0.038	0.4718	
120 minute winter	MH5	3.000	MH4	2.2	0.206	0.005	0.2078	
120 minute winter	MH4	1.003	MH2	19.8	0.760	0.045	0.5311	
120 minute winter	MH3	4.000	MH2	1.5	0.121	0.003	0.2204	
120 minute winter	MH2	1.004	MH1	24.2	0.635	0.050	1.3622	
120 minute winter	MH1	1.005	MH1.1	26.4	0.492	0.206	1.3101	
120 minute winter	MH1.1	1.006	NEW SW 1	27.1	0.943	0.192	0.2192	
120 minute winter	NEW SW 1	EX1.000	EX SW 1	27.0	1.632	1.017	0.3047	81.9
120 minute winter	MH16	5.000	MH17	4.8	1.145	0.025	0.0930	
120 minute winter	MH14	6.000	MH15	1.3	1.053	0.031	0.0140	
120 minute winter	MH15	6.001	MH17	2.2	0.214	0.007	0.1109	
120 minute winter	MH17	5.001	MH19	7.0	0.529	0.019	0.9545	
120 minute winter	MH11	7.000	MH12	4.3	0.332	0.009	0.4595	
120 minute winter	MH12	7.001	MH13	9.1	0.537	0.030	0.7013	
120 minute winter	MH10	8.000	MH13	5.9	0.241	0.006	2.0511	
120 minute winter	MH13	7.002	MH19	16.0	0.353	0.029	1.0128	
120 minute winter	MH18	5.003	EX SW 3	22.5	2.896	0.126	0.0487	70.0
120 minute winter	MH19	5.002	MH18	22.5	1.971	0.051	0.0992	

**Results for 1 year 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute summer	MH9	96	93.705	0.055	5.8	0.2080	0.0000	OK
180 minute summer	MH8	96	93.616	0.063	10.5	0.2168	0.0000	OK
180 minute summer	MH7	96	93.517	0.036	3.2	0.1173	0.0000	OK
180 minute summer	MH6	96	93.489	0.081	16.6	0.2519	0.0000	OK
180 minute summer	MH5	96	93.418	0.041	2.2	0.1209	0.0000	OK
180 minute summer	MH4	96	93.417	0.088	19.5	0.2348	0.0000	OK
180 minute summer	MH3	96	93.334	0.036	1.5	0.1014	0.0000	OK
180 minute summer	MH2	96	93.334	0.089	23.9	0.2725	0.0000	OK
180 minute summer	MH1	100	93.293	0.180	26.9	0.5535	0.0000	OK
180 minute summer	MH1.1	100	93.289	0.254	26.4	1.4878	0.0000	OK
180 minute summer	NEW SW 1	100	91.777	0.138	26.2	0.2447	0.0000	OK
180 minute summer	EX SW 1	100	91.390	0.140	26.2	0.0000	0.0000	OK
180 minute summer	MH16	96	95.673	0.033	4.7	0.1031	0.0000	OK
180 minute summer	MH14	96	95.794	0.019	1.3	0.0348	0.0000	OK
180 minute summer	MH15	96	94.758	0.040	2.2	0.1257	0.0000	OK
180 minute summer	MH17	96	94.753	0.056	6.9	0.1664	0.0000	OK
180 minute summer	MH11	96	94.841	0.041	4.3	0.1473	0.0000	OK
180 minute summer	MH12	96	94.722	0.072	8.9	0.2435	0.0000	OK
180 minute summer	MH10	96	94.680	0.041	5.9	0.1605	0.0000	OK
180 minute summer	MH13	100	94.649	0.221	17.2	0.6526	0.0000	OK
180 minute summer	MH18	100	94.058	0.058	21.9	0.1740	0.0000	OK
180 minute summer	MH19	100	94.649	0.238	22.7	1.0754	0.0000	OK
180 minute summer	EX SW 3	100	93.320	0.053	21.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute summer	MH9	1.000	MH8	5.8	0.409	0.018	0.6189	
180 minute summer	MH8	1.001	MH6	10.5	0.548	0.024	0.6819	
180 minute summer	MH7	2.000	MH6	3.2	0.229	0.007	0.2731	
180 minute summer	MH6	1.002	MH4	16.6	0.684	0.038	0.4655	
180 minute summer	MH5	3.000	MH4	2.2	0.174	0.005	0.2042	
180 minute summer	MH4	1.003	MH2	19.4	0.755	0.044	0.5247	
180 minute summer	MH3	4.000	MH2	1.5	0.099	0.003	0.2173	
180 minute summer	MH2	1.004	MH1	23.8	0.628	0.049	1.2654	
180 minute summer	MH1	1.005	MH1.1	25.5	0.493	0.198	1.2342	
180 minute summer	MH1.1	1.006	NEW SW 1	26.2	0.935	0.186	0.2141	
180 minute summer	NEW SW 1	EX1.000	EX SW 1	26.2	1.634	0.988	0.2989	83.3
180 minute summer	MH16	5.000	MH17	4.7	1.137	0.025	0.0916	
180 minute summer	MH14	6.000	MH15	1.3	1.053	0.031	0.0140	
180 minute summer	MH15	6.001	MH17	2.2	0.212	0.007	0.1100	
180 minute summer	MH17	5.001	MH19	6.9	0.519	0.019	0.8651	
180 minute summer	MH11	7.000	MH12	4.3	0.326	0.009	0.4620	
180 minute summer	MH12	7.001	MH13	8.9	0.526	0.029	0.6356	
180 minute summer	MH10	8.000	MH13	5.9	0.235	0.006	1.9540	
180 minute summer	MH13	7.002	MH19	15.8	0.251	0.029	0.9655	
180 minute summer	MH18	5.003	EX SW 3	21.9	2.879	0.123	0.0478	71.3
180 minute summer	MH19	5.002	MH18	21.9	1.960	0.050	0.0973	

**Results for 1 year 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute winter	MH9	96	93.699	0.049	4.5	0.1847	0.0000	OK
180 minute winter	MH8	96	93.609	0.056	8.2	0.1928	0.0000	OK
180 minute winter	MH7	96	93.513	0.032	2.5	0.1043	0.0000	OK
180 minute winter	MH6	96	93.480	0.072	13.0	0.2226	0.0000	OK
180 minute winter	MH5	96	93.408	0.031	1.7	0.0909	0.0000	OK
180 minute winter	MH4	96	93.407	0.078	15.2	0.2074	0.0000	OK
180 minute winter	MH3	96	93.324	0.026	1.1	0.0734	0.0000	OK
180 minute winter	MH2	96	93.324	0.079	18.6	0.2418	0.0000	OK
180 minute winter	MH1	100	93.237	0.124	20.9	0.3818	0.0000	OK
180 minute winter	MH1.1	100	93.231	0.196	21.4	1.1509	0.0000	OK
180 minute winter	NEW SW 1	100	91.749	0.110	21.4	0.1940	0.0000	OK
180 minute winter	EX SW 1	100	91.352	0.102	21.4	0.0000	0.0000	OK
180 minute winter	MH16	96	95.669	0.029	3.7	0.0917	0.0000	OK
180 minute winter	MH14	96	95.791	0.016	1.0	0.0307	0.0000	OK
180 minute winter	MH15	96	94.753	0.035	1.7	0.1102	0.0000	OK
180 minute winter	MH17	96	94.748	0.051	5.4	0.1529	0.0000	OK
180 minute winter	MH11	96	94.836	0.036	3.3	0.1300	0.0000	OK
180 minute winter	MH12	96	94.714	0.064	6.8	0.2156	0.0000	OK
180 minute winter	MH10	96	94.675	0.036	4.5	0.1418	0.0000	OK
180 minute winter	MH13	100	94.601	0.173	13.1	0.5090	0.0000	OK
180 minute winter	MH18	100	94.053	0.053	18.2	0.1569	0.0000	OK
180 minute winter	MH19	100	94.600	0.189	18.2	0.8537	0.0000	OK
180 minute winter	EX SW 3	100	93.315	0.048	18.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute winter	MH9	1.000	MH8	4.5	0.379	0.014	0.5202	
180 minute winter	MH8	1.001	MH6	8.2	0.512	0.019	0.5711	
180 minute winter	MH7	2.000	MH6	2.5	0.213	0.006	0.2285	
180 minute winter	MH6	1.002	MH4	13.0	0.643	0.030	0.3884	
180 minute winter	MH5	3.000	MH4	1.7	0.139	0.004	0.1615	
180 minute winter	MH4	1.003	MH2	15.2	0.705	0.034	0.4389	
180 minute winter	MH3	4.000	MH2	1.1	0.098	0.003	0.1717	
180 minute winter	MH2	1.004	MH1	18.5	0.624	0.038	0.8397	
180 minute winter	MH1	1.005	MH1.1	20.7	0.481	0.161	0.8454	
180 minute winter	MH1.1	1.006	NEW SW 1	21.4	0.885	0.152	0.1844	
180 minute winter	NEW SW 1	EX1.000	EX SW 1	21.4	1.611	0.806	0.2326	93.6
180 minute winter	MH16	5.000	MH17	3.7	1.059	0.019	0.0774	
180 minute winter	MH14	6.000	MH15	1.0	0.975	0.024	0.0116	
180 minute winter	MH15	6.001	MH17	1.7	0.196	0.006	0.0947	
180 minute winter	MH17	5.001	MH19	5.4	0.518	0.014	0.4791	
180 minute winter	MH11	7.000	MH12	3.3	0.299	0.007	0.3856	
180 minute winter	MH12	7.001	MH13	6.8	0.496	0.022	0.4917	
180 minute winter	MH10	8.000	MH13	4.5	0.223	0.005	1.4036	
180 minute winter	MH13	7.002	MH19	12.8	0.272	0.023	0.6902	
180 minute winter	MH18	5.003	EX SW 3	18.2	2.745	0.102	0.0415	80.3
180 minute winter	MH19	5.002	MH18	18.2	1.876	0.042	0.0842	

**Results for 1 year 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute summer	MH9	124	93.701	0.051	5.0	0.1928	0.0000	OK
240 minute summer	MH8	124	93.611	0.058	9.0	0.2003	0.0000	OK
240 minute summer	MH7	124	93.515	0.034	2.8	0.1095	0.0000	OK
240 minute summer	MH6	124	93.483	0.075	14.2	0.2314	0.0000	OK
240 minute summer	MH5	128	93.410	0.033	1.9	0.0993	0.0000	OK
240 minute summer	MH4	128	93.410	0.081	16.4	0.2150	0.0000	OK
240 minute summer	MH3	128	93.327	0.029	1.3	0.0819	0.0000	OK
240 minute summer	MH2	128	93.327	0.082	20.1	0.2511	0.0000	OK
240 minute summer	MH1	128	93.253	0.140	22.6	0.4313	0.0000	OK
240 minute summer	MH1.1	128	93.248	0.213	23.1	1.2488	0.0000	OK
240 minute summer	NEW SW 1	128	91.755	0.116	22.9	0.2054	0.0000	OK
240 minute summer	EX SW 1	128	91.357	0.107	22.8	0.0000	0.0000	OK
240 minute summer	MH16	124	95.671	0.031	4.1	0.0961	0.0000	OK
240 minute summer	MH14	124	95.792	0.017	1.1	0.0322	0.0000	OK
240 minute summer	MH15	124	94.755	0.037	1.9	0.1164	0.0000	OK
240 minute summer	MH17	124	94.750	0.053	5.9	0.1586	0.0000	OK
240 minute summer	MH11	124	94.838	0.038	3.7	0.1367	0.0000	OK
240 minute summer	MH12	124	94.716	0.066	7.6	0.2244	0.0000	OK
240 minute summer	MH10	124	94.677	0.038	5.1	0.1492	0.0000	OK
240 minute summer	MH13	128	94.616	0.188	14.4	0.5540	0.0000	OK
240 minute summer	MH18	128	94.054	0.054	19.4	0.1627	0.0000	OK
240 minute summer	MH19	128	94.615	0.204	19.8	0.9231	0.0000	OK
240 minute summer	EX SW 3	128	93.317	0.050	19.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute summer	MH9	1.000	MH8	4.9	0.391	0.015	0.5522	
240 minute summer	MH8	1.001	MH6	8.9	0.526	0.020	0.6045	
240 minute summer	MH7	2.000	MH6	2.8	0.220	0.006	0.2427	
240 minute summer	MH6	1.002	MH4	14.0	0.656	0.032	0.4100	
240 minute summer	MH5	3.000	MH4	1.8	0.246	0.004	0.1731	
240 minute summer	MH4	1.003	MH2	16.3	0.719	0.037	0.4633	
240 minute summer	MH3	4.000	MH2	1.2	0.112	0.003	0.1854	
240 minute summer	MH2	1.004	MH1	20.1	0.623	0.041	0.9643	
240 minute summer	MH1	1.005	MH1.1	22.4	0.483	0.174	0.9578	
240 minute summer	MH1.1	1.006	NEW SW 1	22.9	0.900	0.162	0.1935	
240 minute summer	NEW SW 1	EX1.000	EX SW 1	22.8	1.624	0.859	0.2461	92.6
240 minute summer	MH16	5.000	MH17	4.1	1.089	0.021	0.0828	
240 minute summer	MH14	6.000	MH15	1.1	1.002	0.027	0.0124	
240 minute summer	MH15	6.001	MH17	1.9	0.208	0.006	0.1008	
240 minute summer	MH17	5.001	MH19	5.9	0.527	0.016	0.5562	
240 minute summer	MH11	7.000	MH12	3.7	0.311	0.008	0.4100	
240 minute summer	MH12	7.001	MH13	7.4	0.507	0.024	0.5223	
240 minute summer	MH10	8.000	MH13	5.0	0.200	0.005	1.5757	
240 minute summer	MH13	7.002	MH19	13.9	0.238	0.025	0.7741	
240 minute summer	MH18	5.003	EX SW 3	19.4	2.790	0.108	0.0436	78.9
240 minute summer	MH19	5.002	MH18	19.4	1.906	0.044	0.0886	

**Results for 1 year 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute winter	MH9	128	93.695	0.045	3.7	0.1687	0.0000	OK
240 minute winter	MH8	128	93.604	0.051	6.7	0.1755	0.0000	OK
240 minute winter	MH7	128	93.511	0.030	2.1	0.0963	0.0000	OK
240 minute winter	MH6	128	93.473	0.065	10.7	0.2022	0.0000	OK
240 minute winter	MH5	124	93.402	0.025	1.4	0.0743	0.0000	OK
240 minute winter	MH4	128	93.400	0.071	12.5	0.1883	0.0000	OK
240 minute winter	MH3	124	93.318	0.020	0.9	0.0577	0.0000	OK
240 minute winter	MH2	128	93.317	0.072	15.3	0.2206	0.0000	OK
240 minute winter	MH1	128	93.224	0.111	17.3	0.3406	0.0000	OK
240 minute winter	MH1.1	128	93.219	0.184	17.9	1.0777	0.0000	OK
240 minute winter	NEW SW 1	128	91.735	0.096	17.9	0.1691	0.0000	OK
240 minute winter	EX SW 1	128	91.340	0.090	17.8	0.0000	0.0000	OK
240 minute winter	MH16	124	95.667	0.027	3.0	0.0831	0.0000	OK
240 minute winter	MH14	124	95.790	0.015	0.9	0.0290	0.0000	OK
240 minute winter	MH15	124	94.749	0.031	1.5	0.0990	0.0000	OK
240 minute winter	MH17	128	94.744	0.047	4.5	0.1403	0.0000	OK
240 minute winter	MH11	124	94.833	0.033	2.8	0.1198	0.0000	OK
240 minute winter	MH12	128	94.709	0.059	5.7	0.1984	0.0000	OK
240 minute winter	MH10	124	94.673	0.034	3.8	0.1314	0.0000	OK
240 minute winter	MH13	124	94.575	0.147	10.9	0.4337	0.0000	OK
240 minute winter	MH18	128	94.048	0.048	15.3	0.1432	0.0000	OK
240 minute winter	MH19	128	94.574	0.163	15.3	0.7375	0.0000	OK
240 minute winter	EX SW 3	128	93.311	0.044	15.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute winter	MH9	1.000	MH8	3.7	0.356	0.011	0.4533	
240 minute winter	MH8	1.001	MH6	6.7	0.481	0.015	0.4950	
240 minute winter	MH7	2.000	MH6	2.1	0.203	0.005	0.1988	
240 minute winter	MH6	1.002	MH4	10.7	0.611	0.024	0.3367	
240 minute winter	MH5	3.000	MH4	1.4	0.160	0.003	0.1356	
240 minute winter	MH4	1.003	MH2	12.5	0.667	0.028	0.3826	
240 minute winter	MH3	4.000	MH2	0.9	0.119	0.002	0.1453	
240 minute winter	MH2	1.004	MH1	15.3	0.615	0.031	0.7226	
240 minute winter	MH1	1.005	MH1.1	17.3	0.452	0.134	0.7579	
240 minute winter	MH1.1	1.006	NEW SW 1	17.9	0.842	0.127	0.1616	
240 minute winter	NEW SW 1	EX1.000	EX SW 1	17.8	1.560	0.672	0.2005	103.6
240 minute winter	MH16	5.000	MH17	3.0	0.998	0.016	0.0667	
240 minute winter	MH14	6.000	MH15	0.9	0.941	0.021	0.0107	
240 minute winter	MH15	6.001	MH17	1.5	0.192	0.005	0.0825	
240 minute winter	MH17	5.001	MH19	4.5	0.495	0.012	0.4139	
240 minute winter	MH11	7.000	MH12	2.8	0.284	0.006	0.3415	
240 minute winter	MH12	7.001	MH13	5.6	0.479	0.018	0.4268	
240 minute winter	MH10	8.000	MH13	3.8	0.182	0.004	1.1304	
240 minute winter	MH13	7.002	MH19	10.9	0.307	0.020	0.5550	
240 minute winter	MH18	5.003	EX SW 3	15.4	2.627	0.086	0.0367	88.8
240 minute winter	MH19	5.002	MH18	15.3	1.801	0.035	0.0740	

**Results for 1 year 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute summer	MH9	184	93.695	0.045	3.9	0.1716	0.0000	OK
360 minute summer	MH8	184	93.605	0.052	7.0	0.1783	0.0000	OK
360 minute summer	MH7	184	93.511	0.030	2.2	0.0979	0.0000	OK
360 minute summer	MH6	184	93.474	0.066	11.1	0.2048	0.0000	OK
360 minute summer	MH5	184	93.403	0.026	1.5	0.0763	0.0000	OK
360 minute summer	MH4	184	93.400	0.071	12.8	0.1900	0.0000	OK
360 minute summer	MH3	184	93.319	0.021	1.0	0.0602	0.0000	OK
360 minute summer	MH2	184	93.317	0.072	15.7	0.2224	0.0000	OK
360 minute summer	MH1	192	93.222	0.109	17.7	0.3359	0.0000	OK
360 minute summer	MH1.1	192	93.217	0.182	17.8	1.0695	0.0000	OK
360 minute summer	NEW SW 1	192	91.734	0.095	17.7	0.1681	0.0000	OK
360 minute summer	EX SW 1	192	91.339	0.089	17.7	0.0000	0.0000	OK
360 minute summer	MH16	184	95.667	0.027	3.2	0.0854	0.0000	OK
360 minute summer	MH14	184	95.791	0.016	0.9	0.0291	0.0000	OK
360 minute summer	MH15	184	94.750	0.032	1.5	0.0997	0.0000	OK
360 minute summer	MH17	184	94.744	0.047	4.6	0.1416	0.0000	OK
360 minute summer	MH11	184	94.834	0.034	2.9	0.1214	0.0000	OK
360 minute summer	MH12	184	94.709	0.059	6.0	0.2009	0.0000	OK
360 minute summer	MH10	184	94.673	0.034	3.9	0.1325	0.0000	OK
360 minute summer	MH13	184	94.575	0.147	11.3	0.4337	0.0000	OK
360 minute summer	MH18	184	94.049	0.049	15.8	0.1457	0.0000	OK
360 minute summer	MH19	184	94.574	0.163	15.7	0.7374	0.0000	OK
360 minute summer	EX SW 3	184	93.312	0.045	15.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute summer	MH9	1.000	MH8	3.8	0.361	0.012	0.4643	
360 minute summer	MH8	1.001	MH6	6.9	0.487	0.016	0.5051	
360 minute summer	MH7	2.000	MH6	2.2	0.206	0.005	0.2028	
360 minute summer	MH6	1.002	MH4	10.9	0.615	0.025	0.3421	
360 minute summer	MH5	3.000	MH4	1.5	0.140	0.003	0.1381	
360 minute summer	MH4	1.003	MH2	12.7	0.669	0.029	0.3876	
360 minute summer	MH3	4.000	MH2	1.0	0.098	0.002	0.1481	
360 minute summer	MH2	1.004	MH1	15.6	0.614	0.032	0.7130	
360 minute summer	MH1	1.005	MH1.1	17.2	0.449	0.134	0.7480	
360 minute summer	MH1.1	1.006	NEW SW 1	17.7	0.841	0.125	0.1604	
360 minute summer	NEW SW 1	EX1.000	EX SW 1	17.7	1.558	0.667	0.1992	104.7
360 minute summer	MH16	5.000	MH17	3.2	1.014	0.017	0.0695	
360 minute summer	MH14	6.000	MH15	0.9	0.942	0.022	0.0108	
360 minute summer	MH15	6.001	MH17	1.5	0.189	0.005	0.0836	
360 minute summer	MH17	5.001	MH19	4.5	0.496	0.012	0.4200	
360 minute summer	MH11	7.000	MH12	2.9	0.286	0.006	0.3483	
360 minute summer	MH12	7.001	MH13	5.8	0.482	0.019	0.4357	
360 minute summer	MH10	8.000	MH13	3.9	0.148	0.004	1.1321	
360 minute summer	MH13	7.002	MH19	11.2	0.223	0.020	0.5550	
360 minute summer	MH18	5.003	EX SW 3	15.9	2.649	0.089	0.0375	90.5
360 minute summer	MH19	5.002	MH18	15.8	1.818	0.036	0.0758	

**Results for 1 year 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute winter	MH9	192	93.689	0.039	2.8	0.1490	0.0000	OK
360 minute winter	MH8	192	93.598	0.045	5.1	0.1546	0.0000	OK
360 minute winter	MH7	184	93.507	0.026	1.6	0.0853	0.0000	OK
360 minute winter	MH6	184	93.465	0.057	8.1	0.1754	0.0000	OK
360 minute winter	MH5	184	93.399	0.022	1.1	0.0665	0.0000	OK
360 minute winter	MH4	184	93.391	0.062	9.5	0.1641	0.0000	OK
360 minute winter	MH3	184	93.316	0.018	0.7	0.0515	0.0000	OK
360 minute winter	MH2	184	93.308	0.063	11.7	0.1941	0.0000	OK
360 minute winter	MH1	192	93.194	0.081	13.2	0.2497	0.0000	OK
360 minute winter	MH1.1	192	93.189	0.154	13.5	0.9011	0.0000	OK
360 minute winter	NEW SW 1	192	91.719	0.080	13.5	0.1405	0.0000	OK
360 minute winter	EX SW 1	192	91.326	0.076	13.5	0.0000	0.0000	OK
360 minute winter	MH16	184	95.663	0.023	2.3	0.0732	0.0000	OK
360 minute winter	MH14	184	95.789	0.014	0.7	0.0258	0.0000	OK
360 minute winter	MH15	184	94.745	0.027	1.2	0.0853	0.0000	OK
360 minute winter	MH17	184	94.739	0.042	3.5	0.1252	0.0000	OK
360 minute winter	MH11	184	94.829	0.029	2.1	0.1051	0.0000	OK
360 minute winter	MH12	184	94.702	0.052	4.3	0.1752	0.0000	OK
360 minute winter	MH10	184	94.669	0.030	2.9	0.1163	0.0000	OK
360 minute winter	MH13	192	94.552	0.123	8.4	0.3643	0.0000	OK
360 minute winter	MH18	192	94.041	0.041	11.6	0.1237	0.0000	OK
360 minute winter	MH19	192	94.551	0.140	11.7	0.6313	0.0000	OK
360 minute winter	EX SW 3	192	93.306	0.039	11.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute winter	MH9	1.000	MH8	2.8	0.326	0.009	0.3750	
360 minute winter	MH8	1.001	MH6	5.1	0.450	0.012	0.4058	
360 minute winter	MH7	2.000	MH6	1.6	0.189	0.004	0.1618	
360 minute winter	MH6	1.002	MH4	8.1	0.566	0.018	0.2743	
360 minute winter	MH5	3.000	MH4	1.1	0.130	0.003	0.1114	
360 minute winter	MH4	1.003	MH2	9.5	0.615	0.022	0.3145	
360 minute winter	MH3	4.000	MH2	0.7	0.090	0.002	0.1204	
360 minute winter	MH2	1.004	MH1	11.7	0.612	0.024	0.5074	
360 minute winter	MH1	1.005	MH1.1	13.1	0.448	0.102	0.5625	
360 minute winter	MH1.1	1.006	NEW SW 1	13.5	0.781	0.096	0.1318	
360 minute winter	NEW SW 1	EX1.000	EX SW 1	13.5	1.469	0.508	0.1611	118.3
360 minute winter	MH16	5.000	MH17	2.3	0.917	0.012	0.0556	
360 minute winter	MH14	6.000	MH15	0.7	0.875	0.017	0.0090	
360 minute winter	MH15	6.001	MH17	1.2	0.184	0.004	0.0678	
360 minute winter	MH17	5.001	MH19	3.4	0.461	0.009	0.3452	
360 minute winter	MH11	7.000	MH12	2.1	0.259	0.005	0.2821	
360 minute winter	MH12	7.001	MH13	4.3	0.444	0.014	0.3452	
360 minute winter	MH10	8.000	MH13	2.9	0.179	0.003	0.8843	
360 minute winter	MH13	7.002	MH19	8.2	0.200	0.015	0.4387	
360 minute winter	MH18	5.003	EX SW 3	11.6	2.440	0.065	0.0299	100.5
360 minute winter	MH19	5.002	MH18	11.6	1.684	0.027	0.0601	

**Results for 1 year 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute summer	MH9	248	93.691	0.041	3.1	0.1559	0.0000	OK
480 minute summer	MH8	248	93.600	0.047	5.6	0.1614	0.0000	OK
480 minute summer	MH7	248	93.508	0.027	1.7	0.0877	0.0000	OK
480 minute summer	MH6	248	93.467	0.059	8.9	0.1840	0.0000	OK
480 minute summer	MH5	248	93.400	0.023	1.2	0.0692	0.0000	OK
480 minute summer	MH4	248	93.394	0.065	10.5	0.1729	0.0000	OK
480 minute summer	MH3	248	93.317	0.019	0.8	0.0547	0.0000	OK
480 minute summer	MH2	248	93.311	0.066	12.9	0.2038	0.0000	OK
480 minute summer	MH1	248	93.205	0.092	14.6	0.2822	0.0000	OK
480 minute summer	MH1.1	248	93.199	0.164	15.1	0.9650	0.0000	OK
480 minute summer	NEW SW 1	248	91.724	0.085	15.0	0.1504	0.0000	OK
480 minute summer	EX SW 1	248	91.331	0.081	15.0	0.0000	0.0000	OK
480 minute summer	MH16	248	95.664	0.024	2.5	0.0761	0.0000	OK
480 minute summer	MH14	248	95.789	0.014	0.7	0.0259	0.0000	OK
480 minute summer	MH15	248	94.746	0.028	1.2	0.0872	0.0000	OK
480 minute summer	MH17	248	94.740	0.043	3.7	0.1293	0.0000	OK
480 minute summer	MH11	248	94.830	0.030	2.3	0.1098	0.0000	OK
480 minute summer	MH12	248	94.704	0.054	4.8	0.1845	0.0000	OK
480 minute summer	MH10	248	94.670	0.031	3.1	0.1201	0.0000	OK
480 minute summer	MH13	248	94.561	0.133	9.2	0.3914	0.0000	OK
480 minute summer	MH18	248	94.044	0.044	12.8	0.1301	0.0000	OK
480 minute summer	MH19	248	94.560	0.149	12.8	0.6729	0.0000	OK
480 minute summer	EX SW 3	248	93.308	0.041	12.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute summer	MH9	1.000	MH8	3.1	0.337	0.010	0.4011	
480 minute summer	MH8	1.001	MH6	5.6	0.461	0.013	0.4345	
480 minute summer	MH7	2.000	MH6	1.7	0.191	0.004	0.1728	
480 minute summer	MH6	1.002	MH4	8.9	0.579	0.020	0.2952	
480 minute summer	MH5	3.000	MH4	1.2	0.131	0.003	0.1198	
480 minute summer	MH4	1.003	MH2	10.5	0.634	0.024	0.3382	
480 minute summer	MH3	4.000	MH2	0.8	0.116	0.002	0.1296	
480 minute summer	MH2	1.004	MH1	12.9	0.612	0.027	0.5815	
480 minute summer	MH1	1.005	MH1.1	14.6	0.448	0.113	0.6315	
480 minute summer	MH1.1	1.006	NEW SW 1	15.0	0.804	0.106	0.1424	
480 minute summer	NEW SW 1	EX1.000	EX SW 1	15.0	1.504	0.565	0.1749	114.5
480 minute summer	MH16	5.000	MH17	2.5	0.942	0.013	0.0589	
480 minute summer	MH14	6.000	MH15	0.7	0.877	0.017	0.0090	
480 minute summer	MH15	6.001	MH17	1.2	0.180	0.004	0.0710	
480 minute summer	MH17	5.001	MH19	3.7	0.473	0.010	0.3634	
480 minute summer	MH11	7.000	MH12	2.3	0.266	0.005	0.3040	
480 minute summer	MH12	7.001	MH13	4.8	0.458	0.016	0.3765	
480 minute summer	MH10	8.000	MH13	3.1	0.168	0.003	0.9756	
480 minute summer	MH13	7.002	MH19	9.2	0.219	0.017	0.4830	
480 minute summer	MH18	5.003	EX SW 3	12.8	2.503	0.072	0.0321	97.8
480 minute summer	MH19	5.002	MH18	12.8	1.725	0.029	0.0646	

**Results for 1 year 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute winter	MH9	248	93.686	0.036	2.3	0.1354	0.0000	OK
480 minute winter	MH8	248	93.594	0.041	4.2	0.1417	0.0000	OK
480 minute winter	MH7	248	93.505	0.024	1.3	0.0777	0.0000	OK
480 minute winter	MH6	248	93.460	0.052	6.7	0.1600	0.0000	OK
480 minute winter	MH5	248	93.397	0.020	0.9	0.0608	0.0000	OK
480 minute winter	MH4	248	93.385	0.056	7.9	0.1500	0.0000	OK
480 minute winter	MH3	248	93.315	0.017	0.6	0.0481	0.0000	OK
480 minute winter	MH2	248	93.303	0.058	9.7	0.1778	0.0000	OK
480 minute winter	MH1	248	93.186	0.073	10.9	0.2235	0.0000	OK
480 minute winter	MH1.1	248	93.172	0.137	11.3	0.8049	0.0000	OK
480 minute winter	NEW SW 1	248	91.710	0.071	11.3	0.1261	0.0000	OK
480 minute winter	EX SW 1	248	91.318	0.068	11.3	0.0000	0.0000	OK
480 minute winter	MH16	248	95.661	0.021	1.9	0.0670	0.0000	OK
480 minute winter	MH14	224	95.787	0.012	0.5	0.0221	0.0000	OK
480 minute winter	MH15	248	94.742	0.024	0.9	0.0755	0.0000	OK
480 minute winter	MH17	248	94.735	0.038	2.8	0.1141	0.0000	OK
480 minute winter	MH11	248	94.827	0.027	1.7	0.0960	0.0000	OK
480 minute winter	MH12	256	94.697	0.047	3.5	0.1605	0.0000	OK
480 minute winter	MH10	248	94.666	0.027	2.3	0.1048	0.0000	OK
480 minute winter	MH13	248	94.534	0.106	6.7	0.3134	0.0000	OK
480 minute winter	MH18	248	94.037	0.037	9.5	0.1112	0.0000	OK
480 minute winter	MH19	248	94.533	0.122	9.5	0.5528	0.0000	OK
480 minute winter	EX SW 3	248	93.302	0.035	9.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute winter	MH9	1.000	MH8	2.3	0.310	0.007	0.3277	
480 minute winter	MH8	1.001	MH6	4.2	0.421	0.010	0.3538	
480 minute winter	MH7	2.000	MH6	1.3	0.179	0.003	0.1408	
480 minute winter	MH6	1.002	MH4	6.7	0.538	0.015	0.2395	
480 minute winter	MH5	3.000	MH4	0.9	0.122	0.002	0.0974	
480 minute winter	MH4	1.003	MH2	7.9	0.584	0.018	0.2760	
480 minute winter	MH3	4.000	MH2	0.6	0.084	0.001	0.1062	
480 minute winter	MH2	1.004	MH1	9.7	0.589	0.020	0.4381	
480 minute winter	MH1	1.005	MH1.1	10.9	0.434	0.085	0.4823	
480 minute winter	MH1.1	1.006	NEW SW 1	11.3	0.744	0.080	0.1159	
480 minute winter	NEW SW 1	EX1.000	EX SW 1	11.3	1.408	0.425	0.1406	127.7
480 minute winter	MH16	5.000	MH17	1.9	0.865	0.010	0.0487	
480 minute winter	MH14	6.000	MH15	0.5	0.791	0.012	0.0072	
480 minute winter	MH15	6.001	MH17	0.9	0.167	0.003	0.0580	
480 minute winter	MH17	5.001	MH19	2.8	0.429	0.008	0.3000	
480 minute winter	MH11	7.000	MH12	1.7	0.240	0.004	0.2470	
480 minute winter	MH12	7.001	MH13	3.5	0.421	0.011	0.3021	
480 minute winter	MH10	8.000	MH13	2.3	0.158	0.002	0.7161	
480 minute winter	MH13	7.002	MH19	6.7	0.190	0.012	0.3577	
480 minute winter	MH18	5.003	EX SW 3	9.5	2.308	0.053	0.0258	110.1
480 minute winter	MH19	5.002	MH18	9.5	1.598	0.022	0.0517	

**Results for 1 year 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute summer	MH9	315	93.688	0.038	2.6	0.1437	0.0000	OK
600 minute summer	MH8	315	93.596	0.043	4.7	0.1490	0.0000	OK
600 minute summer	MH7	315	93.506	0.025	1.4	0.0804	0.0000	OK
600 minute summer	MH6	315	93.462	0.054	7.4	0.1680	0.0000	OK
600 minute summer	MH5	315	93.398	0.021	1.0	0.0637	0.0000	OK
600 minute summer	MH4	315	93.388	0.059	8.7	0.1573	0.0000	OK
600 minute summer	MH3	315	93.316	0.018	0.7	0.0515	0.0000	OK
600 minute summer	MH2	315	93.306	0.061	10.7	0.1863	0.0000	OK
600 minute summer	MH1	315	93.190	0.077	12.1	0.2352	0.0000	OK
600 minute summer	MH1.1	315	93.181	0.146	12.5	0.8583	0.0000	OK
600 minute summer	NEW SW 1	315	91.715	0.076	12.5	0.1340	0.0000	OK
600 minute summer	EX SW 1	315	91.322	0.072	12.5	0.0000	0.0000	OK
600 minute summer	MH16	315	95.662	0.022	2.1	0.0702	0.0000	OK
600 minute summer	MH14	315	95.788	0.013	0.6	0.0241	0.0000	OK
600 minute summer	MH15	315	94.743	0.025	1.0	0.0793	0.0000	OK
600 minute summer	MH17	315	94.737	0.040	3.1	0.1196	0.0000	OK
600 minute summer	MH11	315	94.828	0.028	1.9	0.1008	0.0000	OK
600 minute summer	MH12	315	94.700	0.050	3.9	0.1683	0.0000	OK
600 minute summer	MH10	315	94.667	0.028	2.6	0.1108	0.0000	OK
600 minute summer	MH13	315	94.543	0.115	7.5	0.3401	0.0000	OK
600 minute summer	MH18	315	94.039	0.039	10.6	0.1178	0.0000	OK
600 minute summer	MH19	315	94.542	0.131	10.6	0.5940	0.0000	OK
600 minute summer	EX SW 3	315	93.304	0.037	10.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute summer	MH9	1.000	MH8	2.6	0.321	0.008	0.3554	
600 minute summer	MH8	1.001	MH6	4.7	0.438	0.011	0.3813	
600 minute summer	MH7	2.000	MH6	1.4	0.180	0.003	0.1506	
600 minute summer	MH6	1.002	MH4	7.4	0.553	0.017	0.2573	
600 minute summer	MH5	3.000	MH4	1.0	0.126	0.002	0.1046	
600 minute summer	MH4	1.003	MH2	8.7	0.600	0.020	0.2959	
600 minute summer	MH3	4.000	MH2	0.7	0.091	0.002	0.1144	
600 minute summer	MH2	1.004	MH1	10.7	0.603	0.022	0.4709	
600 minute summer	MH1	1.005	MH1.1	12.1	0.442	0.094	0.5239	
600 minute summer	MH1.1	1.006	NEW SW 1	12.5	0.764	0.089	0.1246	
600 minute summer	NEW SW 1	EX1.000	EX SW 1	12.5	1.443	0.471	0.1519	121.0
600 minute summer	MH16	5.000	MH17	2.1	0.892	0.011	0.0522	
600 minute summer	MH14	6.000	MH15	0.6	0.838	0.014	0.0081	
600 minute summer	MH15	6.001	MH17	1.0	0.170	0.003	0.0622	
600 minute summer	MH17	5.001	MH19	3.1	0.444	0.008	0.3213	
600 minute summer	MH11	7.000	MH12	1.9	0.251	0.004	0.2656	
600 minute summer	MH12	7.001	MH13	3.9	0.433	0.013	0.3249	
600 minute summer	MH10	8.000	MH13	2.6	0.146	0.003	0.8025	
600 minute summer	MH13	7.002	MH19	7.5	0.176	0.014	0.3991	
600 minute summer	MH18	5.003	EX SW 3	10.6	2.378	0.059	0.0279	105.0
600 minute summer	MH19	5.002	MH18	10.6	1.646	0.024	0.0561	

**Results for 1 year 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute winter	MH9	315	93.683	0.033	2.0	0.1267	0.0000	OK
600 minute winter	MH8	315	93.591	0.038	3.6	0.1320	0.0000	OK
600 minute winter	MH7	315	93.503	0.022	1.1	0.0720	0.0000	OK
600 minute winter	MH6	315	93.456	0.048	5.7	0.1478	0.0000	OK
600 minute winter	MH5	315	93.396	0.019	0.8	0.0576	0.0000	OK
600 minute winter	MH4	315	93.381	0.052	6.7	0.1387	0.0000	OK
600 minute winter	MH3	300	93.314	0.016	0.5	0.0445	0.0000	OK
600 minute winter	MH2	315	93.298	0.053	8.2	0.1645	0.0000	OK
600 minute winter	MH1	315	93.180	0.067	9.3	0.2069	0.0000	OK
600 minute winter	MH1.1	315	93.159	0.124	9.6	0.7260	0.0000	OK
600 minute winter	NEW SW 1	315	91.704	0.065	9.6	0.1146	0.0000	OK
600 minute winter	EX SW 1	315	91.312	0.062	9.6	0.0000	0.0000	OK
600 minute winter	MH16	315	95.660	0.020	1.6	0.0621	0.0000	OK
600 minute winter	MH14	315	95.787	0.012	0.5	0.0221	0.0000	OK
600 minute winter	MH15	315	94.741	0.023	0.8	0.0716	0.0000	OK
600 minute winter	MH17	315	94.733	0.036	2.4	0.1061	0.0000	OK
600 minute winter	MH11	315	94.825	0.025	1.5	0.0907	0.0000	OK
600 minute winter	MH12	315	94.695	0.045	3.1	0.1523	0.0000	OK
600 minute winter	MH10	315	94.664	0.025	2.0	0.0984	0.0000	OK
600 minute winter	MH13	315	94.524	0.096	5.9	0.2833	0.0000	OK
600 minute winter	MH18	315	94.035	0.035	8.3	0.1037	0.0000	OK
600 minute winter	MH19	315	94.523	0.112	8.3	0.5064	0.0000	OK
600 minute winter	EX SW 3	315	93.300	0.033	8.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute winter	MH9	1.000	MH8	2.0	0.295	0.006	0.2958	
600 minute winter	MH8	1.001	MH6	3.6	0.405	0.008	0.3166	
600 minute winter	MH7	2.000	MH6	1.1	0.168	0.003	0.1255	
600 minute winter	MH6	1.002	MH4	5.7	0.514	0.013	0.2130	
600 minute winter	MH5	3.000	MH4	0.8	0.119	0.002	0.0870	
600 minute winter	MH4	1.003	MH2	6.7	0.559	0.015	0.2449	
600 minute winter	MH3	4.000	MH2	0.5	0.095	0.001	0.0942	
600 minute winter	MH2	1.004	MH1	8.2	0.557	0.017	0.3897	
600 minute winter	MH1	1.005	MH1.1	9.3	0.421	0.072	0.4225	
600 minute winter	MH1.1	1.006	NEW SW 1	9.6	0.710	0.068	0.1030	
600 minute winter	NEW SW 1	EX1.000	EX SW 1	9.6	1.352	0.361	0.1244	137.6
600 minute winter	MH16	5.000	MH17	1.6	0.822	0.008	0.0432	
600 minute winter	MH14	6.000	MH15	0.5	0.791	0.012	0.0072	
600 minute winter	MH15	6.001	MH17	0.8	0.162	0.003	0.0527	
600 minute winter	MH17	5.001	MH19	2.4	0.407	0.006	0.2710	
600 minute winter	MH11	7.000	MH12	1.5	0.229	0.003	0.2278	
600 minute winter	MH12	7.001	MH13	3.1	0.406	0.010	0.2786	
600 minute winter	MH10	8.000	MH13	2.0	0.149	0.002	0.6213	
600 minute winter	MH13	7.002	MH19	5.9	0.207	0.011	0.3120	
600 minute winter	MH18	5.003	EX SW 3	8.3	2.226	0.046	0.0234	119.9
600 minute winter	MH19	5.002	MH18	8.3	1.544	0.019	0.0467	

**Results for 1 year 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute summer	MH9	375	93.686	0.036	2.3	0.1354	0.0000	OK
720 minute summer	MH8	375	93.594	0.041	4.2	0.1417	0.0000	OK
720 minute summer	MH7	375	93.505	0.024	1.3	0.0777	0.0000	OK
720 minute summer	MH6	375	93.460	0.052	6.7	0.1600	0.0000	OK
720 minute summer	MH5	375	93.397	0.020	0.9	0.0608	0.0000	OK
720 minute summer	MH4	375	93.385	0.056	7.9	0.1500	0.0000	OK
720 minute summer	MH3	375	93.315	0.017	0.6	0.0481	0.0000	OK
720 minute summer	MH2	375	93.303	0.058	9.7	0.1778	0.0000	OK
720 minute summer	MH1	375	93.186	0.073	10.9	0.2235	0.0000	OK
720 minute summer	MH1.1	375	93.172	0.137	11.3	0.8050	0.0000	OK
720 minute summer	NEW SW 1	375	91.710	0.071	11.3	0.1261	0.0000	OK
720 minute summer	EX SW 1	375	91.318	0.068	11.3	0.0000	0.0000	OK
720 minute summer	MH16	375	95.661	0.021	1.9	0.0670	0.0000	OK
720 minute summer	MH14	375	95.787	0.012	0.5	0.0221	0.0000	OK
720 minute summer	MH15	375	94.742	0.024	0.9	0.0755	0.0000	OK
720 minute summer	MH17	375	94.735	0.038	2.8	0.1141	0.0000	OK
720 minute summer	MH11	375	94.827	0.027	1.7	0.0960	0.0000	OK
720 minute summer	MH12	375	94.697	0.047	3.5	0.1605	0.0000	OK
720 minute summer	MH10	375	94.666	0.027	2.3	0.1048	0.0000	OK
720 minute summer	MH13	375	94.534	0.106	6.7	0.3134	0.0000	OK
720 minute summer	MH18	375	94.037	0.037	9.5	0.1112	0.0000	OK
720 minute summer	MH19	375	94.533	0.122	9.5	0.5530	0.0000	OK
720 minute summer	EX SW 3	375	93.302	0.035	9.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute summer	MH9	1.000	MH8	2.3	0.308	0.007	0.3277	
720 minute summer	MH8	1.001	MH6	4.2	0.421	0.010	0.3538	
720 minute summer	MH7	2.000	MH6	1.3	0.178	0.003	0.1408	
720 minute summer	MH6	1.002	MH4	6.7	0.538	0.015	0.2395	
720 minute summer	MH5	3.000	MH4	0.9	0.121	0.002	0.0974	
720 minute summer	MH4	1.003	MH2	7.9	0.584	0.018	0.2760	
720 minute summer	MH3	4.000	MH2	0.6	0.084	0.001	0.1062	
720 minute summer	MH2	1.004	MH1	9.7	0.589	0.020	0.4381	
720 minute summer	MH1	1.005	MH1.1	10.9	0.433	0.085	0.4823	
720 minute summer	MH1.1	1.006	NEW SW 1	11.3	0.744	0.080	0.1159	
720 minute summer	NEW SW 1	EX1.000	EX SW 1	11.3	1.408	0.425	0.1407	128.7
720 minute summer	MH16	5.000	MH17	1.9	0.865	0.010	0.0487	
720 minute summer	MH14	6.000	MH15	0.5	0.791	0.012	0.0072	
720 minute summer	MH15	6.001	MH17	0.9	0.165	0.003	0.0580	
720 minute summer	MH17	5.001	MH19	2.8	0.429	0.008	0.3001	
720 minute summer	MH11	7.000	MH12	1.7	0.240	0.004	0.2470	
720 minute summer	MH12	7.001	MH13	3.5	0.421	0.011	0.3021	
720 minute summer	MH10	8.000	MH13	2.3	0.143	0.002	0.7163	
720 minute summer	MH13	7.002	MH19	6.7	0.184	0.012	0.3579	
720 minute summer	MH18	5.003	EX SW 3	9.5	2.309	0.053	0.0258	111.5
720 minute summer	MH19	5.002	MH18	9.5	1.598	0.022	0.0517	

**Results for 1 year 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute winter	MH9	360	93.681	0.031	1.7	0.1175	0.0000	OK
720 minute winter	MH8	375	93.589	0.036	3.1	0.1228	0.0000	OK
720 minute winter	MH7	375	93.502	0.021	1.0	0.0690	0.0000	OK
720 minute winter	MH6	375	93.453	0.045	5.0	0.1387	0.0000	OK
720 minute winter	MH5	375	93.395	0.018	0.7	0.0543	0.0000	OK
720 minute winter	MH4	375	93.378	0.049	5.9	0.1302	0.0000	OK
720 minute winter	MH3	330	93.312	0.014	0.4	0.0404	0.0000	OK
720 minute winter	MH2	375	93.295	0.050	7.2	0.1547	0.0000	OK
720 minute winter	MH1	375	93.176	0.063	8.1	0.1934	0.0000	OK
720 minute winter	MH1.1	375	93.149	0.114	8.4	0.6673	0.0000	OK
720 minute winter	NEW SW 1	375	91.699	0.060	8.4	0.1062	0.0000	OK
720 minute winter	EX SW 1	375	91.308	0.058	8.4	0.0000	0.0000	OK
720 minute winter	MH16	360	95.659	0.019	1.4	0.0582	0.0000	OK
720 minute winter	MH14	345	95.786	0.011	0.4	0.0199	0.0000	OK
720 minute winter	MH15	345	94.739	0.021	0.7	0.0674	0.0000	OK
720 minute winter	MH17	375	94.730	0.033	2.1	0.0997	0.0000	OK
720 minute winter	MH11	375	94.824	0.024	1.3	0.0850	0.0000	OK
720 minute winter	MH12	375	94.692	0.042	2.7	0.1435	0.0000	OK
720 minute winter	MH10	375	94.663	0.024	1.8	0.0938	0.0000	OK
720 minute winter	MH13	375	94.515	0.087	5.2	0.2571	0.0000	OK
720 minute winter	MH18	375	94.033	0.033	7.3	0.0971	0.0000	OK
720 minute winter	MH19	375	94.514	0.103	7.3	0.4658	0.0000	OK
720 minute winter	EX SW 3	375	93.298	0.031	7.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute winter	MH9	1.000	MH8	1.7	0.279	0.005	0.2656	
720 minute winter	MH8	1.001	MH6	3.1	0.394	0.007	0.2869	
720 minute winter	MH7	2.000	MH6	1.0	0.166	0.002	0.1149	
720 minute winter	MH6	1.002	MH4	5.0	0.495	0.011	0.1942	
720 minute winter	MH5	3.000	MH4	0.7	0.123	0.002	0.0795	
720 minute winter	MH4	1.003	MH2	5.9	0.537	0.013	0.2240	
720 minute winter	MH3	4.000	MH2	0.4	0.075	0.001	0.0854	
720 minute winter	MH2	1.004	MH1	7.2	0.538	0.015	0.3546	
720 minute winter	MH1	1.005	MH1.1	8.1	0.410	0.063	0.3781	
720 minute winter	MH1.1	1.006	NEW SW 1	8.4	0.685	0.060	0.0935	
720 minute winter	NEW SW 1	EX1.000	EX SW 1	8.4	1.307	0.316	0.1127	146.0
720 minute winter	MH16	5.000	MH17	1.4	0.788	0.007	0.0394	
720 minute winter	MH14	6.000	MH15	0.4	0.738	0.010	0.0061	
720 minute winter	MH15	6.001	MH17	0.7	0.160	0.002	0.0481	
720 minute winter	MH17	5.001	MH19	2.1	0.389	0.006	0.2483	
720 minute winter	MH11	7.000	MH12	1.3	0.217	0.003	0.2074	
720 minute winter	MH12	7.001	MH13	2.7	0.385	0.009	0.2541	
720 minute winter	MH10	8.000	MH13	1.8	0.146	0.002	0.5433	
720 minute winter	MH13	7.002	MH19	5.2	0.188	0.009	0.2738	
720 minute winter	MH18	5.003	EX SW 3	7.3	2.147	0.041	0.0213	124.3
720 minute winter	MH19	5.002	MH18	7.3	1.497	0.017	0.0425	

**Results for 1 year 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute summer	MH9	495	93.683	0.033	1.9	0.1237	0.0000	OK
960 minute summer	MH8	495	93.591	0.038	3.5	0.1302	0.0000	OK
960 minute summer	MH7	495	93.503	0.022	1.1	0.0720	0.0000	OK
960 minute summer	MH6	495	93.455	0.047	5.6	0.1467	0.0000	OK
960 minute summer	MH5	480	93.395	0.018	0.7	0.0543	0.0000	OK
960 minute summer	MH4	495	93.380	0.051	6.5	0.1365	0.0000	OK
960 minute summer	MH3	495	93.314	0.016	0.5	0.0445	0.0000	OK
960 minute summer	MH2	495	93.298	0.053	8.0	0.1626	0.0000	OK
960 minute summer	MH1	495	93.179	0.066	9.0	0.2037	0.0000	OK
960 minute summer	MH1.1	495	93.156	0.121	9.3	0.7116	0.0000	OK
960 minute summer	NEW SW 1	495	91.703	0.064	9.3	0.1125	0.0000	OK
960 minute summer	EX SW 1	495	91.311	0.061	9.3	0.0000	0.0000	OK
960 minute summer	MH16	495	95.660	0.020	1.6	0.0621	0.0000	OK
960 minute summer	MH14	480	95.786	0.011	0.4	0.0199	0.0000	OK
960 minute summer	MH15	480	94.739	0.021	0.7	0.0674	0.0000	OK
960 minute summer	MH17	495	94.732	0.035	2.3	0.1040	0.0000	OK
960 minute summer	MH11	495	94.824	0.024	1.4	0.0879	0.0000	OK
960 minute summer	MH12	495	94.694	0.044	2.9	0.1480	0.0000	OK
960 minute summer	MH10	495	94.664	0.025	2.0	0.0984	0.0000	OK
960 minute summer	MH13	495	94.521	0.093	5.7	0.2756	0.0000	OK
960 minute summer	MH18	495	94.034	0.034	8.0	0.1018	0.0000	OK
960 minute summer	MH19	495	94.520	0.109	8.0	0.4944	0.0000	OK
960 minute summer	EX SW 3	495	93.299	0.032	8.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute summer	MH9	1.000	MH8	1.9	0.288	0.006	0.2880	
960 minute summer	MH8	1.001	MH6	3.5	0.400	0.008	0.3121	
960 minute summer	MH7	2.000	MH6	1.1	0.170	0.003	0.1245	
960 minute summer	MH6	1.002	MH4	5.6	0.514	0.013	0.2095	
960 minute summer	MH5	3.000	MH4	0.7	0.115	0.002	0.0841	
960 minute summer	MH4	1.003	MH2	6.5	0.552	0.015	0.2401	
960 minute summer	MH3	4.000	MH2	0.5	0.079	0.001	0.0928	
960 minute summer	MH2	1.004	MH1	8.0	0.554	0.016	0.3815	
960 minute summer	MH1	1.005	MH1.1	9.0	0.419	0.070	0.4115	
960 minute summer	MH1.1	1.006	NEW SW 1	9.3	0.704	0.066	0.1007	
960 minute summer	NEW SW 1	EX1.000	EX SW 1	9.3	1.341	0.350	0.1215	140.3
960 minute summer	MH16	5.000	MH17	1.6	0.822	0.008	0.0432	
960 minute summer	MH14	6.000	MH15	0.4	0.738	0.010	0.0061	
960 minute summer	MH15	6.001	MH17	0.7	0.157	0.002	0.0502	
960 minute summer	MH17	5.001	MH19	2.3	0.401	0.006	0.2635	
960 minute summer	MH11	7.000	MH12	1.4	0.223	0.003	0.2178	
960 minute summer	MH12	7.001	MH13	2.9	0.395	0.009	0.2665	
960 minute summer	MH10	8.000	MH13	2.0	0.140	0.002	0.5997	
960 minute summer	MH13	7.002	MH19	5.7	0.187	0.010	0.3007	
960 minute summer	MH18	5.003	EX SW 3	8.0	2.203	0.045	0.0228	121.1
960 minute summer	MH19	5.002	MH18	8.0	1.530	0.018	0.0454	

**Results for 1 year 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute winter	MH9	495	93.678	0.028	1.4	0.1077	0.0000	OK
960 minute winter	MH8	495	93.586	0.033	2.6	0.1130	0.0000	OK
960 minute winter	MH7	465	93.500	0.019	0.8	0.0624	0.0000	OK
960 minute winter	MH6	495	93.449	0.041	4.1	0.1265	0.0000	OK
960 minute winter	MH5	435	93.393	0.016	0.5	0.0468	0.0000	OK
960 minute winter	MH4	495	93.373	0.044	4.8	0.1179	0.0000	OK
960 minute winter	MH3	480	93.312	0.014	0.4	0.0404	0.0000	OK
960 minute winter	MH2	495	93.291	0.046	5.9	0.1410	0.0000	OK
960 minute winter	MH1	495	93.170	0.057	6.7	0.1764	0.0000	OK
960 minute winter	MH1.1	495	93.135	0.100	6.9	0.5895	0.0000	OK
960 minute winter	NEW SW 1	495	91.693	0.054	6.9	0.0951	0.0000	OK
960 minute winter	EX SW 1	495	91.302	0.052	6.9	0.0000	0.0000	OK
960 minute winter	MH16	495	95.657	0.017	1.2	0.0540	0.0000	OK
960 minute winter	MH14	420	95.784	0.009	0.3	0.0174	0.0000	OK
960 minute winter	MH15	420	94.736	0.018	0.5	0.0579	0.0000	OK
960 minute winter	MH17	495	94.727	0.030	1.7	0.0905	0.0000	OK
960 minute winter	MH11	495	94.822	0.022	1.1	0.0787	0.0000	OK
960 minute winter	MH12	495	94.689	0.039	2.2	0.1311	0.0000	OK
960 minute winter	MH10	495	94.661	0.022	1.5	0.0865	0.0000	OK
960 minute winter	MH13	495	94.503	0.075	4.3	0.2212	0.0000	OK
960 minute winter	MH18	495	94.029	0.029	6.0	0.0880	0.0000	OK
960 minute winter	MH19	495	94.502	0.091	6.0	0.4100	0.0000	OK
960 minute winter	EX SW 3	495	93.295	0.028	6.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute winter	MH9	1.000	MH8	1.4	0.265	0.004	0.2334	
960 minute winter	MH8	1.001	MH6	2.6	0.369	0.006	0.2510	
960 minute winter	MH7	2.000	MH6	0.8	0.157	0.002	0.0994	
960 minute winter	MH6	1.002	MH4	4.1	0.469	0.009	0.1680	
960 minute winter	MH5	3.000	MH4	0.5	0.105	0.001	0.0676	
960 minute winter	MH4	1.003	MH2	4.8	0.504	0.011	0.1944	
960 minute winter	MH3	4.000	MH2	0.4	0.077	0.001	0.0760	
960 minute winter	MH2	1.004	MH1	5.9	0.507	0.012	0.3097	
960 minute winter	MH1	1.005	MH1.1	6.7	0.398	0.052	0.3218	
960 minute winter	MH1.1	1.006	NEW SW 1	6.9	0.649	0.049	0.0811	
960 minute winter	NEW SW 1	EX1.000	EX SW 1	6.9	1.241	0.260	0.0974	156.4
960 minute winter	MH16	5.000	MH17	1.2	0.752	0.006	0.0354	
960 minute winter	MH14	6.000	MH15	0.3	0.676	0.007	0.0050	
960 minute winter	MH15	6.001	MH17	0.5	0.144	0.002	0.0404	
960 minute winter	MH17	5.001	MH19	1.7	0.369	0.005	0.2149	
960 minute winter	MH11	7.000	MH12	1.1	0.209	0.002	0.1817	
960 minute winter	MH12	7.001	MH13	2.2	0.355	0.007	0.2219	
960 minute winter	MH10	8.000	MH13	1.5	0.169	0.002	0.4410	
960 minute winter	MH13	7.002	MH19	4.3	0.179	0.008	0.2238	
960 minute winter	MH18	5.003	EX SW 3	6.0	2.032	0.034	0.0185	136.3
960 minute winter	MH19	5.002	MH18	6.0	1.417	0.014	0.0368	

**Results for 1 year 1440 minute summer. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute summer	MH9	750	93.678	0.028	1.4	0.1077	0.0000	OK
1440 minute summer	MH8	750	93.586	0.033	2.6	0.1130	0.0000	OK
1440 minute summer	MH7	750	93.500	0.019	0.8	0.0624	0.0000	OK
1440 minute summer	MH6	750	93.449	0.041	4.1	0.1262	0.0000	OK
1440 minute summer	MH5	750	93.394	0.017	0.6	0.0507	0.0000	OK
1440 minute summer	MH4	750	93.374	0.045	4.9	0.1191	0.0000	OK
1440 minute summer	MH3	750	93.312	0.014	0.4	0.0404	0.0000	OK
1440 minute summer	MH2	750	93.291	0.046	6.0	0.1421	0.0000	OK
1440 minute summer	MH1	750	93.171	0.058	6.8	0.1777	0.0000	OK
1440 minute summer	MH1.1	750	93.136	0.101	7.0	0.5949	0.0000	OK
1440 minute summer	NEW SW 1	750	91.693	0.054	7.0	0.0959	0.0000	OK
1440 minute summer	EX SW 1	750	91.303	0.053	7.0	0.0000	0.0000	OK
1440 minute summer	MH16	750	95.657	0.017	1.2	0.0540	0.0000	OK
1440 minute summer	MH14	720	95.784	0.009	0.3	0.0174	0.0000	OK
1440 minute summer	MH15	720	94.736	0.018	0.5	0.0579	0.0000	OK
1440 minute summer	MH17	750	94.727	0.030	1.7	0.0905	0.0000	OK
1440 minute summer	MH11	750	94.822	0.022	1.1	0.0787	0.0000	OK
1440 minute summer	MH12	750	94.689	0.039	2.2	0.1311	0.0000	OK
1440 minute summer	MH10	750	94.661	0.022	1.5	0.0865	0.0000	OK
1440 minute summer	MH13	750	94.503	0.075	4.3	0.2213	0.0000	OK
1440 minute summer	MH18	750	94.029	0.029	6.0	0.0880	0.0000	OK
1440 minute summer	MH19	750	94.502	0.091	6.0	0.4101	0.0000	OK
1440 minute summer	EX SW 3	750	93.295	0.028	6.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute summer	MH9	1.000	MH8	1.4	0.262	0.004	0.2334	
1440 minute summer	MH8	1.001	MH6	2.6	0.370	0.006	0.2504	
1440 minute summer	MH7	2.000	MH6	0.8	0.154	0.002	0.0991	
1440 minute summer	MH6	1.002	MH4	4.1	0.466	0.009	0.1690	
1440 minute summer	MH5	3.000	MH4	0.6	0.111	0.001	0.0700	
1440 minute summer	MH4	1.003	MH2	4.9	0.508	0.011	0.1970	
1440 minute summer	MH3	4.000	MH2	0.4	0.076	0.001	0.0767	
1440 minute summer	MH2	1.004	MH1	6.0	0.510	0.012	0.3131	
1440 minute summer	MH1	1.005	MH1.1	6.8	0.399	0.053	0.3257	
1440 minute summer	MH1.1	1.006	NEW SW 1	7.0	0.652	0.050	0.0820	
1440 minute summer	NEW SW 1	EX1.000	EX SW 1	7.0	1.246	0.264	0.0985	160.6
1440 minute summer	MH16	5.000	MH17	1.2	0.752	0.006	0.0354	
1440 minute summer	MH14	6.000	MH15	0.3	0.676	0.007	0.0050	
1440 minute summer	MH15	6.001	MH17	0.5	0.140	0.002	0.0404	
1440 minute summer	MH17	5.001	MH19	1.7	0.369	0.005	0.2149	
1440 minute summer	MH11	7.000	MH12	1.1	0.210	0.002	0.1817	
1440 minute summer	MH12	7.001	MH13	2.2	0.355	0.007	0.2219	
1440 minute summer	MH10	8.000	MH13	1.5	0.148	0.002	0.4411	
1440 minute summer	MH13	7.002	MH19	4.3	0.176	0.008	0.2239	
1440 minute summer	MH18	5.003	EX SW 3	6.0	2.032	0.034	0.0185	134.9
1440 minute summer	MH19	5.002	MH18	6.0	1.417	0.014	0.0368	

**Results for 1 year 1440 minute winter. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute winter	MH9	750	93.676	0.026	1.1	0.0968	0.0000	OK
1440 minute winter	MH8	750	93.582	0.029	2.0	0.1002	0.0000	OK
1440 minute winter	MH7	720	93.498	0.017	0.6	0.0549	0.0000	OK
1440 minute winter	MH6	750	93.444	0.036	3.1	0.1105	0.0000	OK
1440 minute winter	MH5	690	93.391	0.014	0.4	0.0425	0.0000	OK
1440 minute winter	MH4	750	93.368	0.039	3.6	0.1031	0.0000	OK
1440 minute winter	MH3	720	93.311	0.013	0.3	0.0357	0.0000	OK
1440 minute winter	MH2	750	93.286	0.041	4.5	0.1249	0.0000	OK
1440 minute winter	MH1	750	93.163	0.050	5.1	0.1547	0.0000	OK
1440 minute winter	MH1.1	750	93.120	0.085	5.3	0.4997	0.0000	OK
1440 minute winter	NEW SW 1	750	91.686	0.047	5.3	0.0825	0.0000	OK
1440 minute winter	EX SW 1	750	91.295	0.045	5.3	0.0000	0.0000	OK
1440 minute winter	MH16	720	95.655	0.015	0.9	0.0472	0.0000	OK
1440 minute winter	MH14	600	95.783	0.008	0.2	0.0144	0.0000	OK
1440 minute winter	MH15	690	94.735	0.017	0.4	0.0525	0.0000	OK
1440 minute winter	MH17	720	94.724	0.027	1.3	0.0815	0.0000	OK
1440 minute winter	MH11	720	94.819	0.019	0.8	0.0682	0.0000	OK
1440 minute winter	MH12	750	94.684	0.034	1.7	0.1166	0.0000	OK
1440 minute winter	MH10	720	94.658	0.019	1.1	0.0755	0.0000	OK
1440 minute winter	MH13	750	94.488	0.060	3.2	0.1766	0.0000	OK
1440 minute winter	MH18	750	94.026	0.026	4.5	0.0763	0.0000	OK
1440 minute winter	MH19	750	94.486	0.075	4.5	0.3403	0.0000	OK
1440 minute winter	EX SW 3	750	93.292	0.025	4.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute winter	MH9	1.000	MH8	1.1	0.247	0.003	0.1950	
1440 minute winter	MH8	1.001	MH6	2.0	0.342	0.005	0.2071	
1440 minute winter	MH7	2.000	MH6	0.6	0.145	0.001	0.0816	
1440 minute winter	MH6	1.002	MH4	3.1	0.434	0.007	0.1372	
1440 minute winter	MH5	3.000	MH4	0.4	0.099	0.001	0.0554	
1440 minute winter	MH4	1.003	MH2	3.6	0.461	0.008	0.1596	
1440 minute winter	MH3	4.000	MH2	0.3	0.072	0.001	0.0629	
1440 minute winter	MH2	1.004	MH1	4.5	0.465	0.009	0.2555	
1440 minute winter	MH1	1.005	MH1.1	5.1	0.377	0.040	0.2582	
1440 minute winter	MH1.1	1.006	NEW SW 1	5.3	0.602	0.038	0.0672	
1440 minute winter	NEW SW 1	EX1.000	EX SW 1	5.3	1.156	0.200	0.0803	179.2
1440 minute winter	MH16	5.000	MH17	0.9	0.691	0.005	0.0289	
1440 minute winter	MH14	6.000	MH15	0.2	0.599	0.005	0.0038	
1440 minute winter	MH15	6.001	MH17	0.4	0.130	0.001	0.0342	
1440 minute winter	MH17	5.001	MH19	1.3	0.369	0.003	0.1646	
1440 minute winter	MH11	7.000	MH12	0.8	0.191	0.002	0.1513	
1440 minute winter	MH12	7.001	MH13	1.7	0.330	0.006	0.1876	
1440 minute winter	MH10	8.000	MH13	1.1	0.142	0.001	0.3213	
1440 minute winter	MH13	7.002	MH19	3.2	0.176	0.006	0.1659	
1440 minute winter	MH18	5.003	EX SW 3	4.5	1.872	0.025	0.0151	153.9
1440 minute winter	MH19	5.002	MH18	4.5	1.309	0.010	0.0299	

**Results for 30 year 15 minute summer. 255 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 (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	MH9	14	93.817	0.167	39.0	0.6314	0.0000	OK
15 minute summer	MH8	13	93.810	0.257	70.1	0.8838	0.0000	OK
15 minute summer	MH7	15	93.803	0.322	21.8	1.0373	0.0000	OK
15 minute summer	MH6	15	93.806	0.398	105.1	1.2302	0.0000	OK
15 minute summer	MH5	14	93.810	0.433	17.9	1.2858	0.0000	OK
15 minute summer	MH4	14	93.802	0.473	101.2	1.2589	0.0000	OK
15 minute summer	MH3	14	93.802	0.504	18.1	1.4237	0.0000	OK
15 minute summer	MH2	14	93.805	0.560	98.4	1.7233	0.0000	OK
15 minute summer	MH1	14	93.799	0.686	91.9	2.1047	0.0000	SURCHARGED
15 minute summer	MH1.1	13	93.787	0.752	72.9	4.4140	0.0000	SURCHARGED
15 minute summer	NEW SW 1	17	93.178	1.539	54.3	2.7188	0.0000	SURCHARGED
15 minute summer	EX SW 1	36	91.392	0.142	52.4	0.0000	0.0000	OK
15 minute summer	MH16	10	95.726	0.086	31.9	0.2695	0.0000	OK
15 minute summer	MH14	10	95.824	0.049	8.9	0.0925	0.0000	OK
15 minute summer	MH15	14	95.027	0.309	15.1	0.9770	0.0000	OK
15 minute summer	MH17	14	95.027	0.330	43.7	0.9848	0.0000	OK
15 minute summer	MH11	16	95.049	0.249	28.9	0.8964	0.0000	OK
15 minute summer	MH12	14	95.031	0.381	59.1	1.2898	0.0000	OK
15 minute summer	MH10	17	95.040	0.401	39.3	1.5636	0.0000	OK
15 minute summer	MH13	15	95.036	0.608	90.6	1.7923	0.0000	OK
15 minute summer	MH18	15	94.083	0.083	40.7	0.2478	0.0000	OK
15 minute summer	MH19	15	95.036	0.625	67.5	2.8294	0.0000	SURCHARGED
15 minute summer	EX SW 3	15	93.339	0.072	40.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute summer	MH9	1.000	MH8	38.2	0.693	0.118	3.7103	
15 minute summer	MH8	1.001	MH6	71.6	0.876	0.163	5.5209	
15 minute summer	MH7	2.000	MH6	20.0	0.353	0.046	3.2351	
15 minute summer	MH6	1.002	MH4	96.7	0.977	0.220	4.1626	
15 minute summer	MH5	3.000	MH4	10.1	0.374	0.023	2.7553	
15 minute summer	MH4	1.003	MH2	79.1	0.939	0.180	5.2216	
15 minute summer	MH3	4.000	MH2	9.0	0.216	0.021	3.5089	
15 minute summer	MH2	1.004	MH1	71.0	0.770	0.146	7.3364	
15 minute summer	MH1	1.005	MH1.1	66.9	0.674	0.521	2.0678	
15 minute summer	MH1.1	1.006	NEW SW 1	54.3	1.132	0.385	0.4107	
15 minute summer	NEW SW 1	EX1.000	EX SW 1	52.4	2.977	1.973	0.3055	81.7
15 minute summer	MH16	5.000	MH17	31.6	1.953	0.166	0.3584	
15 minute summer	MH14	6.000	MH15	8.8	1.810	0.213	0.0553	
15 minute summer	MH15	6.001	MH17	12.5	0.323	0.041	1.6048	
15 minute summer	MH17	5.001	MH19	36.9	0.622	0.099	9.1342	
15 minute summer	MH11	7.000	MH12	34.8	0.580	0.076	4.9542	
15 minute summer	MH12	7.001	MH13	45.0	0.651	0.147	7.4763	
15 minute summer	MH10	8.000	MH13	48.8	0.462	0.050	10.1703	
15 minute summer	MH13	7.002	MH19	53.9	0.556	0.098	3.2784	
15 minute summer	MH18	5.003	EX SW 3	40.5	3.334	0.226	0.0762	69.9
15 minute summer	MH19	5.002	MH18	40.7	2.232	0.093	0.1585	

**Results for 30 year 15 minute winter. 255 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 (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute winter	MH9	14	93.875	0.225	41.0	0.8515	0.0000	OK
15 minute winter	MH8	14	93.864	0.311	73.3	1.0718	0.0000	OK
15 minute winter	MH7	16	93.863	0.382	23.6	1.2277	0.0000	OK
15 minute winter	MH6	15	93.868	0.460	110.4	1.4243	0.0000	OK
15 minute winter	MH5	15	93.868	0.491	15.7	1.4585	0.0000	OK
15 minute winter	MH4	15	93.870	0.541	107.8	1.4402	0.0000	OK
15 minute winter	MH3	15	93.872	0.574	23.6	1.6207	0.0000	OK
15 minute winter	MH2	15	93.861	0.616	102.2	1.8961	0.0000	SURCHARGED
15 minute winter	MH1	15	93.868	0.755	87.1	2.3182	0.0000	SURCHARGED
15 minute winter	MH1.1	14	93.850	0.815	64.6	4.7795	0.0000	SURCHARGED
15 minute winter	NEW SW 1	17	93.242	1.603	54.8	2.8323	0.0000	SURCHARGED
15 minute winter	EX SW 1	9	91.392	0.142	53.3	0.0000	0.0000	OK
15 minute winter	MH16	10	95.728	0.088	33.5	0.2765	0.0000	OK
15 minute winter	MH14	10	95.826	0.051	9.4	0.0951	0.0000	OK
15 minute winter	MH15	15	95.086	0.368	15.9	1.1625	0.0000	OK
15 minute winter	MH17	15	95.085	0.388	43.6	1.1587	0.0000	OK
15 minute winter	MH11	15	95.096	0.296	30.4	1.0677	0.0000	OK
15 minute winter	MH12	16	95.089	0.439	61.9	1.4882	0.0000	OK
15 minute winter	MH10	14	95.107	0.467	41.3	1.8228	0.0000	OK
15 minute winter	MH13	16	95.076	0.648	90.8	1.9117	0.0000	OK
15 minute winter	MH18	16	94.085	0.085	42.3	0.2546	0.0000	OK
15 minute winter	MH19	16	95.074	0.663	77.0	2.9974	0.0000	SURCHARGED
15 minute winter	EX SW 3	16	93.341	0.074	42.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute winter	MH9	1.000	MH8	39.8	0.706	0.123	5.3182	
15 minute winter	MH8	1.001	MH6	72.5	0.866	0.165	6.6890	
15 minute winter	MH7	2.000	MH6	19.0	0.364	0.044	3.8641	
15 minute winter	MH6	1.002	MH4	91.4	0.992	0.208	4.7987	
15 minute winter	MH5	3.000	MH4	14.7	0.392	0.034	3.1091	
15 minute winter	MH4	1.003	MH2	82.2	1.007	0.187	5.6011	
15 minute winter	MH3	4.000	MH2	-13.9	0.225	-0.032	3.7259	
15 minute winter	MH2	1.004	MH1	70.0	0.796	0.144	7.4408	
15 minute winter	MH1	1.005	MH1.1	62.9	0.699	0.490	2.0678	
15 minute winter	MH1.1	1.006	NEW SW 1	54.8	1.132	0.389	0.5543	
15 minute winter	NEW SW 1	EX1.000	EX SW 1	53.3	3.029	2.008	0.3054	91.2
15 minute winter	MH16	5.000	MH17	33.1	1.977	0.174	0.3709	
15 minute winter	MH14	6.000	MH15	9.3	1.834	0.225	0.0575	
15 minute winter	MH15	6.001	MH17	14.4	0.326	0.047	1.9672	
15 minute winter	MH17	5.001	MH19	40.2	0.618	0.108	10.2334	
15 minute winter	MH11	7.000	MH12	29.6	0.560	0.065	6.0438	
15 minute winter	MH12	7.001	MH13	42.6	0.678	0.139	8.4471	
15 minute winter	MH10	8.000	MH13	40.7	0.474	0.042	11.5253	
15 minute winter	MH13	7.002	MH19	54.7	0.562	0.099	3.4542	
15 minute winter	MH18	5.003	EX SW 3	42.4	3.374	0.237	0.0789	78.3
15 minute winter	MH19	5.002	MH18	42.3	2.246	0.097	0.1636	

**Results for 30 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute summer	MH9	23	93.838	0.188	35.6	0.7118	0.0000	OK
30 minute summer	MH8	22	93.843	0.290	64.6	0.9992	0.0000	OK
30 minute summer	MH7	23	93.839	0.358	20.5	1.1517	0.0000	OK
30 minute summer	MH6	22	93.839	0.431	93.6	1.3323	0.0000	OK
30 minute summer	MH5	23	93.845	0.468	17.5	1.3918	0.0000	OK
30 minute summer	MH4	23	93.842	0.513	84.8	1.3678	0.0000	OK
30 minute summer	MH3	23	93.839	0.541	14.4	1.5269	0.0000	OK
30 minute summer	MH2	23	93.840	0.595	81.7	1.8294	0.0000	OK
30 minute summer	MH1	23	93.843	0.730	69.2	2.2408	0.0000	SURCHARGED
30 minute summer	MH1.1	23	93.827	0.792	63.1	4.6446	0.0000	SURCHARGED
30 minute summer	NEW SW 1	26	93.223	1.584	54.4	2.7995	0.0000	SURCHARGED
30 minute summer	EX SW 1	15	91.392	0.142	53.1	0.0000	0.0000	OK
30 minute summer	MH16	18	95.722	0.082	29.1	0.2576	0.0000	OK
30 minute summer	MH14	18	95.822	0.047	8.2	0.0887	0.0000	OK
30 minute summer	MH15	24	95.074	0.356	13.9	1.1264	0.0000	OK
30 minute summer	MH17	24	95.072	0.375	39.1	1.1208	0.0000	OK
30 minute summer	MH11	25	95.066	0.266	26.4	0.9591	0.0000	OK
30 minute summer	MH12	23	95.078	0.428	53.5	1.4501	0.0000	OK
30 minute summer	MH10	24	95.070	0.431	35.9	1.6815	0.0000	OK
30 minute summer	MH13	23	95.061	0.633	65.9	1.8678	0.0000	OK
30 minute summer	MH18	24	94.084	0.084	41.6	0.2520	0.0000	OK
30 minute summer	MH19	23	95.059	0.648	59.7	2.9313	0.0000	SURCHARGED
30 minute summer	EX SW 3	24	93.341	0.074	41.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute summer	MH9	1.000	MH8	35.5	0.687	0.110	4.5781	
30 minute summer	MH8	1.001	MH6	64.8	0.847	0.148	6.2333	
30 minute summer	MH7	2.000	MH6	22.0	0.338	0.051	3.5889	
30 minute summer	MH6	1.002	MH4	80.7	0.926	0.183	4.5173	
30 minute summer	MH5	3.000	MH4	12.3	0.323	0.028	2.9798	
30 minute summer	MH4	1.003	MH2	64.9	0.911	0.147	5.4889	
30 minute summer	MH3	4.000	MH2	8.2	0.200	0.019	3.6567	
30 minute summer	MH2	1.004	MH1	54.1	0.700	0.111	7.4360	
30 minute summer	MH1	1.005	MH1.1	60.2	0.612	0.468	2.0678	
30 minute summer	MH1.1	1.006	NEW SW 1	54.4	1.129	0.386	0.5103	
30 minute summer	NEW SW 1	EX1.000	EX SW 1	53.1	3.014	1.998	0.3054	108.7
30 minute summer	MH16	5.000	MH17	29.1	1.913	0.153	0.3373	
30 minute summer	MH14	6.000	MH15	8.2	1.776	0.198	0.0524	
30 minute summer	MH15	6.001	MH17	12.0	0.313	0.039	1.8936	
30 minute summer	MH17	5.001	MH19	32.3	0.558	0.087	10.0117	
30 minute summer	MH11	7.000	MH12	25.5	0.532	0.056	5.6958	
30 minute summer	MH12	7.001	MH13	36.7	0.582	0.120	8.2162	
30 minute summer	MH10	8.000	MH13	31.6	0.407	0.032	11.0042	
30 minute summer	MH13	7.002	MH19	44.7	0.503	0.081	3.3902	
30 minute summer	MH18	5.003	EX SW 3	41.7	3.360	0.233	0.0779	93.1
30 minute summer	MH19	5.002	MH18	41.6	2.240	0.095	0.1616	

**Results for 30 year 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.98%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute winter	MH9	24	93.909	0.259	32.2	0.9799	0.0000	OK
30 minute winter	MH8	25	93.905	0.352	59.0	1.2112	0.0000	OK
30 minute winter	MH7	25	93.902	0.421	18.0	1.3553	0.0000	OK
30 minute winter	MH6	24	93.901	0.493	80.3	1.5243	0.0000	OK
30 minute winter	MH5	25	93.901	0.524	13.9	1.5585	0.0000	OK
30 minute winter	MH4	24	93.901	0.572	76.3	1.5250	0.0000	OK
30 minute winter	MH3	24	93.904	0.606	12.4	1.7111	0.0000	SURCHARGED
30 minute winter	MH2	24	93.901	0.656	70.7	2.0189	0.0000	SURCHARGED
30 minute winter	MH1	24	93.900	0.787	62.6	2.4157	0.0000	SURCHARGED
30 minute winter	MH1.1	26	93.879	0.844	60.7	4.9504	0.0000	SURCHARGED
30 minute winter	NEW SW 1	26	93.285	1.646	55.1	2.9087	0.0000	SURCHARGED
30 minute winter	EX SW 1	52	91.392	0.142	53.9	0.0000	0.0000	OK
30 minute winter	MH16	18	95.718	0.078	26.3	0.2441	0.0000	OK
30 minute winter	MH14	18	95.820	0.045	7.4	0.0839	0.0000	OK
30 minute winter	MH15	26	95.121	0.403	12.6	1.2750	0.0000	OK
30 minute winter	MH17	26	95.121	0.424	34.6	1.2656	0.0000	OK
30 minute winter	MH11	24	95.126	0.326	23.9	1.1766	0.0000	OK
30 minute winter	MH12	24	95.119	0.469	45.7	1.5902	0.0000	OK
30 minute winter	MH10	25	95.117	0.478	32.5	1.8640	0.0000	OK
30 minute winter	MH13	25	95.123	0.695	73.1	2.0512	0.0000	OK
30 minute winter	MH18	26	94.087	0.087	43.8	0.2594	0.0000	OK
30 minute winter	MH19	25	95.124	0.713	58.4	3.2244	0.0000	SURCHARGED
30 minute winter	EX SW 3	26	93.342	0.075	43.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute winter	MH9	1.000	MH8	32.7	0.668	0.101	6.1575	
30 minute winter	MH8	1.001	MH6	55.8	0.811	0.127	7.4284	
30 minute winter	MH7	2.000	MH6	18.6	0.317	0.043	4.2091	
30 minute winter	MH6	1.002	MH4	64.9	0.894	0.147	5.0418	
30 minute winter	MH5	3.000	MH4	12.9	0.325	0.030	3.2476	
30 minute winter	MH4	1.003	MH2	55.3	0.889	0.126	5.7003	
30 minute winter	MH3	4.000	MH2	7.5	0.189	0.017	3.7534	
30 minute winter	MH2	1.004	MH1	50.8	0.719	0.105	7.4408	
30 minute winter	MH1	1.005	MH1.1	57.1	0.631	0.444	2.0678	
30 minute winter	MH1.1	1.006	NEW SW 1	55.1	1.126	0.391	0.6606	
30 minute winter	NEW SW 1	EX1.000	EX SW 1	53.9	3.065	2.031	0.3055	121.9
30 minute winter	MH16	5.000	MH17	26.3	1.861	0.139	0.3947	
30 minute winter	MH14	6.000	MH15	7.4	1.728	0.179	0.0485	
30 minute winter	MH15	6.001	MH17	9.9	0.292	0.032	2.1801	
30 minute winter	MH17	5.001	MH19	30.8	0.561	0.083	11.1932	
30 minute winter	MH11	7.000	MH12	21.7	0.508	0.048	6.6756	
30 minute winter	MH12	7.001	MH13	33.8	0.594	0.110	9.0513	
30 minute winter	MH10	8.000	MH13	30.3	0.418	0.031	12.0870	
30 minute winter	MH13	7.002	MH19	48.3	0.533	0.088	3.6323	
30 minute winter	MH18	5.003	EX SW 3	43.7	3.393	0.244	0.0808	104.5
30 minute winter	MH19	5.002	MH18	43.8	2.261	0.100	0.1684	

**Results for 30 year 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute summer	MH9	39	93.817	0.167	27.1	0.6330	0.0000	OK
60 minute summer	MH8	38	93.812	0.259	49.2	0.8920	0.0000	OK
60 minute summer	MH7	40	93.811	0.330	15.1	1.0609	0.0000	OK
60 minute summer	MH6	40	93.812	0.404	68.9	1.2494	0.0000	OK
60 minute summer	MH5	39	93.810	0.433	10.3	1.2858	0.0000	OK
60 minute summer	MH4	39	93.808	0.479	68.5	1.2753	0.0000	OK
60 minute summer	MH3	39	93.810	0.512	8.9	1.4440	0.0000	OK
60 minute summer	MH2	39	93.810	0.565	67.0	1.7371	0.0000	OK
60 minute summer	MH1	39	93.809	0.696	59.1	2.1371	0.0000	SURCHARGED
60 minute summer	MH1.1	39	93.791	0.756	57.4	4.4361	0.0000	SURCHARGED
60 minute summer	NEW SW 1	42	93.199	1.560	53.6	2.7571	0.0000	SURCHARGED
60 minute summer	EX SW 1	69	91.392	0.142	52.7	0.0000	0.0000	OK
60 minute summer	MH16	33	95.711	0.071	22.1	0.2229	0.0000	OK
60 minute summer	MH14	33	95.816	0.041	6.2	0.0764	0.0000	OK
60 minute summer	MH15	39	95.054	0.336	10.5	1.0630	0.0000	OK
60 minute summer	MH17	39	95.053	0.356	29.7	1.0633	0.0000	OK
60 minute summer	MH11	40	95.051	0.251	20.1	0.9041	0.0000	OK
60 minute summer	MH12	40	95.056	0.406	40.9	1.3744	0.0000	OK
60 minute summer	MH10	40	95.052	0.413	27.3	1.6085	0.0000	OK
60 minute summer	MH13	40	95.047	0.619	66.0	1.8263	0.0000	OK
60 minute summer	MH18	42	94.084	0.084	41.2	0.2505	0.0000	OK
60 minute summer	MH19	41	95.046	0.635	55.5	2.8734	0.0000	SURCHARGED
60 minute summer	EX SW 3	42	93.340	0.073	41.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute summer	MH9	1.000	MH8	27.1	0.644	0.084	3.8099	
60 minute summer	MH8	1.001	MH6	48.7	0.786	0.111	5.6428	
60 minute summer	MH7	2.000	MH6	13.2	0.311	0.030	3.3075	
60 minute summer	MH6	1.002	MH4	58.6	0.872	0.133	4.2483	
60 minute summer	MH5	3.000	MH4	7.3	0.280	0.017	2.7734	
60 minute summer	MH4	1.003	MH2	53.7	0.889	0.122	5.2655	
60 minute summer	MH3	4.000	MH2	-4.7	0.165	-0.011	3.5383	
60 minute summer	MH2	1.004	MH1	48.5	0.633	0.100	7.3539	
60 minute summer	MH1	1.005	MH1.1	53.7	0.563	0.418	2.0678	
60 minute summer	MH1.1	1.006	NEW SW 1	53.6	1.127	0.380	0.4572	
60 minute summer	NEW SW 1	EX1.000	EX SW 1	52.7	2.995	1.985	0.3056	138.8
60 minute summer	MH16	5.000	MH17	22.1	1.775	0.116	0.2761	
60 minute summer	MH14	6.000	MH15	6.2	1.647	0.150	0.0427	
60 minute summer	MH15	6.001	MH17	7.9	0.282	0.026	1.7721	
60 minute summer	MH17	5.001	MH19	25.3	0.535	0.068	9.5836	
60 minute summer	MH11	7.000	MH12	19.6	0.470	0.043	5.3373	
60 minute summer	MH12	7.001	MH13	30.9	0.564	0.101	7.8735	
60 minute summer	MH10	8.000	MH13	24.1	0.366	0.025	10.6597	
60 minute summer	MH13	7.002	MH19	42.5	0.479	0.077	3.3281	
60 minute summer	MH18	5.003	EX SW 3	41.3	3.352	0.231	0.0773	119.1
60 minute summer	MH19	5.002	MH18	41.2	2.236	0.094	0.1603	

**Results for 30 year 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute winter	MH9	42	93.837	0.187	21.9	0.7087	0.0000	OK
60 minute winter	MH8	42	93.831	0.278	40.0	0.9578	0.0000	OK
60 minute winter	MH7	43	93.832	0.351	12.2	1.1292	0.0000	OK
60 minute winter	MH6	43	93.831	0.423	56.8	1.3077	0.0000	OK
60 minute winter	MH5	43	93.831	0.454	8.4	1.3478	0.0000	OK
60 minute winter	MH4	43	93.830	0.501	56.0	1.3356	0.0000	OK
60 minute winter	MH3	43	93.829	0.531	5.5	1.4992	0.0000	OK
60 minute winter	MH2	43	93.829	0.584	59.5	1.7959	0.0000	OK
60 minute winter	MH1	43	93.827	0.714	55.3	2.1914	0.0000	SURCHARGED
60 minute winter	MH1.1	43	93.809	0.774	56.4	4.5417	0.0000	SURCHARGED
60 minute winter	NEW SW 1	44	93.229	1.590	53.6	2.8093	0.0000	SURCHARGED
60 minute winter	EX SW 1	24	91.392	0.142	53.1	0.0000	0.0000	OK
60 minute winter	MH16	33	95.704	0.064	17.9	0.1997	0.0000	OK
60 minute winter	MH14	33	95.811	0.036	5.0	0.0683	0.0000	OK
60 minute winter	MH15	43	95.081	0.363	8.5	1.1480	0.0000	OK
60 minute winter	MH17	43	95.081	0.384	24.3	1.1480	0.0000	OK
60 minute winter	MH11	43	95.082	0.282	16.2	1.0152	0.0000	OK
60 minute winter	MH12	42	95.078	0.428	31.3	1.4493	0.0000	OK
60 minute winter	MH10	42	95.083	0.444	22.1	1.7306	0.0000	OK
60 minute winter	MH13	44	95.078	0.650	51.0	1.9162	0.0000	OK
60 minute winter	MH18	44	94.085	0.085	42.3	0.2543	0.0000	OK
60 minute winter	MH19	44	95.077	0.666	50.0	3.0127	0.0000	SURCHARGED
60 minute winter	EX SW 3	44	93.341	0.074	42.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute winter	MH9	1.000	MH8	22.1	0.606	0.068	4.4193	
60 minute winter	MH8	1.001	MH6	39.0	0.734	0.089	6.0220	
60 minute winter	MH7	2.000	MH6	9.5	0.296	0.022	3.5188	
60 minute winter	MH6	1.002	MH4	47.8	0.848	0.109	4.4560	
60 minute winter	MH5	3.000	MH4	6.8	0.284	0.016	2.9032	
60 minute winter	MH4	1.003	MH2	46.5	0.856	0.106	5.4187	
60 minute winter	MH3	4.000	MH2	3.8	0.167	0.009	3.6210	
60 minute winter	MH2	1.004	MH1	47.2	0.673	0.097	7.4136	
60 minute winter	MH1	1.005	MH1.1	53.4	0.581	0.415	2.0678	
60 minute winter	MH1.1	1.006	NEW SW 1	53.6	1.125	0.380	0.5234	
60 minute winter	NEW SW 1	EX1.000	EX SW 1	53.1	3.019	2.001	0.3054	155.5
60 minute winter	MH16	5.000	MH17	17.9	1.674	0.094	0.2482	
60 minute winter	MH14	6.000	MH15	5.0	1.553	0.121	0.0365	
60 minute winter	MH15	6.001	MH17	6.8	0.272	0.022	1.9423	
60 minute winter	MH17	5.001	MH19	19.2	0.540	0.051	10.3011	
60 minute winter	MH11	7.000	MH12	15.0	0.447	0.033	5.8513	
60 minute winter	MH12	7.001	MH13	24.1	0.571	0.079	8.3461	
60 minute winter	MH10	8.000	MH13	23.4	0.359	0.024	11.3191	
60 minute winter	MH13	7.002	MH19	35.2	0.478	0.064	3.4642	
60 minute winter	MH18	5.003	EX SW 3	42.3	3.371	0.237	0.0788	133.3
60 minute winter	MH19	5.002	MH18	42.3	2.246	0.097	0.1637	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute summer	MH9	64	93.744	0.094	17.9	0.3553	0.0000	OK
120 minute summer	MH8	72	93.713	0.160	32.5	0.5522	0.0000	OK
120 minute summer	MH7	72	93.713	0.232	10.0	0.7467	0.0000	OK
120 minute summer	MH6	72	93.712	0.304	47.4	0.9412	0.0000	OK
120 minute summer	MH5	72	93.710	0.333	6.8	0.9896	0.0000	OK
120 minute summer	MH4	72	93.711	0.382	48.9	1.0165	0.0000	OK
120 minute summer	MH3	72	93.708	0.410	4.5	1.1580	0.0000	OK
120 minute summer	MH2	72	93.708	0.463	52.2	1.4254	0.0000	OK
120 minute summer	MH1	72	93.707	0.594	50.6	1.8226	0.0000	SURCHARGED
120 minute summer	MH1.1	72	93.690	0.655	50.0	3.8453	0.0000	SURCHARGED
120 minute summer	NEW SW 1	74	93.003	1.364	49.8	2.4096	0.0000	SURCHARGED
120 minute summer	EX SW 1	54	91.392	0.142	49.8	0.0000	0.0000	OK
120 minute summer	MH16	64	95.698	0.058	14.6	0.1800	0.0000	OK
120 minute summer	MH14	64	95.808	0.033	4.1	0.0616	0.0000	OK
120 minute summer	MH15	74	94.975	0.257	7.0	0.8107	0.0000	OK
120 minute summer	MH17	74	94.974	0.277	19.7	0.8285	0.0000	OK
120 minute summer	MH11	74	94.975	0.175	13.2	0.6296	0.0000	OK
120 minute summer	MH12	72	94.974	0.324	27.1	1.0978	0.0000	OK
120 minute summer	MH10	72	94.973	0.334	18.0	1.3020	0.0000	OK
120 minute summer	MH13	74	94.974	0.546	39.9	1.6095	0.0000	OK
120 minute summer	MH18	74	94.081	0.081	38.5	0.2404	0.0000	OK
120 minute summer	MH19	74	94.974	0.563	43.9	2.5463	0.0000	SURCHARGED
120 minute summer	EX SW 3	74	93.338	0.071	38.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute summer	MH9	1.000	MH8	17.9	0.573	0.055	1.7500	
120 minute summer	MH8	1.001	MH6	32.4	0.715	0.074	3.6146	
120 minute summer	MH7	2.000	MH6	8.6	0.290	0.020	2.2390	
120 minute summer	MH6	1.002	MH4	42.2	0.826	0.096	3.1943	
120 minute summer	MH5	3.000	MH4	5.2	0.228	0.012	2.1141	
120 minute summer	MH4	1.003	MH2	41.8	0.849	0.095	4.3114	
120 minute summer	MH3	4.000	MH2	3.5	0.142	0.008	2.9243	
120 minute summer	MH2	1.004	MH1	43.1	0.626	0.089	6.7997	
120 minute summer	MH1	1.005	MH1.1	48.3	0.494	0.376	2.0678	
120 minute summer	MH1.1	1.006	NEW SW 1	49.8	1.106	0.353	0.3432	
120 minute summer	NEW SW 1	EX1.000	EX SW 1	49.8	2.827	1.874	0.3055	171.8
120 minute summer	MH16	5.000	MH17	14.6	1.581	0.077	0.2048	
120 minute summer	MH14	6.000	MH15	4.1	1.470	0.099	0.0316	
120 minute summer	MH15	6.001	MH17	5.2	0.261	0.017	1.2750	
120 minute summer	MH17	5.001	MH19	15.7	0.534	0.042	7.6833	
120 minute summer	MH11	7.000	MH12	13.0	0.426	0.028	3.7802	
120 minute summer	MH12	7.001	MH13	18.8	0.553	0.061	6.2791	
120 minute summer	MH10	8.000	MH13	14.8	0.314	0.015	8.8984	
120 minute summer	MH13	7.002	MH19	29.8	0.423	0.054	2.9533	
120 minute summer	MH18	5.003	EX SW 3	38.5	3.299	0.215	0.0733	147.3
120 minute summer	MH19	5.002	MH18	38.5	2.207	0.088	0.1517	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute winter	MH9	64	93.733	0.083	13.8	0.3135	0.0000	OK
120 minute winter	MH8	74	93.681	0.128	25.1	0.4418	0.0000	OK
120 minute winter	MH7	76	93.680	0.199	7.7	0.6405	0.0000	OK
120 minute winter	MH6	76	93.680	0.272	38.3	0.8411	0.0000	OK
120 minute winter	MH5	76	93.679	0.302	5.3	0.8989	0.0000	OK
120 minute winter	MH4	76	93.679	0.350	39.7	0.9336	0.0000	OK
120 minute winter	MH3	76	93.679	0.381	3.5	1.0747	0.0000	OK
120 minute winter	MH2	76	93.679	0.434	44.1	1.3343	0.0000	OK
120 minute winter	MH1	76	93.678	0.565	47.5	1.7341	0.0000	SURCHARGED
120 minute winter	MH1.1	76	93.663	0.628	48.6	3.6843	0.0000	SURCHARGED
120 minute winter	NEW SW 1	78	92.915	1.276	48.5	2.2539	0.0000	SURCHARGED
120 minute winter	EX SW 1	50	91.392	0.142	48.4	0.0000	0.0000	OK
120 minute winter	MH16	64	95.691	0.051	11.3	0.1583	0.0000	OK
120 minute winter	MH14	64	95.804	0.029	3.2	0.0543	0.0000	OK
120 minute winter	MH15	76	94.959	0.241	5.4	0.7609	0.0000	OK
120 minute winter	MH17	76	94.959	0.262	15.7	0.7812	0.0000	OK
120 minute winter	MH11	78	94.959	0.159	10.2	0.5731	0.0000	OK
120 minute winter	MH12	76	94.960	0.310	20.9	1.0486	0.0000	OK
120 minute winter	MH10	76	94.961	0.322	13.9	1.2544	0.0000	OK
120 minute winter	MH13	78	94.960	0.532	34.1	1.5692	0.0000	OK
120 minute winter	MH18	78	94.080	0.080	37.9	0.2382	0.0000	OK
120 minute winter	MH19	78	94.960	0.549	41.0	2.4836	0.0000	SURCHARGED
120 minute winter	EX SW 3	78	93.337	0.070	37.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute winter	MH9	1.000	MH8	13.8	0.531	0.043	1.3919	
120 minute winter	MH8	1.001	MH6	25.1	0.678	0.057	2.9754	
120 minute winter	MH7	2.000	MH6	7.1	0.281	0.016	1.8877	
120 minute winter	MH6	1.002	MH4	35.1	0.801	0.080	2.8339	
120 minute winter	MH5	3.000	MH4	4.1	0.204	0.010	1.8940	
120 minute winter	MH4	1.003	MH2	35.1	0.825	0.080	3.9689	
120 minute winter	MH3	4.000	MH2	2.8	0.131	0.006	2.7100	
120 minute winter	MH2	1.004	MH1	41.8	0.627	0.086	6.5158	
120 minute winter	MH1	1.005	MH1.1	47.0	0.509	0.365	2.0678	
120 minute winter	MH1.1	1.006	NEW SW 1	48.5	1.099	0.344	0.3366	
120 minute winter	NEW SW 1	EX1.000	EX SW 1	48.4	2.749	1.822	0.3054	192.7
120 minute winter	MH16	5.000	MH17	11.3	1.469	0.060	0.1705	
120 minute winter	MH14	6.000	MH15	3.2	1.369	0.077	0.0265	
120 minute winter	MH15	6.001	MH17	4.5	0.247	0.015	1.1766	
120 minute winter	MH17	5.001	MH19	13.4	0.539	0.036	7.2791	
120 minute winter	MH11	7.000	MH12	10.1	0.398	0.022	3.4982	
120 minute winter	MH12	7.001	MH13	16.3	0.554	0.053	6.0174	
120 minute winter	MH10	8.000	MH13	13.3	0.292	0.014	8.5860	
120 minute winter	MH13	7.002	MH19	28.1	0.347	0.051	2.8758	
120 minute winter	MH18	5.003	EX SW 3	37.9	3.287	0.212	0.0724	165.1
120 minute winter	MH19	5.002	MH18	37.9	2.201	0.087	0.1499	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute summer	MH9	96	93.732	0.082	13.4	0.3092	0.0000	OK
180 minute summer	MH8	96	93.647	0.094	24.3	0.3234	0.0000	OK
180 minute summer	MH7	104	93.625	0.144	7.5	0.4642	0.0000	OK
180 minute summer	MH6	104	93.625	0.217	37.4	0.6709	0.0000	OK
180 minute summer	MH5	104	93.624	0.247	5.1	0.7330	0.0000	OK
180 minute summer	MH4	104	93.624	0.295	40.5	0.7847	0.0000	OK
180 minute summer	MH3	104	93.622	0.324	3.4	0.9156	0.0000	OK
180 minute summer	MH2	104	93.623	0.378	44.3	1.1615	0.0000	OK
180 minute summer	MH1	104	93.622	0.509	45.4	1.5612	0.0000	SURCHARGED
180 minute summer	MH1.1	104	93.608	0.573	46.0	3.3628	0.0000	SURCHARGED
180 minute summer	NEW SW 1	104	92.745	1.106	45.8	1.9539	0.0000	SURCHARGED
180 minute summer	EX SW 1	84	91.392	0.142	45.6	0.0000	0.0000	OK
180 minute summer	MH16	96	95.690	0.050	10.9	0.1554	0.0000	OK
180 minute summer	MH14	96	95.804	0.028	3.1	0.0535	0.0000	OK
180 minute summer	MH15	104	94.905	0.187	5.2	0.5921	0.0000	OK
180 minute summer	MH17	104	94.905	0.208	15.1	0.6214	0.0000	OK
180 minute summer	MH11	104	94.904	0.104	9.9	0.3735	0.0000	OK
180 minute summer	MH12	104	94.904	0.254	20.4	0.8607	0.0000	OK
180 minute summer	MH10	104	94.905	0.266	13.5	1.0361	0.0000	OK
180 minute summer	MH13	108	94.903	0.475	35.1	1.4009	0.0000	OK
180 minute summer	MH18	108	94.077	0.077	35.5	0.2293	0.0000	OK
180 minute summer	MH19	108	94.903	0.492	39.3	2.2248	0.0000	SURCHARGED
180 minute summer	EX SW 3	108	93.335	0.068	35.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute summer	MH9	1.000	MH8	13.4	0.526	0.042	1.1114	
180 minute summer	MH8	1.001	MH6	24.3	0.683	0.055	2.0293	
180 minute summer	MH7	2.000	MH6	7.4	0.288	0.017	1.3197	
180 minute summer	MH6	1.002	MH4	36.2	0.806	0.082	2.2037	
180 minute summer	MH5	3.000	MH4	3.9	0.225	0.009	1.4918	
180 minute summer	MH4	1.003	MH2	35.2	0.790	0.080	3.3088	
180 minute summer	MH3	4.000	MH2	2.6	0.143	0.006	2.2798	
180 minute summer	MH2	1.004	MH1	39.4	0.620	0.081	5.8303	
180 minute summer	MH1	1.005	MH1.1	44.3	0.475	0.345	2.0678	
180 minute summer	MH1.1	1.006	NEW SW 1	45.8	1.083	0.325	0.3228	
180 minute summer	NEW SW 1	EX1.000	EX SW 1	45.6	2.590	1.717	0.3054	192.9
180 minute summer	MH16	5.000	MH17	10.9	1.454	0.057	0.1662	
180 minute summer	MH14	6.000	MH15	3.1	1.357	0.075	0.0259	
180 minute summer	MH15	6.001	MH17	4.2	0.248	0.014	0.8513	
180 minute summer	MH17	5.001	MH19	12.9	0.539	0.035	5.8012	
180 minute summer	MH11	7.000	MH12	9.9	0.393	0.022	2.4767	
180 minute summer	MH12	7.001	MH13	16.7	0.525	0.055	4.8248	
180 minute summer	MH10	8.000	MH13	13.0	0.273	0.013	7.2529	
180 minute summer	MH13	7.002	MH19	27.8	0.405	0.051	2.5393	
180 minute summer	MH18	5.003	EX SW 3	35.6	3.238	0.199	0.0689	164.8
180 minute summer	MH19	5.002	MH18	35.5	2.172	0.081	0.1423	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute winter	MH9	96	93.722	0.072	10.3	0.2728	0.0000	OK
180 minute winter	MH8	96	93.636	0.083	18.7	0.2850	0.0000	OK
180 minute winter	MH7	108	93.560	0.079	5.7	0.2528	0.0000	OK
180 minute winter	MH6	108	93.559	0.151	29.5	0.4680	0.0000	OK
180 minute winter	MH5	108	93.558	0.181	3.9	0.5371	0.0000	OK
180 minute winter	MH4	108	93.558	0.229	33.1	0.6090	0.0000	OK
180 minute winter	MH3	108	93.556	0.258	2.6	0.7296	0.0000	OK
180 minute winter	MH2	108	93.556	0.311	37.7	0.9579	0.0000	OK
180 minute winter	MH1	108	93.556	0.443	41.4	1.3588	0.0000	SURCHARGED
180 minute winter	MH1.1	108	93.544	0.509	42.6	2.9865	0.0000	SURCHARGED
180 minute winter	NEW SW 1	108	92.567	0.928	42.5	1.6397	0.0000	SURCHARGED
180 minute winter	EX SW 1	76	91.392	0.142	42.5	0.0000	0.0000	OK
180 minute winter	MH16	96	95.684	0.044	8.4	0.1365	0.0000	OK
180 minute winter	MH14	96	95.800	0.025	2.4	0.0470	0.0000	OK
180 minute winter	MH15	108	94.865	0.147	4.1	0.4652	0.0000	OK
180 minute winter	MH17	108	94.865	0.168	12.0	0.5019	0.0000	OK
180 minute winter	MH11	108	94.866	0.066	7.6	0.2389	0.0000	OK
180 minute winter	MH12	108	94.867	0.217	15.7	0.7333	0.0000	OK
180 minute winter	MH10	108	94.866	0.227	10.4	0.8854	0.0000	OK
180 minute winter	MH13	108	94.865	0.437	27.6	1.2900	0.0000	OK
180 minute winter	MH18	108	94.075	0.075	33.8	0.2228	0.0000	OK
180 minute winter	MH19	108	94.865	0.454	34.8	2.0537	0.0000	SURCHARGED
180 minute winter	EX SW 3	108	93.333	0.066	33.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute winter	MH9	1.000	MH8	10.3	0.486	0.032	0.9256	
180 minute winter	MH8	1.001	MH6	18.7	0.652	0.043	1.3640	
180 minute winter	MH7	2.000	MH6	5.7	0.269	0.013	0.7093	
180 minute winter	MH6	1.002	MH4	29.1	0.783	0.066	1.4814	
180 minute winter	MH5	3.000	MH4	3.4	0.211	0.008	1.0276	
180 minute winter	MH4	1.003	MH2	30.5	0.801	0.069	2.5118	
180 minute winter	MH3	4.000	MH2	2.4	0.103	0.006	1.7575	
180 minute winter	MH2	1.004	MH1	36.5	0.625	0.075	4.8942	
180 minute winter	MH1	1.005	MH1.1	41.2	0.478	0.320	2.0678	
180 minute winter	MH1.1	1.006	NEW SW 1	42.5	1.062	0.301	0.3053	
180 minute winter	NEW SW 1	EX1.000	EX SW 1	42.5	2.414	1.600	0.3055	215.7
180 minute winter	MH16	5.000	MH17	8.4	1.349	0.044	0.1380	
180 minute winter	MH14	6.000	MH15	2.4	1.261	0.058	0.0216	
180 minute winter	MH15	6.001	MH17	3.6	0.237	0.012	0.6212	
180 minute winter	MH17	5.001	MH19	10.8	0.518	0.029	4.7773	
180 minute winter	MH11	7.000	MH12	7.6	0.383	0.017	1.8400	
180 minute winter	MH12	7.001	MH13	13.8	0.527	0.045	4.0300	
180 minute winter	MH10	8.000	MH13	9.6	0.244	0.010	6.3405	
180 minute winter	MH13	7.002	MH19	24.8	0.271	0.045	2.3076	
180 minute winter	MH18	5.003	EX SW 3	33.8	3.200	0.189	0.0664	185.2
180 minute winter	MH19	5.002	MH18	33.8	2.151	0.078	0.1368	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute summer	MH9	124	93.725	0.075	11.3	0.2836	0.0000	OK
240 minute summer	MH8	124	93.639	0.086	20.4	0.2955	0.0000	OK
240 minute summer	MH7	132	93.554	0.073	6.3	0.2344	0.0000	OK
240 minute summer	MH6	132	93.553	0.145	32.1	0.4499	0.0000	OK
240 minute summer	MH5	132	93.551	0.174	4.3	0.5185	0.0000	OK
240 minute summer	MH4	132	93.551	0.222	35.8	0.5923	0.0000	OK
240 minute summer	MH3	132	93.550	0.252	2.8	0.7127	0.0000	OK
240 minute summer	MH2	132	93.550	0.305	39.8	0.9389	0.0000	OK
240 minute summer	MH1	132	93.549	0.436	41.7	1.3400	0.0000	SURCHARGED
240 minute summer	MH1.1	132	93.538	0.503	42.4	2.9501	0.0000	SURCHARGED
240 minute summer	NEW SW 1	136	92.550	0.911	42.2	1.6102	0.0000	SURCHARGED
240 minute summer	EX SW 1	112	91.392	0.142	42.2	0.0000	0.0000	OK
240 minute summer	MH16	124	95.686	0.046	9.2	0.1425	0.0000	OK
240 minute summer	MH14	124	95.801	0.026	2.6	0.0489	0.0000	OK
240 minute summer	MH15	136	94.852	0.134	4.4	0.4223	0.0000	OK
240 minute summer	MH17	136	94.852	0.155	12.7	0.4621	0.0000	OK
240 minute summer	MH11	124	94.855	0.055	8.4	0.1996	0.0000	OK
240 minute summer	MH12	136	94.853	0.203	17.2	0.6863	0.0000	OK
240 minute summer	MH10	136	94.851	0.212	11.4	0.8266	0.0000	OK
240 minute summer	MH13	136	94.853	0.425	29.1	1.2538	0.0000	OK
240 minute summer	MH18	136	94.074	0.074	33.3	0.2207	0.0000	OK
240 minute summer	MH19	136	94.853	0.442	34.7	1.9993	0.0000	SURCHARGED
240 minute summer	EX SW 3	136	93.332	0.065	33.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute summer	MH9	1.000	MH8	11.2	0.500	0.035	0.9777	
240 minute summer	MH8	1.001	MH6	20.2	0.662	0.046	1.3266	
240 minute summer	MH7	2.000	MH6	6.3	0.275	0.014	0.6609	
240 minute summer	MH6	1.002	MH4	31.9	0.788	0.072	1.4172	
240 minute summer	MH5	3.000	MH4	3.6	0.225	0.008	0.9849	
240 minute summer	MH4	1.003	MH2	32.1	0.807	0.073	2.4369	
240 minute summer	MH3	4.000	MH2	2.6	0.107	0.006	1.7092	
240 minute summer	MH2	1.004	MH1	36.5	0.628	0.075	4.8026	
240 minute summer	MH1	1.005	MH1.1	41.0	0.491	0.319	2.0678	
240 minute summer	MH1.1	1.006	NEW SW 1	42.2	1.059	0.299	0.3035	
240 minute summer	NEW SW 1	EX1.000	EX SW 1	42.2	2.397	1.589	0.3055	208.0
240 minute summer	MH16	5.000	MH17	9.2	1.383	0.048	0.1466	
240 minute summer	MH14	6.000	MH15	2.6	1.288	0.062	0.0228	
240 minute summer	MH15	6.001	MH17	4.0	0.244	0.013	0.5478	
240 minute summer	MH17	5.001	MH19	12.2	0.526	0.033	4.4490	
240 minute summer	MH11	7.000	MH12	8.3	0.391	0.018	1.6257	
240 minute summer	MH12	7.001	MH13	14.6	0.526	0.048	3.7566	
240 minute summer	MH10	8.000	MH13	9.9	0.264	0.010	6.0166	
240 minute summer	MH13	7.002	MH19	24.2	0.398	0.044	2.2319	
240 minute summer	MH18	5.003	EX SW 3	33.3	3.189	0.186	0.0656	178.5
240 minute summer	MH19	5.002	MH18	33.3	2.145	0.076	0.1351	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute winter	MH9	124	93.715	0.065	8.4	0.2478	0.0000	OK
240 minute winter	MH8	124	93.628	0.075	15.3	0.2586	0.0000	OK
240 minute winter	MH7	124	93.524	0.043	4.7	0.1399	0.0000	OK
240 minute winter	MH6	124	93.507	0.099	24.1	0.3059	0.0000	OK
240 minute winter	MH5	136	93.468	0.091	3.2	0.2718	0.0000	OK
240 minute winter	MH4	136	93.468	0.139	28.0	0.3713	0.0000	OK
240 minute winter	MH3	136	93.466	0.168	2.1	0.4753	0.0000	OK
240 minute winter	MH2	136	93.466	0.221	33.4	0.6808	0.0000	OK
240 minute winter	MH1	136	93.466	0.353	36.8	1.0828	0.0000	OK
240 minute winter	MH1.1	136	93.457	0.422	37.6	2.4774	0.0000	SURCHARGED
240 minute winter	NEW SW 1	136	92.311	0.672	37.6	1.1882	0.0000	SURCHARGED
240 minute winter	EX SW 1	108	91.392	0.142	37.6	0.0000	0.0000	OK
240 minute winter	MH16	124	95.680	0.040	6.9	0.1240	0.0000	OK
240 minute winter	MH14	124	95.797	0.022	1.9	0.0419	0.0000	OK
240 minute winter	MH15	140	94.794	0.076	3.2	0.2417	0.0000	OK
240 minute winter	MH17	140	94.794	0.097	10.0	0.2888	0.0000	OK
240 minute winter	MH11	124	94.848	0.048	6.2	0.1737	0.0000	OK
240 minute winter	MH12	140	94.795	0.145	12.8	0.4899	0.0000	OK
240 minute winter	MH10	136	94.793	0.154	8.5	0.6021	0.0000	OK
240 minute winter	MH13	140	94.793	0.365	23.7	1.0771	0.0000	OK
240 minute winter	MH18	140	94.070	0.070	30.4	0.2093	0.0000	OK
240 minute winter	MH19	140	94.793	0.382	30.7	1.7274	0.0000	SURCHARGED
240 minute winter	EX SW 3	140	93.329	0.062	30.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute winter	MH9	1.000	MH8	8.4	0.456	0.026	0.8022	
240 minute winter	MH8	1.001	MH6	15.2	0.618	0.035	0.8966	
240 minute winter	MH7	2.000	MH6	4.7	0.256	0.011	0.3608	
240 minute winter	MH6	1.002	MH4	24.2	0.768	0.055	0.7325	
240 minute winter	MH5	3.000	MH4	3.1	0.155	0.007	0.4629	
240 minute winter	MH4	1.003	MH2	27.4	0.788	0.062	1.4676	
240 minute winter	MH3	4.000	MH2	2.2	0.115	0.005	1.0594	
240 minute winter	MH2	1.004	MH1	32.4	0.623	0.067	3.5206	
240 minute winter	MH1	1.005	MH1.1	36.4	0.481	0.283	2.0425	
240 minute winter	MH1.1	1.006	NEW SW 1	37.6	1.028	0.267	0.2791	
240 minute winter	NEW SW 1	EX1.000	EX SW 1	37.6	2.136	1.416	0.3054	232.9
240 minute winter	MH16	5.000	MH17	6.9	1.274	0.036	0.1199	
240 minute winter	MH14	6.000	MH15	1.9	1.179	0.046	0.0183	
240 minute winter	MH15	6.001	MH17	3.2	0.229	0.010	0.2638	
240 minute winter	MH17	5.001	MH19	9.9	0.524	0.027	2.9834	
240 minute winter	MH11	7.000	MH12	6.2	0.366	0.014	1.0515	
240 minute winter	MH12	7.001	MH13	11.7	0.524	0.038	2.5627	
240 minute winter	MH10	8.000	MH13	8.6	0.252	0.009	4.6478	
240 minute winter	MH13	7.002	MH19	21.8	0.273	0.040	1.8536	
240 minute winter	MH18	5.003	EX SW 3	30.4	3.119	0.170	0.0611	199.0
240 minute winter	MH19	5.002	MH18	30.4	2.103	0.070	0.1257	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute summer	MH9	184	93.716	0.066	8.6	0.2493	0.0000	OK
360 minute summer	MH8	184	93.628	0.075	15.5	0.2590	0.0000	OK
360 minute summer	MH7	184	93.525	0.044	4.8	0.1409	0.0000	OK
360 minute summer	MH6	184	93.507	0.099	24.3	0.3064	0.0000	OK
360 minute summer	MH5	192	93.444	0.067	3.3	0.1993	0.0000	OK
360 minute summer	MH4	192	93.444	0.115	28.3	0.3057	0.0000	OK
360 minute summer	MH3	192	93.441	0.143	2.2	0.4033	0.0000	OK
360 minute summer	MH2	192	93.441	0.196	34.2	0.6025	0.0000	OK
360 minute summer	MH1	192	93.441	0.328	36.0	1.0065	0.0000	OK
360 minute summer	MH1.1	192	93.434	0.399	36.4	2.3426	0.0000	SURCHARGED
360 minute summer	NEW SW 1	192	92.240	0.601	36.2	1.0617	0.0000	SURCHARGED
360 minute summer	EX SW 1	176	91.392	0.142	36.1	0.0000	0.0000	OK
360 minute summer	MH16	184	95.680	0.040	7.0	0.1246	0.0000	OK
360 minute summer	MH14	184	95.798	0.023	2.0	0.0429	0.0000	OK
360 minute summer	MH15	192	94.773	0.055	3.4	0.1736	0.0000	OK
360 minute summer	MH17	192	94.771	0.074	10.3	0.2196	0.0000	OK
360 minute summer	MH11	184	94.849	0.049	6.4	0.1757	0.0000	OK
360 minute summer	MH12	192	94.771	0.121	13.1	0.4087	0.0000	OK
360 minute summer	MH10	192	94.768	0.129	8.7	0.5016	0.0000	OK
360 minute summer	MH13	192	94.769	0.341	22.8	1.0064	0.0000	OK
360 minute summer	MH18	192	94.068	0.068	29.2	0.2043	0.0000	OK
360 minute summer	MH19	192	94.769	0.358	30.0	1.6194	0.0000	OK
360 minute summer	EX SW 3	192	93.328	0.061	29.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute summer	MH9	1.000	MH8	8.5	0.459	0.026	0.8063	
360 minute summer	MH8	1.001	MH6	15.3	0.607	0.035	0.8987	
360 minute summer	MH7	2.000	MH6	4.8	0.253	0.011	0.3624	
360 minute summer	MH6	1.002	MH4	24.1	0.774	0.055	0.6272	
360 minute summer	MH5	3.000	MH4	3.3	0.151	0.008	0.3306	
360 minute summer	MH4	1.003	MH2	28.1	0.779	0.064	1.1971	
360 minute summer	MH3	4.000	MH2	2.1	0.098	0.005	0.8736	
360 minute summer	MH2	1.004	MH1	31.5	0.621	0.065	3.1343	
360 minute summer	MH1	1.005	MH1.1	35.3	0.473	0.275	1.9921	
360 minute summer	MH1.1	1.006	NEW SW 1	36.2	1.018	0.257	0.2715	
360 minute summer	NEW SW 1	EX1.000	EX SW 1	36.1	2.051	1.359	0.3054	229.7
360 minute summer	MH16	5.000	MH17	7.0	1.278	0.037	0.1208	
360 minute summer	MH14	6.000	MH15	2.0	1.195	0.048	0.0189	
360 minute summer	MH15	6.001	MH17	3.3	0.235	0.011	0.1706	
360 minute summer	MH17	5.001	MH19	10.2	0.523	0.027	2.4451	
360 minute summer	MH11	7.000	MH12	6.3	0.366	0.014	0.8509	
360 minute summer	MH12	7.001	MH13	11.6	0.521	0.038	2.1063	
360 minute summer	MH10	8.000	MH13	7.7	0.190	0.008	4.0994	
360 minute summer	MH13	7.002	MH19	20.3	0.205	0.037	1.7023	
360 minute summer	MH18	5.003	EX SW 3	29.2	3.089	0.163	0.0592	197.9
360 minute summer	MH19	5.002	MH18	29.2	2.085	0.067	0.1216	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute winter	MH9	184	93.707	0.057	6.3	0.2158	0.0000	OK
360 minute winter	MH8	184	93.618	0.065	11.4	0.2252	0.0000	OK
360 minute winter	MH7	184	93.519	0.038	3.5	0.1224	0.0000	OK
360 minute winter	MH6	184	93.493	0.085	18.0	0.2630	0.0000	OK
360 minute winter	MH5	184	93.421	0.044	2.4	0.1319	0.0000	OK
360 minute winter	MH4	184	93.421	0.092	21.1	0.2447	0.0000	OK
360 minute winter	MH3	192	93.339	0.041	1.6	0.1162	0.0000	OK
360 minute winter	MH2	192	93.339	0.094	25.8	0.2895	0.0000	OK
360 minute winter	MH1	192	93.340	0.227	29.1	0.6980	0.0000	OK
360 minute winter	MH1.1	192	93.336	0.301	29.8	1.7648	0.0000	OK
360 minute winter	NEW SW 1	192	91.967	0.328	29.8	0.5801	0.0000	SURCHARGED
360 minute winter	EX SW 1	184	91.392	0.142	29.7	0.0000	0.0000	OK
360 minute winter	MH16	184	95.674	0.034	5.1	0.1071	0.0000	OK
360 minute winter	MH14	184	95.794	0.019	1.4	0.0361	0.0000	OK
360 minute winter	MH15	184	94.760	0.042	2.4	0.1323	0.0000	OK
360 minute winter	MH17	184	94.755	0.058	7.5	0.1728	0.0000	OK
360 minute winter	MH11	184	94.842	0.042	4.6	0.1517	0.0000	OK
360 minute winter	MH12	184	94.721	0.071	9.5	0.2402	0.0000	OK
360 minute winter	MH10	192	94.694	0.055	6.3	0.2151	0.0000	OK
360 minute winter	MH13	192	94.694	0.266	17.9	0.7845	0.0000	OK
360 minute winter	MH18	192	94.063	0.062	24.9	0.1866	0.0000	OK
360 minute winter	MH19	192	94.693	0.282	25.0	1.2779	0.0000	OK
360 minute winter	EX SW 3	192	93.323	0.056	24.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute winter	MH9	1.000	MH8	6.3	0.419	0.019	0.6542	
360 minute winter	MH8	1.001	MH6	11.3	0.558	0.026	0.7239	
360 minute winter	MH7	2.000	MH6	3.5	0.231	0.008	0.2908	
360 minute winter	MH6	1.002	MH4	18.0	0.699	0.041	0.4947	
360 minute winter	MH5	3.000	MH4	2.4	0.138	0.005	0.2207	
360 minute winter	MH4	1.003	MH2	21.0	0.773	0.048	0.5620	
360 minute winter	MH3	4.000	MH2	1.6	0.115	0.004	0.2429	
360 minute winter	MH2	1.004	MH1	25.8	0.614	0.053	1.6639	
360 minute winter	MH1	1.005	MH1.1	28.9	0.470	0.224	1.5432	
360 minute winter	MH1.1	1.006	NEW SW 1	29.8	0.966	0.211	0.2349	
360 minute winter	NEW SW 1	EX1.000	EX SW 1	29.7	1.689	1.120	0.3054	258.0
360 minute winter	MH16	5.000	MH17	5.1	1.164	0.027	0.0970	
360 minute winter	MH14	6.000	MH15	1.4	1.077	0.034	0.0147	
360 minute winter	MH15	6.001	MH17	2.4	0.218	0.008	0.1175	
360 minute winter	MH17	5.001	MH19	7.5	0.523	0.020	1.3750	
360 minute winter	MH11	7.000	MH12	4.6	0.345	0.010	0.4622	
360 minute winter	MH12	7.001	MH13	9.5	0.521	0.031	1.0136	
360 minute winter	MH10	8.000	MH13	6.1	0.178	0.006	2.5794	
360 minute winter	MH13	7.002	MH19	17.6	0.257	0.032	1.2329	
360 minute winter	MH18	5.003	EX SW 3	24.9	2.971	0.139	0.0525	221.2
360 minute winter	MH19	5.002	MH18	24.9	2.015	0.057	0.1073	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute summer	MH9	248	93.709	0.059	6.8	0.2241	0.0000	OK
480 minute summer	MH8	248	93.621	0.068	12.3	0.2338	0.0000	OK
480 minute summer	MH7	248	93.521	0.040	3.8	0.1275	0.0000	OK
480 minute summer	MH6	248	93.497	0.089	19.5	0.2742	0.0000	OK
480 minute summer	MH5	248	93.425	0.048	2.6	0.1422	0.0000	OK
480 minute summer	MH4	248	93.424	0.095	22.9	0.2539	0.0000	OK
480 minute summer	MH3	256	93.359	0.061	1.7	0.1732	0.0000	OK
480 minute summer	MH2	256	93.359	0.114	27.6	0.3501	0.0000	OK
480 minute summer	MH1	248	93.360	0.247	30.6	0.7578	0.0000	OK
480 minute summer	MH1.1	248	93.355	0.320	31.1	1.8798	0.0000	OK
480 minute summer	NEW SW 1	256	92.026	0.387	31.1	0.6837	0.0000	SURCHARGED
480 minute summer	EX SW 1	240	91.392	0.142	31.2	0.0000	0.0000	OK
480 minute summer	MH16	248	95.676	0.036	5.5	0.1111	0.0000	OK
480 minute summer	MH14	248	95.795	0.020	1.5	0.0373	0.0000	OK
480 minute summer	MH15	248	94.762	0.044	2.6	0.1391	0.0000	OK
480 minute summer	MH17	248	94.757	0.060	8.1	0.1794	0.0000	OK
480 minute summer	MH11	248	94.844	0.044	5.0	0.1575	0.0000	OK
480 minute summer	MH12	248	94.724	0.074	10.3	0.2499	0.0000	OK
480 minute summer	MH10	256	94.710	0.071	6.8	0.2780	0.0000	OK
480 minute summer	MH13	256	94.710	0.282	20.0	0.8304	0.0000	OK
480 minute summer	MH18	256	94.064	0.064	25.8	0.1907	0.0000	OK
480 minute summer	MH19	256	94.709	0.298	26.7	1.3483	0.0000	OK
480 minute summer	EX SW 3	256	93.325	0.058	25.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute summer	MH9	1.000	MH8	6.8	0.429	0.021	0.6920	
480 minute summer	MH8	1.001	MH6	12.3	0.571	0.028	0.7679	
480 minute summer	MH7	2.000	MH6	3.8	0.238	0.009	0.3087	
480 minute summer	MH6	1.002	MH4	19.5	0.716	0.044	0.5238	
480 minute summer	MH5	3.000	MH4	2.6	0.139	0.006	0.2365	
480 minute summer	MH4	1.003	MH2	23.0	0.784	0.052	0.6709	
480 minute summer	MH3	4.000	MH2	1.7	0.098	0.004	0.3475	
480 minute summer	MH2	1.004	MH1	27.0	0.618	0.056	1.9325	
480 minute summer	MH1	1.005	MH1.1	30.1	0.468	0.234	1.6612	
480 minute summer	MH1.1	1.006	NEW SW 1	31.1	0.978	0.221	0.2428	
480 minute summer	NEW SW 1	EX1.000	EX SW 1	31.2	1.774	1.176	0.3056	248.0
480 minute summer	MH16	5.000	MH17	5.5	1.191	0.029	0.1024	
480 minute summer	MH14	6.000	MH15	1.5	1.100	0.036	0.0155	
480 minute summer	MH15	6.001	MH17	2.6	0.221	0.009	0.1253	
480 minute summer	MH17	5.001	MH19	8.1	0.525	0.022	1.5500	
480 minute summer	MH11	7.000	MH12	5.0	0.354	0.011	0.4901	
480 minute summer	MH12	7.001	MH13	10.3	0.512	0.034	1.1474	
480 minute summer	MH10	8.000	MH13	7.0	0.179	0.007	2.8790	
480 minute summer	MH13	7.002	MH19	18.6	0.229	0.034	1.3284	
480 minute summer	MH18	5.003	EX SW 3	25.8	2.999	0.144	0.0541	212.2
480 minute summer	MH19	5.002	MH18	25.8	2.032	0.059	0.1105	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute winter	MH9	248	93.701	0.051	5.0	0.1941	0.0000	OK
480 minute winter	MH8	248	93.612	0.059	9.1	0.2025	0.0000	OK
480 minute winter	MH7	248	93.515	0.034	2.8	0.1100	0.0000	OK
480 minute winter	MH6	248	93.484	0.076	14.4	0.2346	0.0000	OK
480 minute winter	MH5	248	93.412	0.035	1.9	0.1034	0.0000	OK
480 minute winter	MH4	248	93.411	0.082	16.9	0.2189	0.0000	OK
480 minute winter	MH3	248	93.328	0.030	1.3	0.0857	0.0000	OK
480 minute winter	MH2	248	93.328	0.083	20.8	0.2553	0.0000	OK
480 minute winter	MH1	248	93.269	0.156	23.5	0.4780	0.0000	OK
480 minute winter	MH1.1	248	93.263	0.228	24.2	1.3404	0.0000	OK
480 minute winter	NEW SW 1	248	91.762	0.123	24.2	0.2176	0.0000	OK
480 minute winter	EX SW 1	248	91.362	0.112	24.2	0.0000	0.0000	OK
480 minute winter	MH16	248	95.671	0.031	4.1	0.0964	0.0000	OK
480 minute winter	MH14	248	95.793	0.018	1.2	0.0335	0.0000	OK
480 minute winter	MH15	248	94.755	0.037	2.0	0.1174	0.0000	OK
480 minute winter	MH17	248	94.750	0.053	6.1	0.1572	0.0000	OK
480 minute winter	MH11	248	94.838	0.038	3.7	0.1374	0.0000	OK
480 minute winter	MH12	248	94.717	0.067	7.7	0.2284	0.0000	OK
480 minute winter	MH10	248	94.677	0.038	5.1	0.1500	0.0000	OK
480 minute winter	MH13	248	94.632	0.204	14.8	0.6018	0.0000	OK
480 minute winter	MH18	248	94.056	0.056	20.7	0.1684	0.0000	OK
480 minute winter	MH19	248	94.631	0.220	20.8	0.9969	0.0000	OK
480 minute winter	EX SW 3	248	93.318	0.051	20.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute winter	MH9	1.000	MH8	5.0	0.391	0.015	0.5595	
480 minute winter	MH8	1.001	MH6	9.1	0.528	0.021	0.6159	
480 minute winter	MH7	2.000	MH6	2.8	0.219	0.006	0.2469	
480 minute winter	MH6	1.002	MH4	14.4	0.660	0.033	0.4198	
480 minute winter	MH5	3.000	MH4	1.9	0.162	0.004	0.1790	
480 minute winter	MH4	1.003	MH2	16.9	0.725	0.038	0.4754	
480 minute winter	MH3	4.000	MH2	1.3	0.099	0.003	0.1916	
480 minute winter	MH2	1.004	MH1	20.8	0.614	0.043	1.0756	
480 minute winter	MH1	1.005	MH1.1	23.4	0.480	0.182	1.0639	
480 minute winter	MH1.1	1.006	NEW SW 1	24.2	0.914	0.171	0.2017	
480 minute winter	NEW SW 1	EX1.000	EX SW 1	24.2	1.632	0.910	0.2593	277.7
480 minute winter	MH16	5.000	MH17	4.1	1.092	0.022	0.0833	
480 minute winter	MH14	6.000	MH15	1.2	1.028	0.029	0.0132	
480 minute winter	MH15	6.001	MH17	2.0	0.211	0.007	0.1004	
480 minute winter	MH17	5.001	MH19	6.1	0.522	0.016	0.6987	
480 minute winter	MH11	7.000	MH12	3.7	0.309	0.008	0.4188	
480 minute winter	MH12	7.001	MH13	7.7	0.515	0.025	0.5367	
480 minute winter	MH10	8.000	MH13	5.1	0.176	0.005	1.7607	
480 minute winter	MH13	7.002	MH19	14.7	0.242	0.027	0.8658	
480 minute winter	MH18	5.003	EX SW 3	20.7	2.836	0.115	0.0457	238.6
480 minute winter	MH19	5.002	MH18	20.7	1.935	0.047	0.0929	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute summer	MH9	315	93.704	0.054	5.5	0.2030	0.0000	OK
600 minute summer	MH8	315	93.615	0.062	10.0	0.2119	0.0000	OK
600 minute summer	MH7	315	93.517	0.036	3.1	0.1155	0.0000	OK
600 minute summer	MH6	315	93.488	0.080	15.9	0.2467	0.0000	OK
600 minute summer	MH5	315	93.416	0.039	2.1	0.1153	0.0000	OK
600 minute summer	MH4	315	93.415	0.086	18.6	0.2297	0.0000	OK
600 minute summer	MH3	315	93.332	0.034	1.4	0.0966	0.0000	OK
600 minute summer	MH2	315	93.332	0.087	22.9	0.2674	0.0000	OK
600 minute summer	MH1	315	93.298	0.185	25.9	0.5683	0.0000	OK
600 minute summer	MH1.1	315	93.293	0.258	26.6	1.5155	0.0000	OK
600 minute summer	NEW SW 1	315	91.845	0.206	26.6	0.3646	0.0000	SURCHARGED
600 minute summer	EX SW 1	315	91.390	0.140	26.4	0.0000	0.0000	OK
600 minute summer	MH16	315	95.672	0.032	4.5	0.1009	0.0000	OK
600 minute summer	MH14	315	95.794	0.019	1.3	0.0348	0.0000	OK
600 minute summer	MH15	315	94.757	0.039	2.2	0.1243	0.0000	OK
600 minute summer	MH17	315	94.752	0.055	6.7	0.1641	0.0000	OK
600 minute summer	MH11	315	94.840	0.040	4.1	0.1443	0.0000	OK
600 minute summer	MH12	300	94.720	0.069	8.4	0.2354	0.0000	OK
600 minute summer	MH10	315	94.679	0.040	5.6	0.1566	0.0000	OK
600 minute summer	MH13	315	94.658	0.230	16.2	0.6777	0.0000	OK
600 minute summer	MH18	315	94.059	0.059	22.5	0.1765	0.0000	OK
600 minute summer	MH19	315	94.657	0.246	22.7	1.1137	0.0000	OK
600 minute summer	EX SW 3	315	93.321	0.054	22.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute summer	MH9	1.000	MH8	5.5	0.401	0.017	0.5975	
600 minute summer	MH8	1.001	MH6	10.0	0.540	0.023	0.6604	
600 minute summer	MH7	2.000	MH6	3.1	0.226	0.007	0.2653	
600 minute summer	MH6	1.002	MH4	15.9	0.677	0.036	0.4510	
600 minute summer	MH5	3.000	MH4	2.1	0.139	0.005	0.1959	
600 minute summer	MH4	1.003	MH2	18.6	0.745	0.042	0.5093	
600 minute summer	MH3	4.000	MH2	1.4	0.095	0.003	0.2095	
600 minute summer	MH2	1.004	MH1	22.9	0.612	0.047	1.3065	
600 minute summer	MH1	1.005	MH1.1	25.8	0.482	0.201	1.2666	
600 minute summer	MH1.1	1.006	NEW SW 1	26.6	0.938	0.188	0.2162	
600 minute summer	NEW SW 1	EX1.000	EX SW 1	26.4	1.632	0.996	0.3044	262.0
600 minute summer	MH16	5.000	MH17	4.5	1.122	0.024	0.0889	
600 minute summer	MH14	6.000	MH15	1.3	1.053	0.031	0.0140	
600 minute summer	MH15	6.001	MH17	2.2	0.216	0.007	0.1079	
600 minute summer	MH17	5.001	MH19	6.7	0.512	0.018	0.9625	
600 minute summer	MH11	7.000	MH12	4.1	0.334	0.009	0.4408	
600 minute summer	MH12	7.001	MH13	8.4	0.527	0.027	0.7036	
600 minute summer	MH10	8.000	MH13	5.6	0.145	0.006	2.0615	
600 minute summer	MH13	7.002	MH19	16.0	0.177	0.029	1.0150	
600 minute summer	MH18	5.003	EX SW 3	22.5	2.897	0.126	0.0487	224.0
600 minute summer	MH19	5.002	MH18	22.5	1.971	0.052	0.0993	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute winter	MH9	315	93.697	0.047	4.2	0.1788	0.0000	OK
600 minute winter	MH8	315	93.607	0.054	7.7	0.1873	0.0000	OK
600 minute winter	MH7	315	93.513	0.032	2.4	0.1024	0.0000	OK
600 minute winter	MH6	315	93.478	0.070	12.2	0.2157	0.0000	OK
600 minute winter	MH5	315	93.405	0.028	1.6	0.0842	0.0000	OK
600 minute winter	MH4	315	93.405	0.076	14.3	0.2013	0.0000	OK
600 minute winter	MH3	315	93.322	0.024	1.1	0.0682	0.0000	OK
600 minute winter	MH2	315	93.322	0.077	17.6	0.2358	0.0000	OK
600 minute winter	MH1	315	93.228	0.115	19.9	0.3539	0.0000	OK
600 minute winter	MH1.1	315	93.221	0.186	20.5	1.0937	0.0000	OK
600 minute winter	NEW SW 1	315	91.745	0.106	20.5	0.1874	0.0000	OK
600 minute winter	EX SW 1	315	91.349	0.099	20.5	0.0000	0.0000	OK
600 minute winter	MH16	315	95.669	0.029	3.5	0.0893	0.0000	OK
600 minute winter	MH14	315	95.791	0.016	1.0	0.0307	0.0000	OK
600 minute winter	MH15	315	94.752	0.034	1.7	0.1087	0.0000	OK
600 minute winter	MH17	315	94.747	0.050	5.2	0.1504	0.0000	OK
600 minute winter	MH11	315	94.835	0.035	3.1	0.1261	0.0000	OK
600 minute winter	MH12	315	94.712	0.062	6.4	0.2099	0.0000	OK
600 minute winter	MH10	315	94.675	0.036	4.3	0.1390	0.0000	OK
600 minute winter	MH13	315	94.594	0.166	12.4	0.4894	0.0000	OK
600 minute winter	MH18	315	94.052	0.052	17.6	0.1542	0.0000	OK
600 minute winter	MH19	315	94.593	0.182	17.6	0.8236	0.0000	OK
600 minute winter	EX SW 3	315	93.314	0.047	17.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute winter	MH9	1.000	MH8	4.2	0.369	0.013	0.4971	
600 minute winter	MH8	1.001	MH6	7.7	0.503	0.018	0.5454	
600 minute winter	MH7	2.000	MH6	2.4	0.211	0.006	0.2189	
600 minute winter	MH6	1.002	MH4	12.2	0.631	0.028	0.3712	
600 minute winter	MH5	3.000	MH4	1.6	0.137	0.004	0.1524	
600 minute winter	MH4	1.003	MH2	14.3	0.692	0.032	0.4219	
600 minute winter	MH3	4.000	MH2	1.1	0.098	0.003	0.1637	
600 minute winter	MH2	1.004	MH1	17.6	0.617	0.036	0.7750	
600 minute winter	MH1	1.005	MH1.1	19.9	0.481	0.155	0.7814	
600 minute winter	MH1.1	1.006	NEW SW 1	20.5	0.875	0.145	0.1787	
600 minute winter	NEW SW 1	EX1.000	EX SW 1	20.5	1.600	0.772	0.2244	294.3
600 minute winter	MH16	5.000	MH17	3.5	1.042	0.018	0.0744	
600 minute winter	MH14	6.000	MH15	1.0	0.975	0.024	0.0116	
600 minute winter	MH15	6.001	MH17	1.7	0.196	0.006	0.0927	
600 minute winter	MH17	5.001	MH19	5.2	0.513	0.014	0.4660	
600 minute winter	MH11	7.000	MH12	3.1	0.292	0.007	0.3704	
600 minute winter	MH12	7.001	MH13	6.4	0.491	0.021	0.4698	
600 minute winter	MH10	8.000	MH13	4.3	0.167	0.004	1.3331	
600 minute winter	MH13	7.002	MH19	12.4	0.202	0.023	0.6541	
600 minute winter	MH18	5.003	EX SW 3	17.6	2.723	0.098	0.0406	252.4
600 minute winter	MH19	5.002	MH18	17.6	1.862	0.040	0.0821	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute summer	MH9	375	93.701	0.051	4.9	0.1922	0.0000	OK
720 minute summer	MH8	375	93.611	0.058	8.9	0.2004	0.0000	OK
720 minute summer	MH7	375	93.515	0.034	2.7	0.1082	0.0000	OK
720 minute summer	MH6	375	93.483	0.075	14.1	0.2321	0.0000	OK
720 minute summer	MH5	375	93.411	0.034	1.9	0.1014	0.0000	OK
720 minute summer	MH4	375	93.410	0.081	16.6	0.2169	0.0000	OK
720 minute summer	MH3	375	93.328	0.030	1.2	0.0835	0.0000	OK
720 minute summer	MH2	375	93.327	0.082	20.4	0.2530	0.0000	OK
720 minute summer	MH1	375	93.263	0.150	23.0	0.4619	0.0000	OK
720 minute summer	MH1.1	375	93.258	0.223	23.8	1.3089	0.0000	OK
720 minute summer	NEW SW 1	375	91.760	0.121	23.7	0.2133	0.0000	OK
720 minute summer	EX SW 1	375	91.360	0.110	23.7	0.0000	0.0000	OK
720 minute summer	MH16	375	95.670	0.030	4.0	0.0953	0.0000	OK
720 minute summer	MH14	375	95.792	0.017	1.1	0.0322	0.0000	OK
720 minute summer	MH15	360	94.755	0.037	1.9	0.1159	0.0000	OK
720 minute summer	MH17	360	94.750	0.053	5.9	0.1577	0.0000	OK
720 minute summer	MH11	375	94.838	0.038	3.6	0.1356	0.0000	OK
720 minute summer	MH12	375	94.717	0.067	7.5	0.2257	0.0000	OK
720 minute summer	MH10	375	94.677	0.038	5.0	0.1487	0.0000	OK
720 minute summer	MH13	375	94.627	0.199	14.5	0.5857	0.0000	OK
720 minute summer	MH18	375	94.056	0.056	20.3	0.1665	0.0000	OK
720 minute summer	MH19	375	94.626	0.215	20.3	0.9721	0.0000	OK
720 minute summer	EX SW 3	375	93.318	0.051	20.3	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute summer	MH9	1.000	MH8	4.9	0.389	0.015	0.5513	
720 minute summer	MH8	1.001	MH6	8.9	0.525	0.020	0.6062	
720 minute summer	MH7	2.000	MH6	2.7	0.216	0.006	0.2425	
720 minute summer	MH6	1.002	MH4	14.1	0.656	0.032	0.4138	
720 minute summer	MH5	3.000	MH4	1.9	0.142	0.004	0.1761	
720 minute summer	MH4	1.003	MH2	16.6	0.722	0.038	0.4690	
720 minute summer	MH3	4.000	MH2	1.2	0.096	0.003	0.1881	
720 minute summer	MH2	1.004	MH1	20.4	0.614	0.042	1.0351	
720 minute summer	MH1	1.005	MH1.1	23.0	0.459	0.179	1.0273	
720 minute summer	MH1.1	1.006	NEW SW 1	23.7	0.910	0.168	0.1990	
720 minute summer	NEW SW 1	EX1.000	EX SW 1	23.7	1.630	0.894	0.2549	277.4
720 minute summer	MH16	5.000	MH17	4.0	1.084	0.021	0.0818	
720 minute summer	MH14	6.000	MH15	1.1	1.002	0.027	0.0124	
720 minute summer	MH15	6.001	MH17	1.9	0.207	0.006	0.1000	
720 minute summer	MH17	5.001	MH19	5.9	0.513	0.016	0.6439	
720 minute summer	MH11	7.000	MH12	3.6	0.306	0.008	0.4111	
720 minute summer	MH12	7.001	MH13	7.5	0.510	0.025	0.5273	
720 minute summer	MH10	8.000	MH13	5.0	0.143	0.005	1.6976	
720 minute summer	MH13	7.002	MH19	14.4	0.174	0.026	0.8344	
720 minute summer	MH18	5.003	EX SW 3	20.3	2.821	0.113	0.0450	234.9
720 minute summer	MH19	5.002	MH18	20.3	1.926	0.046	0.0915	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute winter	MH9	375	93.695	0.045	3.7	0.1687	0.0000	OK
720 minute winter	MH8	375	93.604	0.051	6.7	0.1755	0.0000	OK
720 minute winter	MH7	375	93.511	0.030	2.1	0.0963	0.0000	OK
720 minute winter	MH6	375	93.473	0.065	10.7	0.2022	0.0000	OK
720 minute winter	MH5	360	93.402	0.025	1.4	0.0743	0.0000	OK
720 minute winter	MH4	375	93.400	0.071	12.5	0.1883	0.0000	OK
720 minute winter	MH3	360	93.318	0.020	0.9	0.0577	0.0000	OK
720 minute winter	MH2	375	93.317	0.072	15.3	0.2206	0.0000	OK
720 minute winter	MH1	375	93.224	0.111	17.3	0.3414	0.0000	OK
720 minute winter	MH1.1	375	93.219	0.184	17.9	1.0794	0.0000	OK
720 minute winter	NEW SW 1	375	91.735	0.096	17.9	0.1694	0.0000	OK
720 minute winter	EX SW 1	375	91.340	0.090	17.9	0.0000	0.0000	OK
720 minute winter	MH16	375	95.667	0.027	3.0	0.0831	0.0000	OK
720 minute winter	MH14	345	95.790	0.015	0.8	0.0276	0.0000	OK
720 minute winter	MH15	375	94.749	0.031	1.4	0.0972	0.0000	OK
720 minute winter	MH17	375	94.744	0.047	4.4	0.1396	0.0000	OK
720 minute winter	MH11	375	94.833	0.033	2.7	0.1182	0.0000	OK
720 minute winter	MH12	375	94.708	0.058	5.6	0.1976	0.0000	OK
720 minute winter	MH10	375	94.672	0.033	3.7	0.1301	0.0000	OK
720 minute winter	MH13	375	94.575	0.147	10.8	0.4335	0.0000	OK
720 minute winter	MH18	375	94.048	0.048	15.2	0.1424	0.0000	OK
720 minute winter	MH19	375	94.574	0.163	15.2	0.7377	0.0000	OK
720 minute winter	EX SW 3	375	93.311	0.044	15.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute winter	MH9	1.000	MH8	3.7	0.356	0.011	0.4533	
720 minute winter	MH8	1.001	MH6	6.7	0.481	0.015	0.4950	
720 minute winter	MH7	2.000	MH6	2.1	0.203	0.005	0.1988	
720 minute winter	MH6	1.002	MH4	10.7	0.611	0.024	0.3367	
720 minute winter	MH5	3.000	MH4	1.4	0.137	0.003	0.1356	
720 minute winter	MH4	1.003	MH2	12.5	0.667	0.028	0.3827	
720 minute winter	MH3	4.000	MH2	0.9	0.093	0.002	0.1453	
720 minute winter	MH2	1.004	MH1	15.3	0.614	0.031	0.7244	
720 minute winter	MH1	1.005	MH1.1	17.3	0.449	0.135	0.7598	
720 minute winter	MH1.1	1.006	NEW SW 1	17.9	0.843	0.127	0.1619	
720 minute winter	NEW SW 1	EX1.000	EX SW 1	17.9	1.561	0.674	0.2009	309.1
720 minute winter	MH16	5.000	MH17	3.0	0.998	0.016	0.0667	
720 minute winter	MH14	6.000	MH15	0.8	0.912	0.019	0.0099	
720 minute winter	MH15	6.001	MH17	1.4	0.188	0.005	0.0813	
720 minute winter	MH17	5.001	MH19	4.4	0.493	0.012	0.4104	
720 minute winter	MH11	7.000	MH12	2.7	0.279	0.006	0.3383	
720 minute winter	MH12	7.001	MH13	5.6	0.478	0.018	0.4240	
720 minute winter	MH10	8.000	MH13	3.7	0.158	0.004	1.1282	
720 minute winter	MH13	7.002	MH19	10.8	0.198	0.020	0.5551	
720 minute winter	MH18	5.003	EX SW 3	15.2	2.620	0.085	0.0364	264.5
720 minute winter	MH19	5.002	MH18	15.2	1.802	0.035	0.0732	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute summer	MH9	495	93.696	0.046	4.0	0.1748	0.0000	OK
960 minute summer	MH8	495	93.606	0.053	7.3	0.1828	0.0000	OK
960 minute summer	MH7	495	93.512	0.031	2.2	0.0984	0.0000	OK
960 minute summer	MH6	495	93.476	0.068	11.5	0.2094	0.0000	OK
960 minute summer	MH5	495	93.403	0.026	1.5	0.0781	0.0000	OK
960 minute summer	MH4	495	93.402	0.073	13.5	0.1956	0.0000	OK
960 minute summer	MH3	495	93.320	0.022	1.0	0.0623	0.0000	OK
960 minute summer	MH2	495	93.320	0.075	16.6	0.2293	0.0000	OK
960 minute summer	MH1	480	93.226	0.113	18.8	0.3475	0.0000	OK
960 minute summer	MH1.1	495	93.220	0.185	19.4	1.0856	0.0000	OK
960 minute summer	NEW SW 1	495	91.741	0.102	19.4	0.1796	0.0000	OK
960 minute summer	EX SW 1	495	91.345	0.095	19.4	0.0000	0.0000	OK
960 minute summer	MH16	495	95.668	0.028	3.3	0.0869	0.0000	OK
960 minute summer	MH14	495	95.791	0.016	0.9	0.0292	0.0000	OK
960 minute summer	MH15	495	94.750	0.032	1.5	0.1022	0.0000	OK
960 minute summer	MH17	495	94.746	0.049	4.8	0.1451	0.0000	OK
960 minute summer	MH11	495	94.834	0.034	3.0	0.1242	0.0000	OK
960 minute summer	MH12	495	94.711	0.061	6.2	0.2069	0.0000	OK
960 minute summer	MH10	495	94.674	0.035	4.1	0.1361	0.0000	OK
960 minute summer	MH13	495	94.584	0.156	11.9	0.4600	0.0000	OK
960 minute summer	MH18	495	94.050	0.050	16.7	0.1498	0.0000	OK
960 minute summer	MH19	495	94.583	0.172	16.7	0.7780	0.0000	OK
960 minute summer	EX SW 3	495	93.313	0.046	16.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute summer	MH9	1.000	MH8	4.0	0.364	0.012	0.4795	
960 minute summer	MH8	1.001	MH6	7.3	0.496	0.017	0.5231	
960 minute summer	MH7	2.000	MH6	2.2	0.204	0.005	0.2086	
960 minute summer	MH6	1.002	MH4	11.5	0.621	0.026	0.3556	
960 minute summer	MH5	3.000	MH4	1.5	0.138	0.003	0.1439	
960 minute summer	MH4	1.003	MH2	13.5	0.680	0.031	0.4049	
960 minute summer	MH3	4.000	MH2	1.0	0.096	0.002	0.1550	
960 minute summer	MH2	1.004	MH1	16.6	0.607	0.034	0.7509	
960 minute summer	MH1	1.005	MH1.1	18.8	0.461	0.146	0.7695	
960 minute summer	MH1.1	1.006	NEW SW 1	19.4	0.861	0.138	0.1719	
960 minute summer	NEW SW 1	EX1.000	EX SW 1	19.4	1.585	0.731	0.2145	295.9
960 minute summer	MH16	5.000	MH17	3.3	1.025	0.017	0.0714	
960 minute summer	MH14	6.000	MH15	0.9	0.944	0.022	0.0108	
960 minute summer	MH15	6.001	MH17	1.5	0.188	0.005	0.0867	
960 minute summer	MH17	5.001	MH19	4.8	0.504	0.013	0.4384	
960 minute summer	MH11	7.000	MH12	3.0	0.289	0.007	0.3625	
960 minute summer	MH12	7.001	MH13	6.2	0.488	0.020	0.4585	
960 minute summer	MH10	8.000	MH13	4.1	0.149	0.004	1.2273	
960 minute summer	MH13	7.002	MH19	11.9	0.180	0.022	0.6016	
960 minute summer	MH18	5.003	EX SW 3	16.7	2.685	0.093	0.0390	254.0
960 minute summer	MH19	5.002	MH18	16.7	1.840	0.038	0.0789	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute winter	MH9	495	93.691	0.041	3.0	0.1537	0.0000	OK
960 minute winter	MH8	495	93.599	0.046	5.4	0.1587	0.0000	OK
960 minute winter	MH7	495	93.508	0.027	1.7	0.0877	0.0000	OK
960 minute winter	MH6	495	93.467	0.059	8.6	0.1811	0.0000	OK
960 minute winter	MH5	465	93.399	0.022	1.1	0.0665	0.0000	OK
960 minute winter	MH4	495	93.392	0.063	10.0	0.1687	0.0000	OK
960 minute winter	MH3	495	93.317	0.019	0.8	0.0547	0.0000	OK
960 minute winter	MH2	495	93.310	0.065	12.4	0.2000	0.0000	OK
960 minute winter	MH1	495	93.201	0.088	14.0	0.2711	0.0000	OK
960 minute winter	MH1.1	495	93.196	0.161	14.5	0.9434	0.0000	OK
960 minute winter	NEW SW 1	495	91.722	0.083	14.5	0.1471	0.0000	OK
960 minute winter	EX SW 1	495	91.329	0.079	14.5	0.0000	0.0000	OK
960 minute winter	MH16	480	95.664	0.024	2.4	0.0747	0.0000	OK
960 minute winter	MH14	480	95.789	0.014	0.7	0.0259	0.0000	OK
960 minute winter	MH15	495	94.745	0.027	1.2	0.0865	0.0000	OK
960 minute winter	MH17	495	94.740	0.043	3.6	0.1277	0.0000	OK
960 minute winter	MH11	480	94.830	0.030	2.2	0.1076	0.0000	OK
960 minute winter	MH12	495	94.703	0.053	4.6	0.1811	0.0000	OK
960 minute winter	MH10	495	94.669	0.030	3.0	0.1183	0.0000	OK
960 minute winter	MH13	495	94.557	0.129	8.8	0.3818	0.0000	OK
960 minute winter	MH18	495	94.043	0.043	12.4	0.1278	0.0000	OK
960 minute winter	MH19	495	94.556	0.145	12.4	0.6582	0.0000	OK
960 minute winter	EX SW 3	495	93.307	0.040	12.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute winter	MH9	1.000	MH8	3.0	0.334	0.009	0.3916	
960 minute winter	MH8	1.001	MH6	5.4	0.456	0.012	0.4241	
960 minute winter	MH7	2.000	MH6	1.7	0.192	0.004	0.1697	
960 minute winter	MH6	1.002	MH4	8.6	0.577	0.020	0.2864	
960 minute winter	MH5	3.000	MH4	1.1	0.128	0.003	0.1151	
960 minute winter	MH4	1.003	MH2	10.0	0.623	0.023	0.3277	
960 minute winter	MH3	4.000	MH2	0.8	0.095	0.002	0.1266	
960 minute winter	MH2	1.004	MH1	12.4	0.611	0.026	0.5556	
960 minute winter	MH1	1.005	MH1.1	14.0	0.446	0.109	0.6079	
960 minute winter	MH1.1	1.006	NEW SW 1	14.5	0.797	0.103	0.1388	
960 minute winter	NEW SW 1	EX1.000	EX SW 1	14.5	1.493	0.546	0.1702	331.2
960 minute winter	MH16	5.000	MH17	2.4	0.930	0.013	0.0572	
960 minute winter	MH14	6.000	MH15	0.7	0.877	0.017	0.0090	
960 minute winter	MH15	6.001	MH17	1.2	0.183	0.004	0.0698	
960 minute winter	MH17	5.001	MH19	3.6	0.469	0.010	0.3566	
960 minute winter	MH11	7.000	MH12	2.2	0.263	0.005	0.2951	
960 minute winter	MH12	7.001	MH13	4.6	0.453	0.015	0.3645	
960 minute winter	MH10	8.000	MH13	3.0	0.150	0.003	0.9428	
960 minute winter	MH13	7.002	MH19	8.8	0.207	0.016	0.4673	
960 minute winter	MH18	5.003	EX SW 3	12.4	2.480	0.069	0.0313	283.1
960 minute winter	MH19	5.002	MH18	12.4	1.711	0.028	0.0630	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute summer	MH9	750	93.690	0.040	2.9	0.1514	0.0000	OK
1440 minute summer	MH8	750	93.599	0.046	5.3	0.1573	0.0000	OK
1440 minute summer	MH7	750	93.508	0.027	1.6	0.0854	0.0000	OK
1440 minute summer	MH6	750	93.466	0.058	8.4	0.1789	0.0000	OK
1440 minute summer	MH5	750	93.399	0.022	1.1	0.0665	0.0000	OK
1440 minute summer	MH4	750	93.392	0.063	9.8	0.1670	0.0000	OK
1440 minute summer	MH3	750	93.316	0.018	0.7	0.0515	0.0000	OK
1440 minute summer	MH2	750	93.309	0.064	12.0	0.1969	0.0000	OK
1440 minute summer	MH1	750	93.198	0.085	13.6	0.2607	0.0000	OK
1440 minute summer	MH1.1	750	93.192	0.157	14.0	0.9226	0.0000	OK
1440 minute summer	NEW SW 1	750	91.720	0.081	14.0	0.1438	0.0000	OK
1440 minute summer	EX SW 1	750	91.327	0.077	14.0	0.0000	0.0000	OK
1440 minute summer	MH16	750	95.664	0.024	2.4	0.0747	0.0000	OK
1440 minute summer	MH14	750	95.789	0.014	0.7	0.0259	0.0000	OK
1440 minute summer	MH15	750	94.745	0.027	1.2	0.0865	0.0000	OK
1440 minute summer	MH17	750	94.740	0.043	3.6	0.1277	0.0000	OK
1440 minute summer	MH11	750	94.830	0.030	2.2	0.1076	0.0000	OK
1440 minute summer	MH12	750	94.703	0.053	4.5	0.1793	0.0000	OK
1440 minute summer	MH10	750	94.669	0.030	2.9	0.1165	0.0000	OK
1440 minute summer	MH13	750	94.556	0.128	8.6	0.3772	0.0000	OK
1440 minute summer	MH18	750	94.042	0.042	12.2	0.1267	0.0000	OK
1440 minute summer	MH19	750	94.555	0.144	12.2	0.6512	0.0000	OK
1440 minute summer	EX SW 3	750	93.307	0.040	12.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute summer	MH9	1.000	MH8	2.9	0.329	0.009	0.3847	
1440 minute summer	MH8	1.001	MH6	5.3	0.454	0.012	0.4174	
1440 minute summer	MH7	2.000	MH6	1.6	0.186	0.004	0.1657	
1440 minute summer	MH6	1.002	MH4	8.4	0.573	0.019	0.2818	
1440 minute summer	MH5	3.000	MH4	1.1	0.127	0.003	0.1137	
1440 minute summer	MH4	1.003	MH2	9.8	0.622	0.022	0.3217	
1440 minute summer	MH3	4.000	MH2	0.7	0.085	0.002	0.1226	
1440 minute summer	MH2	1.004	MH1	12.0	0.607	0.025	0.5321	
1440 minute summer	MH1	1.005	MH1.1	13.6	0.446	0.106	0.5855	
1440 minute summer	MH1.1	1.006	NEW SW 1	14.0	0.789	0.099	0.1353	
1440 minute summer	NEW SW 1	EX1.000	EX SW 1	14.0	1.481	0.527	0.1657	324.9
1440 minute summer	MH16	5.000	MH17	2.4	0.930	0.013	0.0572	
1440 minute summer	MH14	6.000	MH15	0.7	0.877	0.017	0.0090	
1440 minute summer	MH15	6.001	MH17	1.2	0.183	0.004	0.0698	
1440 minute summer	MH17	5.001	MH19	3.6	0.469	0.010	0.3566	
1440 minute summer	MH11	7.000	MH12	2.2	0.263	0.005	0.2920	
1440 minute summer	MH12	7.001	MH13	4.5	0.450	0.015	0.3584	
1440 minute summer	MH10	8.000	MH13	2.9	0.141	0.003	0.9262	
1440 minute summer	MH13	7.002	MH19	8.6	0.175	0.016	0.4598	
1440 minute summer	MH18	5.003	EX SW 3	12.2	2.470	0.068	0.0310	279.7
1440 minute summer	MH19	5.002	MH18	12.2	1.704	0.028	0.0623	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute winter	MH9	750	93.685	0.035	2.2	0.1326	0.0000	OK
1440 minute winter	MH8	750	93.593	0.040	4.0	0.1387	0.0000	OK
1440 minute winter	MH7	720	93.504	0.023	1.2	0.0749	0.0000	OK
1440 minute winter	MH6	750	93.458	0.050	6.3	0.1554	0.0000	OK
1440 minute winter	MH5	690	93.396	0.019	0.8	0.0576	0.0000	OK
1440 minute winter	MH4	750	93.384	0.055	7.4	0.1454	0.0000	OK
1440 minute winter	MH3	750	93.315	0.017	0.6	0.0481	0.0000	OK
1440 minute winter	MH2	750	93.301	0.056	9.1	0.1726	0.0000	OK
1440 minute winter	MH1	750	93.184	0.071	10.3	0.2174	0.0000	OK
1440 minute winter	MH1.1	750	93.167	0.132	10.6	0.7730	0.0000	OK
1440 minute winter	NEW SW 1	750	91.708	0.069	10.6	0.1214	0.0000	OK
1440 minute winter	EX SW 1	750	91.316	0.066	10.6	0.0000	0.0000	OK
1440 minute winter	MH16	750	95.661	0.021	1.8	0.0654	0.0000	OK
1440 minute winter	MH14	690	95.787	0.012	0.5	0.0221	0.0000	OK
1440 minute winter	MH15	750	94.742	0.024	0.9	0.0755	0.0000	OK
1440 minute winter	MH17	750	94.735	0.038	2.7	0.1122	0.0000	OK
1440 minute winter	MH11	720	94.826	0.026	1.6	0.0935	0.0000	OK
1440 minute winter	MH12	720	94.696	0.046	3.3	0.1565	0.0000	OK
1440 minute winter	MH10	750	94.665	0.026	2.2	0.1027	0.0000	OK
1440 minute winter	MH13	750	94.531	0.103	6.4	0.3036	0.0000	OK
1440 minute winter	MH18	750	94.036	0.036	9.1	0.1088	0.0000	OK
1440 minute winter	MH19	750	94.530	0.119	9.1	0.5378	0.0000	OK
1440 minute winter	EX SW 3	750	93.301	0.034	9.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute winter	MH9	1.000	MH8	2.2	0.303	0.007	0.3172	
1440 minute winter	MH8	1.001	MH6	4.0	0.417	0.009	0.3404	
1440 minute winter	MH7	2.000	MH6	1.2	0.174	0.003	0.1346	
1440 minute winter	MH6	1.002	MH4	6.3	0.530	0.014	0.2289	
1440 minute winter	MH5	3.000	MH4	0.8	0.119	0.002	0.0923	
1440 minute winter	MH4	1.003	MH2	7.4	0.573	0.017	0.2634	
1440 minute winter	MH3	4.000	MH2	0.6	0.086	0.001	0.1022	
1440 minute winter	MH2	1.004	MH1	9.1	0.576	0.019	0.4198	
1440 minute winter	MH1	1.005	MH1.1	10.3	0.430	0.080	0.4585	
1440 minute winter	MH1.1	1.006	NEW SW 1	10.6	0.730	0.075	0.1106	
1440 minute winter	NEW SW 1	EX1.000	EX SW 1	10.6	1.386	0.399	0.1340	365.5
1440 minute winter	MH16	5.000	MH17	1.8	0.851	0.009	0.0469	
1440 minute winter	MH14	6.000	MH15	0.5	0.791	0.012	0.0072	
1440 minute winter	MH15	6.001	MH17	0.9	0.167	0.003	0.0571	
1440 minute winter	MH17	5.001	MH19	2.7	0.424	0.007	0.2929	
1440 minute winter	MH11	7.000	MH12	1.6	0.234	0.004	0.2375	
1440 minute winter	MH12	7.001	MH13	3.3	0.414	0.011	0.2904	
1440 minute winter	MH10	8.000	MH13	2.2	0.147	0.002	0.6847	
1440 minute winter	MH13	7.002	MH19	6.4	0.179	0.012	0.3426	
1440 minute winter	MH18	5.003	EX SW 3	9.1	2.283	0.051	0.0250	316.5
1440 minute winter	MH19	5.002	MH18	9.1	1.580	0.021	0.0501	

**Results for 100 year 15 minute summer. 255 minute analysis at 1 minute timestep. Mass balance: 99.98%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	MH9	15	93.999	0.349	52.5	1.3217	0.0000	OK
15 minute summer	MH8	15	93.980	0.427	90.6	1.4703	0.0000	OK
15 minute summer	MH7	15	93.999	0.518	28.1	1.6675	0.0000	OK
15 minute summer	MH6	14	94.001	0.593	131.8	1.8340	0.0000	OK
15 minute summer	MH5	14	93.999	0.622	19.3	1.8473	0.0000	SURCHARGED
15 minute summer	MH4	14	94.009	0.680	116.2	1.8107	0.0000	SURCHARGED
15 minute summer	MH3	14	94.012	0.714	30.5	2.0151	0.0000	SURCHARGED
15 minute summer	MH2	14	93.998	0.753	119.2	2.3156	0.0000	SURCHARGED
15 minute summer	MH1	14	94.004	0.891	88.9	2.7341	0.0000	SURCHARGED
15 minute summer	MH1.1	14	93.958	0.923	78.1	5.4163	0.0000	SURCHARGED
15 minute summer	NEW SW 1	17	93.346	1.707	58.6	3.0158	0.0000	SURCHARGED
15 minute summer	EX SW 1	9	91.392	0.142	54.8	0.0000	0.0000	OK
15 minute summer	MH16	10	95.739	0.099	41.2	0.3101	0.0000	OK
15 minute summer	MH14	10	95.832	0.057	11.6	0.1071	0.0000	OK
15 minute summer	MH15	16	95.190	0.472	19.6	1.4922	0.0000	OK
15 minute summer	MH17	16	95.187	0.490	56.5	1.4624	0.0000	OK
15 minute summer	MH11	16	95.165	0.365	44.8	1.3146	0.0000	OK
15 minute summer	MH12	15	95.193	0.543	71.5	1.8386	0.0000	OK
15 minute summer	MH10	15	95.194	0.555	50.9	2.1621	0.0000	OK
15 minute summer	MH13	17	95.181	0.753	84.3	2.2224	0.0000	SURCHARGED
15 minute summer	MH18	14	94.090	0.090	45.9	0.2683	0.0000	OK
15 minute summer	MH19	17	95.182	0.771	70.8	3.4885	0.0000	SURCHARGED
15 minute summer	EX SW 3	14	93.345	0.078	46.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute summer	MH9	1.000	MH8	51.1	0.725	0.158	8.3836	
15 minute summer	MH8	1.001	MH6	89.3	0.892	0.203	8.7716	
15 minute summer	MH7	2.000	MH6	28.2	0.377	0.065	4.9455	
15 minute summer	MH6	1.002	MH4	100.5	1.009	0.228	5.4066	
15 minute summer	MH5	3.000	MH4	12.5	0.388	0.029	3.4066	
15 minute summer	MH4	1.003	MH2	86.3	0.995	0.196	5.7468	
15 minute summer	MH3	4.000	MH2	18.6	0.238	0.043	3.7536	
15 minute summer	MH2	1.004	MH1	72.0	0.792	0.148	7.4408	
15 minute summer	MH1	1.005	MH1.1	75.8	0.688	0.590	2.0678	
15 minute summer	MH1.1	1.006	NEW SW 1	58.6	1.152	0.415	0.7897	
15 minute summer	NEW SW 1	EX1.000	EX SW 1	54.8	3.113	2.063	0.3054	105.2
15 minute summer	MH16	5.000	MH17	40.8	2.089	0.215	0.5811	
15 minute summer	MH14	6.000	MH15	11.5	1.939	0.278	0.0673	
15 minute summer	MH15	6.001	MH17	16.8	0.340	0.055	2.5477	
15 minute summer	MH17	5.001	MH19	41.4	0.608	0.111	12.1374	
15 minute summer	MH11	7.000	MH12	33.6	0.597	0.074	7.5637	
15 minute summer	MH12	7.001	MH13	52.8	0.669	0.173	9.8394	
15 minute summer	MH10	8.000	MH13	26.9	0.489	0.027	13.1922	
15 minute summer	MH13	7.002	MH19	43.7	0.600	0.080	3.7252	
15 minute summer	MH18	5.003	EX SW 3	46.2	3.439	0.258	0.0843	90.7
15 minute summer	MH19	5.002	MH18	45.9	2.282	0.105	0.1748	

**Results for 100 year 15 minute winter. 255 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 (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute winter	MH9	15	94.158	0.508	76.5	1.9220	0.0000	OK
15 minute winter	MH8	15	94.135	0.582	106.0	2.0053	0.0000	OK
15 minute winter	MH7	16	94.137	0.656	33.1	2.1115	0.0000	SURCHARGED
15 minute winter	MH6	15	94.153	0.745	125.2	2.3047	0.0000	SURCHARGED
15 minute winter	MH5	16	94.145	0.768	27.4	2.2826	0.0000	SURCHARGED
15 minute winter	MH4	15	94.146	0.817	111.5	2.1760	0.0000	SURCHARGED
15 minute winter	MH3	16	94.154	0.856	24.7	2.4170	0.0000	SURCHARGED
15 minute winter	MH2	16	94.135	0.890	106.2	2.7364	0.0000	SURCHARGED
15 minute winter	MH1	16	94.149	1.036	83.5	3.1814	0.0000	SURCHARGED
15 minute winter	MH1.1	16	94.130	1.095	75.8	6.4281	0.0000	SURCHARGED
15 minute winter	NEW SW 1	16	93.468	1.829	58.3	3.2319	0.0000	SURCHARGED
15 minute winter	EX SW 1	8	91.392	0.142	56.5	0.0000	0.0000	OK
15 minute winter	MH16	10	95.742	0.102	43.3	0.3184	0.0000	OK
15 minute winter	MH14	10	95.834	0.059	12.2	0.1101	0.0000	OK
15 minute winter	MH15	16	95.339	0.621	20.6	1.9628	0.0000	SURCHARGED
15 minute winter	MH17	16	95.337	0.640	60.8	1.9117	0.0000	SURCHARGED
15 minute winter	MH11	16	95.321	0.521	39.3	1.8769	0.0000	OK
15 minute winter	MH12	17	95.331	0.681	74.3	2.3078	0.0000	SURCHARGED
15 minute winter	MH10	16	95.313	0.674	53.5	2.6278	0.0000	OK
15 minute winter	MH13	15	95.292	0.864	117.8	2.5500	0.0000	SURCHARGED
15 minute winter	MH18	16	94.094	0.094	48.7	0.2797	0.0000	OK
15 minute winter	MH19	15	95.294	0.883	95.0	3.9933	0.0000	SURCHARGED
15 minute winter	EX SW 3	16	93.348	0.081	49.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute winter	MH9	1.000	MH8	51.5	0.737	0.160	11.6333	
15 minute winter	MH8	1.001	MH6	92.0	0.895	0.210	9.9491	
15 minute winter	MH7	2.000	MH6	30.4	0.384	0.070	5.1702	
15 minute winter	MH6	1.002	MH4	105.8	0.986	0.240	5.4121	
15 minute winter	MH5	3.000	MH4	12.7	0.406	0.029	3.4066	
15 minute winter	MH4	1.003	MH2	84.7	0.966	0.192	5.7468	
15 minute winter	MH3	4.000	MH2	-14.3	0.235	-0.033	3.7536	
15 minute winter	MH2	1.004	MH1	67.2	0.791	0.138	7.4408	
15 minute winter	MH1	1.005	MH1.1	68.2	0.700	0.530	2.0678	
15 minute winter	MH1.1	1.006	NEW SW 1	58.3	1.136	0.413	0.8406	
15 minute winter	NEW SW 1	EX1.000	EX SW 1	56.5	3.209	2.127	0.3054	118.1
15 minute winter	MH16	5.000	MH17	42.8	2.114	0.225	0.8714	
15 minute winter	MH14	6.000	MH15	12.1	1.962	0.291	0.1138	
15 minute winter	MH15	6.001	MH17	20.8	0.333	0.068	2.9641	
15 minute winter	MH17	5.001	MH19	51.0	0.638	0.137	12.9541	
15 minute winter	MH11	7.000	MH12	35.0	0.594	0.077	9.1910	
15 minute winter	MH12	7.001	MH13	54.9	0.655	0.179	10.0990	
15 minute winter	MH10	8.000	MH13	57.8	0.504	0.059	14.3458	
15 minute winter	MH13	7.002	MH19	67.5	0.616	0.123	3.7261	
15 minute winter	MH18	5.003	EX SW 3	49.7	3.503	0.278	0.0890	101.3
15 minute winter	MH19	5.002	MH18	48.7	2.301	0.112	0.1844	

**Results for 100 year 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 99.98%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute summer	MH9	24	94.118	0.468	57.8	1.7713	0.0000	OK
30 minute summer	MH8	24	94.121	0.568	86.3	1.9563	0.0000	OK
30 minute summer	MH7	24	94.115	0.634	25.9	2.0404	0.0000	SURCHARGED
30 minute summer	MH6	23	94.118	0.710	110.7	2.1954	0.0000	SURCHARGED
30 minute summer	MH5	23	94.114	0.737	17.8	2.1911	0.0000	SURCHARGED
30 minute summer	MH4	23	94.117	0.788	93.0	2.0983	0.0000	SURCHARGED
30 minute summer	MH3	23	94.118	0.820	14.7	2.3143	0.0000	SURCHARGED
30 minute summer	MH2	23	94.116	0.871	82.1	2.6777	0.0000	SURCHARGED
30 minute summer	MH1	23	94.114	1.001	80.3	3.0717	0.0000	SURCHARGED
30 minute summer	MH1.1	23	94.090	1.055	81.0	6.1934	0.0000	SURCHARGED
30 minute summer	NEW SW 1	24	93.450	1.811	58.4	3.2003	0.0000	SURCHARGED
30 minute summer	EX SW 1	13	91.392	0.142	56.2	0.0000	0.0000	OK
30 minute summer	MH16	18	95.735	0.095	38.0	0.2976	0.0000	OK
30 minute summer	MH14	18	95.830	0.055	10.7	0.1027	0.0000	OK
30 minute summer	MH15	24	95.304	0.586	18.2	1.8522	0.0000	OK
30 minute summer	MH17	24	95.306	0.609	50.8	1.8173	0.0000	SURCHARGED
30 minute summer	MH11	23	95.312	0.512	34.5	1.8436	0.0000	OK
30 minute summer	MH12	23	95.312	0.662	62.9	2.2411	0.0000	SURCHARGED
30 minute summer	MH10	24	95.307	0.668	46.9	2.6042	0.0000	OK
30 minute summer	MH13	24	95.292	0.864	86.8	2.5478	0.0000	SURCHARGED
30 minute summer	MH18	24	94.094	0.094	49.3	0.2803	0.0000	OK
30 minute summer	MH19	24	95.290	0.879	64.1	3.9746	0.0000	SURCHARGED
30 minute summer	EX SW 3	24	93.348	0.081	49.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute summer	MH9	1.000	MH8	48.3	0.723	0.150	11.1579	
30 minute summer	MH8	1.001	MH6	79.4	0.854	0.181	9.8906	
30 minute summer	MH7	2.000	MH6	27.4	0.328	0.063	5.1702	
30 minute summer	MH6	1.002	MH4	79.9	0.910	0.182	5.4121	
30 minute summer	MH5	3.000	MH4	10.6	0.346	0.024	3.4066	
30 minute summer	MH4	1.003	MH2	60.1	0.870	0.136	5.7468	
30 minute summer	MH3	4.000	MH2	6.9	0.212	0.016	3.7536	
30 minute summer	MH2	1.004	MH1	67.0	0.720	0.138	7.4408	
30 minute summer	MH1	1.005	MH1.1	77.2	0.700	0.600	2.0678	
30 minute summer	MH1.1	1.006	NEW SW 1	58.4	1.147	0.414	0.8406	
30 minute summer	NEW SW 1	EX1.000	EX SW 1	56.2	3.195	2.118	0.3054	141.9
30 minute summer	MH16	5.000	MH17	38.0	2.054	0.200	0.8818	
30 minute summer	MH14	6.000	MH15	10.7	1.905	0.258	0.1070	
30 minute summer	MH15	6.001	MH17	12.8	0.300	0.042	2.9553	
30 minute summer	MH17	5.001	MH19	37.4	0.569	0.100	12.9541	
30 minute summer	MH11	7.000	MH12	29.7	0.524	0.065	9.1263	
30 minute summer	MH12	7.001	MH13	37.8	0.582	0.124	10.0990	
30 minute summer	MH10	8.000	MH13	34.2	0.435	0.035	14.2984	
30 minute summer	MH13	7.002	MH19	47.9	0.515	0.087	3.7261	
30 minute summer	MH18	5.003	EX SW 3	49.7	3.496	0.278	0.0892	121.9
30 minute summer	MH19	5.002	MH18	49.3	2.307	0.113	0.1857	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute winter	MH9	25	94.395	0.745	42.1	2.8228	0.0000	SURCHARGED
30 minute winter	MH8	25	94.391	0.838	76.8	2.8864	0.0000	SURCHARGED
30 minute winter	MH7	25	94.396	0.915	23.5	2.9445	0.0000	SURCHARGED
30 minute winter	MH6	25	94.396	0.988	95.8	3.0543	0.0000	SURCHARGED
30 minute winter	MH5	25	94.397	1.020	16.1	3.0324	0.0000	SURCHARGED
30 minute winter	MH4	25	94.397	1.068	74.3	2.8462	0.0000	SURCHARGED
30 minute winter	MH3	25	94.392	1.094	14.1	3.0894	0.0000	SURCHARGED
30 minute winter	MH2	25	94.392	1.147	79.2	3.5296	0.0000	SURCHARGED
30 minute winter	MH1	25	94.389	1.276	83.6	3.9180	0.0000	SURCHARGED
30 minute winter	MH1.1	25	94.367	1.331	78.3	7.8132	0.0000	SURCHARGED
30 minute winter	NEW SW 1	26	93.663	2.024	59.9	3.5761	0.0000	SURCHARGED
30 minute winter	EX SW 1	12	91.392	0.142	59.1	0.0000	0.0000	OK
30 minute winter	MH16	18	95.730	0.090	34.4	0.2819	0.0000	OK
30 minute winter	MH14	18	95.827	0.052	9.6	0.0967	0.0000	OK
30 minute winter	MH15	25	95.594	0.876	17.3	2.7670	0.0000	SURCHARGED
30 minute winter	MH17	25	95.594	0.897	47.4	2.6770	0.0000	SURCHARGED
30 minute winter	MH11	24	95.610	0.810	31.2	2.9181	0.0000	SURCHARGED
30 minute winter	MH12	25	95.593	0.943	56.5	3.1928	0.0000	SURCHARGED
30 minute winter	MH10	24	95.581	0.942	42.4	3.6743	0.0000	SURCHARGED
30 minute winter	MH13	24	95.585	1.157	79.1	3.4134	0.0000	SURCHARGED
30 minute winter	MH18	25	94.103	0.103	57.4	0.3081	0.0000	OK
30 minute winter	MH19	24	95.585	1.174	70.4	5.3123	0.0000	SURCHARGED
30 minute winter	EX SW 3	25	93.354	0.087	57.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute winter	MH9	1.000	MH8	42.4	0.701	0.131	12.2825	
30 minute winter	MH8	1.001	MH6	66.2	0.809	0.151	9.9902	
30 minute winter	MH7	2.000	MH6	18.6	0.329	0.043	5.1702	
30 minute winter	MH6	1.002	MH4	67.5	0.892	0.153	5.4121	
30 minute winter	MH5	3.000	MH4	11.6	0.351	0.027	3.4066	
30 minute winter	MH4	1.003	MH2	62.4	0.902	0.142	5.7468	
30 minute winter	MH3	4.000	MH2	6.9	0.206	0.016	3.7536	
30 minute winter	MH2	1.004	MH1	65.0	0.738	0.134	7.4408	
30 minute winter	MH1	1.005	MH1.1	72.9	0.661	0.567	2.0678	
30 minute winter	MH1.1	1.006	NEW SW 1	59.9	1.140	0.425	0.8406	
30 minute winter	NEW SW 1	EX1.000	EX SW 1	59.1	3.356	2.225	0.3054	159.2
30 minute winter	MH16	5.000	MH17	34.4	2.000	0.181	0.9290	
30 minute winter	MH14	6.000	MH15	9.6	1.851	0.232	0.1228	
30 minute winter	MH15	6.001	MH17	13.5	0.298	0.044	2.9641	
30 minute winter	MH17	5.001	MH19	33.8	0.581	0.091	12.9541	
30 minute winter	MH11	7.000	MH12	27.1	0.500	0.059	9.5629	
30 minute winter	MH12	7.001	MH13	43.8	0.602	0.143	10.0990	
30 minute winter	MH10	8.000	MH13	34.4	0.435	0.035	14.7335	
30 minute winter	MH13	7.002	MH19	61.5	0.533	0.112	3.7261	
30 minute winter	MH18	5.003	EX SW 3	57.6	3.606	0.322	0.1002	136.4
30 minute winter	MH19	5.002	MH18	57.4	2.369	0.131	0.2107	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute summer	MH9	40	94.090	0.440	35.6	1.6669	0.0000	OK
60 minute summer	MH8	41	94.087	0.534	65.1	1.8395	0.0000	OK
60 minute summer	MH7	41	94.091	0.610	19.8	1.9628	0.0000	SURCHARGED
60 minute summer	MH6	41	94.088	0.680	79.9	2.1044	0.0000	SURCHARGED
60 minute summer	MH5	41	94.090	0.713	13.6	2.1188	0.0000	SURCHARGED
60 minute summer	MH4	41	94.090	0.761	66.3	2.0266	0.0000	SURCHARGED
60 minute summer	MH3	41	94.090	0.792	10.8	2.2353	0.0000	SURCHARGED
60 minute summer	MH2	41	94.090	0.845	64.3	2.5984	0.0000	SURCHARGED
60 minute summer	MH1	41	94.087	0.974	67.3	2.9899	0.0000	SURCHARGED
60 minute summer	MH1.1	41	94.065	1.030	68.4	6.0415	0.0000	SURCHARGED
60 minute summer	NEW SW 1	42	93.433	1.794	56.7	3.1702	0.0000	SURCHARGED
60 minute summer	EX SW 1	25	91.392	0.142	56.0	0.0000	0.0000	OK
60 minute summer	MH16	33	95.722	0.082	29.1	0.2576	0.0000	OK
60 minute summer	MH14	33	95.822	0.047	8.2	0.0887	0.0000	OK
60 minute summer	MH15	40	95.292	0.574	13.9	1.8131	0.0000	OK
60 minute summer	MH17	40	95.293	0.596	37.9	1.7783	0.0000	OK
60 minute summer	MH11	41	95.299	0.499	26.4	1.7972	0.0000	OK
60 minute summer	MH12	41	95.291	0.641	49.0	2.1706	0.0000	SURCHARGED
60 minute summer	MH10	41	95.292	0.653	35.9	2.5458	0.0000	OK
60 minute summer	MH13	41	95.293	0.865	64.9	2.5523	0.0000	SURCHARGED
60 minute summer	MH18	40	94.093	0.093	49.3	0.2791	0.0000	OK
60 minute summer	MH19	41	95.293	0.882	56.8	3.9894	0.0000	SURCHARGED
60 minute summer	EX SW 3	41	93.347	0.080	49.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute summer	MH9	1.000	MH8	36.0	0.672	0.111	10.5815	
60 minute summer	MH8	1.001	MH6	56.0	0.783	0.128	9.6939	
60 minute summer	MH7	2.000	MH6	17.2	0.309	0.040	5.1702	
60 minute summer	MH6	1.002	MH4	58.6	0.866	0.133	5.4121	
60 minute summer	MH5	3.000	MH4	11.0	0.299	0.025	3.4066	
60 minute summer	MH4	1.003	MH2	48.4	0.846	0.110	5.7468	
60 minute summer	MH3	4.000	MH2	6.8	0.171	0.016	3.7536	
60 minute summer	MH2	1.004	MH1	53.4	0.670	0.110	7.4408	
60 minute summer	MH1	1.005	MH1.1	64.4	0.585	0.501	2.0678	
60 minute summer	MH1.1	1.006	NEW SW 1	56.7	1.137	0.402	0.8406	
60 minute summer	NEW SW 1	EX1.000	EX SW 1	56.0	3.182	2.109	0.3054	182.1
60 minute summer	MH16	5.000	MH17	29.1	1.913	0.153	0.8618	
60 minute summer	MH14	6.000	MH15	8.2	1.776	0.198	0.1017	
60 minute summer	MH15	6.001	MH17	9.1	0.278	0.030	2.9399	
60 minute summer	MH17	5.001	MH19	23.9	0.535	0.064	12.9462	
60 minute summer	MH11	7.000	MH12	21.2	0.463	0.046	9.0310	
60 minute summer	MH12	7.001	MH13	32.9	0.556	0.108	10.0990	
60 minute summer	MH10	8.000	MH13	22.7	0.377	0.023	14.1769	
60 minute summer	MH13	7.002	MH19	43.5	0.495	0.079	3.7261	
60 minute summer	MH18	5.003	EX SW 3	49.2	3.484	0.275	0.0886	156.4
60 minute summer	MH19	5.002	MH18	49.3	2.311	0.113	0.1856	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute winter	MH9	44	94.250	0.600	28.8	2.2718	0.0000	OK
60 minute winter	MH8	44	94.249	0.696	50.9	2.3984	0.0000	SURCHARGED
60 minute winter	MH7	44	94.249	0.768	16.1	2.4726	0.0000	SURCHARGED
60 minute winter	MH6	44	94.251	0.843	68.6	2.6062	0.0000	SURCHARGED
60 minute winter	MH5	44	94.248	0.871	11.0	2.5898	0.0000	SURCHARGED
60 minute winter	MH4	44	94.249	0.920	59.2	2.4518	0.0000	SURCHARGED
60 minute winter	MH3	44	94.248	0.950	7.6	2.6806	0.0000	SURCHARGED
60 minute winter	MH2	44	94.248	1.003	59.1	3.0851	0.0000	SURCHARGED
60 minute winter	MH1	44	94.246	1.133	63.5	3.4771	0.0000	SURCHARGED
60 minute winter	MH1.1	44	94.225	1.190	65.0	6.9815	0.0000	SURCHARGED
60 minute winter	NEW SW 1	45	93.555	1.916	58.0	3.3864	0.0000	SURCHARGED
60 minute winter	EX SW 1	83	91.392	0.142	57.7	0.0000	0.0000	OK
60 minute winter	MH16	33	95.714	0.074	23.5	0.2302	0.0000	OK
60 minute winter	MH14	33	95.817	0.042	6.6	0.0790	0.0000	OK
60 minute winter	MH15	43	95.480	0.762	11.2	2.4064	0.0000	SURCHARGED
60 minute winter	MH17	43	95.480	0.783	31.8	2.3372	0.0000	SURCHARGED
60 minute winter	MH11	43	95.495	0.695	21.3	2.5032	0.0000	SURCHARGED
60 minute winter	MH12	43	95.486	0.836	39.0	2.8306	0.0000	SURCHARGED
60 minute winter	MH10	44	95.477	0.838	29.0	3.2684	0.0000	SURCHARGED
60 minute winter	MH13	43	95.480	1.052	58.7	3.1031	0.0000	SURCHARGED
60 minute winter	MH18	43	94.100	0.100	54.7	0.2980	0.0000	OK
60 minute winter	MH19	43	95.480	1.069	61.8	4.8375	0.0000	SURCHARGED
60 minute winter	EX SW 3	43	93.352	0.085	54.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute winter	MH9	1.000	MH8	27.8	0.629	0.086	12.2779	
60 minute winter	MH8	1.001	MH6	44.2	0.750	0.101	9.9902	
60 minute winter	MH7	2.000	MH6	11.7	0.300	0.027	5.1702	
60 minute winter	MH6	1.002	MH4	51.7	0.854	0.117	5.4121	
60 minute winter	MH5	3.000	MH4	8.3	0.296	0.019	3.4066	
60 minute winter	MH4	1.003	MH2	45.7	0.849	0.104	5.7468	
60 minute winter	MH3	4.000	MH2	5.2	0.183	0.012	3.7536	
60 minute winter	MH2	1.004	MH1	52.8	0.701	0.109	7.4408	
60 minute winter	MH1	1.005	MH1.1	61.1	0.605	0.475	2.0678	
60 minute winter	MH1.1	1.006	NEW SW 1	58.0	1.136	0.411	0.8406	
60 minute winter	NEW SW 1	EX1.000	EX SW 1	57.7	3.276	2.172	0.3054	204.4
60 minute winter	MH16	5.000	MH17	23.5	1.805	0.124	0.8917	
60 minute winter	MH14	6.000	MH15	6.6	1.676	0.159	0.1170	
60 minute winter	MH15	6.001	MH17	8.3	0.271	0.027	2.9641	
60 minute winter	MH17	5.001	MH19	21.4	0.538	0.057	12.9541	
60 minute winter	MH11	7.000	MH12	17.6	0.449	0.039	9.5629	
60 minute winter	MH12	7.001	MH13	24.2	0.551	0.079	10.0990	
60 minute winter	MH10	8.000	MH13	25.4	0.383	0.026	14.7335	
60 minute winter	MH13	7.002	MH19	45.2	0.486	0.082	3.7261	
60 minute winter	MH18	5.003	EX SW 3	54.6	3.565	0.305	0.0961	175.2
60 minute winter	MH19	5.002	MH18	54.7	2.351	0.125	0.2023	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute summer	MH9	76	93.910	0.260	23.5	0.9844	0.0000	OK
120 minute summer	MH8	74	93.910	0.357	42.4	1.2278	0.0000	OK
120 minute summer	MH7	74	93.911	0.430	13.1	1.3842	0.0000	OK
120 minute summer	MH6	74	93.911	0.503	57.0	1.5560	0.0000	OK
120 minute summer	MH5	74	93.911	0.534	9.0	1.5876	0.0000	OK
120 minute summer	MH4	74	93.911	0.582	49.4	1.5514	0.0000	OK
120 minute summer	MH3	74	93.910	0.612	5.9	1.7286	0.0000	SURCHARGED
120 minute summer	MH2	74	93.911	0.666	52.1	2.0474	0.0000	SURCHARGED
120 minute summer	MH1	74	93.909	0.796	54.9	2.4432	0.0000	SURCHARGED
120 minute summer	MH1.1	74	93.890	0.855	56.5	5.0156	0.0000	SURCHARGED
120 minute summer	NEW SW 1	76	93.299	1.660	54.4	2.9326	0.0000	SURCHARGED
120 minute summer	EX SW 1	52	91.392	0.142	54.1	0.0000	0.0000	OK
120 minute summer	MH16	64	95.706	0.066	19.2	0.2071	0.0000	OK
120 minute summer	MH14	64	95.813	0.038	5.4	0.0711	0.0000	OK
120 minute summer	MH15	76	95.146	0.428	9.2	1.3522	0.0000	OK
120 minute summer	MH17	74	95.146	0.449	26.1	1.3421	0.0000	OK
120 minute summer	MH11	76	95.146	0.346	17.4	1.2484	0.0000	OK
120 minute summer	MH12	76	95.149	0.499	31.4	1.6886	0.0000	OK
120 minute summer	MH10	76	95.150	0.511	23.7	1.9930	0.0000	OK
120 minute summer	MH13	74	95.151	0.723	49.6	2.1316	0.0000	OK
120 minute summer	MH18	74	94.088	0.088	44.8	0.2632	0.0000	OK
120 minute summer	MH19	74	95.151	0.740	52.9	3.3460	0.0000	SURCHARGED
120 minute summer	EX SW 3	74	93.343	0.076	44.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute summer	MH9	1.000	MH8	23.2	0.610	0.072	6.3390	
120 minute summer	MH8	1.001	MH6	36.6	0.713	0.083	7.5686	
120 minute summer	MH7	2.000	MH6	9.6	0.290	0.022	4.3001	
120 minute summer	MH6	1.002	MH4	43.3	0.830	0.098	5.1079	
120 minute summer	MH5	3.000	MH4	6.8	0.242	0.016	3.2917	
120 minute summer	MH4	1.003	MH2	40.5	0.834	0.092	5.7233	
120 minute summer	MH3	4.000	MH2	3.7	0.174	0.009	3.7536	
120 minute summer	MH2	1.004	MH1	47.9	0.621	0.099	7.4408	
120 minute summer	MH1	1.005	MH1.1	53.8	0.524	0.418	2.0678	
120 minute summer	MH1.1	1.006	NEW SW 1	54.4	1.129	0.386	0.6926	
120 minute summer	NEW SW 1	EX1.000	EX SW 1	54.1	3.076	2.039	0.3054	225.9
120 minute summer	MH16	5.000	MH17	19.2	1.708	0.101	0.4629	
120 minute summer	MH14	6.000	MH15	5.4	1.586	0.130	0.0386	
120 minute summer	MH15	6.001	MH17	7.1	0.258	0.023	2.3225	
120 minute summer	MH17	5.001	MH19	19.9	0.533	0.053	11.6590	
120 minute summer	MH11	7.000	MH12	13.3	0.419	0.029	7.1091	
120 minute summer	MH12	7.001	MH13	22.3	0.545	0.073	9.4550	
120 minute summer	MH10	8.000	MH13	18.6	0.333	0.019	12.6143	
120 minute summer	MH13	7.002	MH19	35.2	0.377	0.064	3.6997	
120 minute summer	MH18	5.003	EX SW 3	44.8	3.412	0.250	0.0823	193.7
120 minute summer	MH19	5.002	MH18	44.8	2.270	0.103	0.1715	

**Results for 100 year 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 99.99%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute winter	MH9	78	93.893	0.243	18.1	0.9184	0.0000	OK
120 minute winter	MH8	78	93.893	0.340	32.8	1.1703	0.0000	OK
120 minute winter	MH7	78	93.893	0.412	10.1	1.3246	0.0000	OK
120 minute winter	MH6	78	93.893	0.485	45.0	1.4988	0.0000	OK
120 minute winter	MH5	78	93.892	0.515	6.9	1.5306	0.0000	OK
120 minute winter	MH4	78	93.892	0.563	42.8	1.4997	0.0000	OK
120 minute winter	MH3	78	93.891	0.593	4.6	1.6739	0.0000	OK
120 minute winter	MH2	78	93.891	0.646	47.7	1.9868	0.0000	SURCHARGED
120 minute winter	MH1	78	93.889	0.776	53.3	2.3824	0.0000	SURCHARGED
120 minute winter	MH1.1	78	93.870	0.835	55.4	4.9006	0.0000	SURCHARGED
120 minute winter	NEW SW 1	80	93.286	1.647	54.1	2.9097	0.0000	SURCHARGED
120 minute winter	EX SW 1	44	91.392	0.142	54.0	0.0000	0.0000	OK
120 minute winter	MH16	64	95.698	0.058	14.8	0.1813	0.0000	OK
120 minute winter	MH14	64	95.808	0.033	4.2	0.0624	0.0000	OK
120 minute winter	MH15	80	95.152	0.434	7.1	1.3705	0.0000	OK
120 minute winter	MH17	80	95.152	0.455	20.3	1.3573	0.0000	OK
120 minute winter	MH11	80	95.153	0.353	13.4	1.2727	0.0000	OK
120 minute winter	MH12	78	95.153	0.503	24.6	1.7033	0.0000	OK
120 minute winter	MH10	78	95.152	0.513	18.3	2.0011	0.0000	OK
120 minute winter	MH13	80	95.152	0.724	43.0	2.1359	0.0000	OK
120 minute winter	MH18	80	94.088	0.088	44.8	0.2632	0.0000	OK
120 minute winter	MH19	80	95.152	0.741	48.0	3.3516	0.0000	SURCHARGED
120 minute winter	EX SW 3	80	93.343	0.076	44.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute winter	MH9	1.000	MH8	18.0	0.564	0.056	5.9146	
120 minute winter	MH8	1.001	MH6	30.1	0.689	0.069	7.2435	
120 minute winter	MH7	2.000	MH6	7.7	0.288	0.018	4.1294	
120 minute winter	MH6	1.002	MH4	37.5	0.808	0.085	4.9807	
120 minute winter	MH5	3.000	MH4	5.1	0.245	0.012	3.2171	
120 minute winter	MH4	1.003	MH2	39.6	0.832	0.090	5.6743	
120 minute winter	MH3	4.000	MH2	3.2	0.158	0.007	3.7499	
120 minute winter	MH2	1.004	MH1	46.7	0.634	0.096	7.4408	
120 minute winter	MH1	1.005	MH1.1	52.9	0.532	0.411	2.0678	
120 minute winter	MH1.1	1.006	NEW SW 1	54.1	1.123	0.383	0.6620	
120 minute winter	NEW SW 1	EX1.000	EX SW 1	54.0	3.065	2.032	0.3056	252.8
120 minute winter	MH16	5.000	MH17	14.8	1.587	0.078	0.4765	
120 minute winter	MH14	6.000	MH15	4.2	1.480	0.101	0.0322	
120 minute winter	MH15	6.001	MH17	5.7	0.251	0.019	2.3531	
120 minute winter	MH17	5.001	MH19	16.0	0.528	0.043	11.7237	
120 minute winter	MH11	7.000	MH12	11.3	0.406	0.025	7.2085	
120 minute winter	MH12	7.001	MH13	19.2	0.557	0.063	9.4950	
120 minute winter	MH10	8.000	MH13	17.0	0.306	0.017	12.6587	
120 minute winter	MH13	7.002	MH19	33.5	0.420	0.061	3.7026	
120 minute winter	MH18	5.003	EX SW 3	44.8	3.413	0.250	0.0823	217.2
120 minute winter	MH19	5.002	MH18	44.8	2.270	0.103	0.1716	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute summer	MH9	108	93.784	0.134	17.5	0.5086	0.0000	OK
180 minute summer	MH8	108	93.784	0.231	31.8	0.7952	0.0000	OK
180 minute summer	MH7	108	93.783	0.302	9.8	0.9714	0.0000	OK
180 minute summer	MH6	108	93.783	0.375	45.6	1.1593	0.0000	OK
180 minute summer	MH5	108	93.782	0.405	6.7	1.2027	0.0000	OK
180 minute summer	MH4	108	93.782	0.453	42.6	1.2061	0.0000	OK
180 minute summer	MH3	108	93.781	0.483	4.4	1.3623	0.0000	OK
180 minute summer	MH2	108	93.781	0.536	46.8	1.6476	0.0000	OK
180 minute summer	MH1	108	93.779	0.666	51.8	2.0446	0.0000	SURCHARGED
180 minute summer	MH1.1	108	93.761	0.726	53.1	4.2619	0.0000	SURCHARGED
180 minute summer	NEW SW 1	108	93.179	1.540	52.5	2.7204	0.0000	SURCHARGED
180 minute summer	EX SW 1	80	91.392	0.142	52.4	0.0000	0.0000	OK
180 minute summer	MH16	96	95.697	0.057	14.3	0.1781	0.0000	OK
180 minute summer	MH14	96	95.807	0.032	4.0	0.0608	0.0000	OK
180 minute summer	MH15	108	95.052	0.334	6.8	1.0551	0.0000	OK
180 minute summer	MH17	108	95.052	0.355	19.8	1.0602	0.0000	OK
180 minute summer	MH11	108	95.055	0.255	13.0	0.9197	0.0000	OK
180 minute summer	MH12	108	95.053	0.403	23.2	1.3649	0.0000	OK
180 minute summer	MH10	108	95.051	0.412	17.7	1.6068	0.0000	OK
180 minute summer	MH13	108	95.054	0.626	40.4	1.8453	0.0000	OK
180 minute summer	MH18	108	94.084	0.084	41.4	0.2510	0.0000	OK
180 minute summer	MH19	108	95.054	0.643	46.4	2.9071	0.0000	SURCHARGED
180 minute summer	EX SW 3	108	93.340	0.073	41.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute summer	MH9	1.000	MH8	17.5	0.568	0.054	3.2019	
180 minute summer	MH8	1.001	MH6	30.6	0.684	0.070	5.0544	
180 minute summer	MH7	2.000	MH6	7.3	0.279	0.017	3.0022	
180 minute summer	MH6	1.002	MH4	36.7	0.800	0.083	3.9705	
180 minute summer	MH5	3.000	MH4	5.0	0.206	0.011	2.6023	
180 minute summer	MH4	1.003	MH2	36.9	0.797	0.084	5.0360	
180 minute summer	MH3	4.000	MH2	2.8	0.140	0.006	3.3877	
180 minute summer	MH2	1.004	MH1	45.2	0.620	0.093	7.2276	
180 minute summer	MH1	1.005	MH1.1	51.2	0.494	0.398	2.0678	
180 minute summer	MH1.1	1.006	NEW SW 1	52.5	1.118	0.372	0.4132	
180 minute summer	NEW SW 1	EX1.000	EX SW 1	52.4	2.977	1.973	0.3054	253.3
180 minute summer	MH16	5.000	MH17	14.3	1.571	0.075	0.2018	
180 minute summer	MH14	6.000	MH15	4.0	1.459	0.097	0.0311	
180 minute summer	MH15	6.001	MH17	5.5	0.251	0.018	1.7610	
180 minute summer	MH17	5.001	MH19	15.8	0.519	0.042	9.6849	
180 minute summer	MH11	7.000	MH12	10.7	0.399	0.024	5.3537	
180 minute summer	MH12	7.001	MH13	19.2	0.532	0.063	7.9021	
180 minute summer	MH10	8.000	MH13	15.2	0.291	0.015	10.7160	
180 minute summer	MH13	7.002	MH19	32.8	0.388	0.060	3.3612	
180 minute summer	MH18	5.003	EX SW 3	41.4	3.353	0.231	0.0775	216.2
180 minute summer	MH19	5.002	MH18	41.4	2.238	0.095	0.1609	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute winter	MH9	108	93.734	0.084	13.5	0.3170	0.0000	OK
180 minute winter	MH8	112	93.728	0.175	24.5	0.6028	0.0000	OK
180 minute winter	MH7	112	93.727	0.246	7.5	0.7931	0.0000	OK
180 minute winter	MH6	112	93.727	0.319	36.8	0.9879	0.0000	OK
180 minute winter	MH5	112	93.727	0.350	5.2	1.0391	0.0000	OK
180 minute winter	MH4	112	93.727	0.398	37.7	1.0592	0.0000	OK
180 minute winter	MH3	108	93.726	0.428	3.4	1.2077	0.0000	OK
180 minute winter	MH2	108	93.726	0.481	44.3	1.4791	0.0000	OK
180 minute winter	MH1	108	93.725	0.612	49.3	1.8780	0.0000	SURCHARGED
180 minute winter	MH1.1	108	93.708	0.673	50.7	3.9504	0.0000	SURCHARGED
180 minute winter	NEW SW 1	112	93.059	1.420	50.6	2.5099	0.0000	SURCHARGED
180 minute winter	EX SW 1	72	91.392	0.142	50.6	0.0000	0.0000	OK
180 minute winter	MH16	96	95.690	0.050	11.0	0.1561	0.0000	OK
180 minute winter	MH14	96	95.804	0.028	3.1	0.0535	0.0000	OK
180 minute winter	MH15	112	95.019	0.301	5.3	0.9505	0.0000	OK
180 minute winter	MH17	112	95.019	0.322	15.4	0.9607	0.0000	OK
180 minute winter	MH11	112	95.019	0.219	10.0	0.7896	0.0000	OK
180 minute winter	MH12	112	95.019	0.369	18.6	1.2510	0.0000	OK
180 minute winter	MH10	112	95.020	0.381	13.6	1.4844	0.0000	OK
180 minute winter	MH13	112	95.019	0.591	33.8	1.7425	0.0000	OK
180 minute winter	MH18	112	94.083	0.083	40.2	0.2464	0.0000	OK
180 minute winter	MH19	112	95.018	0.607	42.2	2.7478	0.0000	SURCHARGED
180 minute winter	EX SW 3	112	93.339	0.072	40.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute winter	MH9	1.000	MH8	13.5	0.527	0.042	2.0051	
180 minute winter	MH8	1.001	MH6	24.3	0.653	0.055	3.9144	
180 minute winter	MH7	2.000	MH6	6.6	0.274	0.015	2.3995	
180 minute winter	MH6	1.002	MH4	32.2	0.791	0.073	3.3688	
180 minute winter	MH5	3.000	MH4	4.5	0.238	0.010	2.2291	
180 minute winter	MH4	1.003	MH2	35.5	0.799	0.081	4.4911	
180 minute winter	MH3	4.000	MH2	2.8	0.120	0.006	3.0453	
180 minute winter	MH2	1.004	MH1	43.6	0.620	0.090	6.9178	
180 minute winter	MH1	1.005	MH1.1	49.0	0.491	0.381	2.0678	
180 minute winter	MH1.1	1.006	NEW SW 1	50.6	1.111	0.359	0.3474	
180 minute winter	NEW SW 1	EX1.000	EX SW 1	50.6	2.876	1.906	0.3054	282.5
180 minute winter	MH16	5.000	MH17	11.0	1.458	0.058	0.1673	
180 minute winter	MH14	6.000	MH15	3.1	1.357	0.075	0.0259	
180 minute winter	MH15	6.001	MH17	4.6	0.242	0.015	1.5532	
180 minute winter	MH17	5.001	MH19	13.4	0.529	0.036	8.8386	
180 minute winter	MH11	7.000	MH12	8.9	0.384	0.019	4.6685	
180 minute winter	MH12	7.001	MH13	16.1	0.547	0.053	7.2391	
180 minute winter	MH10	8.000	MH13	12.6	0.281	0.013	9.9822	
180 minute winter	MH13	7.002	MH19	29.8	0.387	0.054	3.1918	
180 minute winter	MH18	5.003	EX SW 3	40.1	3.330	0.224	0.0757	242.8
180 minute winter	MH19	5.002	MH18	40.2	2.226	0.092	0.1569	

**Results for 100 year 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute summer	MH9	124	93.735	0.085	14.8	0.3226	0.0000	OK
240 minute summer	MH8	136	93.704	0.151	26.7	0.5189	0.0000	OK
240 minute summer	MH7	136	93.702	0.221	8.2	0.7108	0.0000	OK
240 minute summer	MH6	136	93.702	0.294	40.0	0.9091	0.0000	OK
240 minute summer	MH5	136	93.701	0.324	5.6	0.9621	0.0000	OK
240 minute summer	MH4	136	93.701	0.372	39.3	0.9906	0.0000	OK
240 minute summer	MH3	136	93.700	0.402	3.7	1.1342	0.0000	OK
240 minute summer	MH2	136	93.700	0.455	43.9	1.3992	0.0000	OK
240 minute summer	MH1	136	93.699	0.586	48.1	1.7982	0.0000	SURCHARGED
240 minute summer	MH1.1	136	93.683	0.648	49.5	3.8019	0.0000	SURCHARGED
240 minute summer	NEW SW 1	140	92.975	1.336	49.4	2.3609	0.0000	SURCHARGED
240 minute summer	EX SW 1	108	91.392	0.142	49.3	0.0000	0.0000	OK
240 minute summer	MH16	124	95.692	0.052	12.1	0.1635	0.0000	OK
240 minute summer	MH14	124	95.805	0.030	3.4	0.0559	0.0000	OK
240 minute summer	MH15	140	94.978	0.260	5.8	0.8219	0.0000	OK
240 minute summer	MH17	140	94.978	0.281	16.9	0.8397	0.0000	OK
240 minute summer	MH11	140	94.978	0.178	10.9	0.6431	0.0000	OK
240 minute summer	MH12	140	94.979	0.329	20.8	1.1144	0.0000	OK
240 minute summer	MH10	140	94.978	0.339	14.9	1.3207	0.0000	OK
240 minute summer	MH13	140	94.979	0.551	34.1	1.6267	0.0000	OK
240 minute summer	MH18	140	94.081	0.081	38.7	0.2411	0.0000	OK
240 minute summer	MH19	140	94.979	0.568	41.4	2.5713	0.0000	SURCHARGED
240 minute summer	EX SW 3	140	93.338	0.071	38.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute summer	MH9	1.000	MH8	14.6	0.542	0.045	1.6276	
240 minute summer	MH8	1.001	MH6	26.5	0.665	0.060	3.4145	
240 minute summer	MH7	2.000	MH6	6.6	0.280	0.015	2.1228	
240 minute summer	MH6	1.002	MH4	33.5	0.796	0.076	3.0806	
240 minute summer	MH5	3.000	MH4	4.6	0.220	0.011	2.0468	
240 minute summer	MH4	1.003	MH2	35.0	0.795	0.079	4.2097	
240 minute summer	MH3	4.000	MH2	2.8	0.135	0.006	2.8637	
240 minute summer	MH2	1.004	MH1	42.7	0.621	0.088	6.7250	
240 minute summer	MH1	1.005	MH1.1	47.9	0.479	0.373	2.0678	
240 minute summer	MH1.1	1.006	NEW SW 1	49.4	1.104	0.350	0.3414	
240 minute summer	NEW SW 1	EX1.000	EX SW 1	49.3	2.803	1.858	0.3054	270.9
240 minute summer	MH16	5.000	MH17	12.0	1.495	0.063	0.1785	
240 minute summer	MH14	6.000	MH15	3.4	1.392	0.082	0.0276	
240 minute summer	MH15	6.001	MH17	4.9	0.238	0.016	1.2980	
240 minute summer	MH17	5.001	MH19	13.7	0.525	0.037	7.8054	
240 minute summer	MH11	7.000	MH12	10.0	0.386	0.022	3.8761	
240 minute summer	MH12	7.001	MH13	16.7	0.541	0.055	6.4276	
240 minute summer	MH10	8.000	MH13	13.6	0.277	0.014	9.0386	
240 minute summer	MH13	7.002	MH19	28.8	0.400	0.052	2.9845	
240 minute summer	MH18	5.003	EX SW 3	38.7	3.302	0.216	0.0736	232.1
240 minute summer	MH19	5.002	MH18	38.7	2.210	0.089	0.1523	

**Results for 100 year 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute winter	MH9	124	93.724	0.074	11.0	0.2810	0.0000	OK
240 minute winter	MH8	124	93.638	0.085	20.0	0.2936	0.0000	OK
240 minute winter	MH7	140	93.620	0.139	6.1	0.4460	0.0000	OK
240 minute winter	MH6	140	93.619	0.211	30.8	0.6541	0.0000	OK
240 minute winter	MH5	140	93.618	0.241	4.2	0.7175	0.0000	OK
240 minute winter	MH4	140	93.618	0.289	33.5	0.7709	0.0000	OK
240 minute winter	MH3	140	93.617	0.319	2.8	0.9019	0.0000	OK
240 minute winter	MH2	140	93.617	0.372	39.8	1.1457	0.0000	OK
240 minute winter	MH1	140	93.617	0.504	44.4	1.5461	0.0000	SURCHARGED
240 minute winter	MH1.1	140	93.603	0.568	45.6	3.3342	0.0000	SURCHARGED
240 minute winter	NEW SW 1	140	92.740	1.101	45.6	1.9447	0.0000	SURCHARGED
240 minute winter	EX SW 1	96	91.392	0.142	45.5	0.0000	0.0000	OK
240 minute winter	MH16	124	95.685	0.045	9.0	0.1412	0.0000	OK
240 minute winter	MH14	124	95.801	0.026	2.5	0.0480	0.0000	OK
240 minute winter	MH15	144	94.923	0.205	4.3	0.6476	0.0000	OK
240 minute winter	MH17	144	94.923	0.226	12.9	0.6747	0.0000	OK
240 minute winter	MH11	144	94.923	0.123	8.1	0.4450	0.0000	OK
240 minute winter	MH12	144	94.923	0.273	16.5	0.9251	0.0000	OK
240 minute winter	MH10	144	94.922	0.283	11.1	1.1052	0.0000	OK
240 minute winter	MH13	144	94.923	0.495	28.1	1.4610	0.0000	OK
240 minute winter	MH18	144	94.078	0.078	36.4	0.2324	0.0000	OK
240 minute winter	MH19	144	94.923	0.512	36.6	2.3169	0.0000	SURCHARGED
240 minute winter	EX SW 3	144	93.336	0.069	36.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute winter	MH9	1.000	MH8	11.0	0.496	0.034	0.9669	
240 minute winter	MH8	1.001	MH6	19.9	0.647	0.045	1.9638	
240 minute winter	MH7	2.000	MH6	5.8	0.266	0.013	1.2648	
240 minute winter	MH6	1.002	MH4	29.0	0.772	0.066	2.1439	
240 minute winter	MH5	3.000	MH4	3.6	0.174	0.008	1.4544	
240 minute winter	MH4	1.003	MH2	32.2	0.795	0.073	3.2467	
240 minute winter	MH3	4.000	MH2	2.6	0.134	0.006	2.2407	
240 minute winter	MH2	1.004	MH1	39.2	0.621	0.081	5.7631	
240 minute winter	MH1	1.005	MH1.1	44.2	0.484	0.344	2.0678	
240 minute winter	MH1.1	1.006	NEW SW 1	45.6	1.081	0.323	0.3215	
240 minute winter	NEW SW 1	EX1.000	EX SW 1	45.5	2.586	1.714	0.3056	304.4
240 minute winter	MH16	5.000	MH17	9.0	1.376	0.047	0.1447	
240 minute winter	MH14	6.000	MH15	2.5	1.275	0.060	0.0222	
240 minute winter	MH15	6.001	MH17	3.9	0.236	0.013	0.9573	
240 minute winter	MH17	5.001	MH19	11.6	0.526	0.031	6.3179	
240 minute winter	MH11	7.000	MH12	8.0	0.373	0.017	2.8264	
240 minute winter	MH12	7.001	MH13	13.8	0.531	0.045	5.2457	
240 minute winter	MH10	8.000	MH13	11.0	0.251	0.011	7.7123	
240 minute winter	MH13	7.002	MH19	26.1	0.279	0.047	2.6618	
240 minute winter	MH18	5.003	EX SW 3	36.4	3.255	0.203	0.0702	260.2
240 minute winter	MH19	5.002	MH18	36.4	2.183	0.083	0.1450	

**Results for 100 year 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute summer	MH9	184	93.724	0.074	11.1	0.2811	0.0000	OK
360 minute summer	MH8	184	93.638	0.085	20.1	0.2932	0.0000	OK
360 minute summer	MH7	192	93.567	0.086	6.2	0.2770	0.0000	OK
360 minute summer	MH6	192	93.567	0.159	31.6	0.4911	0.0000	OK
360 minute summer	MH5	192	93.565	0.188	4.3	0.5598	0.0000	OK
360 minute summer	MH4	192	93.565	0.236	34.3	0.6297	0.0000	OK
360 minute summer	MH3	192	93.564	0.266	2.8	0.7523	0.0000	OK
360 minute summer	MH2	192	93.564	0.319	39.0	0.9827	0.0000	OK
360 minute summer	MH1	192	93.564	0.451	42.0	1.3842	0.0000	SURCHARGED
360 minute summer	MH1.1	192	93.552	0.517	43.1	3.0337	0.0000	SURCHARGED
360 minute summer	NEW SW 1	200	92.595	0.956	42.9	1.6894	0.0000	SURCHARGED
360 minute summer	EX SW 1	168	91.392	0.142	43.0	0.0000	0.0000	OK
360 minute summer	MH16	184	95.685	0.045	9.1	0.1417	0.0000	OK
360 minute summer	MH14	184	95.801	0.026	2.6	0.0489	0.0000	OK
360 minute summer	MH15	200	94.873	0.155	4.4	0.4909	0.0000	OK
360 minute summer	MH17	200	94.873	0.176	12.8	0.5265	0.0000	OK
360 minute summer	MH11	200	94.875	0.075	8.2	0.2689	0.0000	OK
360 minute summer	MH12	200	94.874	0.224	16.9	0.7579	0.0000	OK
360 minute summer	MH10	200	94.872	0.233	11.2	0.9102	0.0000	OK
360 minute summer	MH13	200	94.874	0.446	28.6	1.3145	0.0000	OK
360 minute summer	MH18	200	94.075	0.075	34.2	0.2243	0.0000	OK
360 minute summer	MH19	200	94.873	0.462	35.8	2.0923	0.0000	SURCHARGED
360 minute summer	EX SW 3	200	93.333	0.066	34.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute summer	MH9	1.000	MH8	11.0	0.497	0.034	0.9661	
360 minute summer	MH8	1.001	MH6	19.8	0.636	0.045	1.4577	
360 minute summer	MH7	2.000	MH6	6.2	0.262	0.014	0.7739	
360 minute summer	MH6	1.002	MH4	29.8	0.766	0.068	1.5624	
360 minute summer	MH5	3.000	MH4	3.4	0.148	0.008	1.0804	
360 minute summer	MH4	1.003	MH2	31.5	0.770	0.071	2.6070	
360 minute summer	MH3	4.000	MH2	2.5	0.097	0.006	1.8214	
360 minute summer	MH2	1.004	MH1	36.9	0.618	0.076	5.0150	
360 minute summer	MH1	1.005	MH1.1	41.6	0.469	0.324	2.0678	
360 minute summer	MH1.1	1.006	NEW SW 1	42.9	1.064	0.304	0.3075	
360 minute summer	NEW SW 1	EX1.000	EX SW 1	43.0	2.443	1.619	0.3054	298.7
360 minute summer	MH16	5.000	MH17	9.1	1.379	0.048	0.1455	
360 minute summer	MH14	6.000	MH15	2.6	1.288	0.062	0.0228	
360 minute summer	MH15	6.001	MH17	3.8	0.236	0.012	0.6669	
360 minute summer	MH17	5.001	MH19	11.3	0.529	0.030	4.9973	
360 minute summer	MH11	7.000	MH12	8.1	0.374	0.018	1.9663	
360 minute summer	MH12	7.001	MH13	14.0	0.511	0.046	4.1941	
360 minute summer	MH10	8.000	MH13	10.0	0.184	0.010	6.5167	
360 minute summer	MH13	7.002	MH19	25.0	0.184	0.045	2.3600	
360 minute summer	MH18	5.003	EX SW 3	34.2	3.209	0.191	0.0670	256.5
360 minute summer	MH19	5.002	MH18	34.2	2.156	0.078	0.1381	

**Results for 100 year 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute winter	MH9	184	93.714	0.064	8.1	0.2434	0.0000	OK
360 minute winter	MH8	184	93.627	0.074	14.7	0.2537	0.0000	OK
360 minute winter	MH7	184	93.524	0.043	4.5	0.1373	0.0000	OK
360 minute winter	MH6	184	93.505	0.097	23.2	0.2989	0.0000	OK
360 minute winter	MH5	200	93.459	0.082	3.1	0.2448	0.0000	OK
360 minute winter	MH4	200	93.459	0.130	27.0	0.3469	0.0000	OK
360 minute winter	MH3	200	93.457	0.159	2.0	0.4485	0.0000	OK
360 minute winter	MH2	200	93.457	0.212	32.5	0.6517	0.0000	OK
360 minute winter	MH1	200	93.456	0.343	36.1	1.0539	0.0000	OK
360 minute winter	MH1.1	200	93.448	0.413	37.1	2.4255	0.0000	SURCHARGED
360 minute winter	NEW SW 1	200	92.289	0.650	37.1	1.1481	0.0000	SURCHARGED
360 minute winter	EX SW 1	160	91.392	0.142	37.1	0.0000	0.0000	OK
360 minute winter	MH16	184	95.679	0.039	6.6	0.1213	0.0000	OK
360 minute winter	MH14	184	95.797	0.022	1.9	0.0419	0.0000	OK
360 minute winter	MH15	200	94.796	0.078	3.2	0.2477	0.0000	OK
360 minute winter	MH17	200	94.796	0.099	9.6	0.2946	0.0000	OK
360 minute winter	MH11	184	94.847	0.047	6.0	0.1711	0.0000	OK
360 minute winter	MH12	200	94.797	0.147	12.4	0.4963	0.0000	OK
360 minute winter	MH10	200	94.795	0.156	8.2	0.6094	0.0000	OK
360 minute winter	MH13	200	94.795	0.367	22.7	1.0823	0.0000	OK
360 minute winter	MH18	200	94.070	0.070	30.5	0.2096	0.0000	OK
360 minute winter	MH19	200	94.795	0.384	30.8	1.7351	0.0000	SURCHARGED
360 minute winter	EX SW 3	200	93.330	0.063	30.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute winter	MH9	1.000	MH8	8.1	0.452	0.025	0.7811	
360 minute winter	MH8	1.001	MH6	14.6	0.609	0.033	0.8691	
360 minute winter	MH7	2.000	MH6	4.5	0.253	0.010	0.3493	
360 minute winter	MH6	1.002	MH4	23.2	0.764	0.053	0.6905	
360 minute winter	MH5	3.000	MH4	2.9	0.151	0.007	0.4122	
360 minute winter	MH4	1.003	MH2	26.5	0.765	0.060	1.3654	
360 minute winter	MH3	4.000	MH2	2.1	0.096	0.005	0.9895	
360 minute winter	MH2	1.004	MH1	31.9	0.614	0.066	3.3753	
360 minute winter	MH1	1.005	MH1.1	35.9	0.475	0.280	2.0253	
360 minute winter	MH1.1	1.006	NEW SW 1	37.1	1.024	0.263	0.2762	
360 minute winter	NEW SW 1	EX1.000	EX SW 1	37.1	2.109	1.398	0.3054	333.6
360 minute winter	MH16	5.000	MH17	6.6	1.257	0.035	0.1162	
360 minute winter	MH14	6.000	MH15	1.9	1.178	0.046	0.0183	
360 minute winter	MH15	6.001	MH17	3.1	0.230	0.010	0.2723	
360 minute winter	MH17	5.001	MH19	9.4	0.521	0.025	3.0260	
360 minute winter	MH11	7.000	MH12	6.0	0.357	0.013	1.0682	
360 minute winter	MH12	7.001	MH13	11.5	0.526	0.038	2.5984	
360 minute winter	MH10	8.000	MH13	7.9	0.199	0.008	4.6920	
360 minute winter	MH13	7.002	MH19	21.8	0.263	0.040	1.8645	
360 minute winter	MH18	5.003	EX SW 3	30.5	3.122	0.170	0.0613	286.9
360 minute winter	MH19	5.002	MH18	30.5	2.105	0.070	0.1259	

**Results for 100 year 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute summer	MH9	248	93.717	0.067	8.7	0.2522	0.0000	OK
480 minute summer	MH8	248	93.629	0.076	15.8	0.2631	0.0000	OK
480 minute summer	MH7	248	93.525	0.044	4.9	0.1427	0.0000	OK
480 minute summer	MH6	240	93.508	0.100	25.1	0.3092	0.0000	OK
480 minute summer	MH5	256	93.481	0.104	3.3	0.3082	0.0000	OK
480 minute summer	MH4	256	93.481	0.152	29.2	0.4039	0.0000	OK
480 minute summer	MH3	256	93.479	0.181	2.2	0.5102	0.0000	OK
480 minute summer	MH2	256	93.479	0.234	34.5	0.7190	0.0000	OK
480 minute summer	MH1	256	93.478	0.365	37.8	1.1210	0.0000	OK
480 minute summer	MH1.1	256	93.469	0.434	38.2	2.5477	0.0000	SURCHARGED
480 minute summer	NEW SW 1	256	92.348	0.709	38.3	1.2528	0.0000	SURCHARGED
480 minute summer	EX SW 1	232	91.392	0.142	38.3	0.0000	0.0000	OK
480 minute summer	MH16	248	95.680	0.040	7.1	0.1257	0.0000	OK
480 minute summer	MH14	248	95.798	0.023	2.0	0.0430	0.0000	OK
480 minute summer	MH15	256	94.803	0.085	3.4	0.2684	0.0000	OK
480 minute summer	MH17	256	94.802	0.105	10.4	0.3147	0.0000	OK
480 minute summer	MH11	248	94.849	0.049	6.5	0.1778	0.0000	OK
480 minute summer	MH12	256	94.803	0.153	13.4	0.5195	0.0000	OK
480 minute summer	MH10	256	94.802	0.163	8.8	0.6361	0.0000	OK
480 minute summer	MH13	256	94.802	0.374	23.5	1.1032	0.0000	OK
480 minute summer	MH18	256	94.071	0.071	30.8	0.2110	0.0000	OK
480 minute summer	MH19	256	94.802	0.391	31.4	1.7674	0.0000	SURCHARGED
480 minute summer	EX SW 3	256	93.330	0.063	30.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute summer	MH9	1.000	MH8	8.7	0.461	0.027	0.8228	
480 minute summer	MH8	1.001	MH6	15.8	0.624	0.036	0.9094	
480 minute summer	MH7	2.000	MH6	4.9	0.260	0.011	0.3673	
480 minute summer	MH6	1.002	MH4	25.3	0.774	0.057	0.7912	
480 minute summer	MH5	3.000	MH4	3.1	0.162	0.007	0.5335	
480 minute summer	MH4	1.003	MH2	28.2	0.776	0.064	1.6051	
480 minute summer	MH3	4.000	MH2	2.2	0.105	0.005	1.1522	
480 minute summer	MH2	1.004	MH1	33.1	0.611	0.068	3.7122	
480 minute summer	MH1	1.005	MH1.1	37.0	0.477	0.288	2.0601	
480 minute summer	MH1.1	1.006	NEW SW 1	38.3	1.033	0.272	0.2829	
480 minute summer	NEW SW 1	EX1.000	EX SW 1	38.3	2.178	1.443	0.3054	319.3
480 minute summer	MH16	5.000	MH17	7.1	1.285	0.037	0.1225	
480 minute summer	MH14	6.000	MH15	2.0	1.197	0.048	0.0189	
480 minute summer	MH15	6.001	MH17	3.3	0.234	0.011	0.3023	
480 minute summer	MH17	5.001	MH19	10.3	0.521	0.028	3.1905	
480 minute summer	MH11	7.000	MH12	6.5	0.368	0.014	1.1318	
480 minute summer	MH12	7.001	MH13	12.3	0.527	0.040	2.7356	
480 minute summer	MH10	8.000	MH13	8.3	0.188	0.008	4.8506	
480 minute summer	MH13	7.002	MH19	22.4	0.200	0.041	1.9096	
480 minute summer	MH18	5.003	EX SW 3	30.8	3.130	0.172	0.0618	274.5
480 minute summer	MH19	5.002	MH18	30.8	2.110	0.071	0.1271	

**Results for 100 year 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute winter	MH9	248	93.708	0.058	6.5	0.2194	0.0000	OK
480 minute winter	MH8	248	93.620	0.067	11.8	0.2294	0.0000	OK
480 minute winter	MH7	248	93.520	0.039	3.6	0.1242	0.0000	OK
480 minute winter	MH6	248	93.495	0.087	18.7	0.2683	0.0000	OK
480 minute winter	MH5	240	93.423	0.046	2.5	0.1366	0.0000	OK
480 minute winter	MH4	240	93.422	0.093	21.9	0.2490	0.0000	OK
480 minute winter	MH3	256	93.357	0.059	1.6	0.1678	0.0000	OK
480 minute winter	MH2	256	93.357	0.112	26.8	0.3455	0.0000	OK
480 minute winter	MH1	256	93.358	0.245	30.0	0.7511	0.0000	OK
480 minute winter	MH1.1	256	93.353	0.318	30.9	1.8661	0.0000	OK
480 minute winter	NEW SW 1	256	92.017	0.378	31.0	0.6675	0.0000	SURCHARGED
480 minute winter	EX SW 1	232	91.392	0.142	31.0	0.0000	0.0000	OK
480 minute winter	MH16	248	95.675	0.035	5.3	0.1091	0.0000	OK
480 minute winter	MH14	248	95.795	0.020	1.5	0.0373	0.0000	OK
480 minute winter	MH15	248	94.761	0.043	2.5	0.1358	0.0000	OK
480 minute winter	MH17	248	94.756	0.059	7.8	0.1763	0.0000	OK
480 minute winter	MH11	248	94.843	0.043	4.8	0.1547	0.0000	OK
480 minute winter	MH12	256	94.724	0.074	9.9	0.2516	0.0000	OK
480 minute winter	MH10	256	94.715	0.076	6.5	0.2948	0.0000	OK
480 minute winter	MH13	256	94.715	0.287	18.8	0.8458	0.0000	OK
480 minute winter	MH18	256	94.064	0.064	26.1	0.1919	0.0000	OK
480 minute winter	MH19	256	94.714	0.303	26.3	1.3721	0.0000	OK
480 minute winter	EX SW 3	256	93.325	0.058	26.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute winter	MH9	1.000	MH8	6.5	0.422	0.020	0.6714	
480 minute winter	MH8	1.001	MH6	11.8	0.565	0.027	0.7448	
480 minute winter	MH7	2.000	MH6	3.6	0.232	0.008	0.2988	
480 minute winter	MH6	1.002	MH4	18.7	0.710	0.042	0.5073	
480 minute winter	MH5	3.000	MH4	2.5	0.142	0.006	0.2280	
480 minute winter	MH4	1.003	MH2	21.9	0.773	0.050	0.6467	
480 minute winter	MH3	4.000	MH2	1.6	0.097	0.004	0.3383	
480 minute winter	MH2	1.004	MH1	26.5	0.614	0.055	1.9064	
480 minute winter	MH1	1.005	MH1.1	29.9	0.480	0.233	1.6480	
480 minute winter	MH1.1	1.006	NEW SW 1	31.0	0.977	0.220	0.2419	
480 minute winter	NEW SW 1	EX1.000	EX SW 1	31.0	1.761	1.167	0.3054	358.2
480 minute winter	MH16	5.000	MH17	5.3	1.178	0.028	0.0998	
480 minute winter	MH14	6.000	MH15	1.5	1.100	0.036	0.0155	
480 minute winter	MH15	6.001	MH17	2.5	0.220	0.008	0.1215	
480 minute winter	MH17	5.001	MH19	7.8	0.514	0.021	1.6261	
480 minute winter	MH11	7.000	MH12	4.8	0.349	0.011	0.4871	
480 minute winter	MH12	7.001	MH13	9.9	0.523	0.032	1.2219	
480 minute winter	MH10	8.000	MH13	6.6	0.191	0.007	2.9745	
480 minute winter	MH13	7.002	MH19	18.7	0.256	0.034	1.3607	
480 minute winter	MH18	5.003	EX SW 3	26.1	3.007	0.146	0.0545	307.9
480 minute winter	MH19	5.002	MH18	26.1	2.037	0.060	0.1115	

**Results for 100 year 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute summer	MH9	315	93.710	0.060	7.1	0.2287	0.0000	OK
600 minute summer	MH8	315	93.622	0.069	12.9	0.2391	0.0000	OK
600 minute summer	MH7	315	93.522	0.041	4.0	0.1304	0.0000	OK
600 minute summer	MH6	315	93.499	0.091	20.5	0.2815	0.0000	OK
600 minute summer	MH5	300	93.427	0.050	2.7	0.1472	0.0000	OK
600 minute summer	MH4	300	93.426	0.097	24.0	0.2586	0.0000	OK
600 minute summer	MH3	315	93.395	0.097	1.8	0.2738	0.0000	OK
600 minute summer	MH2	315	93.395	0.150	29.4	0.4607	0.0000	OK
600 minute summer	MH1	315	93.394	0.281	32.9	0.8635	0.0000	OK
600 minute summer	MH1.1	315	93.389	0.354	33.6	2.0777	0.0000	OK
600 minute summer	NEW SW 1	315	92.113	0.474	33.4	0.8376	0.0000	SURCHARGED
600 minute summer	EX SW 1	300	91.392	0.142	33.3	0.0000	0.0000	OK
600 minute summer	MH16	315	95.676	0.036	5.8	0.1139	0.0000	OK
600 minute summer	MH14	315	95.796	0.021	1.6	0.0385	0.0000	OK
600 minute summer	MH15	315	94.763	0.045	2.7	0.1431	0.0000	OK
600 minute summer	MH17	315	94.759	0.061	8.5	0.1836	0.0000	OK
600 minute summer	MH11	315	94.845	0.045	5.3	0.1618	0.0000	OK
600 minute summer	MH12	315	94.744	0.094	10.9	0.3174	0.0000	OK
600 minute summer	MH10	315	94.739	0.100	7.2	0.3899	0.0000	OK
600 minute summer	MH13	315	94.739	0.311	20.8	0.9166	0.0000	OK
600 minute summer	MH18	315	94.066	0.066	27.5	0.1975	0.0000	OK
600 minute summer	MH19	315	94.738	0.327	28.3	1.4808	0.0000	OK
600 minute summer	EX SW 3	315	93.326	0.059	27.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute summer	MH9	1.000	MH8	7.1	0.435	0.022	0.7145	
600 minute summer	MH8	1.001	MH6	12.9	0.578	0.029	0.7958	
600 minute summer	MH7	2.000	MH6	4.0	0.242	0.009	0.3204	
600 minute summer	MH6	1.002	MH4	20.5	0.752	0.047	0.5371	
600 minute summer	MH5	3.000	MH4	2.7	0.149	0.006	0.2445	
600 minute summer	MH4	1.003	MH2	24.0	0.749	0.054	0.8428	
600 minute summer	MH3	4.000	MH2	1.8	0.094	0.004	0.5617	
600 minute summer	MH2	1.004	MH1	29.1	0.613	0.060	2.4371	
600 minute summer	MH1	1.005	MH1.1	32.5	0.482	0.253	1.8424	
600 minute summer	MH1.1	1.006	NEW SW 1	33.4	0.996	0.237	0.2556	
600 minute summer	NEW SW 1	EX1.000	EX SW 1	33.3	1.891	1.253	0.3054	337.5
600 minute summer	MH16	5.000	MH17	5.8	1.210	0.031	0.1063	
600 minute summer	MH14	6.000	MH15	1.6	1.121	0.039	0.0162	
600 minute summer	MH15	6.001	MH17	2.7	0.221	0.009	0.1300	
600 minute summer	MH17	5.001	MH19	8.5	0.514	0.023	1.9464	
600 minute summer	MH11	7.000	MH12	5.3	0.361	0.012	0.6360	
600 minute summer	MH12	7.001	MH13	10.7	0.513	0.035	1.5880	
600 minute summer	MH10	8.000	MH13	7.4	0.145	0.008	3.4644	
600 minute summer	MH13	7.002	MH19	19.8	0.175	0.036	1.5103	
600 minute summer	MH18	5.003	EX SW 3	27.5	3.044	0.154	0.0566	288.6
600 minute summer	MH19	5.002	MH18	27.5	2.060	0.063	0.1161	

**Results for 100 year 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute winter	MH9	315	93.703	0.053	5.4	0.2013	0.0000	OK
600 minute winter	MH8	315	93.614	0.061	9.8	0.2098	0.0000	OK
600 minute winter	MH7	315	93.516	0.035	3.0	0.1137	0.0000	OK
600 minute winter	MH6	315	93.487	0.079	15.5	0.2435	0.0000	OK
600 minute winter	MH5	315	93.415	0.038	2.1	0.1126	0.0000	OK
600 minute winter	MH4	315	93.414	0.085	18.2	0.2272	0.0000	OK
600 minute winter	MH3	315	93.331	0.033	1.4	0.0941	0.0000	OK
600 minute winter	MH2	315	93.331	0.086	22.4	0.2645	0.0000	OK
600 minute winter	MH1	315	93.292	0.179	25.3	0.5483	0.0000	OK
600 minute winter	MH1.1	315	93.287	0.252	26.1	1.4769	0.0000	OK
600 minute winter	NEW SW 1	315	91.775	0.136	26.1	0.2402	0.0000	OK
600 minute winter	EX SW 1	315	91.390	0.140	26.1	0.0000	0.0000	OK
600 minute winter	MH16	315	95.672	0.032	4.4	0.0998	0.0000	OK
600 minute winter	MH14	300	95.793	0.018	1.2	0.0335	0.0000	OK
600 minute winter	MH15	315	94.756	0.038	2.1	0.1216	0.0000	OK
600 minute winter	MH17	315	94.751	0.054	6.5	0.1619	0.0000	OK
600 minute winter	MH11	315	94.840	0.040	4.0	0.1427	0.0000	OK
600 minute winter	MH12	285	94.718	0.068	8.3	0.2301	0.0000	OK
600 minute winter	MH10	315	94.679	0.040	5.5	0.1553	0.0000	OK
600 minute winter	MH13	315	94.656	0.228	16.0	0.6713	0.0000	OK
600 minute winter	MH18	315	94.059	0.059	22.4	0.1759	0.0000	OK
600 minute winter	MH19	315	94.655	0.244	22.4	1.1038	0.0000	OK
600 minute winter	EX SW 3	315	93.321	0.054	22.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute winter	MH9	1.000	MH8	5.4	0.400	0.017	0.5894	
600 minute winter	MH8	1.001	MH6	9.8	0.538	0.022	0.6492	
600 minute winter	MH7	2.000	MH6	3.0	0.222	0.007	0.2600	
600 minute winter	MH6	1.002	MH4	15.5	0.672	0.035	0.4431	
600 minute winter	MH5	3.000	MH4	2.1	0.139	0.005	0.1920	
600 minute winter	MH4	1.003	MH2	18.2	0.741	0.041	0.5014	
600 minute winter	MH3	4.000	MH2	1.4	0.097	0.003	0.2053	
600 minute winter	MH2	1.004	MH1	22.4	0.606	0.046	1.2543	
600 minute winter	MH1	1.005	MH1.1	25.3	0.478	0.197	1.2221	
600 minute winter	MH1.1	1.006	NEW SW 1	26.1	0.933	0.185	0.2131	
600 minute winter	NEW SW 1	EX1.000	EX SW 1	26.1	1.632	0.982	0.2969	377.4
600 minute winter	MH16	5.000	MH17	4.4	1.115	0.023	0.0875	
600 minute winter	MH14	6.000	MH15	1.2	1.028	0.029	0.0132	
600 minute winter	MH15	6.001	MH17	2.1	0.211	0.007	0.1052	
600 minute winter	MH17	5.001	MH19	6.5	0.520	0.017	0.9341	
600 minute winter	MH11	7.000	MH12	4.0	0.330	0.009	0.4270	
600 minute winter	MH12	7.001	MH13	8.3	0.518	0.027	0.6856	
600 minute winter	MH10	8.000	MH13	5.5	0.167	0.006	2.0349	
600 minute winter	MH13	7.002	MH19	15.9	0.189	0.029	1.0024	
600 minute winter	MH18	5.003	EX SW 3	22.4	2.892	0.125	0.0485	324.0
600 minute winter	MH19	5.002	MH18	22.4	1.968	0.051	0.0988	

**Results for 100 year 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute summer	MH9	375	93.707	0.057	6.3	0.2162	0.0000	OK
720 minute summer	MH8	375	93.619	0.066	11.4	0.2257	0.0000	OK
720 minute summer	MH7	375	93.519	0.038	3.5	0.1225	0.0000	OK
720 minute summer	MH6	375	93.493	0.085	18.1	0.2637	0.0000	OK
720 minute summer	MH5	375	93.422	0.045	2.4	0.1329	0.0000	OK
720 minute summer	MH4	375	93.421	0.092	21.2	0.2456	0.0000	OK
720 minute summer	MH3	375	93.345	0.047	1.6	0.1316	0.0000	OK
720 minute summer	MH2	375	93.345	0.100	26.0	0.3066	0.0000	OK
720 minute summer	MH1	375	93.346	0.233	29.2	0.7149	0.0000	OK
720 minute summer	MH1.1	375	93.341	0.306	30.2	1.7975	0.0000	OK
720 minute summer	NEW SW 1	375	91.981	0.342	30.2	0.6041	0.0000	SURCHARGED
720 minute summer	EX SW 1	390	91.392	0.142	30.1	0.0000	0.0000	OK
720 minute summer	MH16	375	95.674	0.034	5.1	0.1072	0.0000	OK
720 minute summer	MH14	375	95.794	0.019	1.4	0.0361	0.0000	OK
720 minute summer	MH15	375	94.760	0.042	2.4	0.1325	0.0000	OK
720 minute summer	MH17	375	94.755	0.058	7.5	0.1730	0.0000	OK
720 minute summer	MH11	375	94.843	0.043	4.7	0.1532	0.0000	OK
720 minute summer	MH12	375	94.722	0.072	9.7	0.2430	0.0000	OK
720 minute summer	MH10	375	94.700	0.061	6.4	0.2368	0.0000	OK
720 minute summer	MH13	375	94.700	0.272	18.8	0.8032	0.0000	OK
720 minute summer	MH18	375	94.063	0.063	25.3	0.1882	0.0000	OK
720 minute summer	MH19	375	94.700	0.289	25.7	1.3068	0.0000	OK
720 minute summer	EX SW 3	375	93.324	0.057	25.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute summer	MH9	1.000	MH8	6.3	0.419	0.020	0.6560	
720 minute summer	MH8	1.001	MH6	11.4	0.559	0.026	0.7266	
720 minute summer	MH7	2.000	MH6	3.5	0.232	0.008	0.2918	
720 minute summer	MH6	1.002	MH4	18.1	0.700	0.041	0.4970	
720 minute summer	MH5	3.000	MH4	2.4	0.143	0.006	0.2222	
720 minute summer	MH4	1.003	MH2	21.2	0.768	0.048	0.5911	
720 minute summer	MH3	4.000	MH2	1.6	0.096	0.004	0.2709	
720 minute summer	MH2	1.004	MH1	25.8	0.616	0.053	1.7388	
720 minute summer	MH1	1.005	MH1.1	29.2	0.481	0.227	1.5775	
720 minute summer	MH1.1	1.006	NEW SW 1	30.2	0.969	0.214	0.2371	
720 minute summer	NEW SW 1	EX1.000	EX SW 1	30.1	1.709	1.133	0.3054	351.8
720 minute summer	MH16	5.000	MH17	5.1	1.165	0.027	0.0971	
720 minute summer	MH14	6.000	MH15	1.4	1.077	0.034	0.0147	
720 minute summer	MH15	6.001	MH17	2.4	0.216	0.008	0.1177	
720 minute summer	MH17	5.001	MH19	7.5	0.510	0.020	1.4516	
720 minute summer	MH11	7.000	MH12	4.7	0.347	0.010	0.4699	
720 minute summer	MH12	7.001	MH13	9.7	0.518	0.032	1.0770	
720 minute summer	MH10	8.000	MH13	6.5	0.153	0.007	2.6931	
720 minute summer	MH13	7.002	MH19	18.2	0.174	0.033	1.2720	
720 minute summer	MH18	5.003	EX SW 3	25.2	2.982	0.141	0.0531	300.8
720 minute summer	MH19	5.002	MH18	25.3	2.022	0.058	0.1086	

**Results for 100 year 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute winter	MH9	375	93.700	0.050	4.7	0.1885	0.0000	OK
720 minute winter	MH8	375	93.610	0.057	8.6	0.1972	0.0000	OK
720 minute winter	MH7	375	93.514	0.033	2.6	0.1063	0.0000	OK
720 minute winter	MH6	375	93.482	0.074	13.6	0.2279	0.0000	OK
720 minute winter	MH5	375	93.409	0.032	1.8	0.0963	0.0000	OK
720 minute winter	MH4	375	93.409	0.080	15.9	0.2123	0.0000	OK
720 minute winter	MH3	375	93.326	0.028	1.2	0.0793	0.0000	OK
720 minute winter	MH2	375	93.326	0.081	19.6	0.2482	0.0000	OK
720 minute winter	MH1	375	93.253	0.140	22.1	0.4287	0.0000	OK
720 minute winter	MH1.1	375	93.247	0.212	22.8	1.2434	0.0000	OK
720 minute winter	NEW SW 1	375	91.755	0.116	22.8	0.2051	0.0000	OK
720 minute winter	EX SW 1	375	91.357	0.107	22.8	0.0000	0.0000	OK
720 minute winter	MH16	375	95.670	0.030	3.9	0.0941	0.0000	OK
720 minute winter	MH14	375	95.792	0.017	1.1	0.0322	0.0000	OK
720 minute winter	MH15	360	94.754	0.036	1.9	0.1143	0.0000	OK
720 minute winter	MH17	360	94.749	0.052	5.8	0.1545	0.0000	OK
720 minute winter	MH11	375	94.837	0.037	3.5	0.1337	0.0000	OK
720 minute winter	MH12	375	94.715	0.065	7.2	0.2215	0.0000	OK
720 minute winter	MH10	375	94.676	0.037	4.8	0.1460	0.0000	OK
720 minute winter	MH13	375	94.619	0.191	13.9	0.5630	0.0000	OK
720 minute winter	MH18	375	94.055	0.055	19.7	0.1639	0.0000	OK
720 minute winter	MH19	375	94.618	0.207	19.7	0.9371	0.0000	OK
720 minute winter	EX SW 3	375	93.317	0.050	19.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute winter	MH9	1.000	MH8	4.7	0.383	0.015	0.5371	
720 minute winter	MH8	1.001	MH6	8.6	0.520	0.020	0.5909	
720 minute winter	MH7	2.000	MH6	2.6	0.213	0.006	0.2361	
720 minute winter	MH6	1.002	MH4	13.6	0.651	0.031	0.4018	
720 minute winter	MH5	3.000	MH4	1.8	0.138	0.004	0.1689	
720 minute winter	MH4	1.003	MH2	15.9	0.713	0.036	0.4551	
720 minute winter	MH3	4.000	MH2	1.2	0.097	0.003	0.1811	
720 minute winter	MH2	1.004	MH1	19.6	0.615	0.040	0.9535	
720 minute winter	MH1	1.005	MH1.1	22.1	0.481	0.172	0.9517	
720 minute winter	MH1.1	1.006	NEW SW 1	22.8	0.900	0.162	0.1931	
720 minute winter	NEW SW 1	EX1.000	EX SW 1	22.8	1.624	0.858	0.2457	393.7
720 minute winter	MH16	5.000	MH17	3.9	1.076	0.021	0.0804	
720 minute winter	MH14	6.000	MH15	1.1	1.002	0.027	0.0124	
720 minute winter	MH15	6.001	MH17	1.9	0.209	0.006	0.0975	
720 minute winter	MH17	5.001	MH19	5.8	0.517	0.016	0.5774	
720 minute winter	MH11	7.000	MH12	3.5	0.304	0.008	0.4008	
720 minute winter	MH12	7.001	MH13	7.2	0.503	0.024	0.5132	
720 minute winter	MH10	8.000	MH13	4.8	0.167	0.005	1.6097	
720 minute winter	MH13	7.002	MH19	13.9	0.202	0.025	0.7913	
720 minute winter	MH18	5.003	EX SW 3	19.7	2.800	0.110	0.0440	336.8
720 minute winter	MH19	5.002	MH18	19.7	1.912	0.045	0.0894	

**Results for 100 year 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute summer	MH9	495	93.702	0.052	5.1	0.1959	0.0000	OK
960 minute summer	MH8	495	93.612	0.059	9.3	0.2046	0.0000	OK
960 minute summer	MH7	495	93.516	0.035	2.9	0.1119	0.0000	OK
960 minute summer	MH6	495	93.485	0.077	14.8	0.2379	0.0000	OK
960 minute summer	MH5	495	93.413	0.036	2.0	0.1070	0.0000	OK
960 minute summer	MH4	495	93.412	0.083	17.4	0.2221	0.0000	OK
960 minute summer	MH3	495	93.329	0.031	1.3	0.0888	0.0000	OK
960 minute summer	MH2	495	93.329	0.084	21.4	0.2588	0.0000	OK
960 minute summer	MH1	495	93.276	0.163	24.1	0.5019	0.0000	OK
960 minute summer	MH1.1	495	93.271	0.236	24.9	1.3868	0.0000	OK
960 minute summer	NEW SW 1	495	91.766	0.127	24.8	0.2244	0.0000	OK
960 minute summer	EX SW 1	495	91.365	0.115	24.8	0.0000	0.0000	OK
960 minute summer	MH16	495	95.671	0.031	4.2	0.0976	0.0000	OK
960 minute summer	MH14	495	95.793	0.018	1.2	0.0335	0.0000	OK
960 minute summer	MH15	495	94.755	0.037	2.0	0.1181	0.0000	OK
960 minute summer	MH17	495	94.750	0.053	6.2	0.1584	0.0000	OK
960 minute summer	MH11	495	94.839	0.039	3.8	0.1392	0.0000	OK
960 minute summer	MH12	480	94.717	0.067	7.8	0.2284	0.0000	OK
960 minute summer	MH10	495	94.678	0.039	5.2	0.1514	0.0000	OK
960 minute summer	MH13	495	94.638	0.210	15.1	0.6200	0.0000	OK
960 minute summer	MH18	495	94.057	0.057	21.1	0.1704	0.0000	OK
960 minute summer	MH19	495	94.638	0.227	21.2	1.0250	0.0000	OK
960 minute summer	EX SW 3	495	93.319	0.052	21.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute summer	MH9	1.000	MH8	5.1	0.392	0.016	0.5676	
960 minute summer	MH8	1.001	MH6	9.3	0.529	0.021	0.6270	
960 minute summer	MH7	2.000	MH6	2.9	0.222	0.007	0.2521	
960 minute summer	MH6	1.002	MH4	14.8	0.664	0.034	0.4286	
960 minute summer	MH5	3.000	MH4	2.0	0.139	0.005	0.1841	
960 minute summer	MH4	1.003	MH2	17.4	0.732	0.040	0.4853	
960 minute summer	MH3	4.000	MH2	1.3	0.097	0.003	0.1968	
960 minute summer	MH2	1.004	MH1	21.4	0.612	0.044	1.1361	
960 minute summer	MH1	1.005	MH1.1	24.1	0.478	0.187	1.1178	
960 minute summer	MH1.1	1.006	NEW SW 1	24.8	0.921	0.176	0.2057	
960 minute summer	NEW SW 1	EX1.000	EX SW 1	24.8	1.633	0.935	0.2661	376.7
960 minute summer	MH16	5.000	MH17	4.2	1.099	0.022	0.0847	
960 minute summer	MH14	6.000	MH15	1.2	1.028	0.029	0.0132	
960 minute summer	MH15	6.001	MH17	2.0	0.209	0.007	0.1014	
960 minute summer	MH17	5.001	MH19	6.2	0.515	0.017	0.7576	
960 minute summer	MH11	7.000	MH12	3.8	0.315	0.008	0.4204	
960 minute summer	MH12	7.001	MH13	7.8	0.515	0.026	0.5715	
960 minute summer	MH10	8.000	MH13	5.2	0.151	0.005	1.8315	
960 minute summer	MH13	7.002	MH19	15.0	0.176	0.027	0.9011	
960 minute summer	MH18	5.003	EX SW 3	21.1	2.852	0.118	0.0465	323.0
960 minute summer	MH19	5.002	MH18	21.1	1.944	0.048	0.0945	

**Results for 100 year 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute winter	MH9	495	93.695	0.045	3.8	0.1708	0.0000	OK
960 minute winter	MH8	495	93.605	0.052	6.9	0.1780	0.0000	OK
960 minute winter	MH7	480	93.511	0.030	2.1	0.0963	0.0000	OK
960 minute winter	MH6	495	93.474	0.066	10.9	0.2040	0.0000	OK
960 minute winter	MH5	495	93.403	0.026	1.5	0.0767	0.0000	OK
960 minute winter	MH4	495	93.401	0.072	12.8	0.1905	0.0000	OK
960 minute winter	MH3	495	93.319	0.021	1.0	0.0605	0.0000	OK
960 minute winter	MH2	495	93.318	0.073	15.8	0.2240	0.0000	OK
960 minute winter	MH1	495	93.226	0.113	17.8	0.3455	0.0000	OK
960 minute winter	MH1.1	495	93.220	0.185	18.4	1.0852	0.0000	OK
960 minute winter	NEW SW 1	495	91.737	0.098	18.4	0.1728	0.0000	OK
960 minute winter	EX SW 1	495	91.342	0.092	18.4	0.0000	0.0000	OK
960 minute winter	MH16	495	95.667	0.027	3.1	0.0844	0.0000	OK
960 minute winter	MH14	480	95.791	0.016	0.9	0.0292	0.0000	OK
960 minute winter	MH15	495	94.750	0.032	1.5	0.1007	0.0000	OK
960 minute winter	MH17	495	94.745	0.048	4.6	0.1424	0.0000	OK
960 minute winter	MH11	480	94.833	0.033	2.8	0.1202	0.0000	OK
960 minute winter	MH12	495	94.709	0.059	5.8	0.2008	0.0000	OK
960 minute winter	MH10	480	94.673	0.034	3.8	0.1316	0.0000	OK
960 minute winter	MH13	495	94.575	0.147	11.1	0.4337	0.0000	OK
960 minute winter	MH18	495	94.049	0.049	15.7	0.1450	0.0000	OK
960 minute winter	MH19	495	94.574	0.163	15.7	0.7376	0.0000	OK
960 minute winter	EX SW 3	495	93.312	0.045	15.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute winter	MH9	1.000	MH8	3.8	0.359	0.012	0.4621	
960 minute winter	MH8	1.001	MH6	6.9	0.488	0.016	0.5028	
960 minute winter	MH7	2.000	MH6	2.1	0.203	0.005	0.2007	
960 minute winter	MH6	1.002	MH4	10.9	0.613	0.025	0.3418	
960 minute winter	MH5	3.000	MH4	1.5	0.140	0.003	0.1387	
960 minute winter	MH4	1.003	MH2	12.8	0.669	0.029	0.3903	
960 minute winter	MH3	4.000	MH2	1.0	0.098	0.002	0.1496	
960 minute winter	MH2	1.004	MH1	15.8	0.613	0.033	0.7382	
960 minute winter	MH1	1.005	MH1.1	17.8	0.448	0.138	0.7676	
960 minute winter	MH1.1	1.006	NEW SW 1	18.4	0.849	0.130	0.1652	
960 minute winter	NEW SW 1	EX1.000	EX SW 1	18.4	1.569	0.693	0.2054	423.1
960 minute winter	MH16	5.000	MH17	3.1	1.007	0.016	0.0683	
960 minute winter	MH14	6.000	MH15	0.9	0.944	0.022	0.0108	
960 minute winter	MH15	6.001	MH17	1.5	0.194	0.005	0.0845	
960 minute winter	MH17	5.001	MH19	4.6	0.498	0.012	0.4244	
960 minute winter	MH11	7.000	MH12	2.8	0.284	0.006	0.3465	
960 minute winter	MH12	7.001	MH13	5.8	0.482	0.019	0.4356	
960 minute winter	MH10	8.000	MH13	3.8	0.152	0.004	1.1309	
960 minute winter	MH13	7.002	MH19	11.1	0.213	0.020	0.5552	
960 minute winter	MH18	5.003	EX SW 3	15.7	2.643	0.088	0.0373	361.2
960 minute winter	MH19	5.002	MH18	15.7	1.816	0.036	0.0753	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute summer	MH9	750	93.695	0.045	3.7	0.1687	0.0000	OK
1440 minute summer	MH8	750	93.604	0.051	6.7	0.1755	0.0000	OK
1440 minute summer	MH7	750	93.511	0.030	2.1	0.0963	0.0000	OK
1440 minute summer	MH6	750	93.473	0.065	10.7	0.2022	0.0000	OK
1440 minute summer	MH5	750	93.402	0.025	1.4	0.0743	0.0000	OK
1440 minute summer	MH4	750	93.400	0.071	12.5	0.1883	0.0000	OK
1440 minute summer	MH3	750	93.318	0.020	0.9	0.0577	0.0000	OK
1440 minute summer	MH2	750	93.317	0.072	15.3	0.2206	0.0000	OK
1440 minute summer	MH1	750	93.224	0.111	17.3	0.3414	0.0000	OK
1440 minute summer	MH1.1	750	93.219	0.184	17.9	1.0794	0.0000	OK
1440 minute summer	NEW SW 1	750	91.735	0.096	17.9	0.1694	0.0000	OK
1440 minute summer	EX SW 1	750	91.340	0.090	17.9	0.0000	0.0000	OK
1440 minute summer	MH16	750	95.667	0.027	3.0	0.0831	0.0000	OK
1440 minute summer	MH14	750	95.790	0.015	0.8	0.0276	0.0000	OK
1440 minute summer	MH15	750	94.749	0.031	1.4	0.0972	0.0000	OK
1440 minute summer	MH17	750	94.744	0.047	4.4	0.1396	0.0000	OK
1440 minute summer	MH11	750	94.833	0.033	2.7	0.1182	0.0000	OK
1440 minute summer	MH12	750	94.708	0.058	5.6	0.1976	0.0000	OK
1440 minute summer	MH10	750	94.672	0.033	3.7	0.1301	0.0000	OK
1440 minute summer	MH13	750	94.575	0.147	10.8	0.4335	0.0000	OK
1440 minute summer	MH18	750	94.048	0.048	15.2	0.1424	0.0000	OK
1440 minute summer	MH19	750	94.574	0.163	15.2	0.7375	0.0000	OK
1440 minute summer	EX SW 3	750	93.311	0.044	15.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute summer	MH9	1.000	MH8	3.7	0.356	0.011	0.4533	
1440 minute summer	MH8	1.001	MH6	6.7	0.481	0.015	0.4950	
1440 minute summer	MH7	2.000	MH6	2.1	0.203	0.005	0.1988	
1440 minute summer	MH6	1.002	MH4	10.7	0.611	0.024	0.3367	
1440 minute summer	MH5	3.000	MH4	1.4	0.135	0.003	0.1356	
1440 minute summer	MH4	1.003	MH2	12.5	0.667	0.028	0.3827	
1440 minute summer	MH3	4.000	MH2	0.9	0.092	0.002	0.1453	
1440 minute summer	MH2	1.004	MH1	15.3	0.603	0.031	0.7244	
1440 minute summer	MH1	1.005	MH1.1	17.3	0.441	0.135	0.7598	
1440 minute summer	MH1.1	1.006	NEW SW 1	17.9	0.843	0.127	0.1619	
1440 minute summer	NEW SW 1	EX1.000	EX SW 1	17.9	1.561	0.674	0.2009	412.9
1440 minute summer	MH16	5.000	MH17	3.0	0.998	0.016	0.0667	
1440 minute summer	MH14	6.000	MH15	0.8	0.912	0.019	0.0099	
1440 minute summer	MH15	6.001	MH17	1.4	0.185	0.005	0.0813	
1440 minute summer	MH17	5.001	MH19	4.4	0.493	0.012	0.4104	
1440 minute summer	MH11	7.000	MH12	2.7	0.279	0.006	0.3383	
1440 minute summer	MH12	7.001	MH13	5.6	0.478	0.018	0.4240	
1440 minute summer	MH10	8.000	MH13	3.7	0.141	0.004	1.1280	
1440 minute summer	MH13	7.002	MH19	10.8	0.175	0.020	0.5549	
1440 minute summer	MH18	5.003	EX SW 3	15.2	2.621	0.085	0.0364	355.4
1440 minute summer	MH19	5.002	MH18	15.2	1.796	0.035	0.0735	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute winter	MH9	750	93.689	0.039	2.8	0.1490	0.0000	OK
1440 minute winter	MH8	750	93.598	0.045	5.1	0.1546	0.0000	OK
1440 minute winter	MH7	720	93.507	0.026	1.5	0.0830	0.0000	OK
1440 minute winter	MH6	750	93.464	0.056	8.0	0.1745	0.0000	OK
1440 minute winter	MH5	750	93.399	0.022	1.1	0.0665	0.0000	OK
1440 minute winter	MH4	750	93.390	0.061	9.4	0.1635	0.0000	OK
1440 minute winter	MH3	720	93.316	0.018	0.7	0.0515	0.0000	OK
1440 minute winter	MH2	750	93.308	0.063	11.5	0.1928	0.0000	OK
1440 minute winter	MH1	750	93.194	0.081	13.0	0.2478	0.0000	OK
1440 minute winter	MH1.1	750	93.188	0.153	13.4	0.8972	0.0000	OK
1440 minute winter	NEW SW 1	750	91.718	0.079	13.4	0.1399	0.0000	OK
1440 minute winter	EX SW 1	750	91.325	0.075	13.4	0.0000	0.0000	OK
1440 minute winter	MH16	750	95.663	0.023	2.3	0.0732	0.0000	OK
1440 minute winter	MH14	690	95.788	0.013	0.6	0.0241	0.0000	OK
1440 minute winter	MH15	690	94.743	0.025	1.0	0.0793	0.0000	OK
1440 minute winter	MH17	750	94.738	0.041	3.3	0.1229	0.0000	OK
1440 minute winter	MH11	750	94.829	0.029	2.1	0.1053	0.0000	OK
1440 minute winter	MH12	750	94.702	0.052	4.3	0.1758	0.0000	OK
1440 minute winter	MH10	750	94.668	0.029	2.8	0.1146	0.0000	OK
1440 minute winter	MH13	750	94.550	0.122	8.2	0.3613	0.0000	OK
1440 minute winter	MH18	750	94.041	0.041	11.5	0.1229	0.0000	OK
1440 minute winter	MH19	750	94.550	0.139	11.5	0.6266	0.0000	OK
1440 minute winter	EX SW 3	750	93.306	0.039	11.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute winter	MH9	1.000	MH8	2.8	0.326	0.009	0.3750	
1440 minute winter	MH8	1.001	MH6	5.1	0.451	0.012	0.4039	
1440 minute winter	MH7	2.000	MH6	1.5	0.185	0.003	0.1593	
1440 minute winter	MH6	1.002	MH4	8.0	0.564	0.018	0.2725	
1440 minute winter	MH5	3.000	MH4	1.1	0.129	0.003	0.1109	
1440 minute winter	MH4	1.003	MH2	9.4	0.614	0.021	0.3122	
1440 minute winter	MH3	4.000	MH2	0.7	0.089	0.002	0.1195	
1440 minute winter	MH2	1.004	MH1	11.5	0.611	0.024	0.5027	
1440 minute winter	MH1	1.005	MH1.1	13.0	0.446	0.101	0.5584	
1440 minute winter	MH1.1	1.006	NEW SW 1	13.4	0.779	0.095	0.1311	
1440 minute winter	NEW SW 1	EX1.000	EX SW 1	13.4	1.466	0.505	0.1602	463.6
1440 minute winter	MH16	5.000	MH17	2.3	0.917	0.012	0.0556	
1440 minute winter	MH14	6.000	MH15	0.6	0.838	0.014	0.0081	
1440 minute winter	MH15	6.001	MH17	1.0	0.172	0.003	0.0641	
1440 minute winter	MH17	5.001	MH19	3.3	0.455	0.009	0.3356	
1440 minute winter	MH11	7.000	MH12	2.1	0.259	0.005	0.2833	
1440 minute winter	MH12	7.001	MH13	4.3	0.445	0.014	0.3470	
1440 minute winter	MH10	8.000	MH13	2.8	0.141	0.003	0.8738	
1440 minute winter	MH13	7.002	MH19	8.2	0.179	0.015	0.4337	
1440 minute winter	MH18	5.003	EX SW 3	11.5	2.432	0.064	0.0297	397.9
1440 minute winter	MH19	5.002	MH18	11.5	1.680	0.026	0.0595	

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

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute summer	MH9	15	94.855	1.205	187.6	4.5647	0.0000	SURCHARGED
15 minute summer	MH8	16	94.786	1.233	129.6	4.2469	0.0000	SURCHARGED
15 minute summer	MH7	16	94.855	1.374	52.8	4.4210	0.0000	SURCHARGED
15 minute summer	MH6	15	94.829	1.421	164.7	4.3956	0.0000	SURCHARGED
15 minute summer	MH5	15	94.836	1.459	27.0	4.3362	0.0000	SURCHARGED
15 minute summer	MH4	15	94.839	1.510	168.4	4.0219	0.0000	SURCHARGED
15 minute summer	MH3	15	94.828	1.530	41.0	4.3203	0.0000	SURCHARGED
15 minute summer	MH2	15	94.832	1.587	189.7	4.8809	0.0000	SURCHARGED
15 minute summer	MH1	15	94.822	1.709	166.7	5.2472	0.0000	SURCHARGED
15 minute summer	MH1.1	16	94.797	1.762	133.4	10.3396	0.0000	SURCHARGED
15 minute summer	NEW SW 1	17	93.984	2.345	65.6	4.1443	0.0000	SURCHARGED
15 minute summer	EX SW 1	53	91.392	0.142	63.1	0.0000	0.0000	OK
15 minute summer	MH16	15	95.990	0.350	57.7	1.0955	0.0000	SURCHARGED
15 minute summer	MH14	14	95.985	0.210	16.2	0.3937	0.0000	SURCHARGED
15 minute summer	MH15	14	95.949	1.231	40.0	3.8895	0.0000	SURCHARGED
15 minute summer	MH17	15	95.954	1.257	74.8	3.7536	0.0000	SURCHARGED
15 minute summer	MH11	16	95.980	1.180	60.0	4.2513	0.0000	SURCHARGED
15 minute summer	MH12	15	95.948	1.298	97.1	4.3960	0.0000	SURCHARGED
15 minute summer	MH10	15	95.964	1.325	71.2	5.1646	0.0000	SURCHARGED
15 minute summer	MH13	15	95.922	1.494	93.0	4.4077	0.0000	SURCHARGED
15 minute summer	MH18	15	94.113	0.113	66.1	0.3385	0.0000	OK
15 minute summer	MH19	16	95.917	1.506	83.3	6.8136	0.0000	SURCHARGED
15 minute summer	EX SW 3	15	93.362	0.095	66.7	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute summer	MH9	1.000	MH8	-120.3	0.757	-0.373	12.2825	
15 minute summer	MH8	1.001	MH6	116.6	0.925	0.266	9.9902	
15 minute summer	MH7	2.000	MH6	-33.6	0.407	-0.078	5.1702	
15 minute summer	MH6	1.002	MH4	140.7	1.016	0.320	5.4121	
15 minute summer	MH5	3.000	MH4	21.4	0.394	0.049	3.4066	
15 minute summer	MH4	1.003	MH2	161.0	0.989	0.366	5.7468	
15 minute summer	MH3	4.000	MH2	-27.1	0.250	-0.062	3.7536	
15 minute summer	MH2	1.004	MH1	137.2	0.797	0.282	7.4408	
15 minute summer	MH1	1.005	MH1.1	124.9	1.133	0.972	2.0678	
15 minute summer	MH1.1	1.006	NEW SW 1	65.6	1.165	0.465	0.8406	
15 minute summer	NEW SW 1	EX1.000	EX SW 1	63.1	3.586	2.377	0.3055	147.8
15 minute summer	MH16	5.000	MH17	57.2	2.277	0.301	1.5609	
15 minute summer	MH14	6.000	MH15	16.1	2.107	0.388	0.1996	
15 minute summer	MH15	6.001	MH17	-18.2	0.361	-0.059	2.9641	
15 minute summer	MH17	5.001	MH19	44.1	0.619	0.118	12.9541	
15 minute summer	MH11	7.000	MH12	44.2	0.634	0.097	9.5629	
15 minute summer	MH12	7.001	MH13	51.3	0.669	0.168	10.0990	
15 minute summer	MH10	8.000	MH13	41.1	0.525	0.042	14.7335	
15 minute summer	MH13	7.002	MH19	73.5	0.618	0.134	3.7261	
15 minute summer	MH18	5.003	EX SW 3	66.7	3.722	0.373	0.1124	126.8
15 minute summer	MH19	5.002	MH18	66.1	2.424	0.151	0.2371	

**Results for 100 year +40% CC 15 minute winter. 255 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 (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
15 minute winter	MH9	16	95.276	1.626	74.3	6.1564	0.0000	SURCHARGED
15 minute winter	MH8	16	95.234	1.681	184.2	5.7905	0.0000	SURCHARGED
15 minute winter	MH7	16	95.276	1.795	63.1	5.7774	0.0000	SURCHARGED
15 minute winter	MH6	15	95.248	1.840	145.0	5.6910	0.0000	SURCHARGED
15 minute winter	MH5	16	95.264	1.887	28.4	5.6076	0.0000	SURCHARGED
15 minute winter	MH4	16	95.260	1.931	121.4	5.1443	0.0000	SURCHARGED
15 minute winter	MH3	16	95.260	1.962	18.7	5.5374	0.0000	SURCHARGED
15 minute winter	MH2	16	95.262	2.017	116.3	6.2046	0.0000	SURCHARGED
15 minute winter	MH1	16	95.258	2.145	115.5	6.5847	0.0000	SURCHARGED
15 minute winter	MH1.1	16	95.228	2.193	110.8	12.8683	0.0000	SURCHARGED
15 minute winter	NEW SW 1	17	94.306	2.667	69.6	4.7132	0.0000	SURCHARGED
15 minute winter	EX SW 1	57	91.392	0.142	66.9	0.0000	0.0000	OK
15 minute winter	MH16	16	96.323	0.683	60.7	2.1336	0.0000	SURCHARGED
15 minute winter	MH14	16	96.344	0.569	17.0	1.0666	0.0000	SURCHARGED
15 minute winter	MH15	16	96.337	1.619	34.5	5.1160	0.0000	SURCHARGED
15 minute winter	MH17	16	96.331	1.634	84.2	4.8802	0.0000	SURCHARGED
15 minute winter	MH11	15	96.335	1.535	55.0	5.5339	0.0000	FLOOD RISK
15 minute winter	MH12	15	96.311	1.661	91.0	5.6261	0.0000	SURCHARGED
15 minute winter	MH10	15	96.373	1.734	75.9	6.7619	0.0000	FLOOD RISK
15 minute winter	MH13	15	96.346	1.918	115.6	5.6584	0.0000	SURCHARGED
15 minute winter	MH18	16	94.123	0.123	74.4	0.3661	0.0000	OK
15 minute winter	MH19	15	96.343	1.932	95.8	8.7421	0.0000	SURCHARGED
15 minute winter	EX SW 3	16	93.368	0.101	74.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
15 minute winter	MH9	1.000	MH8	64.4	0.764	0.200	12.2825	
15 minute winter	MH8	1.001	MH6	109.8	0.907	0.250	9.9902	
15 minute winter	MH7	2.000	MH6	33.3	0.423	0.077	5.1702	
15 minute winter	MH6	1.002	MH4	114.7	0.977	0.261	5.4121	
15 minute winter	MH5	3.000	MH4	53.3	0.417	0.123	3.4066	
15 minute winter	MH4	1.003	MH2	84.1	0.992	0.191	5.7468	
15 minute winter	MH3	4.000	MH2	32.1	0.267	0.074	3.7536	
15 minute winter	MH2	1.004	MH1	92.7	0.816	0.191	7.4408	
15 minute winter	MH1	1.005	MH1.1	104.3	0.946	0.811	2.0678	
15 minute winter	MH1.1	1.006	NEW SW 1	69.6	1.153	0.493	0.8406	
15 minute winter	NEW SW 1	EX1.000	EX SW 1	66.9	3.802	2.520	0.3055	165.7
15 minute winter	MH16	5.000	MH17	61.2	2.248	0.323	1.5609	
15 minute winter	MH14	6.000	MH15	16.8	2.130	0.407	0.1996	
15 minute winter	MH15	6.001	MH17	23.0	0.340	0.075	2.9641	
15 minute winter	MH17	5.001	MH19	61.2	0.628	0.164	12.9541	
15 minute winter	MH11	7.000	MH12	39.6	0.604	0.087	9.5629	
15 minute winter	MH12	7.001	MH13	79.5	0.692	0.260	10.0990	
15 minute winter	MH10	8.000	MH13	51.6	0.547	0.053	14.7335	
15 minute winter	MH13	7.002	MH19	79.3	0.637	0.144	3.7261	
15 minute winter	MH18	5.003	EX SW 3	74.6	3.798	0.417	0.1232	141.9
15 minute winter	MH19	5.002	MH18	74.4	2.458	0.170	0.2635	

**Results for 100 year +40% CC 30 minute summer. 270 minute analysis at 1 minute timestep. Mass balance: 99.93%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute summer	MH9	25	95.275	1.625	82.9	6.1546	0.0000	SURCHARGED
30 minute summer	MH8	24	95.255	1.702	119.5	5.8601	0.0000	SURCHARGED
30 minute summer	MH7	25	95.275	1.794	36.3	5.7743	0.0000	SURCHARGED
30 minute summer	MH6	24	95.265	1.857	119.9	5.7438	0.0000	SURCHARGED
30 minute summer	MH5	24	95.264	1.887	24.9	5.6077	0.0000	SURCHARGED
30 minute summer	MH4	24	95.263	1.934	117.6	5.1534	0.0000	SURCHARGED
30 minute summer	MH3	24	95.265	1.967	17.3	5.5531	0.0000	SURCHARGED
30 minute summer	MH2	24	95.264	2.019	139.9	6.2092	0.0000	SURCHARGED
30 minute summer	MH1	24	95.262	2.149	156.6	6.5976	0.0000	SURCHARGED
30 minute summer	MH1.1	24	95.230	2.195	144.6	12.8819	0.0000	SURCHARGED
30 minute summer	NEW SW 1	26	94.321	2.682	68.9	4.7383	0.0000	SURCHARGED
30 minute summer	EX SW 1	11	91.392	0.142	67.1	0.0000	0.0000	OK
30 minute summer	MH16	23	96.342	0.702	53.2	2.1944	0.0000	SURCHARGED
30 minute summer	MH14	23	96.345	0.570	14.9	1.0692	0.0000	SURCHARGED
30 minute summer	MH15	23	96.350	1.632	42.6	5.1578	0.0000	SURCHARGED
30 minute summer	MH17	23	96.349	1.652	68.9	4.9337	0.0000	SURCHARGED
30 minute summer	MH11	23	96.331	1.531	51.5	5.5162	0.0000	SURCHARGED
30 minute summer	MH12	23	96.341	1.691	79.8	5.7288	0.0000	SURCHARGED
30 minute summer	MH10	24	96.349	1.710	65.7	6.6682	0.0000	FLOOD RISK
30 minute summer	MH13	23	96.354	1.926	128.9	5.6805	0.0000	SURCHARGED
30 minute summer	MH18	24	94.123	0.123	75.0	0.3672	0.0000	OK
30 minute summer	MH19	23	96.356	1.945	113.6	8.7976	0.0000	SURCHARGED
30 minute summer	EX SW 3	24	93.368	0.101	74.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute summer	MH9	1.000	MH8	54.4	0.749	0.169	12.2825	
30 minute summer	MH8	1.001	MH6	77.2	0.822	0.176	9.9902	
30 minute summer	MH7	2.000	MH6	36.5	0.358	0.084	5.1702	
30 minute summer	MH6	1.002	MH4	100.7	0.868	0.229	5.4121	
30 minute summer	MH5	3.000	MH4	24.1	0.374	0.056	3.4066	
30 minute summer	MH4	1.003	MH2	109.1	0.890	0.248	5.7468	
30 minute summer	MH3	4.000	MH2	11.0	0.223	0.025	3.7536	
30 minute summer	MH2	1.004	MH1	124.9	0.747	0.257	7.4408	
30 minute summer	MH1	1.005	MH1.1	135.5	1.229	1.054	2.0678	
30 minute summer	MH1.1	1.006	NEW SW 1	68.9	1.152	0.488	0.8406	
30 minute summer	NEW SW 1	EX1.000	EX SW 1	67.1	3.812	2.526	0.3054	198.6
30 minute summer	MH16	5.000	MH17	53.2	2.223	0.280	1.5609	
30 minute summer	MH14	6.000	MH15	15.7	2.060	0.379	0.1996	
30 minute summer	MH15	6.001	MH17	-20.2	0.295	-0.066	2.9641	
30 minute summer	MH17	5.001	MH19	32.7	0.588	0.088	12.9541	
30 minute summer	MH11	7.000	MH12	38.4	0.479	0.084	9.5629	
30 minute summer	MH12	7.001	MH13	61.2	0.606	0.200	10.0990	
30 minute summer	MH10	8.000	MH13	46.2	0.474	0.047	14.7335	
30 minute summer	MH13	7.002	MH19	113.6	0.580	0.207	3.7261	
30 minute summer	MH18	5.003	EX SW 3	74.8	3.797	0.418	0.1235	170.6
30 minute summer	MH19	5.002	MH18	75.0	2.462	0.172	0.2648	

**Results for 100 year +40% CC 30 minute winter. 270 minute analysis at 1 minute timestep. Mass balance: 99.95%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
30 minute winter	MH9	24	95.656	2.006	58.9	7.5951	0.0000	FLOOD RISK
30 minute winter	MH8	24	95.657	2.104	100.5	7.2468	0.0000	FLOOD RISK
30 minute winter	MH7	24	95.651	2.170	57.5	6.9831	4.1359	FLOOD
30 minute winter	MH6	24	95.659	2.251	130.8	6.9616	0.0000	FLOOD RISK
30 minute winter	MH5	24	95.656	2.279	33.8	6.7724	0.0000	FLOOD RISK
30 minute winter	MH4	24	95.659	2.330	109.7	6.2073	0.0000	FLOOD RISK
30 minute winter	MH3	24	95.668	2.370	19.7	6.6899	0.0000	FLOOD RISK
30 minute winter	MH2	24	95.666	2.421	111.1	7.4456	0.0000	FLOOD RISK
30 minute winter	MH1	24	95.670	2.557	128.3	7.8487	0.0000	FLOOD RISK
30 minute winter	MH1.1	24	95.644	2.609	116.7	15.3123	0.0000	FLOOD RISK
30 minute winter	NEW SW 1	27	94.613	2.974	72.5	5.2559	0.0000	SURCHARGED
30 minute winter	EX SW 1	10	91.392	0.142	70.4	0.0000	0.0000	OK
30 minute winter	MH16	23	96.605	0.965	48.1	3.0154	0.0000	SURCHARGED
30 minute winter	MH14	23	96.639	0.864	13.7	1.6211	0.0000	SURCHARGED
30 minute winter	MH15	24	96.587	1.869	32.7	5.9060	0.0000	SURCHARGED
30 minute winter	MH17	22	96.587	1.890	54.4	5.6435	0.0000	SURCHARGED
30 minute winter	MH11	22	96.620	1.820	43.6	6.5581	0.0000	FLOOD RISK
30 minute winter	MH12	22	96.618	1.968	69.5	6.6652	0.0000	SURCHARGED
30 minute winter	MH10	22	96.589	1.950	67.0	7.6031	4.6115	FLOOD
30 minute winter	MH13	22	96.593	2.165	109.3	6.3873	0.0000	SURCHARGED
30 minute winter	MH18	23	94.128	0.128	79.5	0.3828	0.0000	OK
30 minute winter	MH19	22	96.590	2.179	95.8	9.8585	0.0000	SURCHARGED
30 minute winter	EX SW 3	23	93.371	0.104	79.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
30 minute winter	MH9	1.000	MH8	52.4	0.703	0.163	12.2825	
30 minute winter	MH8	1.001	MH6	101.1	0.813	0.230	9.9902	
30 minute winter	MH7	2.000	MH6	-45.1	0.353	-0.104	5.1702	
30 minute winter	MH6	1.002	MH4	103.0	0.878	0.234	5.4121	
30 minute winter	MH5	3.000	MH4	14.8	0.383	0.034	3.4066	
30 minute winter	MH4	1.003	MH2	80.5	0.925	0.183	5.7468	
30 minute winter	MH3	4.000	MH2	8.3	0.227	0.019	3.7536	
30 minute winter	MH2	1.004	MH1	96.8	0.763	0.199	7.4408	
30 minute winter	MH1	1.005	MH1.1	107.7	0.976	0.838	2.0678	
30 minute winter	MH1.1	1.006	NEW SW 1	72.5	1.147	0.514	0.8406	
30 minute winter	NEW SW 1	EX1.000	EX SW 1	70.4	3.998	2.650	0.3054	218.7
30 minute winter	MH16	5.000	MH17	48.1	2.134	0.253	1.5609	
30 minute winter	MH14	6.000	MH15	13.5	2.014	0.326	0.1996	
30 minute winter	MH15	6.001	MH17	19.8	0.298	0.065	2.9641	
30 minute winter	MH17	5.001	MH19	61.4	0.616	0.165	12.9541	
30 minute winter	MH11	7.000	MH12	25.6	0.492	0.056	9.5629	
30 minute winter	MH12	7.001	MH13	57.5	0.617	0.188	10.0990	
30 minute winter	MH10	8.000	MH13	-38.7	0.467	-0.039	14.7335	
30 minute winter	MH13	7.002	MH19	86.2	0.540	0.157	3.7261	
30 minute winter	MH18	5.003	EX SW 3	79.5	3.843	0.444	0.1297	186.0
30 minute winter	MH19	5.002	MH18	79.5	2.478	0.182	0.2790	

**Results for 100 year +40% CC 60 minute summer. 300 minute analysis at 1 minute timestep. Mass balance: 99.98%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute summer	MH9	42	95.321	1.671	52.5	6.3293	0.0000	SURCHARGED
60 minute summer	MH8	42	95.310	1.757	79.6	6.0500	0.0000	SURCHARGED
60 minute summer	MH7	42	95.321	1.840	27.8	5.9199	0.0000	SURCHARGED
60 minute summer	MH6	42	95.318	1.909	101.4	5.9061	0.0000	SURCHARGED
60 minute summer	MH5	42	95.317	1.940	19.0	5.7646	0.0000	SURCHARGED
60 minute summer	MH4	42	95.317	1.988	96.5	5.2952	0.0000	SURCHARGED
60 minute summer	MH3	42	95.315	2.017	15.2	5.6929	0.0000	SURCHARGED
60 minute summer	MH2	42	95.315	2.070	109.8	6.3671	0.0000	SURCHARGED
60 minute summer	MH1	42	95.312	2.199	116.8	6.7504	0.0000	SURCHARGED
60 minute summer	MH1.1	42	95.283	2.248	105.3	13.1911	0.0000	SURCHARGED
60 minute summer	NEW SW 1	43	94.362	2.723	68.3	4.8113	0.0000	SURCHARGED
60 minute summer	EX SW 1	19	91.392	0.142	67.6	0.0000	0.0000	OK
60 minute summer	MH16	40	96.386	0.746	40.7	2.3316	0.0000	SURCHARGED
60 minute summer	MH14	40	96.388	0.613	11.4	1.1508	0.0000	SURCHARGED
60 minute summer	MH15	40	96.378	1.660	30.5	5.2464	0.0000	SURCHARGED
60 minute summer	MH17	40	96.381	1.684	53.4	5.0293	0.0000	SURCHARGED
60 minute summer	MH11	41	96.371	1.571	36.9	5.6624	0.0000	FLOOD RISK
60 minute summer	MH12	40	96.369	1.719	69.2	5.8210	0.0000	SURCHARGED
60 minute summer	MH10	40	96.377	1.737	50.2	6.7745	0.0000	FLOOD RISK
60 minute summer	MH13	40	96.368	1.940	105.2	5.7243	0.0000	SURCHARGED
60 minute summer	MH18	40	94.123	0.123	75.2	0.3687	0.0000	OK
60 minute summer	MH19	40	96.367	1.956	92.8	8.8500	0.0000	SURCHARGED
60 minute summer	EX SW 3	40	93.368	0.101	75.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute summer	MH9	1.000	MH8	41.1	0.681	0.127	12.2825	
60 minute summer	MH8	1.001	MH6	64.4	0.772	0.147	9.9902	
60 minute summer	MH7	2.000	MH6	26.6	0.307	0.061	5.1702	
60 minute summer	MH6	1.002	MH4	89.5	0.840	0.203	5.4121	
60 minute summer	MH5	3.000	MH4	13.5	0.339	0.031	3.4066	
60 minute summer	MH4	1.003	MH2	85.3	0.817	0.194	5.7468	
60 minute summer	MH3	4.000	MH2	8.1	0.195	0.019	3.7536	
60 minute summer	MH2	1.004	MH1	91.5	0.705	0.188	7.4408	
60 minute summer	MH1	1.005	MH1.1	98.1	0.889	0.763	2.0678	
60 minute summer	MH1.1	1.006	NEW SW 1	68.3	1.135	0.484	0.8406	
60 minute summer	NEW SW 1	EX1.000	EX SW 1	67.6	3.839	2.544	0.3054	255.0
60 minute summer	MH16	5.000	MH17	40.7	2.044	0.214	1.5609	
60 minute summer	MH14	6.000	MH15	11.4	1.930	0.276	0.1996	
60 minute summer	MH15	6.001	MH17	12.9	0.267	0.042	2.9641	
60 minute summer	MH17	5.001	MH19	38.4	0.541	0.103	12.9541	
60 minute summer	MH11	7.000	MH12	36.0	0.420	0.079	9.5629	
60 minute summer	MH12	7.001	MH13	58.5	0.551	0.191	10.0990	
60 minute summer	MH10	8.000	MH13	35.3	0.415	0.036	14.7335	
60 minute summer	MH13	7.002	MH19	91.1	0.485	0.166	3.7261	
60 minute summer	MH18	5.003	EX SW 3	75.4	3.805	0.421	0.1242	219.0
60 minute summer	MH19	5.002	MH18	75.2	2.461	0.172	0.2658	

**Results for 100 year +40% CC 60 minute winter. 300 minute analysis at 1 minute timestep. Mass balance: 99.98%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
60 minute winter	MH9	42	95.669	2.019	45.8	7.6442	0.0000	FLOOD RISK
60 minute winter	MH8	42	95.659	2.106	64.9	7.2517	0.0000	FLOOD RISK
60 minute winter	MH7	42	95.651	2.170	30.5	6.9831	2.9478	FLOOD
60 minute winter	MH6	42	95.656	2.248	95.4	6.9535	0.0000	FLOOD RISK
60 minute winter	MH5	42	95.662	2.285	15.4	6.7924	0.0000	FLOOD RISK
60 minute winter	MH4	42	95.661	2.332	90.4	6.2118	0.0000	FLOOD RISK
60 minute winter	MH3	42	95.662	2.364	13.1	6.6731	0.0000	FLOOD RISK
60 minute winter	MH2	42	95.661	2.416	98.9	7.4325	0.0000	FLOOD RISK
60 minute winter	MH1	42	95.658	2.545	102.6	7.8142	0.0000	FLOOD RISK
60 minute winter	MH1.1	42	95.621	2.586	93.2	15.1738	0.0000	FLOOD RISK
60 minute winter	NEW SW 1	45	94.619	2.980	71.5	5.2656	0.0000	SURCHARGED
60 minute winter	EX SW 1	15	91.392	0.142	70.4	0.0000	0.0000	OK
60 minute winter	MH16	41	96.605	0.965	32.9	3.0156	0.0000	SURCHARGED
60 minute winter	MH14	41	96.619	0.844	12.0	1.5825	0.0000	SURCHARGED
60 minute winter	MH15	41	96.594	1.876	15.7	5.9285	0.0000	SURCHARGED
60 minute winter	MH17	41	96.592	1.895	38.9	5.6594	0.0000	SURCHARGED
60 minute winter	MH11	40	96.594	1.794	29.9	6.4658	0.0000	FLOOD RISK
60 minute winter	MH12	43	96.589	1.939	55.8	6.5688	0.0000	SURCHARGED
60 minute winter	MH10	41	96.589	1.950	40.6	7.6031	2.1709	FLOOD
60 minute winter	MH13	43	96.588	2.160	91.3	6.3716	0.0000	SURCHARGED
60 minute winter	MH18	41	94.128	0.128	79.5	0.3831	0.0000	OK
60 minute winter	MH19	43	96.587	2.176	89.7	9.8452	0.0000	SURCHARGED
60 minute winter	EX SW 3	41	93.371	0.104	79.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
60 minute winter	MH9	1.000	MH8	32.0	0.645	0.099	12.2825	
60 minute winter	MH8	1.001	MH6	67.6	0.747	0.154	9.9902	
60 minute winter	MH7	2.000	MH6	-20.2	0.309	-0.046	5.1702	
60 minute winter	MH6	1.002	MH4	83.4	0.833	0.189	5.4121	
60 minute winter	MH5	3.000	MH4	11.8	0.321	0.027	3.4066	
60 minute winter	MH4	1.003	MH2	78.0	0.813	0.177	5.7468	
60 minute winter	MH3	4.000	MH2	7.7	0.199	0.018	3.7536	
60 minute winter	MH2	1.004	MH1	81.0	0.722	0.167	7.4408	
60 minute winter	MH1	1.005	MH1.1	87.0	0.789	0.677	2.0678	
60 minute winter	MH1.1	1.006	NEW SW 1	71.5	1.133	0.507	0.8406	
60 minute winter	NEW SW 1	EX1.000	EX SW 1	70.4	4.001	2.652	0.3054	282.8
60 minute winter	MH16	5.000	MH17	35.2	1.909	0.185	1.5609	
60 minute winter	MH14	6.000	MH15	9.2	1.821	0.222	0.1996	
60 minute winter	MH15	6.001	MH17	13.8	0.268	0.045	2.9641	
60 minute winter	MH17	5.001	MH19	39.3	0.566	0.105	12.9541	
60 minute winter	MH11	7.000	MH12	24.7	0.421	0.054	9.5629	
60 minute winter	MH12	7.001	MH13	46.7	0.572	0.153	10.0990	
60 minute winter	MH10	8.000	MH13	28.3	0.410	0.029	14.7335	
60 minute winter	MH13	7.002	MH19	77.9	0.510	0.142	3.7261	
60 minute winter	MH18	5.003	EX SW 3	79.6	3.844	0.445	0.1298	243.1
60 minute winter	MH19	5.002	MH18	79.5	2.477	0.182	0.2792	

**Results for 100 year +40% CC 120 minute summer. 360 minute analysis at 2 minute timestep. Mass balance: 99.98%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute summer	MH9	76	94.914	1.264	32.9	4.7850	0.0000	SURCHARGED
120 minute summer	MH8	76	94.914	1.361	46.7	4.6864	0.0000	SURCHARGED
120 minute summer	MH7	76	94.913	1.432	18.3	4.6085	0.0000	SURCHARGED
120 minute summer	MH6	76	94.913	1.505	60.5	4.6553	0.0000	SURCHARGED
120 minute summer	MH5	76	94.912	1.535	12.6	4.5630	0.0000	SURCHARGED
120 minute summer	MH4	76	94.912	1.583	58.3	4.2177	0.0000	SURCHARGED
120 minute summer	MH3	76	94.911	1.613	8.3	4.5532	0.0000	SURCHARGED
120 minute summer	MH2	76	94.911	1.666	68.9	5.1240	0.0000	SURCHARGED
120 minute summer	MH1	76	94.908	1.795	77.4	5.5116	0.0000	SURCHARGED
120 minute summer	MH1.1	76	94.882	1.847	75.6	10.8367	0.0000	SURCHARGED
120 minute summer	NEW SW 1	78	94.056	2.417	64.3	4.2715	0.0000	SURCHARGED
120 minute summer	EX SW 1	46	91.392	0.142	64.0	0.0000	0.0000	OK
120 minute summer	MH16	74	95.998	0.358	26.9	1.1182	0.0000	SURCHARGED
120 minute summer	MH14	74	96.001	0.226	7.5	0.4237	0.0000	SURCHARGED
120 minute summer	MH15	74	95.997	1.279	12.9	4.0407	0.0000	SURCHARGED
120 minute summer	MH17	74	95.996	1.299	34.3	3.8797	0.0000	SURCHARGED
120 minute summer	MH11	74	95.999	1.199	24.4	4.3196	0.0000	SURCHARGED
120 minute summer	MH12	74	96.002	1.352	39.3	4.5780	0.0000	SURCHARGED
120 minute summer	MH10	74	95.996	1.357	33.2	5.2926	0.0000	SURCHARGED
120 minute summer	MH13	74	96.000	1.572	65.3	4.6371	0.0000	SURCHARGED
120 minute summer	MH18	74	94.115	0.114	67.5	0.3419	0.0000	OK
120 minute summer	MH19	74	96.000	1.589	70.9	7.1878	0.0000	SURCHARGED
120 minute summer	EX SW 3	74	93.362	0.095	67.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute summer	MH9	1.000	MH8	25.5	0.613	0.079	12.2825	
120 minute summer	MH8	1.001	MH6	37.8	0.711	0.086	9.9902	
120 minute summer	MH7	2.000	MH6	14.9	0.289	0.034	5.1702	
120 minute summer	MH6	1.002	MH4	51.6	0.826	0.117	5.4121	
120 minute summer	MH5	3.000	MH4	11.3	0.323	0.026	3.4066	
120 minute summer	MH4	1.003	MH2	54.3	0.809	0.123	5.7468	
120 minute summer	MH3	4.000	MH2	5.0	0.165	0.012	3.7536	
120 minute summer	MH2	1.004	MH1	63.6	0.639	0.131	7.4408	
120 minute summer	MH1	1.005	MH1.1	71.6	0.649	0.557	2.0678	
120 minute summer	MH1.1	1.006	NEW SW 1	64.3	1.121	0.456	0.8406	
120 minute summer	NEW SW 1	EX1.000	EX SW 1	64.0	3.636	2.410	0.3054	316.2
120 minute summer	MH16	5.000	MH17	26.9	1.816	0.142	1.5609	
120 minute summer	MH14	6.000	MH15	7.6	1.730	0.183	0.1996	
120 minute summer	MH15	6.001	MH17	8.8	0.259	0.029	2.9641	
120 minute summer	MH17	5.001	MH19	23.1	0.527	0.062	12.9541	
120 minute summer	MH11	7.000	MH12	18.6	0.417	0.041	9.5629	
120 minute summer	MH12	7.001	MH13	34.9	0.542	0.114	10.0990	
120 minute summer	MH10	8.000	MH13	22.9	0.380	0.023	14.7335	
120 minute summer	MH13	7.002	MH19	63.1	0.401	0.115	3.7261	
120 minute summer	MH18	5.003	EX SW 3	67.4	3.722	0.377	0.1136	271.5
120 minute summer	MH19	5.002	MH18	67.5	2.427	0.155	0.2417	

**Results for 100 year +40% CC 120 minute winter. 360 minute analysis at 2 minute timestep. Mass balance: 99.99%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
120 minute winter	MH9	82	95.035	1.385	25.4	5.2455	0.0000	SURCHARGED
120 minute winter	MH8	82	95.035	1.482	38.1	5.1025	0.0000	SURCHARGED
120 minute winter	MH7	82	95.035	1.554	14.1	4.9993	0.0000	SURCHARGED
120 minute winter	MH6	82	95.034	1.626	52.6	5.0305	0.0000	SURCHARGED
120 minute winter	MH5	82	95.033	1.656	9.7	4.9230	0.0000	SURCHARGED
120 minute winter	MH4	82	95.033	1.704	55.5	4.5407	0.0000	SURCHARGED
120 minute winter	MH3	82	95.032	1.734	6.4	4.8951	0.0000	SURCHARGED
120 minute winter	MH2	82	95.032	1.787	65.6	5.4968	0.0000	SURCHARGED
120 minute winter	MH1	82	95.029	1.916	73.7	5.8833	0.0000	SURCHARGED
120 minute winter	MH1.1	82	95.002	1.967	72.3	11.5453	0.0000	SURCHARGED
120 minute winter	NEW SW 1	82	94.153	2.514	65.3	4.4421	0.0000	SURCHARGED
120 minute winter	EX SW 1	38	91.392	0.142	65.1	0.0000	0.0000	OK
120 minute winter	MH16	78	96.052	0.412	20.7	1.2875	0.0000	SURCHARGED
120 minute winter	MH14	78	96.054	0.279	5.8	0.5230	0.0000	SURCHARGED
120 minute winter	MH15	78	96.047	1.329	9.9	4.2000	0.0000	SURCHARGED
120 minute winter	MH17	78	96.047	1.350	26.7	4.0318	0.0000	SURCHARGED
120 minute winter	MH11	78	96.047	1.247	18.8	4.4947	0.0000	SURCHARGED
120 minute winter	MH12	78	96.048	1.398	33.0	4.7354	0.0000	SURCHARGED
120 minute winter	MH10	78	96.047	1.408	25.6	5.4892	0.0000	SURCHARGED
120 minute winter	MH13	78	96.047	1.619	57.0	4.7753	0.0000	SURCHARGED
120 minute winter	MH18	78	94.116	0.116	68.5	0.3454	0.0000	OK
120 minute winter	MH19	78	96.046	1.635	69.6	7.3979	0.0000	SURCHARGED
120 minute winter	EX SW 3	78	93.363	0.096	68.5	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
120 minute winter	MH9	1.000	MH8	20.6	0.584	0.064	12.2825	
120 minute winter	MH8	1.001	MH6	33.9	0.694	0.077	9.9902	
120 minute winter	MH7	2.000	MH6	9.5	0.290	0.022	5.1702	
120 minute winter	MH6	1.002	MH4	48.3	0.805	0.110	5.4121	
120 minute winter	MH5	3.000	MH4	6.9	0.265	0.016	3.4066	
120 minute winter	MH4	1.003	MH2	51.6	0.821	0.117	5.7468	
120 minute winter	MH3	4.000	MH2	4.1	0.161	0.009	3.7536	
120 minute winter	MH2	1.004	MH1	61.0	0.657	0.126	7.4408	
120 minute winter	MH1	1.005	MH1.1	68.7	0.623	0.535	2.0678	
120 minute winter	MH1.1	1.006	NEW SW 1	65.3	1.130	0.463	0.8406	
120 minute winter	NEW SW 1	EX1.000	EX SW 1	65.1	3.701	2.453	0.3055	354.1
120 minute winter	MH16	5.000	MH17	20.7	1.709	0.109	1.5609	
120 minute winter	MH14	6.000	MH15	5.8	1.616	0.140	0.1996	
120 minute winter	MH15	6.001	MH17	8.0	0.257	0.026	2.9641	
120 minute winter	MH17	5.001	MH19	22.4	0.522	0.060	12.9541	
120 minute winter	MH11	7.000	MH12	13.7	0.401	0.030	9.5629	
120 minute winter	MH12	7.001	MH13	28.8	0.534	0.094	10.0990	
120 minute winter	MH10	8.000	MH13	20.1	0.331	0.021	14.7335	
120 minute winter	MH13	7.002	MH19	55.7	0.447	0.101	3.7261	
120 minute winter	MH18	5.003	EX SW 3	68.5	3.735	0.383	0.1150	304.1
120 minute winter	MH19	5.002	MH18	68.5	2.431	0.157	0.2449	

**Results for 100 year +40% CC 180 minute summer. 420 minute analysis at 4 minute timestep. Mass balance: 99.99%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute summer	MH9	112	94.424	0.774	24.5	2.9310	0.0000	SURCHARGED
180 minute summer	MH8	112	94.423	0.870	37.2	2.9974	0.0000	SURCHARGED
180 minute summer	MH7	112	94.423	0.942	13.7	3.0329	0.0000	SURCHARGED
180 minute summer	MH6	112	94.423	1.015	45.6	3.1407	0.0000	SURCHARGED
180 minute summer	MH5	112	94.423	1.046	9.4	3.1074	0.0000	SURCHARGED
180 minute summer	MH4	112	94.423	1.094	46.8	2.9134	0.0000	SURCHARGED
180 minute summer	MH3	112	94.421	1.123	6.2	3.1715	0.0000	SURCHARGED
180 minute summer	MH2	112	94.421	1.176	56.1	3.6188	0.0000	SURCHARGED
180 minute summer	MH1	112	94.419	1.306	62.9	4.0104	0.0000	SURCHARGED
180 minute summer	MH1.1	112	94.397	1.362	63.4	7.9950	0.0000	SURCHARGED
180 minute summer	NEW SW 1	112	93.695	2.056	59.7	3.6322	0.0000	SURCHARGED
180 minute summer	EX SW 1	72	91.392	0.142	59.5	0.0000	0.0000	OK
180 minute summer	MH16	92	95.707	0.067	20.0	0.2108	0.0000	OK
180 minute summer	MH14	96	95.814	0.039	5.6	0.0724	0.0000	OK
180 minute summer	MH15	108	95.643	0.925	9.5	2.9215	0.0000	SURCHARGED
180 minute summer	MH17	108	95.643	0.946	26.4	2.8242	0.0000	SURCHARGED
180 minute summer	MH11	108	95.646	0.846	18.2	3.0501	0.0000	SURCHARGED
180 minute summer	MH12	108	95.647	0.997	30.4	3.3754	0.0000	SURCHARGED
180 minute summer	MH10	108	95.644	1.005	24.7	3.9190	0.0000	SURCHARGED
180 minute summer	MH13	108	95.643	1.215	49.5	3.5849	0.0000	SURCHARGED
180 minute summer	MH18	108	94.105	0.105	58.9	0.3130	0.0000	OK
180 minute summer	MH19	108	95.642	1.231	60.7	5.5710	0.0000	SURCHARGED
180 minute summer	EX SW 3	108	93.355	0.088	59.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute summer	MH9	1.000	MH8	20.3	0.563	0.063	12.2825	
180 minute summer	MH8	1.001	MH6	29.5	0.687	0.067	9.9902	
180 minute summer	MH7	2.000	MH6	9.4	0.290	0.022	5.1702	
180 minute summer	MH6	1.002	MH4	40.2	0.798	0.091	5.4121	
180 minute summer	MH5	3.000	MH4	6.8	0.206	0.016	3.4066	
180 minute summer	MH4	1.003	MH2	44.9	0.820	0.102	5.7468	
180 minute summer	MH3	4.000	MH2	4.1	0.153	0.010	3.7536	
180 minute summer	MH2	1.004	MH1	53.8	0.617	0.111	7.4408	
180 minute summer	MH1	1.005	MH1.1	60.8	0.551	0.473	2.0678	
180 minute summer	MH1.1	1.006	NEW SW 1	59.7	1.128	0.423	0.8406	
180 minute summer	NEW SW 1	EX1.000	EX SW 1	59.5	3.380	2.240	0.3054	352.9
180 minute summer	MH16	5.000	MH17	20.0	1.721	0.105	0.8921	
180 minute summer	MH14	6.000	MH15	5.6	1.602	0.135	0.1170	
180 minute summer	MH15	6.001	MH17	6.6	0.247	0.022	2.9641	
180 minute summer	MH17	5.001	MH19	18.9	0.519	0.051	12.9541	
180 minute summer	MH11	7.000	MH12	12.3	0.395	0.027	9.5629	
180 minute summer	MH12	7.001	MH13	24.5	0.525	0.080	10.0990	
180 minute summer	MH10	8.000	MH13	17.2	0.309	0.018	14.7335	
180 minute summer	MH13	7.002	MH19	45.4	0.342	0.083	3.7261	
180 minute summer	MH18	5.003	EX SW 3	59.0	3.623	0.330	0.1021	302.8
180 minute summer	MH19	5.002	MH18	58.9	2.378	0.135	0.2155	

**Results for 100 year +40% CC 180 minute winter. 420 minute analysis at 4 minute timestep. Mass balance: 99.99%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
180 minute winter	MH9	116	94.329	0.679	18.9	2.5707	0.0000	SURCHARGED
180 minute winter	MH8	116	94.329	0.776	30.5	2.6713	0.0000	SURCHARGED
180 minute winter	MH7	116	94.328	0.847	10.5	2.7265	0.0000	SURCHARGED
180 minute winter	MH6	116	94.328	0.920	41.8	2.8463	0.0000	SURCHARGED
180 minute winter	MH5	116	94.327	0.950	7.2	2.8246	0.0000	SURCHARGED
180 minute winter	MH4	116	94.327	0.998	43.5	2.6597	0.0000	SURCHARGED
180 minute winter	MH3	116	94.326	1.028	4.8	2.9025	0.0000	SURCHARGED
180 minute winter	MH2	116	94.326	1.081	52.8	3.3257	0.0000	SURCHARGED
180 minute winter	MH1	116	94.324	1.211	59.6	3.7177	0.0000	SURCHARGED
180 minute winter	MH1.1	116	94.302	1.267	60.6	7.4341	0.0000	SURCHARGED
180 minute winter	NEW SW 1	116	93.616	1.977	58.6	3.4926	0.0000	SURCHARGED
180 minute winter	EX SW 1	64	91.392	0.142	58.5	0.0000	0.0000	OK
180 minute winter	MH16	88	95.698	0.058	15.4	0.1809	0.0000	OK
180 minute winter	MH14	96	95.809	0.034	4.3	0.0631	0.0000	OK
180 minute winter	MH15	112	95.570	0.852	7.3	2.6916	0.0000	SURCHARGED
180 minute winter	MH17	112	95.570	0.873	21.0	2.6056	0.0000	SURCHARGED
180 minute winter	MH11	112	95.570	0.770	14.0	2.7734	0.0000	SURCHARGED
180 minute winter	MH12	112	95.570	0.920	24.7	3.1150	0.0000	SURCHARGED
180 minute winter	MH10	112	95.570	0.931	19.1	3.6288	0.0000	SURCHARGED
180 minute winter	MH13	112	95.569	1.141	42.9	3.3671	0.0000	SURCHARGED
180 minute winter	MH18	112	94.103	0.103	57.0	0.3063	0.0000	OK
180 minute winter	MH19	112	95.569	1.158	57.4	5.2390	0.0000	SURCHARGED
180 minute winter	EX SW 3	112	93.354	0.087	57.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
180 minute winter	MH9	1.000	MH8	16.7	0.549	0.052	12.2825	
180 minute winter	MH8	1.001	MH6	27.5	0.672	0.063	9.9902	
180 minute winter	MH7	2.000	MH6	8.0	0.281	0.018	5.1702	
180 minute winter	MH6	1.002	MH4	37.2	0.797	0.084	5.4121	
180 minute winter	MH5	3.000	MH4	5.7	0.230	0.013	3.4066	
180 minute winter	MH4	1.003	MH2	42.2	0.798	0.096	5.7468	
180 minute winter	MH3	4.000	MH2	3.8	0.129	0.009	3.7536	
180 minute winter	MH2	1.004	MH1	51.3	0.630	0.106	7.4408	
180 minute winter	MH1	1.005	MH1.1	58.2	0.528	0.453	2.0678	
180 minute winter	MH1.1	1.006	NEW SW 1	58.6	1.117	0.415	0.8406	
180 minute winter	NEW SW 1	EX1.000	EX SW 1	58.5	3.321	2.201	0.3054	395.8
180 minute winter	MH16	5.000	MH17	15.4	1.584	0.081	0.8770	
180 minute winter	MH14	6.000	MH15	4.3	1.490	0.104	0.1148	
180 minute winter	MH15	6.001	MH17	5.6	0.244	0.018	2.9641	
180 minute winter	MH17	5.001	MH19	16.8	0.531	0.045	12.9541	
180 minute winter	MH11	7.000	MH12	11.2	0.390	0.025	9.5629	
180 minute winter	MH12	7.001	MH13	21.8	0.544	0.071	10.0990	
180 minute winter	MH10	8.000	MH13	14.5	0.294	0.015	14.7335	
180 minute winter	MH13	7.002	MH19	41.4	0.427	0.075	3.7261	
180 minute winter	MH18	5.003	EX SW 3	57.0	3.598	0.319	0.0995	339.6
180 minute winter	MH19	5.002	MH18	57.0	2.366	0.131	0.2096	

**Results for 100 year +40% CC 240 minute summer. 480 minute analysis at 4 minute timestep. Mass balance: 99.99%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute summer	MH9	140	94.059	0.409	20.7	1.5490	0.0000	OK
240 minute summer	MH8	140	94.059	0.506	34.7	1.7421	0.0000	OK
240 minute summer	MH7	140	94.058	0.577	11.5	1.8579	0.0000	OK
240 minute summer	MH6	140	94.058	0.650	44.6	2.0114	0.0000	SURCHARGED
240 minute summer	MH5	140	94.057	0.680	7.9	2.0224	0.0000	SURCHARGED
240 minute summer	MH4	140	94.057	0.728	43.0	1.9406	0.0000	SURCHARGED
240 minute summer	MH3	140	94.056	0.758	5.2	2.1406	0.0000	SURCHARGED
240 minute summer	MH2	140	94.056	0.811	48.5	2.4954	0.0000	SURCHARGED
240 minute summer	MH1	140	94.054	0.941	55.7	2.8895	0.0000	SURCHARGED
240 minute summer	MH1.1	140	94.034	0.999	57.4	5.8613	0.0000	SURCHARGED
240 minute summer	NEW SW 1	144	93.413	1.774	55.8	3.1352	0.0000	SURCHARGED
240 minute summer	EX SW 1	100	91.392	0.142	55.7	0.0000	0.0000	OK
240 minute summer	MH16	124	95.702	0.062	16.9	0.1936	0.0000	OK
240 minute summer	MH14	124	95.810	0.035	4.7	0.0660	0.0000	OK
240 minute summer	MH15	140	95.322	0.604	8.0	1.9071	0.0000	SURCHARGED
240 minute summer	MH17	140	95.321	0.624	22.3	1.8641	0.0000	SURCHARGED
240 minute summer	MH11	140	95.321	0.521	15.3	1.8787	0.0000	OK
240 minute summer	MH12	140	95.322	0.672	26.0	2.2761	0.0000	SURCHARGED
240 minute summer	MH10	140	95.321	0.682	20.8	2.6586	0.0000	OK
240 minute summer	MH13	140	95.322	0.894	42.4	2.6376	0.0000	SURCHARGED
240 minute summer	MH18	140	94.095	0.095	50.1	0.2823	0.0000	OK
240 minute summer	MH19	140	95.322	0.911	50.7	4.1216	0.0000	SURCHARGED
240 minute summer	EX SW 3	140	93.348	0.081	50.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute summer	MH9	1.000	MH8	18.9	0.560	0.059	9.9890	
240 minute summer	MH8	1.001	MH6	29.3	0.670	0.067	9.4905	
240 minute summer	MH7	2.000	MH6	8.6	0.280	0.020	5.1391	
240 minute summer	MH6	1.002	MH4	36.9	0.798	0.084	5.4121	
240 minute summer	MH5	3.000	MH4	5.8	0.210	0.013	3.4066	
240 minute summer	MH4	1.003	MH2	41.0	0.789	0.093	5.7468	
240 minute summer	MH3	4.000	MH2	3.6	0.153	0.008	3.7536	
240 minute summer	MH2	1.004	MH1	48.0	0.615	0.099	7.4408	
240 minute summer	MH1	1.005	MH1.1	55.0	0.499	0.428	2.0678	
240 minute summer	MH1.1	1.006	NEW SW 1	55.8	1.127	0.396	0.8406	
240 minute summer	NEW SW 1	EX1.000	EX SW 1	55.7	3.167	2.099	0.3054	378.9
240 minute summer	MH16	5.000	MH17	16.8	1.645	0.089	0.8610	
240 minute summer	MH14	6.000	MH15	4.7	1.524	0.113	0.1117	
240 minute summer	MH15	6.001	MH17	5.4	0.244	0.018	2.9635	
240 minute summer	MH17	5.001	MH19	15.3	0.526	0.041	12.9541	
240 minute summer	MH11	7.000	MH12	10.8	0.386	0.024	9.1943	
240 minute summer	MH12	7.001	MH13	19.2	0.540	0.063	10.0990	
240 minute summer	MH10	8.000	MH13	16.8	0.295	0.017	14.4034	
240 minute summer	MH13	7.002	MH19	35.9	0.355	0.065	3.7261	
240 minute summer	MH18	5.003	EX SW 3	50.1	3.499	0.280	0.0899	325.6
240 minute summer	MH19	5.002	MH18	50.1	2.316	0.115	0.1883	

**Results for 100 year +40% CC 240 minute winter. 480 minute analysis at 4 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
240 minute winter	MH9	148	93.927	0.277	15.4	1.0506	0.0000	OK
240 minute winter	MH8	148	93.927	0.374	27.5	1.2885	0.0000	OK
240 minute winter	MH7	148	93.927	0.446	8.6	1.4345	0.0000	OK
240 minute winter	MH6	148	93.927	0.519	38.4	1.6045	0.0000	OK
240 minute winter	MH5	148	93.926	0.549	5.9	1.6321	0.0000	OK
240 minute winter	MH4	148	93.926	0.597	40.1	1.5908	0.0000	OK
240 minute winter	MH3	148	93.925	0.627	3.9	1.7702	0.0000	SURCHARGED
240 minute winter	MH2	148	93.925	0.680	46.7	2.0919	0.0000	SURCHARGED
240 minute winter	MH1	148	93.923	0.810	53.3	2.4872	0.0000	SURCHARGED
240 minute winter	MH1.1	148	93.904	0.869	55.0	5.0996	0.0000	SURCHARGED
240 minute winter	NEW SW 1	148	93.314	1.675	54.4	2.9588	0.0000	SURCHARGED
240 minute winter	EX SW 1	88	91.392	0.142	54.4	0.0000	0.0000	OK
240 minute winter	MH16	124	95.693	0.053	12.6	0.1672	0.0000	OK
240 minute winter	MH14	124	95.805	0.030	3.5	0.0568	0.0000	OK
240 minute winter	MH15	148	95.214	0.496	6.0	1.5682	0.0000	OK
240 minute winter	MH17	148	95.214	0.517	17.6	1.5447	0.0000	OK
240 minute winter	MH11	148	95.214	0.414	11.4	1.4938	0.0000	OK
240 minute winter	MH12	148	95.215	0.565	20.7	1.9123	0.0000	OK
240 minute winter	MH10	148	95.214	0.575	15.5	2.2415	0.0000	OK
240 minute winter	MH13	148	95.215	0.787	36.4	2.3202	0.0000	SURCHARGED
240 minute winter	MH18	148	94.091	0.091	46.8	0.2706	0.0000	OK
240 minute winter	MH19	148	95.214	0.803	47.2	3.6345	0.0000	SURCHARGED
240 minute winter	EX SW 3	148	93.345	0.078	46.8	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
240 minute winter	MH9	1.000	MH8	15.1	0.531	0.047	6.8044	
240 minute winter	MH8	1.001	MH6	24.9	0.661	0.057	7.8682	
240 minute winter	MH7	2.000	MH6	7.1	0.275	0.016	4.4371	
240 minute winter	MH6	1.002	MH4	33.9	0.778	0.077	5.1910	
240 minute winter	MH5	3.000	MH4	4.7	0.210	0.011	3.3360	
240 minute winter	MH4	1.003	MH2	39.2	0.791	0.089	5.7438	
240 minute winter	MH3	4.000	MH2	3.1	0.132	0.007	3.7536	
240 minute winter	MH2	1.004	MH1	46.8	0.617	0.096	7.4408	
240 minute winter	MH1	1.005	MH1.1	53.0	0.480	0.412	2.0678	
240 minute winter	MH1.1	1.006	NEW SW 1	54.4	1.120	0.386	0.7261	
240 minute winter	NEW SW 1	EX1.000	EX SW 1	54.4	3.088	2.046	0.3054	424.9
240 minute winter	MH16	5.000	MH17	12.6	1.515	0.066	0.6779	
240 minute winter	MH14	6.000	MH15	3.5	1.405	0.085	0.0382	
240 minute winter	MH15	6.001	MH17	5.0	0.237	0.016	2.6708	
240 minute winter	MH17	5.001	MH19	14.3	0.521	0.038	12.4180	
240 minute winter	MH11	7.000	MH12	8.9	0.378	0.020	8.1944	
240 minute winter	MH12	7.001	MH13	17.7	0.523	0.058	9.9804	
240 minute winter	MH10	8.000	MH13	13.8	0.281	0.014	13.4294	
240 minute winter	MH13	7.002	MH19	33.2	0.351	0.060	3.7261	
240 minute winter	MH18	5.003	EX SW 3	46.8	3.448	0.262	0.0852	364.8
240 minute winter	MH19	5.002	MH18	46.8	2.289	0.107	0.1779	

**Results for 100 year +40% CC 360 minute summer. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute summer	MH9	200	93.795	0.145	15.6	0.5509	0.0000	OK
360 minute summer	MH8	200	93.795	0.242	28.1	0.8326	0.0000	OK
360 minute summer	MH7	200	93.795	0.314	8.7	1.0090	0.0000	OK
360 minute summer	MH6	200	93.795	0.387	39.9	1.1956	0.0000	OK
360 minute summer	MH5	200	93.794	0.417	6.0	1.2393	0.0000	OK
360 minute summer	MH4	200	93.794	0.465	41.5	1.2387	0.0000	OK
360 minute summer	MH3	200	93.793	0.495	3.9	1.3982	0.0000	OK
360 minute summer	MH2	200	93.793	0.548	47.2	1.6865	0.0000	OK
360 minute summer	MH1	200	93.792	0.679	51.4	2.0836	0.0000	SURCHARGED
360 minute summer	MH1.1	200	93.774	0.739	53.1	4.3354	0.0000	SURCHARGED
360 minute summer	NEW SW 1	200	93.189	1.550	52.7	2.7396	0.0000	SURCHARGED
360 minute summer	EX SW 1	152	91.392	0.142	52.6	0.0000	0.0000	OK
360 minute summer	MH16	184	95.694	0.054	12.7	0.1676	0.0000	OK
360 minute summer	MH14	184	95.806	0.031	3.6	0.0575	0.0000	OK
360 minute summer	MH15	200	95.083	0.365	6.1	1.1526	0.0000	OK
360 minute summer	MH17	200	95.083	0.386	17.2	1.1516	0.0000	OK
360 minute summer	MH11	200	95.083	0.283	11.5	1.0202	0.0000	OK
360 minute summer	MH12	200	95.083	0.433	21.3	1.4664	0.0000	OK
360 minute summer	MH10	200	95.083	0.444	15.7	1.7328	0.0000	OK
360 minute summer	MH13	200	95.082	0.654	33.3	1.9304	0.0000	OK
360 minute summer	MH18	200	94.085	0.085	42.4	0.2547	0.0000	OK
360 minute summer	MH19	200	95.082	0.671	43.3	3.0361	0.0000	SURCHARGED
360 minute summer	EX SW 3	200	93.341	0.074	42.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute summer	MH9	1.000	MH8	15.4	0.527	0.048	3.4632	
360 minute summer	MH8	1.001	MH6	24.9	0.659	0.057	5.2871	
360 minute summer	MH7	2.000	MH6	7.1	0.276	0.016	3.1284	
360 minute summer	MH6	1.002	MH4	35.2	0.778	0.080	4.0952	
360 minute summer	MH5	3.000	MH4	4.4	0.150	0.010	2.6813	
360 minute summer	MH4	1.003	MH2	37.0	0.795	0.084	5.1449	
360 minute summer	MH3	4.000	MH2	2.8	0.118	0.006	3.4567	
360 minute summer	MH2	1.004	MH1	45.3	0.616	0.093	7.2864	
360 minute summer	MH1	1.005	MH1.1	51.0	0.479	0.397	2.0678	
360 minute summer	MH1.1	1.006	NEW SW 1	52.7	1.121	0.373	0.4364	
360 minute summer	NEW SW 1	EX1.000	EX SW 1	52.6	2.986	1.979	0.3054	418.2
360 minute summer	MH16	5.000	MH17	12.6	1.517	0.067	0.2552	
360 minute summer	MH14	6.000	MH15	3.6	1.415	0.087	0.0287	
360 minute summer	MH15	6.001	MH17	4.6	0.239	0.015	1.9504	
360 minute summer	MH17	5.001	MH19	13.2	0.511	0.035	10.3776	
360 minute summer	MH11	7.000	MH12	9.0	0.363	0.020	5.9152	
360 minute summer	MH12	7.001	MH13	16.3	0.527	0.053	8.4365	
360 minute summer	MH10	8.000	MH13	11.4	0.173	0.012	11.3704	
360 minute summer	MH13	7.002	MH19	30.5	0.175	0.056	3.4847	
360 minute summer	MH18	5.003	EX SW 3	42.4	3.372	0.237	0.0790	358.7
360 minute summer	MH19	5.002	MH18	42.4	2.248	0.097	0.1641	

**Results for 100 year +40% CC 360 minute winter. 600 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
360 minute winter	MH9	184	93.725	0.075	11.4	0.2858	0.0000	OK
360 minute winter	MH8	208	93.677	0.124	20.7	0.4257	0.0000	OK
360 minute winter	MH7	208	93.676	0.195	6.3	0.6276	0.0000	OK
360 minute winter	MH6	208	93.676	0.268	31.9	0.8288	0.0000	OK
360 minute winter	MH5	208	93.675	0.298	4.3	0.8860	0.0000	OK
360 minute winter	MH4	208	93.675	0.346	34.8	0.9220	0.0000	OK
360 minute winter	MH3	208	93.674	0.376	2.9	1.0622	0.0000	OK
360 minute winter	MH2	208	93.674	0.429	41.6	1.3204	0.0000	OK
360 minute winter	MH1	208	93.673	0.560	46.9	1.7202	0.0000	SURCHARGED
360 minute winter	MH1.1	208	93.658	0.623	48.3	3.6576	0.0000	SURCHARGED
360 minute winter	NEW SW 1	208	92.910	1.271	48.3	2.2465	0.0000	SURCHARGED
360 minute winter	EX SW 1	144	91.392	0.142	48.3	0.0000	0.0000	OK
360 minute winter	MH16	184	95.686	0.046	9.3	0.1435	0.0000	OK
360 minute winter	MH14	184	95.801	0.026	2.6	0.0490	0.0000	OK
360 minute winter	MH15	208	94.991	0.273	4.4	0.8641	0.0000	OK
360 minute winter	MH17	208	94.991	0.294	13.3	0.8791	0.0000	OK
360 minute winter	MH11	208	94.992	0.192	8.4	0.6908	0.0000	OK
360 minute winter	MH12	208	94.992	0.342	16.2	1.1573	0.0000	OK
360 minute winter	MH10	208	94.992	0.353	11.4	1.3749	0.0000	OK
360 minute winter	MH13	208	94.991	0.563	30.0	1.6620	0.0000	OK
360 minute winter	MH18	208	94.081	0.081	39.1	0.2427	0.0000	OK
360 minute winter	MH19	208	94.991	0.580	39.6	2.6247	0.0000	SURCHARGED
360 minute winter	EX SW 3	208	93.338	0.071	39.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
360 minute winter	MH9	1.000	MH8	11.4	0.501	0.035	1.3192	
360 minute winter	MH8	1.001	MH6	20.6	0.642	0.047	2.8992	
360 minute winter	MH7	2.000	MH6	5.9	0.268	0.013	1.8452	
360 minute winter	MH6	1.002	MH4	29.8	0.768	0.068	2.7864	
360 minute winter	MH5	3.000	MH4	3.9	0.146	0.009	1.8627	
360 minute winter	MH4	1.003	MH2	33.7	0.781	0.077	3.9179	
360 minute winter	MH3	4.000	MH2	2.5	0.104	0.006	2.6768	
360 minute winter	MH2	1.004	MH1	41.4	0.615	0.085	6.4660	
360 minute winter	MH1	1.005	MH1.1	46.7	0.471	0.363	2.0678	
360 minute winter	MH1.1	1.006	NEW SW 1	48.3	1.097	0.342	0.3355	
360 minute winter	NEW SW 1	EX1.000	EX SW 1	48.3	2.745	1.819	0.3054	468.0
360 minute winter	MH16	5.000	MH17	9.3	1.390	0.049	0.1481	
360 minute winter	MH14	6.000	MH15	2.6	1.289	0.063	0.0228	
360 minute winter	MH15	6.001	MH17	4.0	0.234	0.013	1.3811	
360 minute winter	MH17	5.001	MH19	11.9	0.523	0.032	8.1344	
360 minute winter	MH11	7.000	MH12	7.7	0.368	0.017	4.1279	
360 minute winter	MH12	7.001	MH13	14.9	0.535	0.049	6.6826	
360 minute winter	MH10	8.000	MH13	10.6	0.224	0.011	9.3432	
360 minute winter	MH13	7.002	MH19	28.0	0.235	0.051	3.0494	
360 minute winter	MH18	5.003	EX SW 3	39.1	3.311	0.219	0.0742	402.4
360 minute winter	MH19	5.002	MH18	39.1	2.215	0.090	0.1537	

**Results for 100 year +40% CC 480 minute summer. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute summer	MH9	248	93.728	0.078	12.2	0.2957	0.0000	OK
480 minute summer	MH8	256	93.674	0.121	22.2	0.4162	0.0000	OK
480 minute summer	MH7	256	93.674	0.193	6.8	0.6209	0.0000	OK
480 minute summer	MH6	256	93.674	0.266	33.8	0.8227	0.0000	OK
480 minute summer	MH5	256	93.674	0.297	4.7	0.8812	0.0000	OK
480 minute summer	MH4	256	93.673	0.344	36.3	0.9177	0.0000	OK
480 minute summer	MH3	256	93.673	0.375	3.1	1.0585	0.0000	OK
480 minute summer	MH2	256	93.673	0.428	42.6	1.3163	0.0000	OK
480 minute summer	MH1	256	93.672	0.559	47.0	1.7165	0.0000	SURCHARGED
480 minute summer	MH1.1	256	93.657	0.622	48.4	3.6505	0.0000	SURCHARGED
480 minute summer	NEW SW 1	264	92.905	1.266	48.2	2.2375	0.0000	SURCHARGED
480 minute summer	EX SW 1	216	91.392	0.142	48.2	0.0000	0.0000	OK
480 minute summer	MH16	248	95.688	0.048	10.0	0.1489	0.0000	OK
480 minute summer	MH14	248	95.802	0.027	2.8	0.0508	0.0000	OK
480 minute summer	MH15	264	94.975	0.257	4.8	0.8136	0.0000	OK
480 minute summer	MH17	264	94.976	0.278	14.2	0.8316	0.0000	OK
480 minute summer	MH11	264	94.976	0.176	9.0	0.6358	0.0000	OK
480 minute summer	MH12	264	94.976	0.326	17.0	1.1037	0.0000	OK
480 minute summer	MH10	264	94.975	0.336	12.3	1.3119	0.0000	OK
480 minute summer	MH13	264	94.976	0.548	30.1	1.6163	0.0000	OK
480 minute summer	MH18	264	94.081	0.081	38.6	0.2405	0.0000	OK
480 minute summer	MH19	264	94.976	0.565	39.6	2.5550	0.0000	SURCHARGED
480 minute summer	EX SW 3	264	93.338	0.071	38.6	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute summer	MH9	1.000	MH8	12.2	0.510	0.038	1.3094	
480 minute summer	MH8	1.001	MH6	21.9	0.651	0.050	2.8545	
480 minute summer	MH7	2.000	MH6	5.9	0.270	0.013	1.8238	
480 minute summer	MH6	1.002	MH4	31.1	0.762	0.071	2.7661	
480 minute summer	MH5	3.000	MH4	3.9	0.142	0.009	1.8512	
480 minute summer	MH4	1.003	MH2	34.1	0.781	0.077	3.9009	
480 minute summer	MH3	4.000	MH2	2.6	0.105	0.006	2.6669	
480 minute summer	MH2	1.004	MH1	41.4	0.614	0.085	6.4518	
480 minute summer	MH1	1.005	MH1.1	46.8	0.481	0.364	2.0678	
480 minute summer	MH1.1	1.006	NEW SW 1	48.2	1.097	0.342	0.3351	
480 minute summer	NEW SW 1	EX1.000	EX SW 1	48.2	2.740	1.816	0.3054	447.7
480 minute summer	MH16	5.000	MH17	10.0	1.420	0.053	0.1562	
480 minute summer	MH14	6.000	MH15	2.8	1.318	0.068	0.0241	
480 minute summer	MH15	6.001	MH17	4.2	0.237	0.014	1.2812	
480 minute summer	MH17	5.001	MH19	12.3	0.518	0.033	7.7221	
480 minute summer	MH11	7.000	MH12	7.7	0.372	0.017	3.8253	
480 minute summer	MH12	7.001	MH13	14.9	0.530	0.049	6.3583	
480 minute summer	MH10	8.000	MH13	11.1	0.182	0.011	8.9717	
480 minute summer	MH13	7.002	MH19	27.6	0.182	0.050	2.9649	
480 minute summer	MH18	5.003	EX SW 3	38.6	3.299	0.216	0.0733	384.7
480 minute summer	MH19	5.002	MH18	38.6	2.208	0.088	0.1519	

**Results for 100 year +40% CC 480 minute winter. 720 minute analysis at 8 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
480 minute winter	MH9	248	93.718	0.068	9.1	0.2575	0.0000	OK
480 minute winter	MH8	248	93.631	0.078	16.5	0.2686	0.0000	OK
480 minute winter	MH7	264	93.542	0.061	5.1	0.1975	0.0000	OK
480 minute winter	MH6	264	93.542	0.134	26.1	0.4140	0.0000	OK
480 minute winter	MH5	264	93.540	0.163	3.5	0.4836	0.0000	OK
480 minute winter	MH4	264	93.540	0.211	29.7	0.5613	0.0000	OK
480 minute winter	MH3	264	93.538	0.240	2.3	0.6787	0.0000	OK
480 minute winter	MH2	264	93.538	0.293	36.0	0.9025	0.0000	OK
480 minute winter	MH1	264	93.538	0.425	40.4	1.3037	0.0000	SURCHARGED
480 minute winter	MH1.1	264	93.527	0.492	41.6	2.8843	0.0000	SURCHARGED
480 minute winter	NEW SW 1	264	92.517	0.878	41.6	1.5507	0.0000	SURCHARGED
480 minute winter	EX SW 1	200	91.392	0.142	41.6	0.0000	0.0000	OK
480 minute winter	MH16	248	95.681	0.041	7.4	0.1283	0.0000	OK
480 minute winter	MH14	248	95.798	0.023	2.1	0.0440	0.0000	OK
480 minute winter	MH15	264	94.871	0.153	3.6	0.4833	0.0000	OK
480 minute winter	MH17	264	94.871	0.174	10.8	0.5191	0.0000	OK
480 minute winter	MH11	264	94.871	0.071	6.7	0.2571	0.0000	OK
480 minute winter	MH12	264	94.871	0.221	13.8	0.7495	0.0000	OK
480 minute winter	MH10	264	94.871	0.232	9.2	0.9037	0.0000	OK
480 minute winter	MH13	264	94.871	0.443	25.5	1.3059	0.0000	OK
480 minute winter	MH18	264	94.075	0.075	34.1	0.2238	0.0000	OK
480 minute winter	MH19	264	94.870	0.459	34.3	2.0786	0.0000	SURCHARGED
480 minute winter	EX SW 3	264	93.333	0.066	34.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
480 minute winter	MH9	1.000	MH8	9.1	0.468	0.028	0.8484	
480 minute winter	MH8	1.001	MH6	16.5	0.632	0.038	1.1927	
480 minute winter	MH7	2.000	MH6	5.1	0.262	0.012	0.5674	
480 minute winter	MH6	1.002	MH4	25.6	0.763	0.058	1.2967	
480 minute winter	MH5	3.000	MH4	3.3	0.147	0.008	0.9063	
480 minute winter	MH4	1.003	MH2	29.2	0.768	0.066	2.2964	
480 minute winter	MH3	4.000	MH2	2.2	0.100	0.005	1.6147	
480 minute winter	MH2	1.004	MH1	35.7	0.614	0.073	4.6251	
480 minute winter	MH1	1.005	MH1.1	40.3	0.482	0.313	2.0678	
480 minute winter	MH1.1	1.006	NEW SW 1	41.6	1.055	0.295	0.3003	
480 minute winter	NEW SW 1	EX1.000	EX SW 1	41.6	2.362	1.566	0.3054	502.3
480 minute winter	MH16	5.000	MH17	7.4	1.301	0.039	0.1261	
480 minute winter	MH14	6.000	MH15	2.1	1.214	0.051	0.0196	
480 minute winter	MH15	6.001	MH17	3.4	0.229	0.011	0.6532	
480 minute winter	MH17	5.001	MH19	10.1	0.514	0.027	4.9243	
480 minute winter	MH11	7.000	MH12	6.7	0.357	0.015	1.9201	
480 minute winter	MH12	7.001	MH13	13.0	0.515	0.042	4.1372	
480 minute winter	MH10	8.000	MH13	8.9	0.188	0.009	6.4611	
480 minute winter	MH13	7.002	MH19	24.3	0.261	0.044	2.3415	
480 minute winter	MH18	5.003	EX SW 3	34.1	3.206	0.191	0.0668	430.7
480 minute winter	MH19	5.002	MH18	34.1	2.154	0.078	0.1376	

**Results for 100 year +40% CC 600 minute summer. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute summer	MH9	315	93.721	0.071	9.9	0.2678	0.0000	OK
600 minute summer	MH8	315	93.634	0.081	18.0	0.2799	0.0000	OK
600 minute summer	MH7	330	93.569	0.088	5.5	0.2820	0.0000	OK
600 minute summer	MH6	330	93.568	0.160	28.2	0.4959	0.0000	OK
600 minute summer	MH5	330	93.567	0.190	3.8	0.5640	0.0000	OK
600 minute summer	MH4	330	93.567	0.238	32.0	0.6334	0.0000	OK
600 minute summer	MH3	330	93.566	0.268	2.5	0.7555	0.0000	OK
600 minute summer	MH2	330	93.566	0.321	38.0	0.9862	0.0000	OK
600 minute summer	MH1	330	93.565	0.452	42.2	1.3871	0.0000	SURCHARGED
600 minute summer	MH1.1	330	93.553	0.518	43.1	3.0394	0.0000	SURCHARGED
600 minute summer	NEW SW 1	330	92.604	0.965	43.0	1.7043	0.0000	SURCHARGED
600 minute summer	EX SW 1	285	91.392	0.142	43.2	0.0000	0.0000	OK
600 minute summer	MH16	315	95.683	0.043	8.1	0.1341	0.0000	OK
600 minute summer	MH14	315	95.800	0.025	2.3	0.0461	0.0000	OK
600 minute summer	MH15	330	94.891	0.173	3.9	0.5464	0.0000	OK
600 minute summer	MH17	330	94.891	0.194	11.8	0.5789	0.0000	OK
600 minute summer	MH11	330	94.892	0.092	7.4	0.3300	0.0000	OK
600 minute summer	MH12	330	94.891	0.241	15.1	0.8175	0.0000	OK
600 minute summer	MH10	330	94.891	0.252	10.0	0.9809	0.0000	OK
600 minute summer	MH13	330	94.891	0.463	26.2	1.3660	0.0000	OK
600 minute summer	MH18	330	94.076	0.076	35.0	0.2272	0.0000	OK
600 minute summer	MH19	330	94.891	0.480	35.5	2.1709	0.0000	SURCHARGED
600 minute summer	EX SW 3	330	93.334	0.067	35.0	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute summer	MH9	1.000	MH8	9.9	0.480	0.031	0.9008	
600 minute summer	MH8	1.001	MH6	18.0	0.647	0.041	1.4469	
600 minute summer	MH7	2.000	MH6	5.5	0.268	0.013	0.7875	
600 minute summer	MH6	1.002	MH4	27.8	0.760	0.063	1.5780	
600 minute summer	MH5	3.000	MH4	3.5	0.150	0.008	1.0901	
600 minute summer	MH4	1.003	MH2	30.7	0.768	0.070	2.6222	
600 minute summer	MH3	4.000	MH2	2.3	0.099	0.005	1.8304	
600 minute summer	MH2	1.004	MH1	36.9	0.616	0.076	5.0303	
600 minute summer	MH1	1.005	MH1.1	41.6	0.458	0.324	2.0678	
600 minute summer	MH1.1	1.006	NEW SW 1	43.0	1.065	0.305	0.3079	
600 minute summer	NEW SW 1	EX1.000	EX SW 1	43.2	2.452	1.625	0.3054	470.2
600 minute summer	MH16	5.000	MH17	8.1	1.335	0.043	0.1345	
600 minute summer	MH14	6.000	MH15	2.3	1.245	0.056	0.0209	
600 minute summer	MH15	6.001	MH17	3.7	0.227	0.012	0.7672	
600 minute summer	MH17	5.001	MH19	11.0	0.523	0.029	5.4587	
600 minute summer	MH11	7.000	MH12	7.3	0.347	0.016	2.2586	
600 minute summer	MH12	7.001	MH13	13.2	0.509	0.043	4.5652	
600 minute summer	MH10	8.000	MH13	9.2	0.132	0.009	6.9429	
600 minute summer	MH13	7.002	MH19	24.8	0.169	0.045	2.4670	
600 minute summer	MH18	5.003	EX SW 3	35.0	3.226	0.196	0.0681	403.5
600 minute summer	MH19	5.002	MH18	35.0	2.166	0.080	0.1406	

**Results for 100 year +40% CC 600 minute winter. 840 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
600 minute winter	MH9	315	93.712	0.062	7.6	0.2363	0.0000	OK
600 minute winter	MH8	315	93.625	0.072	13.8	0.2467	0.0000	OK
600 minute winter	MH7	315	93.522	0.041	4.2	0.1332	0.0000	OK
600 minute winter	MH6	300	93.502	0.094	21.8	0.2899	0.0000	OK
600 minute winter	MH5	315	93.440	0.063	2.9	0.1862	0.0000	OK
600 minute winter	MH4	315	93.439	0.110	25.6	0.2941	0.0000	OK
600 minute winter	MH3	315	93.436	0.138	1.9	0.3902	0.0000	OK
600 minute winter	MH2	315	93.436	0.191	31.1	0.5881	0.0000	OK
600 minute winter	MH1	315	93.436	0.323	35.0	0.9908	0.0000	OK
600 minute winter	MH1.1	315	93.429	0.394	36.0	2.3137	0.0000	SURCHARGED
600 minute winter	NEW SW 1	330	92.231	0.592	35.9	1.0464	0.0000	SURCHARGED
600 minute winter	EX SW 1	270	91.392	0.142	35.9	0.0000	0.0000	OK
600 minute winter	MH16	315	95.678	0.038	6.2	0.1177	0.0000	OK
600 minute winter	MH14	300	95.796	0.021	1.7	0.0397	0.0000	OK
600 minute winter	MH15	330	94.790	0.072	2.9	0.2279	0.0000	OK
600 minute winter	MH17	330	94.789	0.092	9.0	0.2754	0.0000	OK
600 minute winter	MH11	315	94.846	0.046	5.6	0.1659	0.0000	OK
600 minute winter	MH12	330	94.790	0.140	11.6	0.4745	0.0000	OK
600 minute winter	MH10	330	94.788	0.149	7.7	0.5816	0.0000	OK
600 minute winter	MH13	330	94.789	0.360	22.0	1.0635	0.0000	OK
600 minute winter	MH18	330	94.070	0.070	30.2	0.2084	0.0000	OK
600 minute winter	MH19	330	94.788	0.377	30.2	1.7066	0.0000	SURCHARGED
600 minute winter	EX SW 3	330	93.329	0.062	30.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
600 minute winter	MH9	1.000	MH8	7.6	0.444	0.024	0.7491	
600 minute winter	MH8	1.001	MH6	13.8	0.594	0.031	0.8311	
600 minute winter	MH7	2.000	MH6	4.2	0.244	0.010	0.3336	
600 minute winter	MH6	1.002	MH4	21.8	0.750	0.050	0.6081	
600 minute winter	MH5	3.000	MH4	2.9	0.151	0.007	0.3086	
600 minute winter	MH4	1.003	MH2	25.4	0.760	0.058	1.1498	
600 minute winter	MH3	4.000	MH2	2.0	0.094	0.005	0.8407	
600 minute winter	MH2	1.004	MH1	30.9	0.612	0.064	3.0597	
600 minute winter	MH1	1.005	MH1.1	34.8	0.482	0.271	1.9800	
600 minute winter	MH1.1	1.006	NEW SW 1	35.9	1.016	0.255	0.2698	
600 minute winter	NEW SW 1	EX1.000	EX SW 1	35.9	2.041	1.352	0.3054	528.8
600 minute winter	MH16	5.000	MH17	6.2	1.234	0.033	0.1114	
600 minute winter	MH14	6.000	MH15	1.7	1.141	0.041	0.0169	
600 minute winter	MH15	6.001	MH17	2.9	0.230	0.010	0.2443	
600 minute winter	MH17	5.001	MH19	8.8	0.512	0.024	2.8761	
600 minute winter	MH11	7.000	MH12	5.6	0.352	0.012	1.0104	
600 minute winter	MH12	7.001	MH13	11.3	0.516	0.037	2.4742	
600 minute winter	MH10	8.000	MH13	7.6	0.171	0.008	4.5400	
600 minute winter	MH13	7.002	MH19	21.4	0.178	0.039	1.8244	
600 minute winter	MH18	5.003	EX SW 3	30.2	3.114	0.169	0.0608	454.4
600 minute winter	MH19	5.002	MH18	30.2	2.100	0.069	0.1249	

**Results for 100 year +40% CC 720 minute summer. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute summer	MH9	375	93.717	0.067	8.8	0.2535	0.0000	OK
720 minute summer	MH8	375	93.630	0.077	16.0	0.2647	0.0000	OK
720 minute summer	MH7	375	93.525	0.044	4.9	0.1427	0.0000	OK
720 minute summer	MH6	375	93.510	0.102	25.3	0.3147	0.0000	OK
720 minute summer	MH5	375	93.504	0.127	3.4	0.3781	0.0000	OK
720 minute summer	MH4	375	93.504	0.175	29.1	0.4666	0.0000	OK
720 minute summer	MH3	375	93.503	0.205	2.2	0.5778	0.0000	OK
720 minute summer	MH2	375	93.503	0.258	35.1	0.7925	0.0000	OK
720 minute summer	MH1	375	93.502	0.389	39.0	1.1943	0.0000	SURCHARGED
720 minute summer	MH1.1	375	93.492	0.457	39.9	2.6812	0.0000	SURCHARGED
720 minute summer	NEW SW 1	390	92.406	0.767	39.6	1.3545	0.0000	SURCHARGED
720 minute summer	EX SW 1	345	91.392	0.142	39.5	0.0000	0.0000	OK
720 minute summer	MH16	375	95.681	0.040	7.2	0.1266	0.0000	OK
720 minute summer	MH14	375	95.798	0.023	2.0	0.0430	0.0000	OK
720 minute summer	MH15	390	94.834	0.116	3.4	0.3678	0.0000	OK
720 minute summer	MH17	390	94.834	0.137	10.4	0.4096	0.0000	OK
720 minute summer	MH11	375	94.849	0.049	6.5	0.1778	0.0000	OK
720 minute summer	MH12	390	94.835	0.185	13.4	0.6257	0.0000	OK
720 minute summer	MH10	390	94.834	0.195	8.9	0.7600	0.0000	OK
720 minute summer	MH13	390	94.834	0.406	24.5	1.1973	0.0000	OK
720 minute summer	MH18	390	94.073	0.073	32.4	0.2172	0.0000	OK
720 minute summer	MH19	390	94.834	0.423	32.9	1.9119	0.0000	SURCHARGED
720 minute summer	EX SW 3	390	93.332	0.065	32.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute summer	MH9	1.000	MH8	8.8	0.463	0.027	0.8297	
720 minute summer	MH8	1.001	MH6	16.0	0.614	0.036	0.9312	
720 minute summer	MH7	2.000	MH6	4.9	0.254	0.011	0.3750	
720 minute summer	MH6	1.002	MH4	25.0	0.730	0.057	0.9598	
720 minute summer	MH5	3.000	MH4	3.2	0.143	0.007	0.6764	
720 minute summer	MH4	1.003	MH2	28.5	0.762	0.065	1.8766	
720 minute summer	MH3	4.000	MH2	2.1	0.120	0.005	1.3353	
720 minute summer	MH2	1.004	MH1	34.3	0.604	0.071	4.0802	
720 minute summer	MH1	1.005	MH1.1	38.6	0.458	0.300	2.0678	
720 minute summer	MH1.1	1.006	NEW SW 1	39.6	1.042	0.281	0.2899	
720 minute summer	NEW SW 1	EX1.000	EX SW 1	39.5	2.243	1.486	0.3054	491.0
720 minute summer	MH16	5.000	MH17	7.2	1.291	0.038	0.1237	
720 minute summer	MH14	6.000	MH15	2.0	1.197	0.048	0.0189	
720 minute summer	MH15	6.001	MH17	3.2	0.228	0.010	0.4564	
720 minute summer	MH17	5.001	MH19	9.6	0.508	0.026	3.9765	
720 minute summer	MH11	7.000	MH12	6.5	0.362	0.014	1.4131	
720 minute summer	MH12	7.001	MH13	12.5	0.508	0.041	3.3727	
720 minute summer	MH10	8.000	MH13	8.4	0.140	0.009	5.5885	
720 minute summer	MH13	7.002	MH19	23.2	0.173	0.042	2.1111	
720 minute summer	MH18	5.003	EX SW 3	32.4	3.168	0.181	0.0642	421.3
720 minute summer	MH19	5.002	MH18	32.4	2.132	0.074	0.1321	

**Results for 100 year +40% CC 720 minute winter. 960 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
720 minute winter	MH9	375	93.708	0.058	6.6	0.2209	0.0000	OK
720 minute winter	MH8	375	93.620	0.067	12.0	0.2312	0.0000	OK
720 minute winter	MH7	375	93.520	0.039	3.7	0.1259	0.0000	OK
720 minute winter	MH6	375	93.496	0.088	19.0	0.2707	0.0000	OK
720 minute winter	MH5	360	93.423	0.046	2.5	0.1370	0.0000	OK
720 minute winter	MH4	360	93.423	0.094	22.3	0.2493	0.0000	OK
720 minute winter	MH3	375	93.368	0.070	1.7	0.1971	0.0000	OK
720 minute winter	MH2	375	93.368	0.123	27.4	0.3776	0.0000	OK
720 minute winter	MH1	375	93.368	0.255	30.8	0.7829	0.0000	OK
720 minute winter	MH1.1	375	93.363	0.328	31.7	1.9262	0.0000	OK
720 minute winter	NEW SW 1	375	92.043	0.404	31.7	0.7147	0.0000	SURCHARGED
720 minute winter	EX SW 1	420	91.392	0.142	31.6	0.0000	0.0000	OK
720 minute winter	MH16	375	95.675	0.035	5.4	0.1101	0.0000	OK
720 minute winter	MH14	360	95.795	0.020	1.5	0.0373	0.0000	OK
720 minute winter	MH15	375	94.762	0.044	2.6	0.1384	0.0000	OK
720 minute winter	MH17	375	94.757	0.060	8.0	0.1784	0.0000	OK
720 minute winter	MH11	375	94.843	0.043	4.9	0.1561	0.0000	OK
720 minute winter	MH12	390	94.734	0.084	10.1	0.2848	0.0000	OK
720 minute winter	MH10	390	94.728	0.089	6.7	0.3454	0.0000	OK
720 minute winter	MH13	390	94.728	0.300	19.3	0.8843	0.0000	OK
720 minute winter	MH18	390	94.065	0.065	26.9	0.1950	0.0000	OK
720 minute winter	MH19	390	94.727	0.316	27.0	1.4313	0.0000	OK
720 minute winter	EX SW 3	390	93.326	0.059	26.9	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
720 minute winter	MH9	1.000	MH8	6.6	0.424	0.020	0.6790	
720 minute winter	MH8	1.001	MH6	12.0	0.567	0.027	0.7541	
720 minute winter	MH7	2.000	MH6	3.7	0.235	0.009	0.3030	
720 minute winter	MH6	1.002	MH4	19.0	0.722	0.043	0.5112	
720 minute winter	MH5	3.000	MH4	2.5	0.142	0.006	0.2285	
720 minute winter	MH4	1.003	MH2	22.3	0.763	0.051	0.6999	
720 minute winter	MH3	4.000	MH2	1.7	0.097	0.004	0.3969	
720 minute winter	MH2	1.004	MH1	27.3	0.613	0.056	2.0525	
720 minute winter	MH1	1.005	MH1.1	30.7	0.479	0.239	1.7072	
720 minute winter	MH1.1	1.006	NEW SW 1	31.7	0.982	0.225	0.2459	
720 minute winter	NEW SW 1	EX1.000	EX SW 1	31.6	1.798	1.192	0.3054	552.2
720 minute winter	MH16	5.000	MH17	5.4	1.184	0.028	0.1011	
720 minute winter	MH14	6.000	MH15	1.5	1.100	0.036	0.0155	
720 minute winter	MH15	6.001	MH17	2.6	0.223	0.009	0.1243	
720 minute winter	MH17	5.001	MH19	8.0	0.513	0.021	1.7879	
720 minute winter	MH11	7.000	MH12	4.9	0.347	0.011	0.5557	
720 minute winter	MH12	7.001	MH13	10.0	0.510	0.033	1.4124	
720 minute winter	MH10	8.000	MH13	6.6	0.169	0.007	3.2352	
720 minute winter	MH13	7.002	MH19	19.1	0.188	0.035	1.4418	
720 minute winter	MH18	5.003	EX SW 3	26.9	3.028	0.150	0.0557	474.5
720 minute winter	MH19	5.002	MH18	26.9	2.050	0.062	0.1140	

**Results for 100 year +40% CC 960 minute summer. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute summer	MH9	495	93.711	0.061	7.2	0.2303	0.0000	OK
960 minute summer	MH8	495	93.623	0.070	13.1	0.2408	0.0000	OK
960 minute summer	MH7	495	93.522	0.041	4.0	0.1304	0.0000	OK
960 minute summer	MH6	495	93.499	0.091	20.7	0.2829	0.0000	OK
960 minute summer	MH5	480	93.426	0.049	2.7	0.1448	0.0000	OK
960 minute summer	MH4	480	93.425	0.096	24.2	0.2562	0.0000	OK
960 minute summer	MH3	495	93.401	0.103	1.8	0.2909	0.0000	OK
960 minute summer	MH2	495	93.401	0.156	29.6	0.4800	0.0000	OK
960 minute summer	MH1	495	93.401	0.288	33.2	0.8842	0.0000	OK
960 minute summer	MH1.1	495	93.396	0.361	34.0	2.1173	0.0000	OK
960 minute summer	NEW SW 1	495	92.132	0.493	33.8	0.8712	0.0000	SURCHARGED
960 minute summer	EX SW 1	465	91.392	0.142	33.7	0.0000	0.0000	OK
960 minute summer	MH16	495	95.677	0.037	5.9	0.1149	0.0000	OK
960 minute summer	MH14	495	95.796	0.021	1.6	0.0385	0.0000	OK
960 minute summer	MH15	495	94.764	0.046	2.8	0.1456	0.0000	OK
960 minute summer	MH17	495	94.759	0.062	8.7	0.1857	0.0000	OK
960 minute summer	MH11	495	94.845	0.045	5.3	0.1618	0.0000	OK
960 minute summer	MH12	495	94.754	0.104	11.0	0.3532	0.0000	OK
960 minute summer	MH10	495	94.751	0.112	7.3	0.4361	0.0000	OK
960 minute summer	MH13	495	94.751	0.323	20.3	0.9515	0.0000	OK
960 minute summer	MH18	495	94.067	0.067	28.2	0.2002	0.0000	OK
960 minute summer	MH19	495	94.750	0.339	28.5	1.5344	0.0000	OK
960 minute summer	EX SW 3	495	93.327	0.060	28.1	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute summer	MH9	1.000	MH8	7.2	0.437	0.022	0.7219	
960 minute summer	MH8	1.001	MH6	13.1	0.582	0.030	0.8027	
960 minute summer	MH7	2.000	MH6	4.0	0.240	0.009	0.3221	
960 minute summer	MH6	1.002	MH4	20.7	0.754	0.047	0.5367	
960 minute summer	MH5	3.000	MH4	2.7	0.148	0.006	0.2405	
960 minute summer	MH4	1.003	MH2	24.2	0.771	0.055	0.8779	
960 minute summer	MH3	4.000	MH2	1.8	0.105	0.004	0.6014	
960 minute summer	MH2	1.004	MH1	29.4	0.610	0.060	2.5334	
960 minute summer	MH1	1.005	MH1.1	32.9	0.462	0.256	1.8724	
960 minute summer	MH1.1	1.006	NEW SW 1	33.8	0.999	0.240	0.2581	
960 minute summer	NEW SW 1	EX1.000	EX SW 1	33.7	1.916	1.270	0.3055	527.0
960 minute summer	MH16	5.000	MH17	5.9	1.216	0.031	0.1076	
960 minute summer	MH14	6.000	MH15	1.6	1.121	0.039	0.0162	
960 minute summer	MH15	6.001	MH17	2.8	0.225	0.009	0.1327	
960 minute summer	MH17	5.001	MH19	8.7	0.524	0.023	2.1023	
960 minute summer	MH11	7.000	MH12	5.3	0.347	0.012	0.7156	
960 minute summer	MH12	7.001	MH13	10.6	0.507	0.035	1.7854	
960 minute summer	MH10	8.000	MH13	6.8	0.136	0.007	3.7144	
960 minute summer	MH13	7.002	MH19	19.9	0.178	0.036	1.5846	
960 minute summer	MH18	5.003	EX SW 3	28.1	3.062	0.157	0.0577	452.1
960 minute summer	MH19	5.002	MH18	28.2	2.070	0.064	0.1183	

**Results for 100 year +40% CC 960 minute winter. 1200 minute analysis at 15 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
960 minute winter	MH9	495	93.703	0.053	5.3	0.1996	0.0000	OK
960 minute winter	MH8	495	93.614	0.061	9.7	0.2088	0.0000	OK
960 minute winter	MH7	495	93.516	0.035	3.0	0.1137	0.0000	OK
960 minute winter	MH6	495	93.486	0.078	15.4	0.2428	0.0000	OK
960 minute winter	MH5	495	93.414	0.037	2.0	0.1111	0.0000	OK
960 minute winter	MH4	495	93.414	0.085	18.0	0.2259	0.0000	OK
960 minute winter	MH3	495	93.331	0.033	1.3	0.0924	0.0000	OK
960 minute winter	MH2	495	93.330	0.085	22.1	0.2628	0.0000	OK
960 minute winter	MH1	495	93.288	0.175	25.0	0.5372	0.0000	OK
960 minute winter	MH1.1	495	93.283	0.248	25.8	1.4554	0.0000	OK
960 minute winter	NEW SW 1	495	91.772	0.133	25.8	0.2343	0.0000	OK
960 minute winter	EX SW 1	495	91.390	0.140	25.8	0.0000	0.0000	OK
960 minute winter	MH16	495	95.672	0.032	4.4	0.0998	0.0000	OK
960 minute winter	MH14	480	95.793	0.018	1.2	0.0335	0.0000	OK
960 minute winter	MH15	495	94.756	0.038	2.1	0.1216	0.0000	OK
960 minute winter	MH17	495	94.751	0.054	6.5	0.1619	0.0000	OK
960 minute winter	MH11	495	94.840	0.040	4.0	0.1427	0.0000	OK
960 minute winter	MH12	465	94.718	0.068	8.2	0.2311	0.0000	OK
960 minute winter	MH10	495	94.679	0.040	5.4	0.1540	0.0000	OK
960 minute winter	MH13	495	94.653	0.225	15.8	0.6652	0.0000	OK
960 minute winter	MH18	495	94.059	0.059	22.2	0.1753	0.0000	OK
960 minute winter	MH19	495	94.653	0.242	22.3	1.0945	0.0000	OK
960 minute winter	EX SW 3	495	93.320	0.053	22.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
960 minute winter	MH9	1.000	MH8	5.3	0.396	0.016	0.5836	
960 minute winter	MH8	1.001	MH6	9.7	0.536	0.022	0.6456	
960 minute winter	MH7	2.000	MH6	3.0	0.223	0.007	0.2592	
960 minute winter	MH6	1.002	MH4	15.4	0.672	0.035	0.4403	
960 minute winter	MH5	3.000	MH4	2.0	0.139	0.005	0.1899	
960 minute winter	MH4	1.003	MH2	18.0	0.739	0.041	0.4970	
960 minute winter	MH3	4.000	MH2	1.3	0.098	0.003	0.2027	
960 minute winter	MH2	1.004	MH1	22.1	0.614	0.045	1.2252	
960 minute winter	MH1	1.005	MH1.1	25.0	0.471	0.194	1.1974	
960 minute winter	MH1.1	1.006	NEW SW 1	25.8	0.930	0.183	0.2114	
960 minute winter	NEW SW 1	EX1.000	EX SW 1	25.8	1.633	0.971	0.2940	590.1
960 minute winter	MH16	5.000	MH17	4.4	1.115	0.023	0.0875	
960 minute winter	MH14	6.000	MH15	1.2	1.028	0.029	0.0132	
960 minute winter	MH15	6.001	MH17	2.1	0.211	0.007	0.1052	
960 minute winter	MH17	5.001	MH19	6.5	0.517	0.017	0.9132	
960 minute winter	MH11	7.000	MH12	4.0	0.331	0.009	0.4284	
960 minute winter	MH12	7.001	MH13	8.2	0.511	0.027	0.6685	
960 minute winter	MH10	8.000	MH13	5.4	0.150	0.006	2.0094	
960 minute winter	MH13	7.002	MH19	15.8	0.202	0.029	0.9903	
960 minute winter	MH18	5.003	EX SW 3	22.2	2.888	0.124	0.0483	507.2
960 minute winter	MH19	5.002	MH18	22.2	1.966	0.051	0.0983	

**Results for 100 year +40% CC 1440 minute summer. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute summer	MH9	750	93.702	0.052	5.2	0.1977	0.0000	OK
1440 minute summer	MH8	750	93.613	0.060	9.4	0.2057	0.0000	OK
1440 minute summer	MH7	750	93.516	0.035	2.9	0.1119	0.0000	OK
1440 minute summer	MH6	750	93.485	0.077	14.9	0.2387	0.0000	OK
1440 minute summer	MH5	750	93.413	0.036	2.0	0.1077	0.0000	OK
1440 minute summer	MH4	750	93.413	0.084	17.5	0.2227	0.0000	OK
1440 minute summer	MH3	750	93.330	0.032	1.3	0.0894	0.0000	OK
1440 minute summer	MH2	750	93.329	0.084	21.5	0.2594	0.0000	OK
1440 minute summer	MH1	750	93.280	0.167	24.3	0.5113	0.0000	OK
1440 minute summer	MH1.1	750	93.274	0.239	25.1	1.4051	0.0000	OK
1440 minute summer	NEW SW 1	750	91.768	0.129	25.1	0.2274	0.0000	OK
1440 minute summer	EX SW 1	750	91.366	0.116	25.1	0.0000	0.0000	OK
1440 minute summer	MH16	750	95.671	0.031	4.2	0.0976	0.0000	OK
1440 minute summer	MH14	750	95.793	0.018	1.2	0.0335	0.0000	OK
1440 minute summer	MH15	750	94.755	0.037	2.0	0.1181	0.0000	OK
1440 minute summer	MH17	750	94.750	0.053	6.2	0.1584	0.0000	OK
1440 minute summer	MH11	750	94.839	0.039	3.8	0.1392	0.0000	OK
1440 minute summer	MH12	720	94.718	0.068	7.9	0.2301	0.0000	OK
1440 minute summer	MH10	750	94.678	0.039	5.2	0.1514	0.0000	OK
1440 minute summer	MH13	750	94.642	0.214	15.2	0.6305	0.0000	OK
1440 minute summer	MH18	750	94.057	0.057	21.4	0.1716	0.0000	OK
1440 minute summer	MH19	750	94.641	0.230	21.4	1.0411	0.0000	OK
1440 minute summer	EX SW 3	750	93.319	0.052	21.4	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute summer	MH9	1.000	MH8	5.2	0.396	0.016	0.5733	
1440 minute summer	MH8	1.001	MH6	9.4	0.532	0.021	0.6308	
1440 minute summer	MH7	2.000	MH6	2.9	0.221	0.007	0.2530	
1440 minute summer	MH6	1.002	MH4	14.9	0.666	0.034	0.4306	
1440 minute summer	MH5	3.000	MH4	2.0	0.138	0.005	0.1851	
1440 minute summer	MH4	1.003	MH2	17.5	0.733	0.040	0.4871	
1440 minute summer	MH3	4.000	MH2	1.3	0.097	0.003	0.1976	
1440 minute summer	MH2	1.004	MH1	21.5	0.610	0.044	1.1588	
1440 minute summer	MH1	1.005	MH1.1	24.3	0.481	0.189	1.1391	
1440 minute summer	MH1.1	1.006	NEW SW 1	25.1	0.923	0.178	0.2072	
1440 minute summer	NEW SW 1	EX1.000	EX SW 1	25.1	1.632	0.945	0.2689	578.8
1440 minute summer	MH16	5.000	MH17	4.2	1.099	0.022	0.0847	
1440 minute summer	MH14	6.000	MH15	1.2	1.028	0.029	0.0132	
1440 minute summer	MH15	6.001	MH17	2.0	0.209	0.007	0.1014	
1440 minute summer	MH17	5.001	MH19	6.2	0.512	0.017	0.7902	
1440 minute summer	MH11	7.000	MH12	3.8	0.316	0.008	0.4241	
1440 minute summer	MH12	7.001	MH13	7.9	0.518	0.026	0.5927	
1440 minute summer	MH10	8.000	MH13	5.2	0.142	0.005	1.8712	
1440 minute summer	MH13	7.002	MH19	15.2	0.174	0.028	0.9214	
1440 minute summer	MH18	5.003	EX SW 3	21.4	2.861	0.120	0.0469	492.5
1440 minute summer	MH19	5.002	MH18	21.4	1.950	0.049	0.0954	

**Results for 100 year +40% CC 1440 minute winter. 1680 minute analysis at 30 minute timestep. Mass balance: 100.00%**

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m <sup>3</sup> )	Flood (m <sup>3</sup> )	Status
1440 minute winter	MH9	750	93.696	0.046	3.9	0.1728	0.0000	OK
1440 minute winter	MH8	750	93.605	0.052	7.1	0.1804	0.0000	OK
1440 minute winter	MH7	750	93.512	0.031	2.2	0.0984	0.0000	OK
1440 minute winter	MH6	750	93.475	0.067	11.3	0.2077	0.0000	OK
1440 minute winter	MH5	750	93.403	0.026	1.5	0.0767	0.0000	OK
1440 minute winter	MH4	750	93.402	0.073	13.2	0.1934	0.0000	OK
1440 minute winter	MH3	750	93.319	0.021	1.0	0.0605	0.0000	OK
1440 minute winter	MH2	750	93.319	0.074	16.2	0.2267	0.0000	OK
1440 minute winter	MH1	750	93.226	0.113	18.3	0.3465	0.0000	OK
1440 minute winter	MH1.1	750	93.220	0.185	18.9	1.0857	0.0000	OK
1440 minute winter	NEW SW 1	750	91.739	0.100	18.9	0.1762	0.0000	OK
1440 minute winter	EX SW 1	750	91.343	0.093	18.9	0.0000	0.0000	OK
1440 minute winter	MH16	750	95.667	0.027	3.2	0.0856	0.0000	OK
1440 minute winter	MH14	720	95.791	0.016	0.9	0.0292	0.0000	OK
1440 minute winter	MH15	750	94.750	0.032	1.5	0.1014	0.0000	OK
1440 minute winter	MH17	750	94.745	0.048	4.7	0.1437	0.0000	OK
1440 minute winter	MH11	750	94.834	0.034	2.9	0.1222	0.0000	OK
1440 minute winter	MH12	750	94.710	0.060	6.0	0.2039	0.0000	OK
1440 minute winter	MH10	750	94.673	0.034	3.9	0.1331	0.0000	OK
1440 minute winter	MH13	750	94.579	0.151	11.5	0.4448	0.0000	OK
1440 minute winter	MH18	750	94.049	0.049	16.2	0.1474	0.0000	OK
1440 minute winter	MH19	750	94.578	0.167	16.2	0.7546	0.0000	OK
1440 minute winter	EX SW 3	750	93.313	0.046	16.2	0.0000	0.0000	OK

Link Event	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )
1440 minute winter	MH9	1.000	MH8	3.9	0.361	0.012	0.4708	
1440 minute winter	MH8	1.001	MH6	7.1	0.490	0.016	0.5151	
1440 minute winter	MH7	2.000	MH6	2.2	0.205	0.005	0.2066	
1440 minute winter	MH6	1.002	MH4	11.3	0.620	0.026	0.3504	
1440 minute winter	MH5	3.000	MH4	1.5	0.138	0.003	0.1413	
1440 minute winter	MH4	1.003	MH2	13.2	0.676	0.030	0.3982	
1440 minute winter	MH3	4.000	MH2	1.0	0.097	0.002	0.1519	
1440 minute winter	MH2	1.004	MH1	16.2	0.608	0.033	0.7447	
1440 minute winter	MH1	1.005	MH1.1	18.3	0.449	0.142	0.7690	
1440 minute winter	MH1.1	1.006	NEW SW 1	18.9	0.856	0.134	0.1684	
1440 minute winter	NEW SW 1	EX1.000	EX SW 1	18.9	1.578	0.712	0.2099	650.5
1440 minute winter	MH16	5.000	MH17	3.2	1.016	0.017	0.0698	
1440 minute winter	MH14	6.000	MH15	0.9	0.944	0.022	0.0108	
1440 minute winter	MH15	6.001	MH17	1.5	0.191	0.005	0.0856	
1440 minute winter	MH17	5.001	MH19	4.7	0.501	0.013	0.4314	
1440 minute winter	MH11	7.000	MH12	2.9	0.285	0.006	0.3546	
1440 minute winter	MH12	7.001	MH13	6.0	0.485	0.020	0.4471	
1440 minute winter	MH10	8.000	MH13	3.9	0.150	0.004	1.1708	
1440 minute winter	MH13	7.002	MH19	11.5	0.186	0.021	0.5745	
1440 minute winter	MH18	5.003	EX SW 3	16.2	2.664	0.091	0.0381	556.9
1440 minute winter	MH19	5.002	MH18	16.2	1.828	0.037	0.0771	

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